

Correspondence Study Courses

1962-1964

UNIVERSITY OF *Minnesota*

• GENERAL EXTENSION DIVISION
CORRESPONDENCE STUDY DEPARTMENT
MINNEAPOLIS 14



Journal of the UNIVERSITY of MINNESOTA

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 from 52 colleges, universities, and comparable educational agencies. It is available from the Business Office: National University Extension Association, 112 TSMc, University of Minnesota, Minneapolis 14. For single copies, the cost is 25 cents.

UNIVERSITY OF MINNESOTA

Board of Regents

The Board of Regents is composed of 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 Richard L. Griggs, Duluth; The Honorable Bjarne E. Grotum, Jackson; The Honorable Robert E. Hess, White Bear Lake; The Honorable Fred J. Hughes, St. Cloud; The Honorable A. I. Johnson, Benson; The Honorable Lester A. Malkerson, Minneapolis; The Honorable A. J. Olson, Renville; The Honorable Otto A. Silha, Minneapolis; and The Honorable Herman F. Skyberg, Fisher.

Administrative Officers

O. Meredith Wilson, Ph.D., President
Malcolm M. Willey, Ph.D., L.H.D., LL.D., Vice President, Academic Administration
Laurence R. Lunden, B.A., LL.D., Vice President, Business Administration
Stanley J. Wenberg, M.A., Vice President for Educational Relationships and Development

GENERAL EXTENSION DIVISION

Administration

Julius M. Nolte, B.A., LL.B., Dean of University Extension
Huntington Miller, B.A., LL.B., Associate Dean; Chairman of Committee on Student Scholastic Standing
Harold J. Alford, M.A., Manager of St. Paul Extension Center
Elizabeth L. Cless, B.A., Assistant to the Dean for Liberal Arts
Eleanor S. Fenton, M.A., Assistant to the Dean; Co-ordinator of Scholastic and Counseling Services; Secretary of Committee on Student Scholastic Standing
Albert M. Fulton, Ph.M., Associate Director, Evening and Special Classes
Gilford W. Remington, M.A., Manager of Duluth Extension Office
Richard B. Simons, Ph.D., Co-ordinator of Field Service; Manager of Minneapolis Extension Office

Correspondence Study Department

F. Lloyd Hansen, M.A., Director of Correspondence Study Department

Extension Departments and Directors

Audio-Visual Extension Service, Erwin C. Welke, 115 TSMa
Center for Continuation Study, Fred E. Berger, 136 Center for Continuation Study
Correspondence Study Department, F. Lloyd Hansen, 251 Nicholson Hall (FEderal 8-8791)
Duluth Extension Office, Gilford W. Remington, 110 New Garrick Building (RANdolph 2-1745)
Evening and Special Classes, Huntington Miller, 54 Nicholson Hall (FEderal 8-8791)
Minneapolis Extension Office, Richard B. Simons, 690 Northwestern Bank Building (FEderal 2-0624)
Municipal Reference Bureau, Orville Peterson, 15 Library Building
Radio and Television Broadcasting (KUOM), Burton Paulu, 1 Eddy Hall
St. Paul Extension Office, Harold J. Alford, 2nd floor, 555 Wabasha St. (CApital 2-6175)
State Organization Service, William C. Rogers, 104 TSMc
University Program Service, James S. Lombard, 229 Northrop Memorial Auditorium

CORRESPONDENCE STUDY DEPARTMENT

Application Blank—page 65
How to Study Course—page 49
Index—inside back cover
Refunds—page 6
Military Personnel and Veterans—page 7

General Information

Location

The Correspondence Study Department is a part of the General Extension Division which is housed in the east wing of Nicholson Hall on the Minneapolis Campus. The main office is in room 251 Nicholson Hall. The telephone number is FEderal 8-8791 (after May 12, 1962, the number will be 373-3256).

Eligibility

The University's correspondence courses are open to everyone who can handle them successfully.

Cost

Tuition fees are \$9 per credit hour plus a \$3 per course fee for registrations originating outside of Minnesota. The tuition fee for each course is stated in the course description section of this bulletin. Some courses have a material fee. Text-books are not included in the tuition cost.

Applicants, except military personnel, living outside Minnesota 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 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. In the back of this bulletin there is a Book Order Blank which can be completed and sent *directly* to the Nicholson Hall Bookstore. The books will be sent immediately, and you will be billed for the correct amount, including a nominal fee for postage and handling. Such procedure will allow you to begin your course without delay.

Students must purchase or have constant access to the required textbooks and materials. Contact the bookstore regarding partial refunds on your texts when the course has been completed.

Registration

Complete the Application Blank that is on page 65 of this bulletin and send it with the proper fee to the Correspondence Study Department, University of Minnesota, Minneapolis 14. 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.

With the acceptance of the application and the mailing of lesson materials, the student is enrolled.

No receipts for payments by check or money order will be issued unless requested. No receipts 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. This is an advantage of home study.

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.

Reinstatements

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

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

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

Lesson Service

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 when some lessons must be sent to off-campus addresses. At least 1 week is required for an assignment to be received on campus, read and graded, and placed in the return mail.

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 has an official record of credits and grades earned by correspondence study. Grades and credits are transferred to other University records only on request. Such requests are made 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. Make certain that you indicate your credits were earned in correspondence study. (Note: Many colleges and universities will accept credits earned through correspondence, but the amount and application varies with each institution. The student should check 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:

1. Correspondence Study Department, 251 Nicholson Hall, University of Minnesota
2. General Extension offices in Minneapolis, St. Paul, or Duluth
3. School superintendent or principal; college instructor or administrator
4. Commissioned officers (for military personnel)

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 \$1.20 for each lesson serviced are nonrefundable from the tuition fee.

High School Courses

This bulletin carries only a listing of high school courses (see page 62). 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 3, Wisconsin.

Veterans

Courses in this bulletin have been approved under Public Law 550 (Korean Bill). Military personnel who were in service between June 27, 1950 and January 31, 1955 are eligible for educational benefits, provided the educational program or training is started within 3 years from the date of separation from service.

Correspondence courses may be used to initiate or continue a program leading to a certificate or degree, a vocational or professional objective. The veteran may change from resident classes to correspondence study or from correspondence to resident study without penalty. Under Public Law 550, however, the veteran cannot be enrolled in correspondence courses and resident classes at the same time.

A veteran must register and pay his tuition and fees, after which such costs are refunded quarterly by the Veterans Administration, on a prorated basis according to the number of completed lessons. The Veterans Administration will not pay for textbooks. No subsistence (monthly educational allowance) is paid for enrollment in correspondence courses.

Write to the Correspondence Study Department for instructions for enrolling under Public Law 550.

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 Bldg., St. Paul 1.)

Grades

The grades A, B, C, and D indicate work of varying degrees of merit, D being the lowest passing grade. The grade F, failure, indicates marked deficiency and that the student must repeat the course to earn credit. A failure in a continuation course should be made up before proceeding with the sequence.

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 \$2 per course and the student pays \$1.20 for each of the completed lessons. 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 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.

Maximum Load—A student may enroll for not more than two courses at a time without special permission from advisers in Correspondence Study.

Noncredit Registration—A noncredit registration is made by writing "noncredit" 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, courses numbered 50 or above during the junior and senior years of college.

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 originated with a gift and must be 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 14.

Working Toward a Degree by Correspondence

There are some limitations on the use of credits earned by correspondence for a degree from the University of Minnesota. No college of the University will grant a degree without a minimum of 1 year (45 quarter credits) of resident study. Moreover, many of the courses completed during the junior and senior years are not available by correspondence study. Credits earned by correspondence do not count as resident credits, nor do they apply toward a Master's or Doctor's degree.

In the following section are some applications of correspondence work to degree programs at the University. It is understood that 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.

College of Science, Literature, and the Arts

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

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 or Engl 1B-2B-3B or Comm 1-2-3 or Engl 1A-2A-3A or exemption. (Only Engl 1B-2B-3B offered by correspondence study)

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 1 language
1 year	(a) 10 credits in same language or (b) 15 credits in different language
2 years in 1 language	(a) 5 credits in same language or (b) 10 credits in different language
3 or more years in 1 language	No college requirement if the high school work is validated by the appropriate college department
2 years in each of 2 languages	No college requirement if 1 language is validated at the 2-year level by the appropriate college department

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

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

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

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

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

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

F. Health: PubH or PubH 3 or equivalent.

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

Note—Only 3 credits by correspondence in student's major sequence in courses numbered 50 or above.

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

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

Note—Students may apply only 12 credits earned in correspondence courses numbered 50 or above to the approximately 78 credits needed in the School of Business Administration.

Institute of Technology

(College of Engineering, School of Architecture, School of Chemistry, School of Mines and Metallurgy, School of Physics)

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

About 255 quarter credits are needed for a degree in the Institute of Technology.

The first-year curriculum is the same for all students in the College of Engineering, School of Architecture, School of Mines and Metallurgy, and School of Physics while some courses are the same in the School of Chemistry. 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)

I.T. First-Year Curriculum

(Credits shown in parentheses)

ITM 11, 12, 13—College Algebra and Trigonometry I; College Algebra and Trigonometry II; Calculus I; Analytic Geometry and Calculus (5-5-5)	EC 14, 15, 16—Engineering Graphics (3-3-3) Engl A-B-C, or 1A-2A-3A, or 1B-2B-3B— Freshman English (4-4-4) Phys 11-12-13—General Physics (5-5-5)
--	--

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.

Engl 1B-2B-3B—Freshman English	ITM 13A—Calculus I: Analytic Geometry and Calculus
EC 14-15-16—Engineering Graphics	ITM 24A—Calculus II: Analytic Geometry and Calculus
ITM 11—College Algebra and Trigonometry I	
ITM 12—College Algebra and Trigonometry II	

ITM 25A—Calculus III: Analytic Geometry and Calculus

ITM 26A—Calculus IV: Differential Equations and Calculus

MM 27—Rigid-Body Mechanics I

MM 28—Rigid-Body Mechanics II

MM 29—Rigid-Body Mechanics III

CE 146—Concrete and Concrete Materials

Note—Elementary and higher algebra and plane and solid geometry are prerequisites for the college level mathematics sequence that begins with ITM 11. Any deficiencies in these 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 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 or 30 semester hours 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.

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 Science, Literature, and the 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 requirement, 18 credits in social science, 3 credits in personal health, and other conditions can be satisfied by correspondence courses. For additional information write to the Correspondence Study Department or to the Associate Dean, College of Agriculture, Forestry, and Home Economics, University of Minnesota, St. Paul 1.

School of Nursing

Leading to B.S. degree with a minimum of 255 quarter credits.

1. Those with no college experience and no professional training might use the 2-year curriculum in the College of Science, Literature, and the Arts as a guide in completing many of the requirements in prenursing. (Some of the required courses in chemistry, zoology, and physical education are not offered by correspondence study.) (See page 9.)

2. Graduate professional nurses seeking a degree can satisfy general requirements with the following correspondence courses:

(Credits shown in parentheses)

Engl 1B-2B-3B—Freshman English (12)
Sociology (6)

Psy 1-2—General Psychology (6)
CD 80—Child Psychology (3)

Note—There are a number of nursing programs with a variety of requirements. It is recommended that the student contact the School of Nursing for details.

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.

Certificates

The General Extension Division, of which the Correspondence Study Department is a part, 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 the 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 and 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, Sections I-II-III, indicate those programs that are most accessible through University of Minnesota correspondence courses. The first section lists those certificates that can be earned *entirely* through completion of courses chosen from this bulletin. The second section 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. The third section 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

Engl 1B-2B-3B; 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 1 subject, or in approved related liberal arts subjects, in addition to the credits earned in that subject under the spread and English requirements above.

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

Certificate in Engineering Mathematics and Science

(45 credits)

Core Requirements

Basic Technical Writing I or Engl 1B	ITM 24A—Calculus II: Analytic Geometry and Calculus
ITM 11—College Algebra and Trigonometry I	ITM 25A—Calculus III: Analytic Geometry and Calculus
ITM 12—College Algebra and Trigonometry II	
ITM 13A—Calculus I: Analytic Geometry and Calculus	

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

Astronomy	Electrical Engineering or Technology
Engineering Graphics	Mechanical Engineering
Geology	Mechanics and Materials
Physics	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

Business Correspondence; or Engl 1B	BA 58—Business Law
Econ 1-2—Principles of Economics	BA 99—Survey of Office Management
BA 5—Business Statistics	Psy 1-2—General Psychology
BA 24-25-26—Principles of Accounting	

Electives: additional courses to be selected from the following:

BA 52—Modern Industrial Relations: Labor Marketing	BA 56—Corporation Finance
BA 72—Modern Industrial Relations: Manpower Management	BA 55C—Managerial Costs
BA 53—Insurance Principles	BA 55D—Analysis of Financial Statements
	BA 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 7C—Comparative European Governments	Hist 127—Russian History III
Pol 25—World Politics	Pol 94—The Far East in International Relations
Pol 4C—United Nations	
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	Pol 26—American Foreign Policy
Econ 1-2—Principles of Economics	Hist 125 or 126—Russian History I or II
Engl 4C—Masterpieces of World Literature	Hum 3 or 4—Humanities in Modern World III or IV
Hist 1 or 2 or 3 or 8C—Civilization in the Modern World (or) Foundations of Modern Civilization	Pol 89—Japanese Government and Politics
Hist 93—American Diplomatic History I	Soc 1—Introduction to Sociology
Pol 55—Government of the Soviet Union	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:

Engl 1B-2B-3B; or Comm 1-2-3; or exemption	ITM 11—College Algebra and Trigonometry I;
Econ 1-2—Principles of Economics	(or) Math 10—College Algebra;
BA 5—Elements of Statistics	(or) Math 15—College Algebra;
BA 24-25-26—Principles of Accounting	(or) equivalent
(or) Acct 30-31-32 Accounting I, II, III	

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

BA 50—Production Management	BA 60—Business Policy and Management Control*
BA 51—Business Statistics*	Econ 65—Intermediate Economic Analysis: The Firm*
BA 52—Modern Industrial Relations: Labor Marketing	Econ 66—Intermediate Economic Analysis: Income and Employment
BA 53—Risk Management and Insurance	Econ 67—Money and Banking
BA 54—Transportation I: Principles*	Econ 69—Government Regulation of Business*
BA 56—Corporation Finance*	
BA 57—Principles of Marketing*	
BA 58—Business Law: Contracts	

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:

Engl 1B-2B-3B; or Comm 1-2-3; or exemption	ITM 11—College Algebra and Trigonometry I;
Econ 1-2—Principles of Economics	(or) Math 10—College Algebra;
BA 5—Elements of Statistics	(or) Math 15—College Algebra;
BA 24-25-26—Principles of Accounting	(or) equivalent
(or) Acct 30-31-32 Accounting I, II, III	

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

BA 50—Production Management	BA 60—Business Policy and Management Control*
BA 51—Business Statistics*	Econ 65—Intermediate Economic Analysis: The Firm*
BA 52—Modern Industrial Relations: Labor Marketing	Econ 66—Intermediate Economic Analysis: Income and Employment
BA 53—Risk Management and Insurance	Econ 67—Money and Banking
BA 54—Transportation I: Principles*	Econ 68—Elements of Public Finance*
BA 56—Corporation Finance*	Econ 69—Government Regulation of Business*
BA 57—Principles of Marketing*	
BA 58—Business Law: Contracts	

Electives in Business Administration and Economics: at least 12 additional credits in courses in business administration and economics.

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 9).

- B. Additional courses approved by the Committee on Student Scholastic Standing to make a minimum of 90 credits for the certificate.

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 of the sequences marked with an asterisk (*) is NOT listed in this bulletin.

Accounting Certificates

Junior Certificate

(45 credits)

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

Requirements:

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

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

Senior Certificate

(90 credits)

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

Requirements:

Engl A-B-C, or 1A-2A-3A, or 1B-2B-3B, or
Comm 1-2-3
Comp 27—Advanced Writing
ITM 11-12—College Algebra and Trigonometry I-II; or Math 10 or 15 and 40
BA 24-25-26—Principles of Accounting
BA 105A-B-C—Intermediate Accounting*
BA 115A-B—Cost Accounting*
Four additional accounting courses numbered 100 or above
BA 56—Corporation Finance*
Econ 1-2—Principles of Economics
BA 5—Elements of Statistics
BA 51—Business Statistics*
BA 58—Business Law: Contracts
BA 78-88—Business Law, or approved substitutions in industrial management or industrial engineering

Two courses from the following:

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

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 cer-

tificate must take a test in transcription under the supervision of the secretarial faculty in the School of Business Administration.

Core Requirement

- | | |
|--|--|
| Review of Business English and Business Correspondence; or Comp 58, Business Reports* and Letters* | BA 58, 88—Business Law |
| Econ 1-2—Principles of Economics | BA 79A-79B—Administrative Secretarial Studies* |
| BA 24-25—Principles of Accounting | BA 99—Survey of Office Management |
| BA 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.

- | | |
|--------------------------------|-------------------------------------|
| Communication in Management* | BA 53—Risk Management and Insurance |
| BA 5—Elements of Statistics | Econ 67—Money and Banking |
| BA 26—Principles of Accounting | BA 78, 98—Business Law |

Industrial Relations Certificate

(46 credits)

Core Requirement

- | | |
|--|---|
| Econ 1-2—Principles of Economics | One course from the following:
Survey of Current Problems in Industrial Relations* |
| BA 52—Modern Industrial Relations: Labor Marketing | |
| BA 72—Modern Industrial Relations: Manpower Management | BA 182B—Intermediate Manpower Management* |
| Econ 172—Public Policy: Labor Relations | BA 262-272-282—Graduate Topics in Industrial Relations* |
| Econ 182—Economic Security | One course from the following:
BA 142—Settlement of Industrial Relations Disputes* |
| Psy 1-2—General Psychology | |
| Psy 4-5—Introductory Laboratory Psychology* | Econ 152—Labor Movements* |
| Psy 122-123—Vocational and Personnel Psychology* | Econ 162—Union Government and Policies* |

Electives (any two courses from the following):

- | | |
|-----------------------------------|----------------------------|
| BA 50—Production Management | Soc 120—Social Psychology |
| BA 99—Survey of Office Management | IR 1C-2C—Supervision I, II |
| Psy 144-145—Abnormal Psychology | |

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

Interior Design Certificate

(45 credits)

The Interior Design Certificate is awarded upon successful completion of a program of courses in interior design and related fields, totaling 45 credits. A student holding the certificate will have a background indicating proficiency in the field of home furnishings or as a junior decorator in a studio or store.

Core Requirement

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

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

- | | |
|--|-----------------------------------|
| 1. History of Art, Art Appreciation | 3. Ceramics, Sculpture, Weaving |
| 2. Design, Drafting, Color Photography | 4. French, Humanities, Psychology |

Public Administration Certificate

(45 credits)

Core Requirement

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

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

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

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

- | | |
|--------------------------------|-------------------|
| Accounting | Political Science |
| Child Development | Psychology |
| Economics and Business Finance | Recreation |
| Engineering | Social Work |
| Industrial Relations | Sociology |
| Insurance | |

Basic Engineering Science Certificate

(52 credits)

Prerequisite: high school graduate or equivalent, higher algebra, solid geometry, satisfactory completion of the English Placement Test.

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, are 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. Trans-

fer of approved credits will be permitted. Certificates are awarded to students who complete with a minimum C average the prescribed program of study.

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

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

EXTENSION CERTIFICATES SECTION III

Below is 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)

College Courses

Note—There is a \$3 per course fee for registrations originating outside of Minnesota, except 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 material 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, Ph.D., Professor of Agricultural Economics

Mykola H. Haydak, Ph.D., Associate Professor of Entomology and Economic Zoology

A4. Beekeeping. Useful to the nonexperienced and experienced beekeeper. Some of the topics considered 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, and preparation of honey and wax for market. (No prerequisite and no credit toward a degree)

Haydak — 3 Extension credits only — \$27 — 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 — \$27 — 16 lessons

Agricultural Education (Rural Education). See page 28.

Forestry. See page 37.

Home Economics (Textiles). See page 43.

Horticulture. See page 43.

Parliamentary Law. See page 49.

ANTHROPOLOGY (Anth)

Elden Johnson, Associate Professor of Anthropology

Marco Bicchieri, B.A., Teaching Assistant in Anthropology

Nancy Lienke, M.A., Research 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)

Bicchieri — 5 credits — \$45 — 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, directed toward a deeper and broader understanding of human capacities and purposes. (No prerequisite)

Bicchieri — 5 credits — \$45 — 27 lessons

80. The American Indian. A survey of the native cultures of the Americas. Descriptive accounts of the physical types, languages, prehistory, and cultures of North, Central, and South America. (Prerequisite: Anth 2A or equivalent)

Lienke — 3 credits — \$27 — 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 — \$27 — 16 lessons — Registrations accepted after July 1, 1962

ART (Art) and ART EDUCATION (ArEd)

Clifton Gayne, Jr., Ph.D., Professor and Chairman, Department of Art Education

Lorenz E. A. Eitner, Ph.D., Professor of Art

Leah Lewis, B.S., Associate Professor of Art

Lucile S. Robinson, B.S., Instructor in Handcraft (Correspondence Study)

1. Introduction to Art. Offers a survey of the visual arts—architecture, sculpture, painting, the 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 — \$36 — 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 — \$27 — 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 — \$27 — 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 — \$9 — 6 lessons

Robinson — 2 credits — \$18 — 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 — \$27 — 16 lessons

83(c). Interior Design I. (Interior Decoration) A study of traditional and modern furniture and how to combine various styles successfully. Additional subjects include floor coverings, wall treatment, how to build color schemes, and general trends in home decoration. Of interest to teachers, homemakers, and home furnishings sales people. (No prerequisite)

Lewis — 3 credits — \$27 — 16 lessons

84(c). Interior Design II. Trends in decorative fabrics and floor coverings including a study of the new fibers used in curtain, drapery, and upholstering fabrics. How to estimate. Major accessories such as picture selection, ceramics, and the use of metals

in decoration are considered. Another major emphasis is on window treatment and planning room color schemes. (Prerequisite: Art 83[c])

Lewis — 3 credits — \$27 — 16 lessons

ArEd 19(c). Art Appreciation in Education. An introductory survey of art to provide a background for personal growth and for effective co-operation in modern educational programs. The role of the artist, his ideas, materials, and techniques will be examined in terms of his contributions to enriched living. Painting, sculpture, architecture, city planning, personal appearance, and industrial design are some of the specific areas studied in relation to current personal and social problems. (No prerequisite; recommended for elementary school teachers but of general interest; not open for credit to art majors or those who have completed ArEd 19)

Gayne — 4 credits — \$36 plus \$1.50 materials fee — 21 lessons

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

Palmer — 1 credit — \$9 — 6 lessons

ASTRONOMY (Ast)

Willem J. Luyten, Ph.D., 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 — \$45 — 27 lessons

BUSINESS ADMINISTRATION (BA)

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

Herbert G. Heneman, Jr., Ph.D., Professor of Economics and Industrial Relations
 C. Arthur Williams, Ph.D., Professor of Economics and Insurance
 Reuel I. Lund, Ph.D., C.P.A., Associate Professor of Accounting
 Ernestine C. Donaldson, M.A., Associate Professor of Business Administration
 Robert W. Hardcopf, M.S., Instructor in Quantitative Analysis (Correspondence Study)
 Keith R. Heller, M.S., Lecturer in Accounting
 Herschel V. Kasper, M.A., Instructor in Economics (Correspondence Study)
 L. Hamilton May, LL.B., Instructor in Business Law (Correspondence Study)
 Edward J. Moline, B.B.A., Instructor in Accounting (Correspondence Study)
 Roberta J. Nelson, M.A., Instructor in Industrial Relations (Correspondence Study)
 Elvin Peterson, B.B.A., Instructor in Industrial Management (Correspondence Study)
 Harvey B. Safeer, M.A., Instructor in Economics
 Wayne Sorenson, M.A., Research Fellow in Industrial Relations
 Steele S. Stanchfield, B.A., Instructor in Salesmanship (Correspondence Study)
 George W. Ulseth, M.A., Instructor in Accounting (Correspondence Study)

Accounting (Acct)

Some of the following courses in accounting carry full credit toward graduation from the University, and others carry only credit toward the junior and senior certificates. In the first group are the following: 24, 25, 26, 125, and 135. In the second group are: 30, 31, 32, 33, 34, and 35. Both the series 24, 25, 26 and the series 30, 31, 32 cover the basic topics in accounting but the approach is somewhat different. In the first series (24, etc.) the emphasis is on the use of accounting data, while in the

other series more attention is given to bookkeeping techniques. If you are ultimately interested in degree credit, you must register for the series 24; if, on the other hand, you wish bookkeeping and accounting knowledge in order to keep your own records or to do such work for others, the second series would be advisable. It is also fair to warn you that the standard of grading is more severe in the 24 series.

- 24. Principles of Accounting.** The first course in accounting. Topics are: debit and credit; journals; ledger; adjusting, closing, and reversal entries; income statement; statement of retained earnings; balance sheet; and interim statements. (No prerequisite)

Lund — 3 credits — \$27 — 16 lessons

- 25, 26. Principles of Accounting.** Topics of these courses are: entries peculiar to a partnership; entries peculiar to a corporation; cash and internal control; inventories; depreciation; notes and interest; bonds; consolidated statements; reports to stockholders; statement analysis; a brief survey of cost accounting; and managerial use of cost data. (Prerequisite: Acct 24)

Lund — 3 credits each course — \$27 each — 16 lessons each

- 30(c). Accounting I.** The form and content of financial statements; ledgers; debit and credit; journals; control accounts; special books; the trial balance; adjusting and closing entries; the work sheet; and the preparation of financial statements. Each lesson will include a reading assignment in a text and a number of problems to work. (No prerequisite)

Lund — 3 Extension credits only — \$27 — 16 lessons

- 31(c). Accounting II.** Deals mainly with corporation accounting. Formation of a corporation; types of stock; opening entries; donated and other treasury stock; surplus; dividends; reserves; surplus statement; valuation of stocks and bonds. The remainder of the lessons will consider peculiarities of accounting for partnership. (Prerequisite: Acct 30 or equivalent)

Lund — 3 Extension credits only — \$27 — 16 lessons

- 32(c). Accounting III.** Accounting for manufacturing inventory methods; the job order method; process costs; departmental accounting; branch accounting; consolidated statements; funds statements; and an analysis and interpretation of financial statements. Each lesson includes problems which are to be worked and submitted by the student. A longer practice set is also assigned near the end of the course. (Prerequisite: Acct 31 or equivalent)

Lund — 3 Extension credits only — \$27 — 16 lessons

- 33(c). Cost Accounting.** The uses of cost information in modern industry; the accounting mechanism for costs; types of cost systems; the definition of cost terms; the use of the factory ledger; the accounting for materials, their purchase, storage, use; the stores ledger, and the calculation of materials costs; the accounting for labor with particular reference to applying labor costs to production; the accumulation and analysis of overhead and its application to product; cost reports and statements for the management. (Prerequisite: Acct 26 or 32(c) or equivalent)

Lund — 3 Extension credits only — \$27 — 16 lessons

- 34(c). Analysis of Financial Statements.** A review of accounting procedures and adjusting, closing, and reversing entries; financial statements; corporation accounting; analysis of financial statements; statement of application of funds. (Prerequisite: Acct 26 or 32 or equivalent)

Lund — 3 Extension credits only — \$27 — 16 lessons

- 35(c). Simplified Municipal Accounting.** An introduction is given to some of the general problems arising in municipal service which are related to the task of accounting for the funds involved. The text suggests fundamental and technical adaptation of governmental accounting procedures. Attempts to give some practical answers, yet remaining understandable to those with limited or no accounting knowledge. (No prerequisite)

Moline — no credit — \$18 — 12 lessons

125. **Auditing Principles and Procedures.** Instruction in which a set of working papers and an audit report are prepared. The purposes and principles of auditing. The verification and certification of published statements by public accountants. 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: One course in intermediate accounting or consent of instructor)

Lund — 4 credits — \$36 — 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 what types of income are taxable and which are not. Consideration is then given to gains and losses, dividends, and deductions. Actual preparation of tax returns for individuals and corporations is practiced as a final step. (Prerequisite: first-year elementary course in accounting at college level, or equivalent)

Heller — 3 credits — \$27 — 16 lessons

Governmental Accounting. See page 54.

Business Finance (BFin)

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 — \$27 — 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)

May — 3 credits — \$27 — 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)

May — 3 credits — \$27 — 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)

May — 3 credits — \$27 — 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)

May — 3 credits — \$27 — 16 lessons

Economics (Econ)

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)
Kasper — 3 credits — \$27 — 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)
Safeer — 3 credits — \$27 — 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)
3 credits — \$27 — 16 lessons — Registrations accepted after September 1, 1962
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)
Kasper — 3 credits — \$27 — 16 lessons
104. **International Economics.** Principal issues involved in international economic relationships. Significance of foreign trade and investment, international payments and foreign exchange, the gold standard, the International Monetary Fund and Bank, and the arguments over tariffs and foreign aid policies. (Prerequisite: Econ 2 or equivalent)
3 credits — \$27 — 16 lessons — Registrations accepted after September 1962
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 52 or equivalent)
Nelson — 3 credits — \$27 — 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 52 or equivalent)
Nelson — 3 credits — \$27 — 16 lessons

Industrial Relations (IR)

(See also Economics, page 24)

- 30(c). **Supervision I.** A study of the basic principles of supervision and leadership. Survey of the problems of industrial relations and personnel management met with in day-to-day supervision with emphasis upon human relations. Practical aspects of these problems are emphasized. Included is a coverage of selection, induction, and training of employees, status of supervisors, merit rating, giving orders, and labor legislation affecting the supervisor's job. (No prerequisite)
Sorenson — 3 Extension credits only — \$27 — 16 lessons
- 31(c). **Supervision II.** Covers advanced techniques based on principles of supervision discussed in 30(c). Morale measurement, job analysis, employee selection and training, principles of work organization, and employee communications are discussed. (Prerequisite: IR 30(c))
Sorenson — 3 Extension credits only — \$27 — 16 lessons
52. **Modern Industrial Relations: Labor Marketing.** Introduction to current employment relationships; an economic approach and analysis. The application and conservation of human resources in employment, 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)
R. Nelson — 3 credits — \$27 — 16 lessons

72. **Modern Industrial Relations: Manpower Management.** Personnel management and labor relations, the development and application of effective workteams within firms and agencies. Overview of policy and practice in major manpower management functions of staffing, training, communications, motivation, compensation, and morale maintenance. (Prerequisite: IR 52)

Heneman — 3 credits — \$27 — 16 lessons

Insurance (Ins)

53. **Risk Management and Insurance.** Recognition, measurement, and evaluation of insurable personal, property, and liability risks of economic units. Tools of risk management; assumption, loss prevention, transfer, and others with emphasis on insurance. Design and implementation of the optimum risk management program. Government regulation of insurance. (Prerequisite: Econ 2 or equivalent)

Williams — 3 credits — \$27 — 16 lessons

73. **Life and Accidental Injury and Sickness Insurance.** Nature and relative importance of insurable personal risks; analysis of life and accidental injury and sickness contracts; programming; estate planning; business insurance; pricing, underwriting, and marketing methods. (Prerequisite: Ins 53 or consent of instructor)

Williams — 3 credits — \$27 — 16 lessons

93. **Property and Liability Insurance I.** Nature and relative importance of insurable 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 — \$27 — 16 lessons

Management (Mgmt)

- GC 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 on retailing. (No prerequisite)

Ulseth — 3 credits in General College — \$27 — 16 lessons

Marketing (Mktg)

- 30(c). **Salesmanship.** A course in the art and techniques of effective salesmanship. Major emphasis placed on practical aspects with various case histories presented. (No prerequisite)

Stanchfield — 3 Extension credits only — \$27 — 16 lessons

Office Management (OMgt)

99. **Office Management—Management of Administrative Services.** Problems involving organization, planning, and control of administrative services. Communications; records management; equipment analysis and control; forms and supplies; flow of work, layout, and environment; office personnel. (Prerequisite [for credit]: Econ 2 or equivalent)

Donaldson — 3 credits — \$27 — 16 lessons

Production (Prod)

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

ning and control. (Prerequisite: Econ 2 or equivalent; open to businessmen with prerequisite on a noncredit basis)

Peterson — 3 credits — \$27 — 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 and decision-making. (Prerequisite: Math 10 or 15 or equivalent)

Hardcopf — 3 credits — \$27 — 16 lessons

Business English. See page 36.

CHILD DEVELOPMENT (CD)

(See Education, page 28)

Armin Grams, Ph.D., Associate Professor of Child Development

William R. Charlesworth, Ph.D., Assistant Professor of Child Development

Frank B. W. Harper, Ph.D., Assistant Professor of Child Development

Nancy Mann, M.A., Instructor in Child Development

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)

Charlesworth — 3 credits — \$27 — 16 lessons

81. **Adolescent Psychology.** Social, physical, mental, emotional, and personality development during adolescence. (Prerequisite: Psy 1 and 2)

Harper — 3 credits — \$27 — 16 lessons

83. **Guidance of Children's Activities.** Techniques of guiding children's interests and activities with emphasis on creative materials and group activities. (Prerequisite: CD 80)

Mann — 3 credits — \$27 — 16 lessons

86. **Psychology of the Gifted Child.** Psychology and development of high intellectual ability and of special talents. (Prerequisite: CD 80)

Grams — 3 credits — \$27 — 16 lessons

89. **The Psychology of Parent-Child Relationships.** Discussion of parent-child relationships and family situations. Evaluation of relevant research literature. (Prerequisite: CD 80)

Grams — 2 credits — \$18 — 12 lessons

CHINESE AND CHINESE CIVILIZATION

Richard B. Mather, Ph.D., Associate Professor and Chairman, Department of 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. 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)

Mather — 5 credits — \$45 — 27 lessons

20. **Asian Civilization: China.** A readings course to introduce student 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)

Mather — 3 credits — \$27 — 16 lessons — Registrations accepted after July 1, 1962

CLASSICS

Roy A. Swanson, Ph.D., Associate Professor of Classics

24. **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)

Swanson — 3 credits — \$27 — 16 lessons

EDUCATION (Ed)

Donovan Johnson, Ph.D., Professor of Education

Harry W. Kitts, Ph.D., Professor of Agricultural Education

Adrian Dupuis, Ph.D., Associate Professor of Education, Marquette University

Dewey G. Force, Jr., Ph.D., Associate Professor of Educational Psychology

Helen P. Mudgett, M.A., Associate Professor of Intercultural Education

Edward G. Summers, M.A., Instructor in Psychology

Note—See Child Development, page 27, for courses in Child Training, Child Psychology, Guidance of Children's Activities, Adolescent Psychology, The Gifted Child, etc. These courses are accepted for credit in College of Education. See page 50 for courses in physical education.

- 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. The central objective of this course is to help teachers clarify their thinking in respect to the many conflicting viewpoints in educational philosophy. (No prerequisite)

Dupuis — 4 credits — \$36 — 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)

Kitts — 3 credits — \$27 — 16 lessons

60. **Introduction to Measurement and Statistics.** A study of 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)

Johnson — 3 credits — \$27 — 16 lessons

65. **Teaching of 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 con-

tent of importance in elementary education are identified and special attention is given to their explanation. (No prerequisite)

Summers — 3 credits — \$27 — 16 lessons

- 77. 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. (May be substituted for HEd 141 in undergraduate curriculums; not open to students who have taken HEd 141)

Dupuis — 3 credits — \$27 — 16 lessons

- EPsy. 82. Education of Exceptional Children.** Provides an overview of the field of special education. The major objective is to develop a beginning understanding of the characteristics and needs of socially maladjusted, gifted, mentally retarded, crippled, visually and auditorially handicapped children. A number of general problems in special education (such as prevention of handicaps, current trends, research needs, teacher training opportunities, patterns of school organization and administration, etc.) are also given brief consideration. Especially planned for regular classroom teachers, counselors, supervisors, and administrators. Also is a suitable first course for students working for special certificates to teach exceptional children. (Prerequisite: Psy 1 and 2 or equivalent or teacher's certificate)

Force — 3 credits — \$27 — 16 lessons

- HEd 92(c). Techniques of Intergroup Education for Rural Schools.** Designed to help rural teachers gain clearer insight into the need of their school community for a better understanding, both of themselves and of others. (No prerequisite)

Mudgett — 2 credits — \$18 — 12 lessons (Materials \$6.50)

ENGINEERING

Robert Edward Summers, M.S.(Ch.E.) M.E., Dean of Admissions and Records and Professor of Mechanical Engineering

Miles Kersten, Ph.D., Professor of Civil Engineering

James K. Threlkeld, Ph.D., Professor of Mechanical Engineering

Paul A. Cartwright, M.S., Associate Professor of Electrical Engineering

Immanuel C. Fischer, M.S., Associate Professor of Engineering

Edward S. Loye, Ph.D., Associate Professor of Mathematics

Theodor W. Thomas, M.S.(C.E.), Associate Professor of Civil Engineering

Lewis G. Palmer, M.A., Assistant Professor of Mechanical Engineering

Jerome L. Novotny, M.S., Instructor in Mechanical Engineering

Russell S. Nyquist, M.S., Instructor in Mechanical Engineering

The Institute of Technology consists of the College of Engineering, the School of Architecture, the School of Chemistry, the School of Mines and Metallurgy, and the School of Physics. See page 10 for the amount of credit earned by correspondence courses for degrees in 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 — \$27 — 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: knowledge of elementary algebra, physics, and chemistry; if credit is desired, prerequisite is MM 128 or 40 or consent of instructor)

Thomas — 3 credits — \$27 — 16 lessons

Electrical Technology (ET)

- 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. (No prerequisite)

Cartwright — 3 Extension credits only — \$27 — 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)

Cartwright — 3 Extension credits only — \$27 — 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—volt-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: ET 1(c) or equivalent in experience and consent of instructor)

Cartwright — 3 Extension credits only — \$27 — 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) and 2(c) or equivalent in experience)

Cartwright — 2 Extension credits only — \$18 — 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))

Cartwright — 2 Extension credits only — \$18 — 12 lessons

- Basic Mathematics and Practical Electricity for Electrical Workers.** A great deal of the material covered is very basic in nature although later courses are directed toward individuals doing electrical maintenance and construction work for power utilities. The work is divided into 4 separate courses, each course consisting of 12 lessons (plus an examination if credit is desired).

A. Basic Mathematics (Algebra).

Cartwright — 2 Extension credits — \$18 — 12 lessons

B. Basic Mathematics (Trigonometry).

Cartwright — 2 Extension credits — \$18 — 12 lessons

C. DC Circuits and Fundamentals of Electricity.

Cartwright — 2 Extension credits — \$18 — 12 lessons

D. DC Equipment and Introduction to AC Circuits.

Cartwright — 2 Extension credits — \$18 — 12 lessons

Engineering Graphics (EG)

14. **Engineering Graphics.** Engineering representation and analysis including systems of projection, co-ordinate systems, and solution of space problems with mathematical correlation. Engineering geometry, shape, description, sketching, and pictorial illustration. (Prerequisite: solid geometry or ITM 8)
Palmer — 3 credits — \$27 — 16 lessons
15. **Engineering Graphics.** Engineering representation and analysis. Continuation of graphic solution of space problems. Intersections, developments, size description, common devices, and application of theory and standard practices to graphic communication. (Prerequisite: EG 14...and ITM 11 or concurrent enrollment in ITM 11)
Palmer — 3 credits — \$27 — 16 lessons
16. **Engineering Graphics.** Graphical computation of engineering problems involving graphic algebra, calculus, and statics. Functional scales, nomography, representation and analysis of empirical data. (Prerequisite: EG 15...and ITM 12 or concurrent enrollment in ITM 12)
Palmer — 3 credits — \$27 — 16 lessons

General Engineering (GE)

70. **Slide Rule.** Practical course for engineers and office workers. Position of decimal point in computation stressed. (No prerequisite)
Palmer — 1 credit — \$9 — 6 lessons — slide rule \$3.25 and up

Mathematics (ITM)

(For additional credit courses in mathematics, see page 47)

- 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 — \$27 — 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 ITM 1[c])
Fischer — no credit — \$27 — 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
9. **Higher Algebra.** Review of elementary algebra, linear equations, factoring, fractions, simultaneous linear equations, exponents, radicals, graphical methods, quadratic equations, systems of quadratics, ratio and variation, binomial theorem, logarithms, progressions. (Prerequisite: 1 year of elementary algebra in high school or equivalent)
Loye — $\frac{1}{2}$ entrance unit — \$25 — 20 lessons

Note—ITM 8 and 9 meet the present entrance requirements in mathematics of the Institute of Technology.

11. **College Algebra and Trigonometry I.** Review of elementary algebra, factoring, fractions, functions and graphs, linear equations, determinants, exponents and radicals, quadratic equations, inequalities, systems of quadratic equations, proportion and variation, mathematical induction, binomial theorem, trigonometric functions, right triangles, oblique triangles, radian measure, slide rule. (Prerequisite: ITM 9 or equivalent)
Loye — 5 credits — \$45 — 27 lessons
12. **College Algebra and Trigonometry II.** Progressions, logarithms. Trigonometric formulas and identities, trigonometric curves, inverse trigonometric functions, trigonometric equations, complex numbers. Theory of equations, permutations, combinations, probabilities, partial fractions, hyperbolic functions. (Prerequisite: ITM 11 or equivalent)
Loye — 5 credits — \$45 — 27 lessons
- 13A. **Calculus I: Analytic Geometry and Calculus.** Rectangular co-ordinates, locus and equation, straight line, conic sections. Limit, derivative, rules of differentiation, rates, curve tracing, maxima and minima. Elements of integration and applications. (Prerequisite: ITM 10, 11, and 12 or equivalent)
Loye — 5 credits — \$45 — 27 lessons
- 24A. **Calculus II: Analytic Geometry and Calculus.** Mean value theorem, definite integral. Differentiation and integration of elementary functions, polar co-ordinates. Applications of integration: plane areas, length of curve, area of curved surfaces, volumes, moments, centroids, moments of inertia, hydrostatic pressure, work. (Prerequisite: ITM 13A or equivalent)
Fischer — 5 credits — \$45 — 27 lessons
- 25A. **Calculus III: Analytic Geometry and Calculus.** Parametric equations, vector algebra, and vector calculus. Solid analytic geometry treated by vector methods, partial differentiation, geometry of surfaces, differentials, directional derivative, maxima, and minima. Multiple integrals, volume, surface area, physical applications. (Prerequisite: ITM 24A or equivalent)
Fischer — 5 credits — \$45 — 27 lessons
- 26A. **Calculus IV: Differential Equations and Calculus.** Infinite series; convergence tests, Taylor's formula and expansion of functions. Differential equations; equations of first order; standard methods of solutions; linear equations with constant coefficients, applications; simultaneous equations, integration by series, numerical methods. (Prerequisite: ITM 25A or equivalent)
Loye — 5 credits — \$45 — 27 lessons
80. **Elementary Differential Equations.** Equations of first order, singular solutions; linear equations with constant coefficients, simultaneous equations, integration in series. (Prerequisite: ITM 25 or equivalent)
Loye — 3 credits — \$27 — 16 lessons

Mechanical Engineering (ME)

- 1(c). **Steam Power Plants I.** For boiler operators. Fuels, combustion, furnaces, steam generators, pumps, pipes, and fittings. Boiler room practices. Properties of steam; boiler-water conditioning. (Prerequisite: proficiency in arithmetic)
Summers — 3 Extension credits only — \$27 — 16 lessons
- 2(c). **Introduction to Heat Transfer.** Examination of the fundamentals of heat transfer by conduction, convection, and radiation, and their application to engineering analysis. (Prerequisite: basic physics and differential and integral calculus)
Novotny — 3 Extension credits only — \$27 — 16 lessons
- 4(c). **Air Conditioning.** Fundamental topics involved with year-around air conditioning. Definitions and fundamental terms, comfort conditions for people, heat gains and cooling loads for spaces, properties of atmospheric air, psychrometric charts, air conditioning calculations, refrigeration equipment and refrigeration calculations, use of

water in air conditioning, centrifugal fans, and air flow in ducts. Primary emphasis is upon summer air conditioning. (Prerequisite: elementary algebra or consent of instructor)

Threlkeld — 3 Extension credits only — \$27 — 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 — \$45 — 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 — \$45 — 27 lessons

Mechanics and Materials (MM)

26. **Engineering Statics.** Characteristics of a force and of a couple, resolution of force systems, equilibrium of rigid bodies, analysis of framed structures, graphical methods. Centroids and moment inertia. Virtual work. (Prerequisite: ITM 25A; not open to University of Minnesota students)

Fischer — 5 credits — \$45 — 27 lessons

27. **Rigid-Body Mechanics I.** Vector algebra. Application of the equations of equilibrium to the analysis of simple engineering structures and machines. Nature and influence of friction. Elementary theory of statically determinate framed structures. (Prerequisite: ITM 25A and Phys 14)

Fischer — 3 credits — \$27 — 16 lessons

28. **Rigid-Body Mechanics II.** Application of the principles of particle motion. Kinematics. Impulse-momentum and work-energy principles. Potential and potential energy, motion in a central force field. Introduction to forced and free mechanical vibrations. (Prerequisite: MM 27 and ITM 26A)

Fischer — 3 credits — \$27 — 16 lessons—Registrations accepted after June 1, 1962

127. **Engineering Dynamics.** Kinematics and its application to structural elements. Dynamics of particles and of rigid bodies. Work and energy. Impulse and momentum. Introduction to mechanical vibrations. (Prerequisite: MM 26; not open to students at the University of Minnesota)

Fischer — 5 credits — \$45 — 27 lessons

128. **Engineering Solid Mechanics.** Mechanical and elastic properties of engineering materials. Stress, strain, and deformation in continuous solids. Applications to simply stressed members, joints, shafts, beams, and columns. State of stress at a point, combined stresses, and Mohr's circle. (Prerequisite: MM 26; not open to students at the University of Minnesota)

Fischer — 5 credits — \$45 — 27 lessons

Note—The MM sequence 26, 127 and 128 will be discontinued when books or study guides become unavailable. The additional courses in the new MM series (29,

Rigid-Body Mechanics III; 40, Deformable-Body Mechanics I; and 41, Deformable-Body Mechanics II) may be developed in 1963 or 1964. Students interested in these courses, or a description of the courses, should write to the Correspondence Study Department.

ENGLISH

(See Humanities, page 44)

Harold J. Alford, M.A., Associate Professor of English
 Robert R. Owens, Ph.D., Associate Professor of English, UMD
 Clifford I. Haga, B.A., Assistant Professor of English
 Helen A. Anderson, M.A., Instructor in English (Correspondence Study)
 Sumner J. Ferris, M.A., Instructor in English (Correspondence Study)
 Ralph Haug, Ph.D., Instructor in English (Correspondence Study)
 Louise Klohn, M.A., Instructor in English (Correspondence Study)
 John Lippert, B.S., Instructor in English (Correspondence Study)
 Agnes Macdonald, M.A., Instructor in English (Correspondence Study)
 Robert Merideth, M.A., Instructor in English, Miami University

English (Engl)

Selecting Books for Children. See page 56.

- 1B. Freshman English I.** A combined course in composition (3 credits) and literature (1 credit). The entire series (1B-2B-3B) concentrates upon developing the student's skill in writing expository prose; the first (1B) emphasizes clarity and correctness, especially in the sentence and paragraph. The literature consists of assignments in narrative prose. (Prerequisite: Preparatory English or satisfactory score on English Placement Test, or satisfactory Trial Lesson)
 Haug — 4 credits — \$36 — 21 lessons
- 2B. Freshman English II.** Continuation of Engl 1B. Emphasis is on effectiveness in composition, how to use printed sources, and how to draw inferences from them. Several plays are studied, and much of the writing of the course concerns them. (Prerequisite: Engl 1B)
 Haug — 4 credits — \$36 — 21 lessons
- 3B. Freshman English III.** Continuation of Engl 2B. Emphasis is on clarity of thought and organization of material, culminating in the preparation of a research paper. English and American poems provide several topics for critical writing. Students who do not have access to libraries may arrange a special writing project with the instructor. (Prerequisite: Engl 2B)
 Haug — 4 credits — \$36 — 21 lessons
- 4(c). Masterpieces of World Literature.** For those who want to learn to read well, to raise the standard of their reading, and to acquaint themselves with the classics which everyone should know. The books on the reading list have been selected from the world's great stories and are treated in a way to help the reader discuss intelligently with others the problems of today. Of interest to prospective college students, club women, book reviewers, writers, teachers, and other professional people, as well as to homemakers and those in the business world who realize the opportunities that a command of reading and intelligent conversation has to offer. (No prerequisite; cannot be used for credit toward teachers' certificates.)
 Klohn — 2 Extension credits only — \$18 — 12 lessons
- 21.** Introduction to Literature I.** An intensive study of the leading writers of poetry and prose and of their historical background. The entire course of 3 terms (21, 22,

** Students may enter any course of 21, 22, 23. Two courses are required as a prerequisite for a minor sequence; the second and third are required for a teacher's certificate.

23) begins with Marlowe and ends with Arnold. A knowledge of English history from Elizabeth to Victoria is required. The first term includes Marlowe, Spenser, Bacon, Browne, Milton, Bunyan, and Shakespeare. (Prerequisite: Freshman English)

Anderson — 5 credits — \$45 — 27 lessons

22.** Introduction to Literature II. Continuation of Engl 21. Addison and Steele, Swift, Pope, Fielding, Johnson, Boswell, Sheridan, Congreve, and Dryden. (Prerequisite: Freshman English)

Anderson — 5 credits — \$45 — 27 lessons

23.** Introduction to Literature III. Continuation of Engl 22. Wordsworth, Coleridge, Lamb, Byron, Shelley, Keats, Carlyle, Tennyson, Browning, and Arnold. (Prerequisite: Freshman English)

Anderson — 5 credits — \$45 — 27 lessons

39. Twentieth-Century Literature III. The novel since Thomas Hardy. Covers at least the following 3 English novels: Thomas Hardy's *Tess of the D'Urbervilles*, Joseph Conrad's *Lord Jim*, Arnold Bennett's *The Old Wives Tale*; and the following 3 American novels: Ernest Hemingway's *A Farewell to Arms*, Thomas Wolfe's *Of Time and the River*, John Steinbeck's *The Grapes of Wrath*. (Prerequisite: Freshman English)

Anderson — 3 credits — \$27 — 16 lessons

52. English Novel I. A study of the English novel from its 18th-century beginning with the work of Defoe, through its development by Richardson, Fielding, Smollett, and Sterne, to its early 19th-century refinement in the realism of Jane Austen and the romance of Sir Walter Scott. Emphasis will be placed upon the contributions of the successive works to the evolution of the novel as a literary form. (Prerequisite: Freshman English and 5 additional credits in English)

Anderson — 3 credits — \$27 — 16 lessons

53. English Novel II. A study of the novel during the age of Victoria, showing the progression from older forms and earlier taste toward the anticipation of the modern naturalistic and psychological novel at the end of the 19th century. Works of Thackeray, Dickens, the Brontë sisters, George Eliot, Trollope, Meredith, and Hardy will be read. (Prerequisite: Freshman English and 5 additional credits in English)

Anderson — 3 credits — \$27 — 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 plays. (Prerequisite: Engl 1B-2B-3B and 5 additional credits in English)

Owens — 3 credits — \$27 — 16 lessons

56. Shakespeare II. Continuation of Engl 55. Is devoted to Shakespeare's later career from 1600 to 1611. It includes tragedies, romantic comedies, romances, and one problem comedy. (Prerequisite: Engl 55 or consent of instructor)

Owens — 3 credits — \$27 — 16 lessons

72. American Literature I. The development of American literature and thought from the beginnings through the early American Renaissance. (Prerequisite: Engl 3A or 3B or Comm 3 and 5 additional credits or 5 credits in 21-22-23)

Merideth — 3 credits — \$27 — 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)

Merideth — 3 credits — \$27 — 16 lessons

** Students may enter any course of 21, 22, 23. Two courses are required as a prerequisite for a major sequence; the second and third are required for a teacher's certificate.

74. **American Literature III.** Continuation of Engl 73. American literature from the end of the 19th century to the present. (Prerequisite: Engl 73)
Merideth — 3 credits — \$27 — 16 lessons
75. **Chaucer. *The Canterbury Tales*.** A close study of the last and most varied work of the founder of the English poetic tradition. The reading is done in the original early English, but only such emphasis is placed on it as serves to illuminate the quality and meaning of the poetry. Particular attention is paid to Chaucer's variety of literary forms, his skill at characterization, his place as a representative (and credit) of medieval Christianity and culture, and his poetic artistry. (Prerequisite: Freshman English and 5 additional credits in English)
Ferris — 4 credits — \$36 — 21 lessons

Composition (Comp)

Vocabulary Building. See page 59.

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 — \$18 — 12 lessons

Preparatory English. The fundamentals of good English with emphasis upon the mechanics of writing, intended to give additional drill to those who need further preparation for college English. (No prerequisite)

Klohn — no credit — \$18 — 12 lessons

Review of Business English. For those who have been out of school or who had poor preparation for Business English while in school. Modern, streamlined sentence structure, paragraphing, punctuation, and spelling. Brief introduction to letter form and organization. Emphasis on brevity, accuracy, meaning, and vividness. (No prerequisite)

Lippert — 3 Extension credits only — \$27 — 16 lessons

1(c). **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 — \$27 — 16 lessons

2(c). **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)

Lippert — 3 Extension credits only — \$27 — 16 lessons

27. **Advanced Writing I—Exposition.** Study and writing of essays with emphasis on structure and organization. The student is free to choose his own essay subjects. Intended to aid the student in working out individual problems. (Prerequisite: Freshman English or equivalent)

Alford — 3 credits — \$27 — 16 lessons

28. **Advanced Writing II—Narration and Description.** Study of principles of description and narration with analysis of specimens and exercises in writing. (Prerequisite: Comp 27)

Alford — 3 credits — \$27 — 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 — \$27 — 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 4 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 — \$27 — 16 lessons

80(c). Independent Writing. This is a course in criticism of manuscript. There are no assignments or lesson materials. It is intended for an advanced student who is working on his own project and who wants criticism and suggestions from an instructor. It consists of the letters that student and instructor exchange. These are based on submitted material. The instructor will read approximately 8,000 words which may be divided into assignments as the student wishes. Poetry is not covered in the course.

Anderson — 3 Extension credits only — \$27

FAMILY STUDIES (FamS)

Maurine Hansen, M.A., Instructor in Family Studies

1(c). Building a Better Marriage. Designed to gain a clearer picture of marriage and of participation in a satisfying family life. The general areas covered include: what you bring to marriage—backgrounds and self-understanding; what you expect of marriage—changing roles and goals for men and women, choice of mate and engagement; what you put into marriage—marriage adjustments including husband-wife interactions, finances, children, social and family relationships, and facing crises. Arrangements may be made for attending 1 or 2 on-campus sessions, day or evening classes to view films. (No prerequisite)

Hansen — 3 credits — \$27 — 16 lessons

FORESTRY (For)

Frank H. Kaufert, Ph.D., Professor and Director, School of Forestry

Donald P. Duncan, Ph.D., Professor of Forestry

1A. Conservation of Natural Resources. Current status, utilization, and sound management of the more significant renewable natural resources upon which man is dependent. Conservation principles and their application to soil, water, forests, grasslands, and wildlife. (No prerequisite; not open to students who have taken other collegiate courses in renewable natural resource conservation)

Kaufert, Duncan — 3 credits — \$27 — 16 lessons—Registrations accepted after September 1, 1962

FRENCH (Fr)

Henry E. Kalb, M.A., Teaching Assistant in Romance Languages

A 33 $\frac{1}{3}$ -rpm record, "The Sounds of French" 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 6, Minnesota. The price \$1.50. Also available on phonotape for \$2.50.

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

Kalb — 5 credits — \$45 — 27 lessons

2. **Beginning French II.** Continuation of Fr 1. (Prerequisite: Fr 1, or 1 year of high school French)
Kalb — 5 credits — \$45 — 27 lessons
3. **Intermediate French I.** Review of grammar; composition; reading of representative authors. (Prerequisite: Fr 2, or 2 years of high school French)
Kalb — 5 credits — \$45 — 27 lessons
4. **Intermediate French II.** Continuation of Fr 3. (Prerequisite: Fr 3, or 3 years of high school French)
Kalb — 5 credits — \$45 — 27 lessons

GEOGRAPHY (Geog)

Frederic R. Steinhauser, Ph.D., Assistant Professor of Geography

- 7(c). **Geography of Minnesota.** A geographic study of the human and physical resources of Minnesota with emphasis on major regional differences. The map study of various distributional patterns is stressed. (No prerequisite)
Steinhauser — 4 credits — \$36 — 21 lessons

GEOLOGY (Geol)

Robert E. Sloan, Ph.D., Assistant Professor of Geology

2. **Historical Geology.** An introductory treatment of the geological history of the earth. The changing physical conditions and the record of life during geologic times, with emphasis on the North American continent. (Prerequisite: Geol 1 or 8)
Sloan — 3 credits — \$27 — 16 lessons
8. **Introductory Geology.** An introductory treatment of the materials of the earth and of geologic processes; principles of earth sculpture, glaciation, volcanic activity, mountain building, etc., as a key to the interpretation of the surface features and the history of the earth. (No prerequisite)
Sloan — 5 credits — \$45 — 27 lessons

GERMAN (Ger)

Herman Ramras, Ph.D., Professor and Chairman, Department of German
Edwin F. Menze, Ph.D., 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 is also available for approximately \$4.50. 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 — \$45 — 27 lessons
2. **Beginning German II.** Continuation of Ger. 1. (Prerequisite: Ger 1, or 1 year of high school German)
Ramras — 5 credits — \$45 — 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 — \$45 — 27 lessons

- 4. Intermediate German.** Selections from modern narrative and descriptive prose. Assigned outside readings and reports. (Prerequisite: Ger 1, 2, and 3 or equivalent)
Menze — 5 credits — \$45 — 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 — \$27 — 16 lessons
- 17B. German for Graduate Students.** Designed to give the graduate student some experience in intensive reading of selections from many areas in the sciences and in the humanities. Progress in the ability to read will be facilitated by constant criticism of the student's efforts. After he completes Ger 17B, the student should be able to read the 200 or 300 pages in his major field, which the Graduate School suggests is the minimum preparation for the German Graduate Reading Examination. (Prerequisite: Ger 17A or 2 quarters of elementary German or 2 years of high School German or equivalent)
Menze — no credit — \$27 — 16 lessons
- 24. Introduction to Chemical German.** Selections of simple chemical German prose. Vocabulary and grammatical exercises. (No prerequisite)
Menze — 3 credits — \$27 — 16 lessons
- 25-26. Chemical German.** Reading of works on chemistry. Vocabulary exercises. (Prerequisite: Ger 24, 1, or 1 year of high school German)
(25) Menze — 3 credits — \$27 — 16 lessons
(26) Menze — 3 credits — \$27 — 16 lessons
- 33. Medical German.** Intended primarily for medical students. Articles on anatomy, biology, embryology, comparative anatomy, surgery, and other fields of medicine. (Prerequisite: Ger 3 or equivalent)
Menze — 5 credits — \$45 — 27 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)
Menze — 2 credits — \$18 — 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 — \$18 — 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 — \$18 — 12 lessons
- 73. Drama: The Classical Period.** Selected plays of Lessing, Schiller, and Goethe; with assigned readings and reports. (Prerequisite: Ger 4 or equivalent)
Menze — 3 credits — \$27 — 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 — \$27 — 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 — \$27 — 16 lessons

GREEK (Grk)

(See Classics, page 28)

Roy A. Swanson, Ph.D., Associate Professor of Classics

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

Swanson — 5 credits — \$45 — 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 student to read classical Greek well, and the New Testament Greek very well, with the aid of a dictionary. (Prerequisite: Grk 1 or equivalent or consent of instructor)

Swanson — 5 credits — \$45 — 27 lessons

HEALTH (PubH)

Murray Bates, M.D., 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 10C [Human Biology] in General College or PubH 2, 5, 50 or 51)

Bates — 2 credits — \$18 — 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 10C in General College or PubH 2, 3, 4, 5 or 51)

Bates — 3 credits — \$27 — 16 lessons

HISTORY (Hist)

(See Asian Civilization: China, page 28)

(See European Travel, page 60)

Maude L. Lindquist, Ph.D., Professor and Head, Department of History, UMD

Tom B. Jones, Ph.D., Professor of History

Donald F. Warner, Ph.D., Professor of History, Wisconsin State College (Eau Claire)

Clarke A. Chambers, Ph.D., Associate Professor of History

David W. Noble, Ph.D., Associate Professor of History

Jeanne C. Traphagen, Ph.D., Assistant Professor of History

George A. Olkhovsky, M.A., Instructor in History (Correspondence Study)

Mary L. White, B.S., 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 — \$27 — 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 — \$27 — 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 — \$27 — 16 lessons

4. **English History I.** Conquest and settlement, the feudal age, foreshadowings of limited monarchy and popular government. (No prerequisite)
White — 3 credits — \$27 — 16 lessons
5. **English History II.** Tudors and Stuarts, parliament versus king, colonization. (No prerequisite)
White — 3 credits — \$27 — 16 lessons
6. **English History III.** The coming of democracy, Britain and Europe, Empire and Commonwealth. (No prerequisite)
White — 3 credits — \$27 — 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 79)
Lindquist — 4 credits — \$36 — 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 — \$36 — 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 — \$27 — 16 lessons
- 14A. **Basic Readings in Ancient Civilization I.** An introduction to the literature of the Ancient Near East and its relation to the Old Testament. The reading will include translations of Babylonian and Egyptian epics, religious texts, folk tales, and public records, Assyrian, Hittite, and North Syrian literature as well as the Greek epics. (Prerequisite: Hist 14 or concurrent registration)
Jones — 2 credits — \$18 — 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 — \$27 — 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 — \$18 — 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 de-

cline 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; suggested 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 — \$27 — 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 — \$18 — 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)

Traphagen — 4 credits — \$36 — 21 lessons

- 21. American History II, 1844-1896.** Manifest Destiny and the Mexican War; problems of slavery; politics of sectionalism; roots of the Civil War; the war at home and abroad; Reconstruction; the passing of the frontier; the triumph of industrial capitalism; the problems of labor; immigration; agriculture and the Populist revolt. (No prerequisite)

Noble — 4 credits — \$36 — 21 lessons

- 22. American History III, 1896 to Present.** Resurgence of Manifest Destiny and the Spanish-American War; social problems at the turn of the century; the theory and practice of progressivism; Roosevelt, Taft, and Wilson; World War I; normalcy and reaction; Harding, Coolidge, and Hoover; the Jazz Age; retreat to isolationism; depression and the New Deal; the world crisis and Pearl Harbor; problems of peace; Truman and foreign policy; the Eisenhower administrations. (No prerequisite)

Chambers — 4 credits — \$36 — 21 lessons

- 92. History of the Far West.** A study of 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 — \$27 — 16 lessons — Registrations accepted after June 1, 1962

- 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 — \$27 — 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 — \$27 — 16 lessons

- 100. History of the Ancient Near 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 — \$27 — 16 lessons

- 101. 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 Hist 100)

Jones — 3 credits — \$27 — 16 lessons

- 102. 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 Hist 100)

Jones — 3 credits — \$27 — 16 lessons

- 125. 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 — \$27 — 16 lessons

- 126. 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 — \$27 — 16 lessons

- 127. 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 — \$27 — 16 lessons

- 159. 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)

Traphagen — 3 credits — \$27 — 16 lessons—Registrations accepted after June 1, 1962

HOME ECONOMICS (HE)

Gladys Babcock, Ph.D., 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 — \$27 plus \$1.50 for materials — 16 lessons

HORTICULTURE (Hort)

Robert A. Phillips, M.S., 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 — \$27 — 16 lessons

- 60. Home Landscape Planning.** Planning the home grounds for greater use and enjoyment, with an introduction to the principles of landscape design, 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 — \$27 — 16 lessons

HUMANITIES (Hum)

(See Asian Civilization: China, page 28)

Gwendolyn K. E. Wetter, M.A., Instructor (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)

Wetter — 3 credits — \$27 — 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. Writings by the influential scientists and philosophers of the age, including essays by Lamarck, Darwin, Wallace, John Dewey, 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)

Wetter — 3 credits — \$27 — 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)

Wetter — 3 credits — \$27 — 16 lessons

INTERIOR DECORATION

(See Art, page 21)

JAPANESE

Edward M. Copeland, M.A., Assistant Professor of 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 approximately \$6.

1. **Beginning Japanese I.** As an introduction to reading and writing modern Japanese, the course provides the basic grammar and vocabulary for learning to read modern fiction, newspapers, magazine styles, as well as for conversational Japanese. (No prerequisite)
Copeland — 5 credits — \$45 — 27 lessons

JOURNALISM (Jour)

George S. Hage, Ph.D., Associate Professor of Journalism
John C. Sim, M.A., Associate Professor of Journalism
Harold W. Wilson, M.A., Associate Professor of Journalism
Robert Lindsay, M.A., Instructor of Journalism

13. **Introduction to Reporting.** Study of the newspaper audience; structure and writing of the news story; study of news values; exercises in journalistic style; analysis of newspapers; news gathering and reportorial methods. Numerous writing assignments. (Prerequisite: Freshman English or equivalent)
Sim — 3 credits — \$27 — 16 lessons
14. **Newspaper Reporting I.** Continued study of the news gathering and of writing the "straight" news story; the human interest or feature story; analysis of newspapers; special types of reporting; advanced interviewing. Numerous writing assignments. (Prerequisite: Jour 13 or consent of instructor)
Sim — 3 credits — \$27 — 16 lessons
15. **Newspaper Reporting II.** Study of newspaper law, including libel, rights of the press, study of "privilege," and other legal regulations affecting the press; advanced reporting; the interpretative story; the newspaper feature story. Numerous writing assignments. (Prerequisite: Jour 14 or consent of instructor)
Sim — 3 credits — \$27 — 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 — \$27 — 16 lessons — Registrations accepted after October 1, 1962
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 laid on the journalistic type of article rather than the essay type. (Prerequisite: Jour 15; not open to those who have completed Jour 69)
Hage — 3 credits — \$27 — 16 lessons
78. **Public Relations.** Techniques of interpreting business and industrial organizations, educational and scientific institutions, social welfare groups, government agencies, and other organizations to the public through the press, radio, trade papers, magazines, pamphlets, circulars, bulletins, direct mail, etc. An analysis of the methods of using each of the media. Policy determinants in public relations. (Prerequisite: Jour 69 or 73 or consent of instructor)
Lindsay — 3 credits — \$27 — 16 lessons
86. **Problems of Radio and Television Writing.** Introduces the student to the lines of experience in both major fields of broadcasting. More emphasis is placed on radio than on television since radio is good foundation for learning television. Starts with the simplest kind of radio writing and progresses by logical steps to more complex work. Numerous writing assignments are made, and optional exercises are provided for additional experience. (Prerequisite: Freshman English or consent of instructor)
Lindsay — 3 credits — \$27 — 16 lessons — Registrations accepted after September 1, 1962

LATIN (Lat)

(See Classics, page 28)

Margaret Forbes, M.A., Associate Professor of 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 course 1) is the course immediately preceding, or equivalent credit. Students who have completed the first 3 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)
Forbes — 5 credits — \$45 — 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)
Forbes — 5 credits — \$45 — 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)
Forbes — 5 credits — \$45 — 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)
Forbes — 3 credits — \$27 — 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)
Forbes — 5 credits — \$45 — 27 lessons
6. **Cicero.** Readings from the most famous humanistic essays. (Prerequisite: Lat 3 or equivalent)
Forbes — 3 credits — \$27 — 16 lessons

LIBRARY SCIENCE (Lib)

Joyce Davenport, M.A., Instructor in Library Science (Correspondence Study)

Selecting Books For Children. See page 56.

52. **Descriptive Cataloguing.** The forms and principles involved in making a dictionary card catalogue. Based primarily on *Akers Simple Library Cataloging*. Directions for the use of printed cards prepared by the Wilson Company and the Library of Congress. (No prerequisite; recommended that Lib 52 precede 54)
Davenport — 3 credits — \$27, materials \$2.15 — 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 — \$27, materials \$3.10 — 16 lessons

MATHEMATICS (Math)

(For students who want credit in the College of Science, Literature, and the Arts or for teaching mathematics)

Edward Nelson, Ph.D., Associate Professor of Mathematics, University of Utah
Margaret O. Marchand, Ph.D., Instructor in Mathematics (Correspondence Study)
Erna M. Yackel, M.A., Instructor in Mathematics (Correspondence Study)

Engineering Mathematics. See page 31.

High School Mathematics. See page 63.

- 1. Higher Algebra.** (May be substituted for Math Y) A review and a collegiate treatment of the topics of elementary algebra for those who have 1 year of elementary algebra. (Prerequisite: open for credit to any student offering 1 year of elementary algebra but not more than $\frac{1}{2}$ year of high school higher algebra for entrance)
Yackel — 5 credits — \$45 — 27 lessons

Note to University of Minnesota Students: The above course will be offered until study guides or textbooks become unavailable. At the beginning of the fall term in 1963 it will be discontinued or offered on a noncredit basis.

- T. Trigonometry.** Analytic trigonometry emphasizing identities, equations, and properties of the functions; right and oblique triangles without logarithmic computation. (Prerequisite: Plane geometry and either Math Y or 1 or high school higher algebra)
Marchand — 3 credits — \$27 — 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 Y or high school algebra)
Yackel — 5 credits — \$45 — 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 15)
Yackel — 5 credits — \$45 — 27 lessons
- 30. Analytic Geometry.** The elements of plane analytic geometry including the geometry of the conic sections, with a brief introduction to solid analytic geometry. (Prerequisite: Math 10 or 15 and either T or high school trigonometry; University of Minnesota students should take Math 49)
Yackel — 5 credits — \$45 — 27 lessons
- 49. Analytic Geometry and Calculus I.** Introduction to differential calculus with study of topics in analytic geometry. Major items for consideration include: study of the straight line, simple conics, curve tracing, derivations of elementary functions, velocity, acceleration, related rates, maxima and minima, and differentials. (Prerequisite: Math 10 or 15 and either T or high school trigonometry)
Marchand — 5 credits — \$45 — 27 lessons

- 50. Calculus I.** Differential calculus. Limits, continuity, differentiation, maxima and minima, applications to geometry and physics, differentials, law of the mean, indeterminate forms, convergence of series, series expansion and partial differentiation. (Prerequisite: Math 30; University of Minnesota students should enroll in Math 53)
Nelson — 5 credits — \$45 — 27 lessons
- 51. Calculus II.** Integral calculus. Indefinite integrals, definite integrals, convergence of improper integrals, the definite integral as the limit of a sum, multiple integrals and applications to geometry and mechanics. (Prerequisite: Math 50; University of Minnesota students should enroll in Math 54)
Nelson — 5 credits — \$45 — 27 lessons
- 53. Analytic Geometry and Calculus II.** Introduction to integration with applications to area, volume, and work; topics in analytic geometry; differentiation and integration of transcendental functions; study of limits; polar co-ordinates; and integration by standard forms and special methods. (Prerequisite: Math 49)
Marchand — 5 credits — \$45 — 27 lessons
- 54. Analytic Geometry and Calculus III.** Continuation of Math 53. Improper integrals; infinite series; Taylor's theorem; multiple integrals in 2 and 3 dimensions. (Prerequisite: Math 53)
Marchand — 5 credits — \$45 — 27 lessons
- 55. Intermediate Calculus.** Advanced topics in partial differentiation, total differentials, directional derivatives, maxima and minima of functions of several variables, applications of multiple integrals, Taylor's theorem for functions of several variables, elements of differential equations. (Prerequisite: Math 54)
Marchand — 3 credits — \$27 — 16 lessons
- 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 50 or 53)
Yackel — 3 credits — \$27 — 16 lessons
- 106. Differential Equations.** A problem course in the solution of ordinary differential equations, with the basic theory necessary for the development of the methods to be used. (Prerequisite: Math 55 or consent of instructor)
Marchand — 3 credits — \$27 — 16 lessons

MUSIC (Mus)

Paul Fetler, Ph.D., Associate Professor of Music
Mary E. Malcolm, M.A., Associate 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 — \$27 — 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 — \$27 — 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 — \$27 — 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 in par-

ticular 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 — \$27 — 16 lessons

NORWEGIAN (Scan)

Marion J. Nelson, Ph.D., Assistant Professor of Scandinavian

1. **Beginning Norwegian I.** A complete survey of Norwegian grammar. Composition. Reading of easy prose. (No prerequisite)
Nelson — 5 credits — \$45 — 27 lessons
2. **Beginning Norwegian II.** Study of folk tales and short stories. Reading and composition. (Prerequisite: Scan I or equivalent)
Nelson — 5 credits — \$45 — 27 lessons

PARLIAMENTARY PROCEDURE

Ralph E. Miller, M.S., Associate Professor, College of Agriculture, Forestry, Home Economics

25. **Parliamentary Procedure.** Fundamental principles and practices of parliamentary law essential for conducting meetings and participating in community organizations. Particular emphasis is given to discussion of problems relative to federated clubs, P.T.A., Legion Auxiliary, extension organizations, farm organizations, such as: Grange, Farm Bureau, Farmers Union, 4-H clubs, and Future Farmers of America. Topics to be considered will include formation of organizations, drafting of constitutions, duties of officers, motions, amendments, nominations, and elections. (No prerequisite)
Miller — 1 credit — \$18 — 12 lessons

PERSONAL ORIENTATION (PO)

Edward G. Summers, M.A., Instructor in Psychology

1. **How to Study.** Practical assistance in developing efficient methods of study and concentration, organizing material, preparing for examinations, and improving reading ability. Attention to the orientation of students in their attitudes and motivation, and the relation of these to satisfactory performance. (No prerequisite, but credit must be added to degree requirements at the University of Minnesota)
Summers — 2 credits — \$18 — 12 lessons—Registrations accepted after October 1, 1962

PHILOSOPHY (Phil)

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

Daniel D. Merrill, M.A., Instructor in Philosophy, Knox College

John Trentman, M.A., Instructor and Counselor, SLA

1. **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? 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 — \$27 — 16 lessons

2. **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 — \$27 — 16 lessons
3. **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 — \$27 — 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 — \$18 — 12 lessons
50. **History of Ancient Philosophy.** The first of three courses surveying major developments in Western philosophic thought from its beginning among the Greeks to the end of the 19th century. This course is concerned with the origins of philosophy, the culture of ancient Athens, Socrates, Plato, Aristotle, the early Roman philosophies, the philosophies of Alexandria, and the differences introduced by Judaism and Christianity to philosophic thought. Philosophy from 600 B.C. to A.D. 100. (No prerequisite)
Trentman — 5 credits — \$45 — 27 lessons

PHYSICAL EDUCATION (PE)

(Including Courses in Recreation)

Gertrude Baker, Ed.D., Professor and Director of Physical Education for Women
Richard J. Donnelly, Ph.D., Professor and Director of Physical Education for Men
Ralph Piper, Ed.D., Professor of Physical Education
Fred Chapman, Re.D., Associate Professor of Physical Education
H. Robert Giles, Re.D., Associate Professor of Physical Education
William Heusner, Ph.D., Associate Professor of Physical Education
Eloise M. Jaeger, Ph.D., Associate Professor of Physical Education
Helen Slocum, Ph.D., Associate Professor of Physical Education
Marjorie U. Wilson, Ph.D., Associate Professor of Physical Education
Gordon L. Starr, M.Ed., Assistant Professor of Physical Education
Gerald B. Fitzgerald, Re.D., Lecturer in Physical Education

11. **Survey of Recreational Activities.** Serves the student as an introduction to many areas of and kinds of recreational activities. It is designed to acquaint the student with many recreational activities that surround him every day, and enable him to better understand the world in terms of leisure and recreation. The beginning student should find the course and course material a good orientation for his professional choice, and other students should be encouraged to seek additional information and training. (No prerequisite)
Starr — 3 credits — \$27 — 16 lessons
31. **Industrial Recreation.** Serves as an introduction to industrial recreation, 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 industry and recreation. Arranged to challenge the student to

think of the responsibilities of business and industries of both the employee and the community. (No prerequisite)

Starr — 3 credits — \$27 — 16 lessons

32. **Introduction to Physical Education.** Principles and problems connected with the philosophy, organization, administration, program construction, and methods of teaching physical education. (No prerequisite; open to men only)

Heusner — 3 credits — \$27 — 16 lessons

48. **Methods in Supervision of Recreation.** The various in-service training devices and supervisory techniques common to recreation programs in communities and hospitals are considered. Necessary qualities, traits, and characteristics of the supervisor are reviewed along with the purposes and advantages of good supervision. This course should be of value to those in formal and informal settings who find it necessary to deal effectively with personnel in working relationships. (No prerequisite)

Chapman — 3 credits — \$27 — 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. It stresses the nature of leisure and recreation with particular reference to their relationships. Attention is focused upon leisure and recreation as parts of daily living in our society and as products of our social progress. (No prerequisite)

Fitzgerald — 3 credits — \$27 — 16 lessons

50. **Orientation to Recreation in Hospitals.** Introductory principles of hospital 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 is highlighted. Beginning methods in the leadership and supervision of recreation programs for patients in hospitals are featured. (No prerequisite)

Chapman — 3 credits — \$27 — 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 — \$27 — 16 lessons

57. **Operation of Recreation Centers.** Designed especially to aid the teacher of art, music, industrial, or physical education who has been given the responsibility of assisting with, or directing, the summer recreation program. Programs, leadership, facilities and equipment, and problems of operation and administration. (No prerequisite)

Fitzgerald — 3 credits — \$27 — 16 lessons

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 — \$27 — 16 lessons

63. **Organization and Administration of Physical Education.** Problems of organization, administration, and supervision. Arrangement of programs in physical education activities. Discussion of place of athletics in the program; schedule making; construction, equipment, and care of gymnasium and athletic fields. (Prerequisite: PE 32 or Principles and Methods of Physical Education or consent of instructor; open to men only)

Piper — 3 credits — \$27 — 16 lessons

82. **Principles of Physical Education.** Principles of philosophy, curriculum, method, and evaluation are studied in the light of their psychological, biological, and social significance. (Prerequisite: minimum of 5 credits in skills courses and 3 credits in methods courses in physical education; open to women only)

Wilson — 3 credits — \$27 — 16 lessons

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 — \$27 — 16 lessons

- 84A. The Physical Education Program in the Elementary and Secondary School.** Curricular problems in physical education are studied in relation to the best thinking in general education. Both elementary and secondary levels are considered but individual application may be made to specific level. (Prerequisite: senior major or minor in physical education; minimum of 5 credits in skills courses and 3 credits in methods courses in physical education)

Jaeger — 3 credits — \$27 — 16 lessons

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

Jaeger — 3 credits — \$27 — 16 lessons

- 95. Administration of Physical Education.** A study of the co-ordination of the various aspects of the physical education department concerned with children, girls, and women. Stress is placed upon the administration of the balanced program, organization of groups, persistent problems in the conduct of the girls' physical education program, facilities, equipment, finance, promotion, and ethics; relationships to the school as a whole and the community are considered throughout. (Prerequisite: minimum of 5 credits in skills courses and 3 credits in methods courses in physical education; open to women only)

Baker — 3 credits — \$27 — 16 lessons

PHYSICS (Phys)

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

Joseph Valasek, Ph.D., Professor of Physics

- 1. Introduction to Physical Science I.** A study of the basic physical laws and principles relative to mechanics and molecular physics. The use of mathematics usually enhances the understanding of these laws and, to this extent, it is the purpose of the course that a certain amount of problem solving be done. (Prerequisite: high school elementary algebra and plane geometry)

Christensen — 3 credits — \$27 — 16 lessons

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

Christensen — 3 credits — \$27 — 16 lessons

- 3. Introduction to Physical Science III.** A sequential course to Phys 1 and 2. Topics: electricity, magnetism, and modern physics. Topics in modern physics include: radioactivity, X-rays, gaseous conduction, Bohr atom, etc. (Prerequisite: Phys 1)

Christensen — 3 credits — \$27 — 16 lessons

- 4(c). Modern Physics.** A study of important discoveries, theories, phenomena, and experiments that have taken place during the last century, such as: discovery of electron, atomic structure, mass spectroscopy, radioactivity, atomic accelerators, cosmic rays, photoelectricity, and semi-conductors. (Prerequisite: Phys 1)

Christensen — 3 credits — \$27 — 16 lessons — Registrations accepted after November 1, 1962

- 16(c). Elements of Mechanics.** Basic principles of mechanics such as Newton's laws of motion, conservation of energy and momentum. 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 — \$27 — 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)

Valasek — 3 credits — \$27 — 16 lessons

- 35. Photography.** An elementary course on the science and technique of photographic reproduction in monochrome and in color. Emphasis will be on the physical principles which are the basis for the operation or use of cameras, lenses, shutters, enlargers, filters, exposure meters, and sensitive materials used in black-and-white and in color photography. It is expected that those registered for the course possess and use some kind of photographic equipment. However, there will not be any assigned laboratory projects, but some will be recommended for those who wish to improve their photographic skill or learn new procedures. Essentially a course in physics on the college freshman level dealing with selected topics which have important applications in the science and practice of photography. (Prerequisite: high school algebra and geometry)

Valasek — 3 credits — \$27 — 16 lessons

POLICE SUPERVISION (PS)

(See Sociology, page 57)

POLISH (Plsh)

Kristina Trendota, Ph.D., Assistant Professor, Wayne State University

A 12-inch, 33 $\frac{1}{3}$ -rpm Polish pronunciation record is available from the Correspondence Study Department for \$5. A tape recording is available for about half of the price.

- 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 — \$45 — 27 lessons

- 2. Beginning Polish II.** Continuation of Plsh I. 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 I or equivalent and consent of instructor)

Trendota — 5 credits — \$45 — 27 lessons

POLITICAL SCIENCE (Pol)

John A. Dettmann, Ph.D., Professor of Business and Economics, UMD

Harold S. Quigley, Ph.D., Professor Emeritus of Political Science

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

John E. Turner, Ph.D., Professor of Political Science

George Warp, LL.B., M.A., Professor of Political Science

Dorothy Dodge, Ph.D., Assistant Professor of Political Science, Macalester College

George W. Shepherd, Jr., Ph.D., Assistant Professor of International Relations, University of Denver

Robert L. Rosholt, M.A.P.A., Administrative Fellow, Department of 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)

Rosholt — 3 credits — \$27 — 16 lessons

- 2. American Government and Politics II.** Gives the student knowledge of 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)
Rosholt — 3 credits — \$27 — 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 12 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 — 2 Extension credits only — \$18 — 12 lessons
- 7(c). Comparative European Governments.** Deals with the governmental systems and politics of Great Britain, France, Soviet Russia, Germany, and Sweden. Emphasis is placed on the institutional structures, political customs, ideologies, problems of administration, and crisis government. (No prerequisite)
Turner — 3 credits — \$27 — 16 lessons
- 25. World Politics.** The world since 1914. Explains the significance of contemporary events in Europe and the Far East by a study of their causes. The policies of the Great Powers, the influence of geographic position, and of domestic politics on foreign policy, imperialism, armaments and international organizations including the League of Nations and the United Nations. The effect of world events on American interests. (No prerequisite)
Rogers — 3 credits — \$27 — 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 — \$27 — 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)
Quigley — 3 credits — \$27 — 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 — \$27 — 16 lessons
- 58. Governmental Accounting.** Principles and procedures of governmental accounting, including: fund accounting, budgetary accounting as it relates to preparation and control of appropriation and program budgets, and control of periodic allotments; revenues, expenditures, assets, and liabilities; account classification; organizational and administrative aspects including systems and simplification techniques; financial reporting; principles of governmental cost accounting. (Prerequisite: elementary accounting and consent of instructor)
Dettmann — 3 credits — \$27 — 16 lessons — Registrations accepted after June 1, 1962
- 60. Introduction to Public Administration.** 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 — \$27 — 16 lessons

- 62. Public Personnel Administration.** 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 — \$27 — 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)
Quigley — 3 credits — \$27 — 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)
Quigley — 3 credits — \$27 — 16 lessons
- 148. African Government and Politics.** Nationalism and the reaction against colonialism; movements toward independence; domestic and international problems of the independent states; nondemocratic tendencies, racism, economic development, foreign intervention. Emphasis is on Africa south of the Sahara. (No prerequisite)
Shepherd — 3 credits — \$27 — 16 lessons

PSYCHOLOGY (Psy)

G. Gordon Kingsley, Ed.D., Associate Professor of Psychological Studies
 Leslie A. King, Ph.D., Assistant Professor of Psychological Studies
 Dorothy M. Bird, Ph.D., Instructor in Psychology (Correspondence Study)
 Harold Gilberstadt, Ph.D., Instructor in Psychology (Correspondence Study)

- 1A(c). Application of Psychology to Living.** Devoted to psychology in personal relationships and in the achievement of mental health. Centers, for the most part, around our fundamental needs—the source of all our actions and satisfactions—and 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)
 King, Kingsley — 3 credits — \$27 — 16 lessons — Registrations accepted after January 1, 1963
- 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 — \$27 — 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 — \$27 — 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 — \$27 — 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)

Bird — 3 credits — \$27 — 16 lessons

145. Abnormal Psychology II. Continuative study of abnormal behavior, with emphasis on the psychoneuroses, organic psychoses, and associated personality disorders. Consideration of therapeutic methods. (Prerequisite: Psy 144 or consent of instructor)

Bird — 3 credits — \$27 — 16 lessons

Child Psychology. See page 27.

Psychology of Adolescence. See page 27.

Social Psychology. See page 58.

PUBLIC HEALTH

(See page 40)

READING

Louise Klohn, M.A., Instructor in English (Correspondence Study)

1(c). Home Reading Course. The 8 lessons in this course provide 8 lists of books on subjects of current interest, such as science, history, sociology, fine arts, government, etc. The student reads at least two books from each list and reports on them. The aim is to follow a systematic plan of reading that will help the average person to become better informed. Particularly designed for members of the Federation of Women's Clubs who are anxious to qualify for the Epsilon Sigma Omicron reading award. Course is available on an individual lesson basis. Write for introduction that will give topic for each lesson. (No prerequisite and no credit toward university degree or certificate programs)

Klohn — \$9 or \$1.50 per lesson

2(c). Selecting Books for Children. An introductory course for parents, teachers, and those interested in guiding children's reading. It surveys the field of children's literature from preschool age through the teens. (No prerequisite)

Klohn — 2 Extension credits only — \$18 — 12 lessons

RECREATION

(See page 50)

ROMANCE LANGUAGES

(See pages 37, 58)

RUSSIAN (Russ)

Pearl C. Niemi, Ph.D., Associate Professor of Slavic Languages

Phillip E. Nice, M.A., Instructor in Slavic and Oriental Languages

An 11-minute, 33 $\frac{1}{3}$ -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 from the EMC Recordings Corp., 180E East 6th Street, St. Paul 6, Minnesota. Also available on phono-tape (3.75 ips).

1. **Beginning Russian I.** Prepares for the reading and writing knowledge of the Russian language. Acquaints the student with the Russian script; pronunciation; the essentials of grammar; translations from Russian and into Russian; interpretation of easy Russian short stories. (No prerequisite)
Niemi — 5 credits — \$45 — 27 lessons
2. **Beginning Russian II.** Continuation of Russ I. (Prerequisite: Russ 1)
Niemi — 5 credits — \$45 — 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)
Nice — 2 credits — \$18 — 12 lessons
- 25(c). **Scientific Russian II.** Directed reading and translation of Russian scientific texts in a field of the student's choice. (Prerequisite: Russ 24c)
Nice — no credit — \$18 — 12 lessons
- 26(c). **Scientific Russian III.** Continuation of Russ 25c. (Prerequisite: Russ 25c)
Nice — no credit — \$18 — 12 lessons

SCANDINAVIAN LANGUAGES

(See pages 49, 60)

SOCIOLOGY (Soc)

Elio D. Monachesi, Ph.D., Professor and Chairman, Department of Sociology

Arnold M. Rose, Ph.D., Professor of Sociology

George A. Donohue, B.A., Associate Professor and Extension Sociologist

Miriam Cohn, M.S., Assistant Professor of Social Work

Wayne W. Bennett, LL.B., Instructor in Sociology (Correspondence Study) (Chief of Police, Edina)

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)
Monachesi — 3 credits — \$27 — 16 lessons
3. **Social Problems.** A study of 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 of modern social problems within a carefully defined framework of values. (No prerequisite)
Rose — 3 credits — \$27 — 16 lessons
- 15(c). **Methods in Police Supervision.** A study of the basic principles of supervision and leadership. Survey of the problems of supervisory positions with emphasis on human relations. Each supervisory position is considered. The problems of delegating supervisory functions are emphasized. The course is designed to assist police officers at

all levels of supervisory positions in the police department personnel arrangement. (No prerequisite)

Bennett — 3 Extension credits only — \$27 — 16 lessons

50. **An Introduction to the Theory and Practice of Social Work.** 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)

Cohn — 3 credits — \$27 — 16 lessons — Registrations accepted after January 1, 1963

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 — \$27 — 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 — \$27 — 16 lessons

123. **Racial and Cultural Minorities.** A consideration of the historical and sociological factors in prejudice and discrimination with special emphasis on the United States. Includes study of racial and religious minorities and the problems of immigration. Analysis of the social values involved and of social changes now occurring. (Prerequisite: Soc 1 or consent of instructor)

Rose — 3 credits — \$27 — 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 — \$27 — 16 lessons

SPANISH (Span)

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

Santiago A. Cuneo, Ph.D., Associate Professor of Romance Languages

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 recording is also available.

- 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 type 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 1, Minnesota. (No prerequisite)

Willging — 3 credits — \$27

1. **Beginning Spanish I.** To learn the fundamentals of Spanish grammar, to develop good ear training by means of records or tapes, 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 — \$45 — 27 lessons

- 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 — \$45 — 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 — \$45 — 27 lessons
- 20. Intermediate Spanish.** Study of the Spanish grammar in Spanish. Starts the student thinking in 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 — \$45 — 27 lessons
- 53. 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 — \$27 — 16 lessons
- 57. 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 — \$45 — 27 lessons
- 60. Advanced Spanish Composition.** Continuation of Span 53. (Prerequisite: Span 53)
Cuneo — 3 credits — \$27 — 16 lessons
- 70. 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; Spanish not necessary. (No prerequisite)
Cuneo — 3 credits — \$27 — 16 lessons

SPEECH AND THEATER ARTS (Spch)

Herbert C. Carson, Ph.D., Assistant Professor of Speech, Ferris Institute
Louise Klohn, M.A., Instructor in English (Correspondence Study)

- 1(c). Vocabulary Building.** A practical course designed to increase the student's speaking and reading vocabulary. The lessons and exercises will stimulate interest and afford practice in the proper use of words, provoke word collecting and suggest substitutes for overworked words. (No prerequisite; course cannot be used for credit toward a teacher's certificate)
Klohn — 3 Extension credits only — \$27 — 16 lessons
- 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: Spch 31 or consent of instructor)
Carson — 3 credits — \$27 — 16 lessons
- 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: Spch 115 and consent of instructor)
Carson — 3 Extension credits only — \$27 — 16 lessons (2 full-length plays or approximately the same amount of writing made up of shorter dramatic forms)

SWEDISH (Swed)

Alrik Gustafson, Ph.D., Professor and Chairman, Department of Scandinavian

A Swedish pronunciation record (78 revolutions per minute) prepared by the Scandinavian Department and the Correspondence Study Department may be purchased for \$4. Not required but recommended.

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

Gustafson — 5 credits — \$45 — 27 lessons

- 8. Beginning Swedish II.** Continuation of Swed 7. (Prerequisite: Swed 7)

Gustafson — 5 credits — \$45 — 27 lessons

TRAVEL

Vernie Wolfsberg, Research Assistant, World Affairs Center

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; and the relations of these countries with the United States. The students of the course—"would-be" travelers—will acquire not only practical information, but 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 — \$27 — 16 lessons

Special Courses

CITIZENSHIP

John M. Huebner, B.A., 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. All persons wishing to enroll should write to the Correspondence Study Department, University of Minnesota.

Huebner — no credit — \$4 — 21 lessons

High School Courses

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

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

2. Biology, Part B

Bicak — $\frac{1}{2}$ 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

ENGLISH

1. Ninth Grade English, Part A

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

2. Ninth Grade English, Part B

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

3. Tenth Grade English, Part A

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

4. Tenth Grade English, Part B

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

5. Eleventh Grade English, Part A

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

6. Eleventh Grade English, Part B

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

7. Twelfth Grade English, Part A

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

8. Twelfth Grade English, Part B

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

9. Preparatory English. (Prerequisite: consent of counselor and Correspondence Study Department)

Klohn — no credit — \$18 — 12 lessons

11. Vocabulary Building. (Prerequisite: consent of instructor)

Klohn — ½ unit — \$27 — 16 lessons

MATHEMATICS

1. Elementary Algebra, Part A

Ziebarth — ½ unit — \$25 — 20 lessons

2. Elementary Algebra, Part B

Ziebarth — ½ unit — \$25 — 20 lessons

3. Plane Geometry, Part A. (Prerequisite: Math 1 and 2)

V. Hansen — ½ unit — \$25 — 20 lessons

4. Plane Geometry, Part B. (Prerequisite: Math 3)

V. Hansen — ½ unit — \$25 — 20 lessons

5. Trigonometry. (Prerequisite: Math 2 and 4)

Ziebarth — ½ unit — \$25 — 20 lessons

9. Higher Algebra. (Prerequisite: 1 year of elementary algebra or equivalent)

Loye — ½ unit — \$25 — 20 lessons

10. Solid Geometry. (Prerequisite: 1 year of plane geometry or equivalent)

Fischer — ½ unit — \$25 — 20 lessons

PHYSICS

1. Physical Science. (No prerequisite)

Bicak — ½ unit — \$25 — 20 lessons

2. Physical Science (Earth Science). (No prerequisite)

Bicak — ½ unit — \$25 — 20 lessons (to be written)

LANGUAGES*

French

Beginning French I and II

Kalb — 1 unit each — \$45 per unit — 27 lessons each

German

Beginning German I, II, and III

Ramras — 1 unit each — \$45 per unit — 27 lessons each

Latin

Beginning Latin I and II

Forbes — 1 unit each — \$45 per unit — 27 lessons each

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

Norwegian**Beginning Norwegian I and II**

Nelson — 1 unit each — \$45 per unit — 27 lessons each

Russian**Beginning Russian I and II**

Niemi — 1 unit each — \$45 per unit — 27 lessons each

Spanish**Elementary Spanish A and B**

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

Swedish**Beginning Swedish I and II**

Gustafson — 1 unit each — \$40 per unit — 27 lessons each

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

Gardner — ½ entrance unit — \$25 — 20 lessons

4. World History, Part B

F. Johnson — ½ entrance unit — \$25 — 20 lessons

5. American History, Part A

F. Johnson — ½ entrance unit — \$25 — 20 lessons

6. American History, Part B

Gardner — 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 backside of this page for second section) to Correspondence Study Department, University of Minnesota, Minneapolis 14. Make check for *exact amount* of course fee. Remember, there is a \$3 per course fee for all registrations originating outside of Minnesota, except military personnel.

Use the Book Order Blank for textbooks (see next pages) and send your order directly to Nicholson Hall Bookstore, University of Minnesota, Minneapolis 14.

Cut along this line

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

**UNIVERSITY OF MINNESOTA
GENERAL EXTENSION DIVISION
CORRESPONDENCE STUDY DEPARTMENT
Minneapolis 14**

Application for Registration

Date _____

Please print _____
(Mr., Mrs., Miss) First Name Middle or Maiden Name Last Name

Mailing Address _____
Street Address

City Zone State

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 Zone State

Title of courses for which you are registering (no more than 2 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			

If enrolling under Korean Bill (P.L. 550) check here

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 \$1.20 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 14

Application for Registration

Date _____

Please print _____
(Mr., Mrs., Miss) First Name Middle or Maiden Name Last Name

Mailing Address _____
Street Address

City Zone State

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 Zone State

Title of courses for which you are registering (no more than 2 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			

If enrolling under Korean Bill (P.L. 550) check here

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 \$1.20 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

TEXTBOOKS

Necessary textbooks may be obtained wherever convenient. The Nicholson Hall Bookstore will send the required books and will bill you for the correct amount, including a nominal charge for postage and handling. The ordering of textbooks at the time of enrollment will prevent delay in starting your course. If you wish a list of books and prices, however, you can wait for your study guide or write for a separate listing. It is assumed that you will remit promptly when billed. Make checks payable to the University of Minnesota.

Cut along this line

BOOK ORDER FORM

(Mail directly to the Nicholson Hall Bookstore, University of Minnesota, Minneapolis 14)

(Please type or print plainly)

Field of Study _____

Course No. _____ Course Name _____

Author _____ Title _____

Author _____ Title _____

Author _____ Title _____

Supplies

Name _____

Street Address _____

City _____ Zone _____ State _____

(I will pay promptly)

Signature _____

INDEX

Accounting	22, 23, 24	Interior Design	17, 21
Admissions	4	International Economics	25
Advertising, Typography	45	International Relations	55
Africa, Government and Politics	55	Japanese	45
Agriculture	20	Journalism	45
Anthropology, Archaeology	20, 21	Landscape Planning	44
Art	21	Latin	46
Astronomy	22	Latin America	43, 59
Beekeeping	20	Library Science	46
Book Selection, Children	56	Literature	34
Bookkeeping	62	Mathematics	31, 47, 63
Books	4	Mechanics	33, 52
Business Administration	10, 22	Music	48
Business Law	24	Norwegian	49
Certificates	12	Office Management	23
Change of Registration	7	Parliamentary Procedure	49
Child Development	27	Personality, Psychology of	55
Chinese and Chinese Civilization	27, 28	Philosophy	49, 50
Classics	28	Photography	53
Composition	36	Physical Education	50
Conservation of Natural Resources	37	Physics	52
Creative Writing	36, 37, 45	Playwriting	59
Credit, University	5	Police Supervision, Methods	57
Criminology	58	Polish	53
Degrees	8	Political Science	53
Drawing, Engineering	31	Production Management	26
Economics	24	Psychology	55
Education	28	Public Administration	18, 54, 55
Electronics	30	Radio and Television Writing	45
Engineering	29	Real Estate	24
English	34, 62	Recordings	8
Examinations	6	Recreation	51
Extension Credits	5	Refunds	6
Family Studies	37	Religion, Science and	50
Fees	4	Rigid-Body Mechanics	33
Foreign Policy	54	Russian	56, 57
Forestry	37	Salesmanship	26
French	37	Social Work	58
Gardening	43	Sociology	57
Geography	36	Spanish	58
Geology	36	Speech	59
German	36	Statistics	27, 28
Government	53, 54	Study, How to	49
Grammar (Preparatory English)	36	Swedish	60
Greek	40	Textiles	43
Handcrafts	21	Time and Motion Study	33
Health	40	Travel (European)	60
High School Subjects	62	United Nations	54
History	40	Vocabulary Building	59
Home Reading	56	World Affairs Certificate	14
Humanities	44	World Politics	54
Income Tax Accounting	24		
Industrial Relations	25, 26		
Institute of Technology	10, 29		
Insurance	26		

Other Services of the General Extension Division . . .

Audio-Visual Extension Service

operates a large library of films available on a rental basis to schools, organizations, and individuals, and provides advisory service for audio-visual institutes and workshops. For information, contact: Audio-Visual Extension Service, 115 TSMa, University of Minnesota, Minneapolis 14.

Center for Continuation Study

presents institutes and short courses in professional and postgraduate, business, and cultural fields. For information, contact: Center for Continuation Study, University of Minnesota, Minneapolis 14.

Evening and Special Classes

is a department offering more than 400 collegiate and special interest courses for residents of the Twin Cities area and Duluth. Courses are provided for those interested in degrees, certificates, occupational advancement, and hobbies. The part-time arrangement makes Extension evening classes attractive to the adult population. For a bulletin, contact: General Extension Division, 54 Nicholson Hall, University of Minnesota, Minneapolis 14.

Municipal Reference Bureau

co-operates with the League of Minnesota Municipalities in supplying information about city and village affairs to civic officials and others interested. For information, contact: Municipal Reference Bureau, 15 Walter Library, University of Minnesota, Minneapolis 14.

Radio and Television Broadcasting (KUOM)

broadcasts educational, musical, news, and sports programs to the Upper Midwest; its staff produces educational telecasts which may be shown on educational or commercial stations. For a schedule, contact: KUOM, 1 Eddy Hall, University of Minnesota, Minneapolis 14.

State Organization Service

assists voluntary nonprofit associations on a community or statewide basis by supplying them with secretarial, mimeograph, mailing, and general organizational services, subject matter aid, and space. For information, contact: State Organization Service, 15th and Washington Avenues Southeast, University of Minnesota, Minneapolis 14.

University Program Service

brings concerts, lectures, and assembly programs to audiences of the area and maintains a drama advisory service and loan play library. For information, contact: University Program Service, 229 Northrop Memorial Auditorium, University of Minnesota, Minneapolis 14.



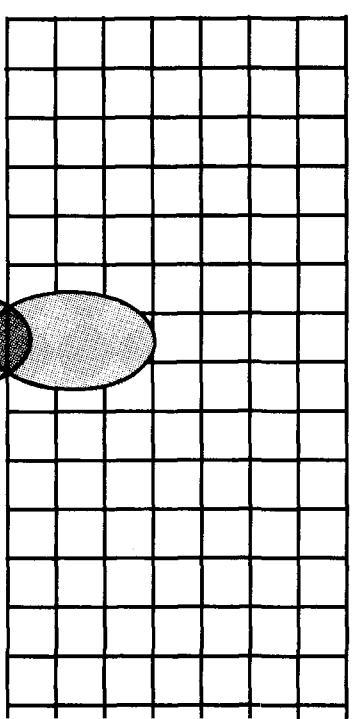
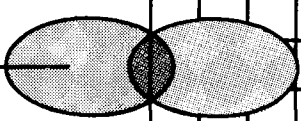
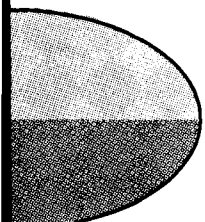
DESK COPY

Delivery 7-19-62

OK Kill _____

**OF THE UNIVERSITY
OF MINNESOTA
EVENING AND SPECIAL
CLASSES**

GENERAL EXTENSION DIVISION



UNIVERSITY OF MINNESOTA

Board of Regents

The Board of Regents is composed of 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 Richard L. Griggs, Duluth; The Honorable Bjarne E. Grottum, Jackson; The Honorable Robert E. Hess, White Bear Lake; The Honorable Fred J. Hughes, St. Cloud; The Honorable A. I. Johnson, Benson; The Honorable Lester A. Malkerson, Minneapolis; The Honorable A. J. Olson, Renville; The Honorable Otto A. Silha, Minneapolis; and The Honorable Herman F. Skyberg, Fisher.

Administrative Officers

O. Meredith Wilson, Ph.D., President
Malcolm M. Willey, Ph.D., L.H.D., LL.D., Vice President, Academic Administration
Laurence R. Lunden, B.A., LL.D., Vice President, Business Administration
Stanley J. Wenberg, M.A., Vice President for Educational Relationships and Development

GENERAL EXTENSION DIVISION

Administration for Evening and Special Classes

Julius M. Nolte, B.A., LL.B., Dean of University Extension
Huntington Miller, B.A., LL.B., Associate Dean, Director, Chairman of Committee on Student Scholastic Standing
Albert M. Fulton, Ph.M., Associate Director
Harold J. Alford, M.A., Manager of St. Paul Extension Center
Gilford W. Remington, M.A., Manager of Duluth Extension Office
Eleanor S. Fenton, M.A., Assistant to the Dean; Co-ordinator of Scholastic and Counseling Services
Elizabeth L. Cless, B.A., Assistant to the Dean for Liberal Arts

Extension Departments and Directors

Audio-Visual Extension Service, Erwin C. Welke, 115 TSMa
Center for Continuation Study, Fred E. Berger, 136 Center for Continuation Study; Associate Director, Merrill K. Cragun, 136 Center for Continuation Study
Correspondence Study Department, F. Lloyd Hansen, 251 Nicholson Hall
Evening and Special Classes, Huntington Miller, 54 Nicholson Hall; Associate Director, Albert M. Fulton, 56 Nicholson Hall
Municipal Reference Bureau, Orville Peterson, 15 Walter Library
Radio and Television Broadcasting (KUOM), Burton Paulu, 1 Eddy Hall
State Organization Service, William C. Rogers, 104 TSMc
University Program Service, James S. Lombard, 229 Northrop Memorial Auditorium

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

Volume LXV

Number 14

July 15, 1962

BULLETIN OF THE UNIVERSITY OF MINNESOTA

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 14, Minnesota.

Contents - 12

(Also see Index, pages 156-158)

	Page
Office Hours	4
Calendar	5, 6
Introduction	7
I. Extension Certificate Programs	8
II. University Degree Programs	25
III. Information	
General Information	31
Registration Regulations and Fees	35
Special Information for Veterans and Members of the Armed Forces	39
Special Services for Students	42
IV. Liberal Arts Programs	46
V. Course Offerings	
Agriculture	49
Arts and Sciences	51
Business Administration	102
Education	120
Engineering and Technical Sciences	124
Recreation	142
Classes Listed by Quarters	146-148
St. Paul Extension Center Classes	149
Faculty	151
Index	156-158
Maps	159-163
Other Services of the General Extension Division	back cover

Registration Office Hours*** - 14

Fall Semester (September 10 to 19, 1962. All offices closed September 20 and 21)

Spring Semester (February 4 to 13, 1963. All offices closed February 14 and 15)

Campus Office: 57 Nicholson Hall (southeast entrance), University of Minnesota, Minneapolis 14; telephone 373-3195. Monday through Friday, 12:30 to 4:30 and 5:30 to 8 p.m.; Saturday, 9 a.m. to 1 p.m.

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

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

Fall Quarter (September 10 to 19, 1962), same as Fall Semester 1962. All offices.

Winter Quarter (December 17, 1962, to January 4, 1963), regular office hours for all offices. (See Regular Office Hours.)

Spring Quarter (March 18 to 29, 1963), regular office hours for all offices. (See Regular Office Hours.)

Regular Office Hours

Regular office hours not in effect during fall and spring semester registration periods. See Registration Office Hours. All offices closed September 20-21, 1962 and February 14-15, 1963.

Campus Office: 57 Nicholson Hall (southeast entrance), University of Minnesota, Minneapolis 14; telephone 373-3195. Monday through Thursday, 8 a.m. to 12 noon and 1 to 8 p.m.; Friday, 8 a.m. to 12 noon and 1 to 5 p.m. (during Christmas recess, December 17 to 31, 1962, the campus office will close Monday through Friday at 5 p.m.); closed Saturday. During the summer recess, the office is open Monday through Friday only, from 7:45 a.m. to 12 noon and from 12:45 to 4:30 p.m.

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

St. Paul Office: 555 Wabasha Street (second floor), St. Paul 2; Capital 2-6175. Monday through Friday, 8 a.m. to 12:30 p.m. and 1:30 to 8 p.m. (during Christmas recess, December 17 to 31, 1962, the office will close at 5 p.m.); closed Saturday. During the summer recess, the office is open Monday through Friday only, from 8 a.m. to 12:30 p.m. and 1:30 to 5 p.m. This office may be closed without notice for short periods of time during the summer.

*** Registration hours for Northwest Suburban Extension Center classes to be held at Robbinsdale Senior High School listed in special brochure. Write or telephone: Central Office, Independent School District 281, Minneapolis 22, JUNiper 8-2743; or Evening Classes, 57 Nicholson Hall, University of Minnesota, Minneapolis 14, telephone 373-3195.

Calendar ¹⁴

Evening and Special Classes—Twin Cities Area

Academic Year, 1962-63

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

Offices will be closed and classes will not meet on holidays listed in this calendar, unless specified to the contrary.

Fall Semester

September	10	Monday	<i>Fall Semester registration begins. Special registration hours listed on page 4.</i>
September	19	Wednesday	<i>Last day for registration and payment of tuition. Late fee goes into effect at midnight. Mail registrations postmarked after midnight must include late fee (see Mail Registrations, page 37).</i>
September	20-21		<i>All offices closed.</i>
September	24	Monday	<i>Fall Semester classes begin. All offices resume regular office hours listed on page 4.</i>
October	12	Friday	<i>Columbus Day, holiday.</i>
November	22	Thursday	<i>Thanksgiving Day, holiday.</i>
December	15	Saturday	<i>Christmas recess begins.</i>
December	25	Tuesday	<i>Christmas Day, holiday.</i>
January	1	Tuesday	<i>New Year's Day, holiday.</i>
January	3	Thursday	<i>Classes resume.</i>
January 28 to February 1			<i>Final examination period.</i>
February	2	Saturday	<i>Fall Semester classes close.</i>

Spring Semester

February	4	Monday	<i>Spring Semester registration begins. Special registrations hours listed on page 4.</i>
February	12	Tuesday	<i>Lincoln's Birthday, holiday. (Offices open for spring semester registration.)</i>
February	13	Wednesday	<i>Last day for registration and payment of tuition. Late fee goes into effect at midnight. Mail registrations postmarked after midnight must include late fee (see Mail Registrations, page 37).</i>
February	14-15		<i>All offices closed.</i>
February	18	Monday	<i>Spring Semester classes begin. All offices resume regular office hours listed on page 4.</i>
February	22	Friday	<i>Washington's Birthday, holiday.</i>
April	12	Friday	<i>Good Friday, holiday.</i>
May	30	Thursday	<i>Memorial Day, holiday.</i>
June 10 to 14			<i>Final examination period.</i>
June	15	Saturday	<i>Spring Semester classes close.</i>

Fall Quarter

September	10	Monday	<i>Fall Quarter registration begins.</i> Special registration hours listed on page 4.
September	19	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 37).
September	20-21		All offices closed.
September	24	Monday	<i>Fall Quarter classes begin.</i> All offices resume regular office hours listed on page 4.
October	12	Friday	Columbus Day, holiday.
November	22	Thursday	Thanksgiving Day, holiday.
December	10 to 14		Final examination period.
December	15	Saturday	<i>Fall quarter closes.</i>

Winter Quarter

December	17	Monday	<i>Winter Quarter registration begins.</i> Regular office hours all offices as listed on page 4.
December	25	Tuesday	Christmas Day, holiday.
January	1	Tuesday	New Year's Day, holiday.
January	3	Thursday	<i>Winter Quarter classes begin.</i>
January	4	Friday	<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 37).
February	12	Tuesday	Lincoln's Birthday, holiday. (Offices open for spring semester registration.)
February	22	Friday	Washington's Birthday, holiday.
March 18 to	22		Final examination period.
March	23	Saturday	<i>Winter quarter closes.</i>

Spring Quarter

March	18	Monday	<i>Spring Quarter registration begins.</i> Regular office hours all offices as listed on page 4.
March	29	Friday	<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 37).
April	1	Monday	<i>Spring Quarter classes begin.</i>
April	12	Friday	Good Friday, holiday.
May	30	Thursday	Memorial Day, holiday.
June 10 to	14		Final examination period.
June	15	Saturday	<i>Spring Quarter 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. Mail registrations postmarked after midnight must include late fee (see Mail Registrations, page 37).

Department of Evening and Special Classes

Twin Cities Area

(An index will be found on pages 156-158)

INTRODUCTION

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

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

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

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

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

I. 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 both business and industry as valuable professional and technical preparation for employment and promotion in areas requiring extensive knowledge. With careful planning a certificate can be, if the student wishes, a stepping stone to a degree.

Seventeen intensive certificate programs in the areas of liberal arts, business administration, and engineering science (for engineers and technicians) are conducted by the General Extension Division. These programs may be completed entirely in the Evening and Special Classes Department. The curriculums are described in detail in the following pages. Certificate programs are organized at the collegiate level; students entering them should bring adequate educational preparation or other experience to work effectively with college materials.

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

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

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

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

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

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

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

Liberal Arts Certificate

(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:

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

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

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

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

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

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

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

Interior Design Certificate

(45 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 will have a background indicating proficiency in the field of home furnishings or as a junior decorator in a studio or store.

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

Core Requirement:

Art 83A—Interior Design I

Art 84A—Interior Design II

Art 103A—Seminar in Interior Design I

Art 104A—Seminar in Interior Design II

Layout for Interior Design I or Home Design and Planning

Art 1—Introduction to Art

Psy 1A—Application of Psychology to Living

Engl 1B—Freshman English

Business Correspondence

Spread Requirement: not more than 2 courses in at least 3 of the following groups, to total 18 credits; courses subject to approval of the certificate program adviser, Mrs. Lewis, telephone 373-3918 or WEst 8-3431.

1. History of Art, Art Appreciation

3. Ceramics, Sculpture, Weaving

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

4. French, Humanities, Psychology

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:

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

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

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

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

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

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

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

Political Science
Psychology
Recreation Leadership
Social Work
Sociology
Transportation

Secretarial Certificate

(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.

Core Requirement:

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-79B—Administrative Secretarial Studies

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

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

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

Evening and Special Classes

Industrial Relations Certificate

(46 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 12 credits in industrial relations courses at the University of Minnesota.

Core Requirement:

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

One course from the following:
Survey of Current Problems in Industrial Relations
IR 182B—Intermediate Manpower Management
IR 262-272-282—Graduate Topics in Industrial Relations
One course from the following:
IR 142—Settlement of Industrial Relations Disputes
Econ 152—Labor Movements
Econ 162—Union Government and Policies

Electives (any two courses from the following):

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

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

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

Business Administration Certificates

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

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

Junior Business Administration Certificate

(45 credits)

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

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

Prebusiness Requirement:

Engl 1B-2B-3B; or Comm 1-2-3
Econ 1-2—Principles of Economics
QA 5—Elements of Statistics

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

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

Prod 50—Production Management
QA 51—Business Statistics
IR 52—Modern 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:
The Firm
Econ 66—Intermediate Economic Analysis:
Income and Employment
Econ 67—Money and Banking
Econ 69—Government Regulation of Business

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

Senior Business Administration Certificate

(90 credits)

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

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

Prebusiness Requirement:

Engl 1B-2B-3B; or Comm 1-2-3
Econ 1-2—Principles of Economics
QA 5—Elements of Statistics

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

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

Prod 50—Production Management
QA 51—Business Statistics
IR 52—Modern 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:
The Firm
Econ 66—Intermediate Economic Analysis:
Income and Employment
Econ 67—Money and Banking
Econ 68—Elements of Public Finance
Econ 69—Government Regulation of Business

Electives in the School of Business Administration: at least 12 additional credits in courses in business administration and economics (i.e., courses listed on pages 28 to 29 of this bulletin). These may be selected from the core group above.

Other Electives:

- A. Satisfactory completion of the prebusiness degree requirements in either social sciences, natural sciences or humanistic courses (see items 4, 5, and 6 on page 28).
- 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 28).

Accounting Certificates

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

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

Junior Accounting Certificate

(45 credits)

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

Requirements:

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

(90 credits)

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

Requirements:

Engl 1B-2B-3B; or Comm 1-2-3
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
Four 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—Modern Industrial Relations: Labor
Marketing
Ins 53—Risk Management and Insurance
Tran 54—Transportation I: Principles
Mktg 57—Principles of Marketing
Econ 65—Intermediate Economic Analysis:
The Firm
Econ 66—Intermediate Economic Analysis:
Income and Employment
Econ 67—Money and Banking
Econ 68—Elements of Public Finance
Econ 69—Government Regulation of
Business

Management of Administrative Services Certificates

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

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

Junior Management of Administrative Services Certificate

(45 credits)

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

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

Core Requirement:

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

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

Senior Management of Administrative Services Certificate

(90 credits)

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

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:

Review of Business English and Business Correspondence; or Engl 1B-2B-3B; or Comm 1-2-3; or exemption Econ 1-2—Principles of Economics QA 5—Business Statistics Acct 24-25-26—Principles of Accounting IR 52—Modern Industrial Relations: Labor Marketing	BLaw 58—Business Law: Contracts OMgt 99—Office Management—Management of Administrative Services Psy 1-2—General Psychology Comp 58—Business Reports and Letters (or) Communication in Management
---	---

Group Requirements:

Group I—at least three courses from the following :

Ins 53—Risk Management and Insurance Tran 54—Transportation I: Principles	BFin 56—Corporation Finance Mktg 57—Principles of Marketing
--	--

Group II—at least six courses from the following:

Acct 55C—Managerial Costs Acct 55D—Analysis of Financial Statements IR 62—Human Relations in Industry Mgmt 70—History of Management Thought IR 72—Modern Industrial Relations: Manpower Management BFin 76—Finance Management Mgmt 80—Administrative Practices BLaw 88—Business Law	Prod 110—Systems and Procedures Analysis: Work Measurement; or equivalent OMgt 119—Business Communications and Correspondence Control OMgt 129—Records Administration OMgt 139—Analysis of Office Functions Psy 122-123—Vocational and Personnel Psychology
--	---

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

Mktg 87—Credits and Collections OMgt 89B—Tabulating Equipment Applied to Business: Laboratory Supervision I, II, III Pol 64—Employee Training Techniques Pol 68—Administrative Communication Psy 156—Psychology of Advertising Accounting Business Finance Economics Industrial Management and Relations	Insurance Marketing Office Management Real Estate Sales Management Traffic English Humanities Social Science Speech
---	--

Engineering Science and Engineering Technician Certificates

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

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

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

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

It is recognized that many capable students would like to complete an engineering degree. Such students should plan to complete the Senior Engineering Science Certificate and apply for admission to the Institute of Technology. Third-year Upper Division degree credit classes sequences in civil engineering, electrical engineering, mechanical engineering and ITM mathematics are available for evening students. It is hoped that such a class sequence will also be started in mechanical engineering in the near future. However, it must be remembered that most engineering curriculums are 5 years in length on a full-time basis. It is unlikely that it will be possible to complete any degree program entirely in the evening for some time to come.

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

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

Basic Engineering Science Certificate

(52 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 classes in the Basic Engineering Science Certificate program carry degree credit, representing the first year of required course work for an engineering degree, and are transferable to the Institute of Technology when admission requirements are satisfied.*

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

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

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

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

EG 25—Engineering Graphics
Phys 11-12-13—General Physics
GE 70—The Slide Rule
Engl 1B-2B-3B—Freshman English

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

†† 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.

Evening and Special Classes

Senior Engineering Science Certificate

(102 credits—includes 52 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.

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

Prerequisite: completion of Basic Engineering Science Certificate.

Core Requirement:

ITM 24A—Calculus II: Analytic Geometry and Calculus	MM 27—Rigid-Body Mechanics I
ITM 25A—Calculus III: Analytic Geometry and Calculus	Phys 14—Intermediate Physics
ITM 26A—Calculus IV: Analytic Geometry and Calculus	Phys 14A—Intermediate Physics Laboratory
	Phys 50—Intermediate General Physics
	Phys 50A—Intermediate Physics Laboratory
	GeCh 4-5—General Principles of Chemistry

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

ITM 90—Elementary Engineering Statistics	MM 41—Deformable-Body Mechanics II
MM 28—Rigid-Body Mechanics II	GeCh 6—Principles of Solution Chemistry
MM 40—Deformable-Body Mechanics I	OrCh 61-62—Elementary Organic Chemistry

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

†† 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.

Senior Civil Engineering Technician Certificate

(102 credits—includes 52 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, or highways and pavements.

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

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

Prerequisite: completion of Basic Engineering Science Certificate.

Core Requirement:

- | | |
|--|---|
| Engl 85—Advanced Technical Communication | MM 27—Rigid-Body Mechanics I |
| ITM 24A—Calculus II: Analytic Geometry and Calculus | MM 40—Deformable-Body Mechanics I |
| ITM 25A—Calculus III: Analytic Geometry and Calculus | CE 18-19—Surveying |
| | CE 31-32-33—Elementary Structural Analysis and Design |

Concentration Requirement: select at least 4 courses from the following civil engineering courses:

- | | |
|--|--|
| CE 20—Surveying | CE 141—Reinforced Concrete |
| CE 130—Statically Indeterminate Structures | CE 142—Reinforced Concrete Design |
| CE 131—Structural Analysis | CE 144—Prestressed Reinforced Concrete |
| CE 132—Structural Design | |

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

†† Institute of Technology nontechnical or biological science electives may be chosen from the following: Psy 1-2, 155; Biol 1-2; Econ 1-2, 172; 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.

Evening and Special Classes

Senior Electrical Engineering Technician Certificate

(102 credits—includes 52 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.

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

Prerequisite: completion of Basic Engineering Science Certificate.

Core Requirement:

ITM 24A—Calculus II: Analytic Geometry and Calculus	Elements of Electric Circuits
ITM 25A—Calculus III: Analytic Geometry and Calculus	Elements of Electric Machines and Control Systems
ITM 26A—Calculus IV: Analytic Geometry and Calculus	Elements of Electronics I-II-III
MM 27—Rigid-Body Mechanics I	Engl 85—Advanced Technical Communication
MM 28—Rigid-Body Mechanics II	Phys 14—Intermediate Physics
	Phys 14A—Intermediate Physics Laboratory

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

†† Institute of Technology nontechnical or biological science electives may be chosen from the following: Psy 1-2, 155; Biol 1-2; Econ 1-2, 172; 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.

Senior Industrial Engineering Technician Certificate

(102 credits—includes 52 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. Credits earned in correspondence study or day school applicable to this program can be transferred. Transcripts of credits earned at other institutions of higher learning will be evaluated by the Advanced Standing office of the University of Minnesota. Transfer of approved credits not to exceed 75 per cent will be permitted. Certificates are awarded to students who complete with a minimum of C average the prescribed program of study.

Prerequisite: completion of Basic Engineering Science Certificate.

Core Requirement:

- | | |
|--|---|
| ITM 24A—Calculus II: Analytic Geometry and Calculus | MM 40—Deformable-Body Mechanics I |
| ITM 25A—Calculus III: Analytic Geometry and Calculus | Engl 85—Advanced Technical Communication |
| MM 27—Rigid-Body Mechanics I | Industrial Engineering and Management |
| | ITM 90—Elementary Engineering Statistics or |
| | ME 99—Engineering Analysis |

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

- | | |
|-----------------------------------|--|
| Motion and Time Study | Plastics Technology |
| Principles of Engineering Economy | Manufacturing Cost Analysis |
| Introduction to Reliability | Introduction to Operations Analysis |
| Inventory and Production Control | Layout Engineering and Materials Handling |
| Statistical Quality Control | Designing for Production Value Engineering |

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

- | | |
|---------------------------|---|
| Industrial Engineering | Econ 1-2—Principles of Economics |
| Mechanical Engineering | IR 52—Modern Industrial Relations: Labor |
| Electrical Engineering | Marketing |
| Mathematics | IR 72—Modern Industrial Relations: Manpower |
| Psy 1-2 | Management |
| Supervision I, II, or III | |

Senior Mechanical Engineering Technician Certificate

(102 credits—includes 52 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.

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

Prerequisite: completion of Basic Engineering Science Certificate.

Core Requirement:

ITM 24A—Calculus II: Analytic Geometry and Calculus	ME 23—Mechanisms: Components and Synthesis
ITM 25A—Calculus III: Analytic Geometry and Calculus	ME 30-31-32—Thermodynamics
ME 21—Mechanisms: Kinematic Analysis	MM 27—Rigid-Body Mechanics I
ME 22—Mechanisms: Dynamic Analysis	MM 40—Deformable-Body Mechanics I
	Engl 85—Advanced Technical Communication Instrumentation and Automatic Control

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

Air Conditioning
Refrigeration
Value Engineering

Servomechanisms
Tool Design
Machine Tool Fundamentals

†† 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.

II. UNIVERSITY DEGREE PROGRAMS

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

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

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

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

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

Bulletins of the various colleges of the University can be obtained by telephoning 373-2011, and asking for the Service Bureau.

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

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

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

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

Bachelor of Arts (B.A.)

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

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

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

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

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

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

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

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

- | | |
|---|--|
| <ul style="list-style-type: none"> 1. Anthropology 2. Economics 3. Business Functions and Management (only Mgmt 1 accepted) 4. Quantitative Analysis (only QA 5 accepted) 5. Geography | <ul style="list-style-type: none"> 6. History 7. Political Science 8. Psychology 9. Sociology 10. Social Science (Interdisciplinary Programs) |
|---|--|

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

- 1. Biological sciences: biology, botany, psychology, zoology
- 2. Physical sciences: astronomy, chemistry, geology, physics, Physical World
- 3. Mathematics (except Y, 20, 21)
- 4. Orientation in the natural sciences (a student presenting credits in only NSci 1-2 must take his additional work in other than group D2)

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

- | | |
|---|--|
| <ul style="list-style-type: none"> 1. Art 2. English literature 3. Foreign literature 4. History 5. Humanities | <ul style="list-style-type: none"> 6. Mathematics (except Y, T, C, 20, 21) 7. Music 8. Philosophy 9. Speech and theater arts (except 6, 6A, 9, 39) |
|---|--|

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

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

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

Evening and Special Classes

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

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

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

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

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

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

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

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

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

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

Degree Requirements

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

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

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

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

Master's Degree

No complete master's program is available through regular evening classes in the General Extension Division; however, some graduate credit toward such a degree is possible. See Graduate Credit, page 32 in this bulletin.

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 Office of the Dean, School of Business Administration, University of Minnesota, Minneapolis 14.

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 14.

III. INFORMATION

GENERAL INFORMATION

Admission Requirements

There are no entrance or residence requirements for admission into the General Extension Division; however, for registration in specific programs or classes there may be prerequisite courses or experience. See Prerequisites, page 32. Service veterans may register under Public Laws 550 and 894. See Special Information for Veterans and Members of the Armed Forces, page 39.

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, 53 Nicholson Hall, Minneapolis Campus, telephone 373-3905. This must be done at least 3 weeks in advance of the opening of a registration period if the student wants help in planning a program. Obtain transcripts from the registrar of an institution previously attended. Korean veterans, see page 40 for special instructions.

Credits

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

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

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

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

Transfer—Credits may sometimes be transferred from one college to another, or from another accredited institution to this University, but requests for such transfer are

Evening and Special Classes

always ruled on individually and according to their merits; consult a member of the Committee on Student Scholastic Standing of the General Extension Division.

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

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

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

A student wishing to take a special examination should consult the subject matter department in which he expects to take the examination, where he will be advised as to the wisdom of his taking the examination. If it is determined that he should take an examination, he shall arrange the date and time for examining with the department concerned. He must then pay a fee of \$5 to the Department of Evening and Special Classes, at which time he will be given a "Special Examination Form" to be presented at the time of the examination.

Residence—Credits earned in undergraduate evening classes in Minneapolis, St. Paul, and Duluth are "residence" credits. They may be used to satisfy the residence requirements of the University of Minnesota. They do not, however, meet the residence requirements of individual colleges of the University, until a student who is working on a degree program is formally admitted to the college from which he expects to get a degree. See University Degree Programs, page 25.

Graduate Credit—A graduate student may, upon approval of his graduate adviser, petition the dean of the Graduate School to have transferred to his graduate record not more than 9 credits in courses taught by members of the graduate faculty and numbered 100 and above. A student registering for graduate credit *must request at the time of registration that the appropriate class card(s) be stamped graduate credit requested.* (Students are urged to advise the instructor at the first class meeting that graduate credit is requested and to make certain he is a member of the graduate staff.) This will insure record of graduate credit on the instructor's grade report which will be filed with the Office of Admissions and Records. Upon completion of a course, or at a later date if more appropriate, the student must then initiate the petition to the dean of the Graduate School. Petition to transfer is limited to credits earned in evening classes since September, 1955.

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

Prerequisites

The purpose of a prerequisite is to establish who is eligible to register for the class. You will find the prerequisite of any class listed at the end of the class description. Usually there is no prerequisite for beginning classes. However, if these classes have two or more parts, these parts must be taken in sequence unless otherwise indicated. Most advanced classes do have prerequisites and cannot be carried satisfactorily unless the student has had the stated previous class(es) or their equivalent. In some instances, ma-

ture 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 class without penalty or to cancel with a full refund, provided this action is taken before the end of second week of classes (see Refunds, page 38). A prerequisite course may not usually be taken for credit after the advanced course has been satisfactorily completed.

Grades

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

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

There is a temporary grade of I (incomplete), assigned when the instructor has insufficient information to permit a permanent grade. It indicates that some required work is unfinished or that the student, though officially registered, did not attend or left without officially canceling. 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 and Special Classes in all cases of official cancellation during the first half of any semester, quarter, or special term irrespective of the student's standing. After the midpoint, the W shall be assigned by the instructor only if the student has officially canceled and was doing passing work.

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

Grade Reports—Reports of students' grades are sent them by the University Office of Admissions and Records, and cannot be furnished by the Extension offices. Students are asked to allow a month's time from the close of a term for the record office to get grades to them. A student who needs a grade sooner than that may leave a self-addressed postcard with his instructor, who will mail it to him as soon as his grade is determined. Students desiring complete transcripts of their records, see page 34.

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

Evening and Special Classes

determined by dividing the sum of grade points by the sum of credits attempted, both passed and failed.

For Extension certificates, grade points are used usually only to ascertain whether a student has the required C average; they are not used to reduce the number of credits required for a certificate except upon special action of the Committee on Student Scholastic Standing. Students in evening classes who are seeking degrees should consult the bulletin of the college in which the degree is sought regarding the status of grade points in that college.

Probation

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

Auditors

A student who does not expect to do all the required work of a class may register as an *auditor* by writing "Aud." in the credit column of the registration form and above his name on the class card, or by asking his instructor to record him as an auditor not later than the *ninth* week of a semester class or the *sixth* week of a quarter class, provided he is doing passing work at the time of the request. Auditor's status carries no credit. One may not later take for credit a course which has been audited; exceptions to this ruling may be allowed upon consultation with an adviser in the college or school concerned. Auditors pay the same fee as other students. No *veteran* may audit any class under Public Law 550 or 894. No *military personnel* may audit any class under Off-Duty Academic Instruction or Tuition Assistance Programs.

These regulations apply to all classes listed in this bulletin.

Transcripts

Extension students can secure transcripts showing all credits earned in evening classes by calling or writing the Office of Admissions and Records, University of Minnesota, Minneapolis 14; telephone 373-2011.

Special Classes and Short Courses

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

Faculty

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

Committee on Student Scholastic Standing

There is a Scholastic Committee in each college and school of the University and in the General Extension Division. It is a committee of the faculty, chaired by an adminis-

trative officer. Its purpose is to interpret and enforce regulations and to make exception to those regulations when they may do an educational disservice to the student. An Extension student working on a degree program must consult the Scholastic Committee of the college from which he intends to get his degree.

Correspondence Study Courses

A large selection of correspondence study courses is available. Much of the work required for Extension certificates and for some University degrees may be earned through correspondence study. Bulletins are available from any Extension office or from Director, Correspondence Study Department, 254 Nicholson Hall, University of Minnesota, Minneapolis 14.

REGISTRATION REGULATIONS AND FEES

The following regulations apply to veteran as well as nonveteran students, unless otherwise indicated. In addition, all service veterans and military personnel should read the Special Information for Veterans and Members of the Armed Forces section starting on page 39.

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

Business firms may register their employees in evening classes by special arrangement with the General Extension Division. Registration materials and instructions should be requested from Associate Director, Department of Evening and Special Classes, General Extension Division, University of Minnesota, Minneapolis 14, telephone 373-3942.

How to Use This Bulletin for Registering

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

The first line or two of the listing gives the abbreviated departmental prefix, the class number, if any, the title of the class, the number of credits and the kind of credit, and the tuition per term (semester, quarter, or special 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 31).

The description of the course content follows. Such regulations as prerequisites, class size limitations, number of meetings, etc., will be found in the parenthetical statement following the course description. (See Prerequisites, page 32.)

Evening and Special Classes

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

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

Registration Periods

All registrations should be made and fees paid during the official registration period for the term involved. Any registration, initial or added, made after the official registration period will be considered a late registration and subject to a late fee. (See Late Registrations and Additions, page 37.)

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

Korean veterans, military personnel, and all other students who plan to register under the authority or with the assistance of any federal, state, or foreign agency, military service, institution, company, scholarship, or loan fund must register in person in 51 Nicholson Hall on the Minneapolis Campus.

Symbols

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

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

Present or Former University Day-School Students

Students who are regularly registered in day school classes in any unit of the University who wish to register for Extension 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 Extension classes.

The Department of Evening and Special 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.

Work Load

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

Discontinued Classes

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

Tuition and Fees

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

The full amount of the tuition and other special fees is payable at the time of registration. No arrangements for partial payment can be made. Checks or money orders must be drawn for the exact amount due and made payable to the University of Minnesota. Students in need of special financial assistance see Extension Student Loan Fund, page 43.

A student is not registered until his fees are paid.

Mail Registrations

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

1. Registrations must be made on official registration forms, with attached check or money order covering full amount of tuition and fees, payable to the University of Minnesota.

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

3. *No registration for limited classes* will be accepted by mail. These registrations may be made in person at any Extension office.

4. No veteran, 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 Associate Director, Department of Evening and Special Classes, Room 56 Nicholson Hall, Minneapolis Campus; telephone 373-3942. Normally, such registrations must be made in person.

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

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 5 and 6, will be considered late registrations and will be subject to the late fee listed below:

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

Quarter classes—during first week \$3.

Special Term classes—during first week \$3.

Evening and Special Classes

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

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

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

There are no exceptions to payment of late fees.

Transfers

Students who wish to transfer after an initial registration will be subject to the following transfer fees:

Semester classes—during first week no transfer fee, second week \$5.

Quarter classes—during first week no transfer fee.

Special Term classes—during first week no transfer fee.

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

Limited Classes

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

Cancellations

Any student who drops out or wishes to drop out of classes is urged to make an official cancellation at once, either in person or by writing any Extension office. By so doing he will receive a refund when *eligible* (see below) and will likewise insure the appropriate grade on his grade report. If a student officially cancels a class *before* mid-term he will be automatically given a "W" on his grade report. This symbol means "official withdrawal without grade." If the official cancellation is *after* mid-term your instructor will give you a "W" if you are doing passing work. *It is urgent therefore, that you officially cancel whenever you stop attending a class.*

No student is permitted to cancel the last 2 weeks of any quarter, semester, or special term. Official cancellation of registrations may be made in person or by writing any Extension office; telephone 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.

Refunds

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

1. Full refund of all tuition and special fees when a class is canceled by the Extension Division; when the hour, day, or location of the class is changed by the Extension Division, after a student has registered in it; or when *in the opinion of the instructor*, the student does not have the necessary prerequisites or the class does not

meet the student's needs or the student has already had the equivalent material in another class. In this 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.*
2. For cancellation of classes on or before the opening date of each semester, quarter, or special term, a \$3 registration fee will be charged. The balance of the tuition and special fees will be refunded.
3. For cancellation of classes *after* the opening date of each semester, quarter, or special term, a partial refund of tuition and special fees will be made as follows (private fees for late registration, additions, and transfers are not refundable):

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

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

Refunds cannot be made in cash; they must be paid by check. Normally, it requires 3 weeks to process a request for a refund. Refund checks will be mailed to the student.

SPECIAL INFORMATION FOR VETERANS AND MEMBERS OF THE ARMED FORCES

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

Military Personnel

All branches of the Armed Services now provide Off-Duty Academic Instruction or Tuition Assistance Programs for military personnel on active duty. There are no application forms necessary for admission to the Evening and Special Classes Division. Under these programs, eligible military personnel may be entitled to payment of \$6.75 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

Evening and Special Classes

be paid by military personnel. Interested members of the Armed Services are urged to contact the educational officer or commanding officer of their command for proper authorization to participate in these programs. Written authorization designating classes and amount of tuition to be paid by Army, Navy, Air Force, or Marine Corps should be presented at time of registration, at which time payment of remainder of tuition and fees must be made. Military personnel who do not have the necessary authorization at the time of registration will be required to pay in full for their registration. When the government authorization is received, a refund for the authorized amount will be made. Registration must be made in person at the Veterans Office, 51 Nicholson Hall, Minneapolis Campus, telephone 373-3939.

World War II Veterans

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

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 1, Minnesota, CApital 2-3013.

Korean War Veterans

A veteran who wishes to initiate his educational training, resume his educational training, or make changes in his educational training program under Public Law 550 is urged to keep the following information in mind: (a) A veteran initiating his training for the first time must be actually enrolled in and attending classes on or before his delimiting date, which date is 3 years from his date of separation from active duty. The Veterans Administration makes no exception to this rule. The mere registration for classes does not constitute initiation of a training program. (b) A veteran can interrupt his educational program for a period not to exceed 12 calendar months from the date of interruption. For veterans who interrupt their training before their "delimiting date" the allowable 12 months' interruption is counted from the delimiting date. If and when the 12 months' period ends during a vacation, recess, or other period where it is not possible to re-enter school, the period may be extended to the first quarter, semester, or term thereafter without Veterans Administration approval. (c) Any veteran who has initiated his educational training and then decides that he would like to change his objective can do so without restriction if the change is requested and the new program initiated prior to his delimiting date. However, if he has not used his one change in objective, a new educational objective may be approved after his delimiting date provided it involves no material loss of time or credit. The Veterans Office, 51 Nicholson Hall, should be consulted regarding such a proposed change in objective.

Registration—All registrations by veterans must be made in person at the Veterans Office, 51 Nicholson Hall, Minneapolis Campus, telephone 373-3939. No Korean veteran registration can be accepted at either the St. Paul or Minneapolis Extension offices. Consult the Registration section of this bulletin for exact dates.

Original Certificate for Educational Training—A veteran who has not applied previously for educational training under Public Law 550 should contact the Veterans Office,

General Extension Division, 51 Nicholson Hall, for all information regarding his application, objectives, and registration at the University of Minnesota.

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

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

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

Educational Requirements—There are no special entrance or residence requirements for Korean veterans. See Admission Requirements, page 31. However, all veterans previously enrolled in day school, University of Minnesota, must present a transcript of credits at time of registration. Veterans from other institutions of higher learning should present a transcript of credits for evaluation at least 1 month before registration. Contact Veterans Office, 51 Nicholson Hall, telephone 373-3939 for instructions.

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

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

Monthly Educational Allowance—When a veteran enrolls for a minimum ½-time credit or credit equivalent work load in evening or day time classes he will be paid a monthly educational allowance on the basis of monthly certifications (see paragraph on Monthly Certifications). All entrance credit classes carry a credit equivalent for purposes of determining monthly educational or tuition refunds. Enrollment in correspondence courses does not entitle a veteran to a monthly educational allowance (see following section on Tuition refund by the Veterans Administration).

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

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

	Semester Classes (Minimum Credits)	Quarter Classes (Minimum Credits)	Educational Allowance		
			Single	One De- pendent	Two De- pendents
Full Work Load	21	14	\$110	\$135	\$160
¾ Work Load	15	10	80	100	120
½ Work Load	10½	7	50	60	80

Evening and Special Classes

Tuition Refund by the Veterans Administration—When a veteran enrolls in correspondence courses or for less than a ½-time credit or credit equivalent work load in either evening or day time classes, he will be refunded tuition and fees only. These refunds will be prorated monthly on the basis of monthly certifications (see paragraphs on Monthly Certifications).

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

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

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

Veterans are strongly advised to remember that signing monthly certifications is not a mere perfunctory act. Since all monies paid a Korean veteran by the Veterans Administration are based on said monthly certification, a veteran is making a legal affidavit that he is still in attendance and completing assignments in all classes in which originally enrolled unless there has been an official cancellation submitted to the Veterans Office, 51 Nicholson Hall.

Cancellations, Transfers, and Additions

Cancellation of any class, or transfer from or addition to an initial registration, must be made in person on official forms at the Veterans Office, 51 Nicholson Hall. *No instructor is authorized to accept cancellations.*

Counseling

The Veterans Office, 51 Nicholson Hall, Minneapolis Campus, telephone 373-3939, should be consulted on all problems related to Veterans Administration authorizations for educational training, transfers, interruptions, or cancellations, as well as Extension Division registration procedures.

SPECIAL SERVICES FOR STUDENTS

Program Advising and Personal Counseling

Members of the evening class staff are available at all offices *by appointment* throughout the year for general advisory services on the selection of classes, programs of study, certificate and degree requirements, etc. The Committee on Student Scholastic Standing in the University Campus office assists students in arranging programs of study

leading to University degrees, and handles evaluations of transcripts for advanced standing, satisfaction of prerequisites, special examinations, and other academic matters.

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

There will be special meetings arranged at the beginning of each semester registration for students who may be candidates for degrees in the College of Science, Literature, and the Arts. Such students should request specific information about the meetings from any Extension office, or telephone 373-3905.

Program advisers from the College of Science, Literature, and the Arts, the College of Education, the School of Business Administration, and the Institute of Technology will be available in their offices on the University Campus during specific evening and Saturday morning hours in the course of the special registration periods. A student wishing to see such an adviser should telephone the University Campus Extension office for information as to the schedule and *make an appointment; telephone 373-3905.*

Appointments for the testing and counseling services of the University Student Counseling Bureau may be arranged by calling the Bureau, 373-4193. Vocational, personal, and social problems may be brought to the Bureau. The Counseling Bureau's fee for regularly enrolled evening students is \$10.

Extension Student Loan Funds

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 fifty cents. Applications should be made before or during any official registration period at any Extension office.

Aids for Handicapped Students

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

English Classes for Foreign-Born Students

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

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

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

University Library

Evening students attending classes in Minneapolis or St. Paul are entitled to draw books from the University Library to be used in connection with their classes but are subject to all library regulations including those in regard to return upon demand and

Evening and Special Classes

to fines on overdue books. These regulations and hours are set forth in the *Library Handbook*, copies of which may be had at the Library circulation desk.

Coffman Memorial Union

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

Convocations

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

University Theater, Artists Course, and Special Lectures

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

Minneapolis Symphony Orchestra

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

Athletic Facilities

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

Season Athletic Tickets

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

Wednesday, September 19, 9 a.m.-4:30 p.m.

Thursday, September 20, 9 a.m.-9 p.m.

Friday, September 21, 9 a.m.-4:30 p.m.

Saturday, September 22, 9 a.m.-2 p.m.

Monday, September 24, 9 a.m.-9 p.m.

Tuesday, September 25, 9 a.m.-4:30 p.m.

All ticket sales will be held in Williams Arena Lobby. Reserved seat season tickets will be issued in Williams Arena Lobby on Thursday and Friday, September 27 and 28, from 9 a.m. to 4:30 p.m., and Saturday, September 29, from 9 a.m. to 2 p.m. Regulations governing purchase, transfer, and cancellation of these tickets are available on request to the Athletic Ticket Office.

IV. LIBERAL ARTS PROGRAMS

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

Lecture Series

Each year the General Extension Division brings some of the country's outstanding experts to the Twin Cities for discussions of subjects of general interest. Two such lecture series are planned for 1962-63. More complete announcements will be made at a later date. All lecture series are open to the public.

Folk and Jazz: Music of the American People

Six lectures explore and explain the ramifications of Folk and Jazz music. Folk and jazz—amalgams of Elizabethan melodies and Negro rhythms, heavily spiced with Latin influence—savor of all the seasonings in the American melting pot. No other aspect of our culture is as uniquely American as our traditional people's music. Folk and jazz music are recognized abroad as America's own special contribution to world culture. In its pure—as well as in its degenerate—forms American music is becoming increasingly the popular music of the whole world. The Russians testify to the importance of this movement by assigning the origins of jazz to the city of Odessa!

Essentially the music is full of a good-time spirit but it also expresses all of the sadness and sorrows in Everyman's life. In this music the American Negro has played a dominant role.

In each of the lectures there will be ample musical examples and for a number of them there will be live musical productions.

The lectures will be held on Wednesday nights, from January 16 to February 20, at 8:30 p.m. in Nicholson Hall auditorium. General admission tickets are \$10. Educational admission tickets (staff, teachers, students) are \$6.50. All checks should be made payable to the University of Minnesota. No tickets to individual lectures will be sold. Tickets may be purchased beginning December 26 *in person* at 156 Nicholson Hall or *by mail*. Address: Lecture Series, 156 Nicholson Hall, University of Minnesota, Minneapolis 14. Information about the lectures is available by telephone, 373-3919.

The Dark Ages

Eight lectures survey this important period of history. Periods are rare in which a decadent civilization checks its own decline and restores itself to a new and more vigorous form. Modern Western civilization actually began in such a period, between the 4th and 11th centuries, when the Roman world was superseded by a new Germanic world—best known as the Dark Ages. This second European civilization contained some elements of the first, but they were entirely transformed by the new social, political, and intellectual context which they entered. The early medieval period, therefore, has a double fascination. On the one hand, it was a period of political chaos and social anarchy in which much of the cultural achievement of classical antiquity was lost; and, on the other, it was a period of immense creative energy and of vital forces which laid the foundations of the modern Western world. The West lost the political order of

Rome and sustained a decline in arts and letters; but it gained a new intellectual orientation, a new and progressive economy and technology, and a new range of social and cultural interests and values.

The lecture series will provide a comprehensive survey of the important political, social, and intellectual movements of Europe which led to this rebuilding of Western civilization.

The lectures will be held on Wednesday evenings, March 13 through May 1, at 8 p.m. in the Museum of Natural History auditorium. General admission tickets are \$12. Educational admission tickets (staff, teachers, students) are \$7.50. All checks should be made payable to the University of Minnesota. No tickets to individual lectures will be sold. Tickets may be purchased beginning February 20 *in person* at 156 Nicholson Hall or *by mail*. Address: Lecture Series, 156 Nicholson Hall, University of Minnesota, Minneapolis 14. Information about the lectures is available by telephone, 373-3919.

Neighborhood Seminars

If 16 or more persons wish to organize a study and discussion group on a subject of mutual interest they may request the Extension Division to assist them in obtaining the services of qualified faculty members as instructors. The group meets in the homes of its members or in a convenient school or church. Seminars in two general areas of study are available. History: (1) Latin America Today, (2) American Goals and Values, (3) Background of Western Civilization. Humanities: (1) Primary Ideas in the 20th Century, (2) Ancient Sources of Contemporary Culture, (3) Poetry, Painting, and Music of Today. If another subject area is of special interest to a group, it may be possible to arrange for a qualified instructor. For further information write for the brochure, "Learning for 20th Century Living," 153 Nicholson Hall, University of Minnesota, Minneapolis 14.

Registration is through the General Extension Division with fees of approximately \$16 per person or \$24 per couple. No University credit is available.

Seminars for Women

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

Meetings are held on the campus for a full morning every other week from October through June. Tuition for the year for each seminar is \$72. Registration in each is limited to 20 women.

Seminar applicants must be members of the Minnesota Plan. To register in the plan, telephone 373-3850 or write Minnesota Plan for Continuing Education of Women, Room 106 Temporary South of Mines A, University of Minnesota, Minneapolis 14. For information about the seminars write Assistant to the Dean for Liberal Arts Programs, 153 Nicholson Hall, University of Minnesota, Minneapolis 14, or telephone 373-3919.

We regret that the seminars are filled for 1962-63. Applications for 1963-64 seminars (beginning in October of 1963) will be accepted after January 3, 1963.

New Worlds of Knowledge

This is a liberal arts seminar covering a wide range of topics from physics, through the biological and social sciences, to art, music, and literature. The primary emphasis is on new developments in the last 15-20 years and the differing methods of critical thinking appropriate to each field. (Two or three residential meetings of a day and a half each are held in the Center for Continuation Study where dormitory space is available.)

Evening and Special Classes

The Arts of Reading

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

The Cultivation of Vision

Perhaps because ours is a complicated culture based on mainly a sense of vision, most of us look at the world but do not see what we are looking at. This seminar, using great art and fine design as tools, will attempt to sharpen the sense of perception our civilization has lost so largely.

Special Seminar for Men

New Worlds of Knowledge

Upon request the University has adapted this seminar to the time schedule of men. It will be presented as a combination of two teaching methods: the discussion seminar, and independent study. Day-long meetings will be conducted at the Center for Continuation Study on Saturdays—December 15, 1962; January 12, February 9, March 9, April 13, May 11, and May 25, 1963. Extensive reading and periodic short papers will be required. No auditors will be allowed and registrations must be limited. Tuition is \$75. (For description of course, see New Worlds of Knowledge seminar for women.) For further information call 373-3919 or write Assistant to the Dean for Liberal Arts Programs, 153 Nicholson Hall, University of Minnesota, Minneapolis 14.

V. COURSE OFFERINGS

AGRICULTURE

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

Horticulture

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

A practical course in the science of house plant growing, propagation and care of plants; and special emphasis on autumn gardening activities; growing bulbs in the garden and in pots for the home in winter. Student projects in growing plants from cuttings; and growing and forcing bulbs for winter house plants. Although this course is 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 41. Horticultural Crop Judging. 3 degree credits. \$27.

The course is designed for anyone interested in becoming a judge of horticultural produce or exhibits (other than arrangements). It should also be of special interest to vocational agricultural instructors or anyone connected with this type of work. Course will include selection of materials for and preparation of exhibits, as well as their evaluation and judging. (Prerequisite: 1, 6, or #)

Fall Quarter

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

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

A complete practical course in home gardening for the experienced gardener as well as the beginner. All the practical horticultural aspects of plant growing and garden and home grounds care are covered in lecture, demonstrations, and illustrations; student projects in propagating plants in greenhouses, hot beds, and home facilities. Special emphasis on pruning, fertilizing; weed, insect, and disease control. Also a survey of all the plants recommended for Minnesota gardens and yards. (No prerequisite)

Special Term—February 19 to April 30

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

Hort 60. Home Landscaping Planning. (Formerly Hort 24) 3 degree credits. \$27.

An opportunity for the home owner to learn the principles of planning the home grounds and how to apply them to his own 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

Symbols explained on page 36.

Evening and Special Classes

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 and Construction. (Formerly Hort 25) 3 degree credits. \$27.

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

Special Term—February 21 to May 2

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

Symbols explained on page 36.

ARTS AND SCIENCES

Anthropology

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

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

Fall Semester

T 8:10-9:50, Ford 120, Bicchieri

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

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

Spring Semester

T 8:10-9:50, Ford 120, Bicchieri

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

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

Fall Semester

Th 8:10-9:50, Ford 120, Holt

Anth 164. Social Anthropology. 3 degree credits. \$27.

The structure of nonliterate and folk societies with special attention to systems of kinship and marriage and their relationship to economic, religious, and political institutions; an examination of the functional and structural approaches in cultural anthropology. Students wishing graduate credit should inquire at time of registration. (No prerequisite)

Spring Semester

Th 8:10-9:50, Ford 150, Holt

Art

Art Education. (See page 120.)

Art History and Criticism

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

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

Fall Quarter

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

Winter Quarter

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

Spring Quarter

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

Symbols explained on page 36.

Evening and Special Classes

Fall Semester

Th 10:00-11:40 a.m., StP Gallery D
Th 7:30-9:10 p.m., StP Gallery D

Spring Semester

Th 10:00-11:40 a.m., StP Gallery D
Th 7:30-9:10 p.m., StP Gallery D

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

Fall Quarter—Winter Quarter—Spring Quarter

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

Art 56. Renaissance and Baroque Art: 1300-1500. 3 degree credits. \$27 plus \$1 laboratory fee.

Painting, sculpture, and architecture in Europe from Duccio to Raphael. Giotto and the 14th century in Italy. Architecture of the early Renaissance. The Van Eycks, Masaccio, Donatello, and the 15th century in Italy and Flanders. Leonardo, Raphael, Dürer, and the High Renaissance. (Prerequisite: 1 or 50 or #)

Fall Quarter

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

Art 57. Renaissance and Baroque Art: 1500-1650. 3 degree credits. \$27 plus \$1 laboratory fee.

Painting, sculpture, and architecture in Europe from Michelangelo to Rubens. Titian, Tintoretto, and the 16th century in Venice. Palladio and the academic attitude in architecture. Caravaggio, El Greco, and the early baroque style of Bernini and Velasquez. (Prerequisite: 1 or 50 or #)

Winter Quarter

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

Art 58. Renaissance and Baroque Art: 1650-1800. 3 degree credits. \$27 plus \$1 laboratory fee.

Painting, sculpture, and architecture in Europe from Rembrandt to David. Seventeenth-century art of Holland, Poussin and the classical tradition in France and England. Watteau, Boucher, and 18th-century decoration. The English portraitists. The rise of neoclassicism in Italy and France. (Prerequisite: 1 or 50 or #)

Spring Quarter

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

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

Painting, sculpture, and architecture during the second half of the 19th century with particular emphasis on the schools of Paris, their influence and parallels in England, Germany, and the United States. (Prerequisite: 1 or 50 or #)

Winter Quarter

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

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

Development of painting, sculpture, and architecture in Europe and the United States during the 20th century. (Prerequisite: 1 or 50 or #)

Spring Quarter

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

Symbols explained on page 36.

Studio Courses

All studio drawing and painting classes will meet for a 2½-hour period. Those who wish to receive degree credit in these courses will be expected to do some work outside of class—consult instructor. Unless otherwise indicated, students may register for any unit number of these sequences in any semester, provided units are satisfactorily completed in the order listed or instructor's consent is obtained for registration in an advanced unit on the basis of background and ability. Advanced standing credit will be granted in special cases for work done elsewhere—consult chairman of Art Department.

Art 10. Basic Photography I. (See page 85.)

Art 11. Basic Photography II. (See page 85.)

*Art 23-24-25. First Year Drawing and Painting. 2 degree credits each semester. \$27 plus \$3 laboratory fee each semester.

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

Fall Semester

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

Spring Semester

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

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

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

Fall Semester

M 7:30-10:00, Jones 109, Young

Spring Semester

M 7:30-10:00, Jones 109, Young

*Art 32e-33e-90e. Introduction to Printmaking. 2 degree credits each semester. \$27 plus \$3 laboratory fee each semester.

The techniques of engraving, etching, aquatint, softground, and other processes on the copper plate. Also woodcut and wood engraving processes with primary emphasis on color printing. Analysis of works by old master and modern printmakers. (Prerequisite: Art 23 for 32e; 32e or # for 33e; 33e or # for 90e. Repeated spring semester. Limited to 25 students)

Fall Semester

W 6:30-9:30, Jones 203, Myers

Spring Semester

W 6:30-9:30, Jones 203, Myers

*Art 51. Principles of Pictorial Design. 2 degree credits each semester. \$27 plus \$3 laboratory fee each semester.

The stages of observing objectively the plastic qualities and relationships which make painting significant as an art. Investigation of the ways in which painters have organized their materials to meet their individual purposes. In conjunction with this, individual creative efforts are developed in simple mediums. (Prerequisite: 24. Class limited to 25 students)

Fall Semester

T 7:00-9:00, Jones 109, Phyllis Downs

Symbols explained on page 36.

Evening and Special Classes

*Art 52-53. **Drawing II.** 3 degree credits. \$27 plus \$3 laboratory fee.

Drawing from model, still life, and nature. Principles of anatomy. (Prerequisite: 24 or # for 52; 52 or # for 53. Class limited to 12 students)

Spring Semester

Th 7:00-9:30, Jones 200, Phyllis Downs

*Art 54-55. **Life Drawing.** 3 degree credits. \$27 plus \$3 laboratory fee.

Continuation of 52-53. Places particular emphasis on drawing from the model. Related studies of past and contemporary drawing and painting employing the human figure. (Prerequisite: 53 or # for 54; 54 or # for 55. Class limited to 12 students. Meets concurrently with Art 52-53 [total limited to 24 students])

Spring Semester

Th 7:00-9:30, Jones 200, Phyllis Downs

*Art 60B-61B-62B. **Water Color.** 2 degree credits. \$27 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. Class limited to 25 students)

Fall Semester

T 6:20-8:50, Jones 11, Beauchamp

*Art 70-71-72. **Oil Painting.** 3 degree credits. \$27 plus \$3 laboratory fee.

Introduction to medium of oil; individual projects and instruction. (Prerequisite: 54 or # for 70; 70 or # for 71; 71 or # for 72. Class limited to 12 students. Meets concurrently with Art 70B [total limited to 24 students])

Spring Semester

M 7:00-9:30, Jones 200, Busa

*Art 70B-71B-72B. **Oil Painting.** 2 degree credits. \$27 plus \$3 laboratory fee.

No credit for art majors. (Prerequisite: 20 or 23 or # for 70B; 70B or # for 71B; 71B or # for 72B. Class limited to 12 students. Meets concurrently with Art 70 [total limited to 24 students])

Spring Semester

M 7:00-9:30, Jones 200, Busa

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

*Art 83A. **Interior Design I.** 3 degree credits. \$27 plus \$1 laboratory fee.

A study of traditional and modern furniture used today and of how to combine various styles. Additional subjects include room composition, color, floor coverings, wall treatments, window treatments. Some general discussions of new ideas and materials in home building. Interesting optional field trips. Drawing not emphasized. Slides and practical demonstrations are used in the regular class procedure. (No prerequisite. Each section limited to 50 students, accepted in order of registration. Repeated spring semester)

Fall Semester

M 6:20-8:00, Nicholson 216, Lewis

T 6:20-8:00, Nicholson 216, Lewis

Th 6:20-8:00, Nicholson 216, Lewis

Spring Semester

W 6:20-8:00, Nicholson 216, Lewis

Th 6:20-8:00, Nicholson 216, Lewis

Symbols explained on page 36.

Course Offerings—Arts and Sciences

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

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

Spring Semester

M 6:20-8:00, Nicholson 216, Lewis
T 6:20-8:00, Nicholson 216, Lewis

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

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

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

Fall Semester

103A W 8:10-9:50, Nicholson 107, Lewis

Spring Semester

104A W 8:10-9:50, Nicholson 107, Lewis
and staff

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

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

Fall Semester

T 6:20-8:00, Jones 4, Hopkins

Spring Semester

T 8:10-9:50, Jones 109, Hopkins

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

Continuation of Layout for Interior Design I. Emphasis on application of design principles to the interior design situation. Discussion and advanced problems in both the commercial-institutional and residential fields. (Prerequisite: Layout for Interior Design I)

Fall Semester

T 8:10-9:50, Jones 4, Hopkins

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

Lectures and laboratory work demonstrating how color should and should not be used in public buildings and private residences. This course is designed to be of service to both the amateur home decorator and to the professional artist, architect, advertiser, or decorator. The course will deal with basic theory of color as well as problems in the use of color in architecture and interior design. (No prerequisite. Class limited to 25 students)

Spring Semester

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

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

A review of residential planning and design techniques of historical styles and significant modern work. Emphasis on basic factors of functional and aesthetic components as effected through building technology. Consideration given to neighborhood and site planning, landscaping, interior design, modern concepts of family living, building materials and methods, climate control and con-

Symbols explained on page 36.

Evening and Special Classes

ditioning, and building restrictions. Discussion of existing houses, apartments, two-family houses; their economics and planning techniques. (No prerequisite)

Fall Quarter

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

Courses at Minneapolis School of Art

The Minneapolis School of Art is located at 200 East 25th Street. Telephone number is FEderal 8-8759. Registration for University credit for these courses may be made at any Extension office, but not at the School of Art.

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

Study and practice of free and constructed lettering, special emphasis on the relationship of lettering to other visual elements in composition or layout. (No prerequisite for 15A or B. Need not be taken in sequence)

Fall Semester

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

Special Term—February 4-May 31

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

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

Basic principles of perspective and composition, some life drawing. Variety of media. (No prerequisite for 20A or B. Need not be taken in sequence)

Fall Semester

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

Special Term—February 4-May 31

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

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

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

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

A beginning class meeting one evening a week. (No prerequisite for 20A or B. Need not be taken in sequence)

Fall Semester

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

Special Term—February 4-May 31

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

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

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

Dietrichson

Dietrichson

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

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

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

A beginning class in drawing and composition from the figure. (Prerequisite: 20A or B or # for 21A or 21B. Need not be taken in sequence)

Fall Semester

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

Special Term—February 4-May 31

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

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

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

Mousseau

Mousseau

Symbols explained on page 36.

Course Offerings—Arts and Sciences

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

An introductory class in oil painting designed to acquaint the student with the medium and its uses. Emphasis is placed upon craftsmanship and the basic principles of picture making. There are assigned problems in color harmony, tone relationship, and shape organization. (Prerequisite: 20B for 22A or B. Need not be taken in sequence)

Fall Semester

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

Special Term—February 4-May 31

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

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

Figure modeling. (Prerequisite: 21B or # for 40A or 40B. Need not be taken in sequence)

Fall Semester

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

Special Term—February 4-May 31

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

Art 45A-B. Ceramics. 2 degree credits each semester. \$27 plus \$5 special fee.

A beginning course in throwing, glazing, decorating, and firing at stoneware temperatures. (No prerequisite for 45A or 45B. Need not be taken in sequence)

Fall Semester

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

Special Term—February 4-May 31

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

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

Intermediate to advanced oil painting, emphasizing, first, organizational principles, then skill and techniques, using still life and the model. Individual development in various modes including the most contemporary. Attention throughout to the philosophical aspects of painting. (Prerequisite: 22B for 50A or B. Need not be taken in sequence)

Fall Semester

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

Special Term—February 4-May 31

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

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

Continuation of head and figure study; construction interpretation, movement. Figure composition. (Prerequisite: 21B for 54A or B. Need not be taken in sequence)

Fall Semester

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

Special Term—February 4-May 31

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

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

Head study, using various mediums, stressing discovery of each model's individual qualities. (Prerequisite: 21B for 54C or D. Need not be taken in sequence)

Fall Semester

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

Special Term—February 4-May 31

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

Symbols explained on page 36.

Evening and Special Classes

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

A broadly designed class covering a wide range of subject matter. (Prerequisite: 20B or # for 60A or B. Need not be taken in sequence)

Fall Semester

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

Special Term—February 4-May 31

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

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

Form and form relationships as they occur in the human figure, designed to help the student see and use natural forms in pictorial organization. (Prerequisite: 21 and 22 for 62A or B. Need not be taken in sequence)

Fall Semester

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

Special Term—February 4-May 31

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

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

Specialized fashion illustration in black and white from the costumed model; designed for students wishing to do newspaper and magazine work. (Prerequisite: 21 for 74A or B. Need not be taken in sequence)

Fall Semester

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

Special Term—February 4-May 31

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

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

An advanced course, utilizing layout problems met in actual practice. Composition of visual elements as used in magazines, newspapers, posters, and direct mail pieces; study of principles of layout, movement, balance, emphasis, legibility, color values, lettering design, and typographic styling. (Prerequisite: 20 or 21 and 15 for 75A or 75B. Need not be taken in sequence)

Fall Semester

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

Special Term—February 4-May 31

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

Courses at St. Paul Gallery and School of Art

The St. Paul Gallery is located at 476 Summit Avenue. Telephone is Capital 5-9621. Registration may be made at any Extension office, but not at the Gallery.

Art 1. Introduction to Art. 3 degree credits. \$27 plus \$1 laboratory fee.

A general introduction to the appreciation and application of art, through a series of lectures, studio work, and explanatory tours for all gallery exhibitions. (No prerequisite. Repeated spring semester)

Fall Semester

Th 10:00-11:40 a.m., StP Gallery D
Th 7:00-9:30, StP Gallery D

Spring Semester

Th 10:00-11:40 a.m., StP Gallery D
Th 7:00-9:30, StP Gallery D

Symbols explained on page 36.

Course Offerings—Arts and Sciences

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

Drawing and composition from the figure. Special emphasis on surface anatomy of the individual model. (No prerequisite for 21A or B. Need not be taken in sequence)

Fall Semester

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

Spring Semester

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

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

An introduction to a variety of art experiences in drawing and painting, through exploration with pencil, charcoal, watercolor, and oil paints. The class will provide the discipline of drawing directly from the model and still life. (No prerequisite for 23; 23 or # for 24; 24 or # for 25)

Fall Semester

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

Spring Semester

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

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

Creative three-dimensional design derived from animal, human, and abstract forms. Use of various colored clays and glazes. (No prerequisite for 40A or B. Need not be taken in sequence)

Fall Semester

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

Spring Semester

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

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

Fundamentals of making pottery. Includes handbuilding, wheel throwing, decorative techniques in slip and glaze, glazing, and firing. A time other than the regular class period will be made available for students to work in the Pottery Shop. Consult instructor. (No prerequisite for 45; 45 or # for 94; 94 or # for 95)

Fall Semester

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

Spring Semester

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

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

Instruction in basic metal working techniques involved in the making of jewelry. Special emphasis is placed upon individual solutions to problems of design and construction. Class open to beginning and advanced students. (No prerequisite for 49A or B. Need not be taken in sequence. Class limited to 12 students)

Fall Semester

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

Spring Semester

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

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

This class is for students who have had sufficient background and command of drawing and painting to pursue the subject of portraits effectively. (Prerequisite: 21B or # for 54C or D. Need not be taken in sequence)

Fall Semester

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

Spring Semester

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

Symbols explained on page 36.

Evening and Special Classes

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

Still life and figure problems to be carried out in charcoal, chalk, water color, and oil. Study of problems related to drawing and painting through experiments designed to suit the needs and purposes of the individual student. (Prerequisite: 25 or # for 60; 60 or # for 61; 61 or # for 62)

Fall Semester

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

Spring Semester

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

***Art. Beginning Drawing.** 2 certificate credits. \$27 plus \$5 laboratory fee.

A broad basic approach to art. Through exploration with pencil, charcoal, watercolor, and oil paints, students will receive a wide variety of experiences in drawing and painting. (No prerequisite. Limited to 20 students. Repeated spring semester)

Fall Semester

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

Spring Semester

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

Art. Anatomy and Figure Drawing and Painting. 2 certificate credits. \$27 plus \$5 laboratory fee.

Analysis of body structure and application of color. (No prerequisite. Repeated spring semester)

Fall Semester

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

Spring Semester

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

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

A beginning course in design for the handloom. Experimentation with color, texture, and pattern. (No prerequisite for I; I or # for II)

Fall Semester

I W 7:00-9:30, StP Gallery E

Spring Semester

II W 7:00-9:30, StP Gallery E

Art. Prints. 2 certificate credits. \$27 plus \$5 laboratory fee.

Wood cuts and movable block prints. Class will discover the vast possibilities attainable through knowledge of these simple procedures. (No prerequisite. Repeated spring semester)

Fall Semester

W 7:00-9:30, StP Gallery D, Jensen

Spring Semester

W 7:00-9:30, StP Gallery D, Jensen

Art. Commercial Art. 2 certificate credits. \$27 plus \$5 laboratory fee.

Techniques involved in layout and design as applied to illustrative work and publications. (No prerequisite. Repeated spring semester)

Fall Semester

F 7:00-9:30, StP Gallery D, Fry

Spring Semester

F 7:00-9:30, StP Gallery D, Fry

***Art. Advanced Painting.** 2 certificate credits. \$27 plus \$8 laboratory fee.

Students with prior training or experience in the field of art may apply for this class. (Prerequisite: #. Limited to 15 students. Repeated spring semester)

Fall Semester

F 7:00-9:30, StP Gallery C, Kramer

Spring Semester

F 7:00-9:30, StP Gallery C, Kramer

Symbols explained on page 36.

Astronomy

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

The general principles and fundamental facts of astronomy, illustrated by slides, simple problems, and naked-eye and telescopic observation. The Spitz Projection Planetarium will be used extensively to provide superior demonstration opportunities regardless of weather conditions. Higher mathematics not necessary. (No prerequisite)

Fall Semester

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

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

Supplements Ast 11 which, however, is not prerequisite. A detailed description of the constellations and individual stars, and structure of the sidereal universe, determination of time from the stars; extended opportunity for the use of the telescope and the observation of the heavenly bodies, supplemented by use of the Spitz Projection Planetarium. Higher mathematics not necessary. (No prerequisite)

Special Term—February 6-June 5

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

Biology

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

Fall Semester

Spring Semester

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

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

Classics

Clas 91, 92, 93. Classical Literary Traditions. (**Clas 191, 192, 193) 3 degree credits each quarter. \$27 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. (Students may enter in any quarter. Prerequisite: 9 credits in English literature beyond Freshman English, or in foreign literature. No knowledge of Greek or Latin is required)

Fall Quarter

Winter Quarter

Spring Quarter

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

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

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

Class 191, 192, 193. Classical Literary Traditions. 3 degree credits each quarter. \$27 each quarter.

Fall Quarter (191)—Winter Quarter (192)—Spring Quarter (193)

See course description, day, time, place, and instructor as listed under Clas 91, 92, 93. Students wishing graduate credit should inquire at time of registration.

Evening and Special Classes

English

English Placement Tests

Admission to Engl 1B or Comm 1 is based on satisfactory score in the English Placement Test or satisfactory completion of Comp X, Preparatory Composition.

Your first step is to register for Engl 1B 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 Engl 1B but you need not take the placement test. (c) If you have passed Comp X 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 13, Nicholson 211
- 7:00 p.m. Tuesday, September 18, Nicholson 211
- 7:00 p.m. Tuesday, September 18, StP Ext Center 2H
- 7:00 p.m. Wednesday, September 19, Robbinsdale Senior High School 231

Winter Quarter

- 7:00 p.m. Thursday, December 27, Nicholson 211
- 7:00 p.m. Wednesday, January 2, Nicholson 211

Spring Quarter

- 7:00 p.m. Thursday, March 28, Nicholson 211

You will be notified by mail prior to the first meeting of your class of your eligibility to remain in Engl 1B 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 Engl 1B 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 Engl 1B 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.

Literature

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

A combined course in composition (9 credits) and literature (3 credits). It concentrates upon developing the student's skill in writing exposition, with an introduction to literary types as the chief means of providing subject matter for writing. It satisfies the Group A requirement for graduation. (Prerequisite: for 1B, Comp X or satisfactory score in English Placement Test, explained above; 1B for 2B; 2B for 3B. Must be taken in sequence. If you have had a freshman English course, other than 1B-2B-3B, at this University, consult registration clerk for proper placement)

Symbols explained on page 36.

Course Offerings—Arts and Sciences

Fall Quarter		Winter Quarter		Spring Quarter	
1B	M	6:30-10:00, Robbinsdale Senior High School 233	1B	T	6:20-9:50, Folwell 101
					W 6:20-9:50, Folwell 101
					F 6:00-9:30, StP Ext Center 3C
					2B M 6:30-10:00, Robbinsdale Senior High School 233
					T 6:20-9:50, Folwell 104
					W 6:20-9:50, Folwell 104
					F 6:00-9:30, StP Ext Center 2A
					3B T 6:20-9:50, Folwell 107
					1B W 6:20-9:50, Folwell 107
					2B T 6:20-9:50, Folwell 101
					W 6:20-9:50, Folwell 101
					F 6:00-9:30, StP Ext Center 3C
					3B M 6:30-10:00, Robbinsdale Senior High School 233
					T 6:20-9:50, Folwell 104
					W 6:20-9:50, Folwell 104
					F 6:00-9:30, StP Ext Center 3F

Engl 22, 23. Introduction to Literature. 5 degree credits each semester. \$45 each semester.

A chronological study of English literature with historical background. An introduction to types of literature and literary ideas. 22: The Restoration and the 18th century. Pope, Swift, Addison and Steele, Johnson, Boswell, Fielding, and Sheridan. 23: The romantic movement and the Victorians. Wordsworth, Byron, Shelley, Keats, Carlyle, Tennyson, Browning, and Arnold. (Prerequisite: 3B or Comm 3 for 22 or 23. Need not be taken in sequence)

Fall Semester

22 Th 6:20-9:20, Folwell 104

Spring Semester

23 Th 6:20-9:20, Folwell 104

Engl 52, 53, 54. The English Novel. 3 degree credits each quarter. \$27 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 Brontes, Thackeray, and Dickens. 54: Reading of novels by such writers as Trollope, George Eliot, Meredith, Hardy, Conrad, and Butler. (Prerequisite: Engl 3B or Comm 1 and 5 additional credits in English for 52, 53, or 54. Need not be taken in sequence)

Fall Quarter

52 W 6:20-8:50, Folwell 109

Winter Quarter

53 W 6:20-8:50, Folwell 109

Spring Quarter

54 W 6:20-8:50, Folwell 109

Engl 55-56. Shakespeare. 3 degree credits each semester. \$27 each semester.

55: The reading of plays from Shakespeare's early and middle periods—*Richard II*, *A Midsummer Night's Dream*, *The Merchant of Venice*, *Much Ado About Nothing*, and 2 or 3 other plays selected by the instructor. 56: The reading of plays from Shakespeare's middle and later periods—*Twelfth Night*, *Hamlet*, *Macbeth*, *The Tempest*, and 2 other plays selected by the instructor. (Prerequisite: 3B or Comm 3 and 5 additional English credits for 55 or 56. Need not be taken in sequence but students are strongly urged to take 55 before 56)

Fall Semester

55 Th 6:20-8:00, Folwell 102

Spring Semester

56 Th 6:20-8:00, Folwell 102

Engl 75. Chaucer. 4 degree credits. \$36.

Readings of selections from *The Canterbury Tales* with introduction dealing with grammar and literary forms of 14th-century English. (Prerequisite: 3B or Comm 3 and 5 additional credits in English)

Fall Semester

T 6:20-8:50, Folwell 206

Engl 129. Modern Drama. 3 degree credits. \$27.

Survey of the chief dramatists, English, American, and Continental, from 1900. (Prerequisite: 55-56)

Spring Semester

T 6:20-8:00, Folwell 102

Symbols explained on page 36.

Evening and Special Classes

Composition

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

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

Fall Quarter

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

Winter Quarter

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

Spring Quarter

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

Comp X. Preparatory Composition. No credit. \$27 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 Engl 1B or Comm 1. (No prerequisite. Repeated winter and spring quarters)

Fall Quarter

T 6:20-8:50, Folwell 110
W 6:20-8:50, Folwell 110
F 6:00-8:30, StP Ext
Center 2E

Winter Quarter

T 6:20-8:50, Folwell 110
W 6:20-8:50, Folwell 110
F 6:00-8:30, StP Ext
Center 2E

Spring Quarter

W 6:20-8:50, Folwell 110

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

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)

Fall Semester

Th 7:00-10:00, StP Ext Center 3C, Alford

Spring Semester

Th 7:00-10:00, StP Ext Center 3G, Alford

Comp 27, 28. Advanced Writing. 3 degree credits each semester. \$27 each semester.

Offers training in the fundamentals of creative writing, through lectures and the criticism of manuscripts. 27: Deals with expository writing: articles, essays, criticism, etc. 28: Deals with description and narration. (Prerequisite: 3B or Comm 1 or # for 27 or 28. Need not be taken in sequence)

Fall Semester

27 W 6:20-8:00, Folwell 209, Macdonald

Spring Semester

28 W 6:20-8:00, Folwell 209, Macdonald

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

For advanced and professional students who write with facility and desire personal direction. Criticism of manuscripts submitted. (Prerequisite: # for 101 or 102. Need not be taken in sequence)

Fall Semester

101 T 6:20-8:00, Folwell 103, Macdonald

Spring Semester

102 T 6:20-8:00, Folwell 103, Macdonald

Family Studies

***FamS 1. Dynamics of Dating, Courtship, and Marriage.** 3 degree credits. \$27 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

Symbols explained on page 36.

Course Offerings—Arts and Sciences

through discussion and study about: personal growth and maturity; desirable mate qualities and selecting a marriage partner; purposes and problems of dating, courtship and engagement; family philosophy, religion, values, and planning; early marriage adjustments, child training and discipline, sex education, income management, problem solving and decision making. Integral parts of the course are: case studies, movies, and student discussion. Students are invited for discussion and personal or family counseling with the instructor. (No prerequisite. Class limited to 25 students)

Spring Semester

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

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

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

Fall Semester

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

Child Development. (See page 121.)

French

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

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

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

Fall Semester

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

Spring Semester

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

Fren 3C-4C. Beginning French. 5 degree credits each semester. \$45 each semester.

A continuation of the 5-credit sequence in Beginning French. (Prerequisite: 2C or # for 3C; 3C or # for 4C)

Fall Semester

3C M 6:20-9:20, Folwell 208, Poisson

Spring Semester

4C M 6:20-9:20, Folwell 208, Poisson

Symbols explained on page 36.

Evening and Special Classes

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

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

Fall Semester

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

Spring Semester

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

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

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

Fall Semester

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

Spring Semester

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

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

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

Fall Semester

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

Spring Semester

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

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

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

Fall Semester

W 6:20-8:00, Folwell 203

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

Informal discussion of current affairs and everyday topics. (Prerequisite: 4 or # for 54; 54 or # for 55)

Fall Semester

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

Spring Semester

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

Geography

Geog 1. Geography of Natural Resources. 5 degree credits. \$45.

Physical characteristics and geographic distribution of the world's natural resources; major regional differences in the problems of physical resource development. (No prerequisite)

Fall Semester

M 6:20-9:20, Ford 285, Barrett

Geog 4. Human Geography. 5 degree credits. \$45.

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

Spring Semester

W 6:20-9:20, West Bank 415, Webb

Symbols explained on page 36.

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

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

Fall Semester

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

Geog 114. Historical Geography of North America. 3 degree credits. \$27.

Sequential analysis of settlement and economy in the changing environment and resource patterns of North America. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 10 credits of geography or #)

Spring Quarter

T 6:20-8:50, West Bank 435, Lukermann

Geology

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

1: Physical geology, which consists of an introductory treatment of the materials of the earth and the geologic processes; principles of earth sculpture, glaciation, volcanic activity, mountain building, etc.; geologic occurrence of gems, ores, and other economic mineral resources. 2: History geology, which is a résumé of the theories as to the origin of the earth, its geologic history, and the changes in its plant and animal life throughout the ages. (No prerequisite for 1; 1 for 2. Must be taken in sequence)

Fall Semester

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

Spring Semester

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

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

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

Fall Semester

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

Spring Semester

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

German

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

Symbols explained on page 36.

Evening and Special Classes

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

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

Fall Semester

1B M 6:20-9:20, Folwell 308, Ramras

Spring Semester

2B M 6:20-9:20, Folwell 209½, Ramras

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

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

Fall Semester

M 6:20-9:20, Folwell 205

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

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

Fall Semester

1 M 6:20-8:00, Folwell 209, Weiss
1 Th 6:20-8:00, Folwell 209, F Wood
1 M 6:00-7:40, StP Ext Center 3F
2 M 6:20-8:00, Folwell 209½

Spring Semester

1 M 6:20-8:00, Folwell 207, F Wood
2 M 6:20-8:00, Folwell 209, Weiss
2 M 6:00-7:40, StP Ext Center 3F

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

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

Fall Semester

M 6:20-8:00, Folwell 109

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

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

Spring Semester

M 6:20-8:00, Folwell 205

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

Designed to help graduate students acquire a reading knowledge of German as required of candidates for higher degrees. Grammar is reduced to a minimum, with stress on recognition of forms encountered in reading. Rapid reading of simple, graded material. Intensive reading of more difficult material selected from the various fields of specialization. Detailed study of several sets of examinations in each of the fields. (No prerequisite for 17A; 2 years German in high school, or equivalent for 17B)

Fall Semester

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

Spring Semester

17A M 6:20-8:00, Folwell 104, Menze
17B M 6:20-8:00, Folwell 105, C Wood

History

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

1: The rise of the European state system as framework within which Western civilization developed, and the economic, cultural, political, intellectual, and religious implications of the emerging

Symbols explained on page 36.

Course Offerings—Arts and Sciences

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 for 1, 2, or 3. Need not be taken in sequence)

<i>Fall Semester</i>	<i>Spring Semester</i>
2 T 7:50-9:30, StP Ext Center 3G	3 T 7:50-9:30, StP Ext Center 3G

<i>Fall Quarter</i>	<i>Winter Quarter</i>	<i>Spring Quarter</i>
1 W 6:20-8:50, Ford 115, Hall	2 W 6:20-8:50, West Bank 120, Hall	3 W 6:20-8:50, West Bank 120, Hall

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

14: A survey of the rise of civilization in the Ancient Near East from the earliest times to 500 B.C. Emphasis is placed upon the origin of culture and its development in complexity from the primitive to the civilized stage. Special attention is given to the civilizations of Babylonia, Egypt, Indus Valley, Syria, Palestine, and Crete. 15: The history of the rise and flowering of the Greek civilization from the earliest times to the death of Alexander the Great in 323 B.C. Special emphasis is placed on Greek civilization in the fifth century (Age of Pericles) with attention to the political, social, literary, artistic, and philosophic achievements of that period. 16: The climax of ancient civilization during the Hellenistic Age (323-133 B.C.) and the Roman Imperial Period followed by the decline of Rome and of ancient civilization (to about A.D. 300). The three main topics to be considered are (a) the civilization of the ancient world at its peak, (b) the rise and flowering of Roman culture, and (c) the reasons for the decline of ancient civilization. Special attention will be paid to political institutions, art, literature, economics and society, philosophy, and ancient science. (No prerequisite, but it is suggested that 16 be preceded by 15, and 15 by 14 in order that student may acquire a background for following course)

<i>Fall Quarter</i>	<i>Winter Quarter</i>	<i>Spring Quarter</i>
14 Th 5:30-8:00, Ford 115, Jones	15 Th 5:30-8:00, West Bank 120, Jones	16 Th 5:30-8:00, West Bank 120, Jones

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

A survey of the history of China, Japan, India, and southeast Asia from ancient times to the present. 17: Ancient history and culture of China, Japan, and India to A.D. 1200. 18: Asia A.D. 1200-1800: Chinese Empire period; India: Muslim domination; Japanese Feudalism; the beginning of Western influence. 19: Modern Asia: The impact of Europe, nationalism, post-World War II Asia. (No prerequisite for 17, 18, or 19. Need not be taken in sequence)

<i>Fall Quarter</i>	<i>Winter Quarter</i>	<i>Spring Quarter</i>
17 M 5:30-8:00, Ford 130, Stein	18 M 5:30-8:00, West Bank 120, Stein	19 M 5:30-8:00, West Bank 120, Stein

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

A survey of the political, economic, and social history of the United States, with emphasis on the forces that resulted in the emergence of modern America. 20: Colonial and early national period. 21: Sectionalism and national development. 22: Modern America. (No prerequisite for 20, 21, or 22. Need not be taken in sequence)

<i>Fall Semester</i>	<i>Spring Semester</i>	
22 M 6:20-8:00, Ford 115, Beatty	20 M 6:20-8:00, West Bank 135, Beatty	
<i>Fall Quarter</i>	<i>Winter Quarter</i>	<i>Spring Quarter</i>
20 M 6:00-8:30, StP Ext Center 2A, Montgomery	21 M 6:00-8:30, StP Ext Center 2A, Montgomery	22 M 6:00-8:30, StP Ext Center 2A, Montgomery

Symbols explained on page 36.

Evening and Special Classes

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

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

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

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

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

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

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

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

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

Hist 80-81.‡ The United States in the Twentieth Century. 3 degree credits each semester. \$27 each semester.

A concentrated study of the social, political, economic, and cultural development of the United States since 1900 and of the rise of the United States as a world power. 80: Social and intellectual crises of the 1920's; prosperity and depression; the New Deal; the rise of organized labor; from isolation to intervention; the post-war scene. 81: From 1932 to the present. (No prerequisite for 80 or 81. Need not be taken in sequence)

Fall Semester

Spring Semester

80 Th 6:20-8:00, Ford 85, Noble

81 Th 6:20-8:00, West Bank 115, Noble

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

86: The European and English background, foundation of colonies, establishment of colonial institutions, 1607-1689. 87: The expansion of the colonies territorially, economically, and culturally, 1689-1750. 88: The colonies in the empire, imperial struggle and its aftermath in revolution and independence, 1750-1776. (No prerequisite for 86, 87, or 88. Need not be taken in sequence)

Fall Quarter

Winter Quarter

Spring Quarter

86 T 5:30-8:00, Ford 150,
Rutman

87 T 5:30-8:00, West Bank
120, Rutman

88 T 5:30-8:00, West Bank
120, Rutman

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

Interpretation of American frontier from its establishment in the colonies to its disappearance as a factor in American life. 90: Colonial frontier. 91: Mid-America. 92: Far West. (No prerequisite for 90, 91, or 92. Need not be taken in sequence)

Fall Quarter

Winter Quarter

Spring Quarter

90 W 5:30-8:00, Ford 185,
Berkhofer

91 W 5:30-8:00, West Bank
125, Berkhofer

92 W 5:30-8:00, West Bank
125, Berkhofer

Symbols explained on page 36.

Course Offerings—Arts and Sciences

Hist 93-94.† American Diplomatic History. 3 degree credits each semester. \$27 each semester.

93: American diplomacy, 1776-1848. 94: Period of national development, 1848-1898. (No prerequisite for 93 or 94. Need not be taken in sequence)

Fall Semester

93 M 8:10-9:50, Ford 120, Beatty

Spring Semester

94 M 8:10-9:50, West Bank 135, Beatty

Hist 100-101-102.† History of the Ancient Near East. 3 degree credits each quarter. \$27 each quarter.

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

Fall Quarter

100 T 5:30-8:00, Ford 115,
Jones

Winter Quarter

101 T 5:30-8:00, West
Bank 125, Jones

Spring Quarter

102 T 5:30-8:00, West
Bank 125, Jones

Hist 103-104-105.† History of Early Medieval Europe. 3 degree credits each quarter. \$27 each quarter.

103: The end of the ancient world (300-400). 104: The beginning of the medieval world (400-800). 105: The Germanic Empire (800-1125). Students wishing graduate credit should inquire at time of registration. (No prerequisite for 103, 104, or 105. Need not be taken in sequence)

Fall Quarter

103 M 5:30-8:00, Ford 175,
Morrison

Winter Quarter

104 M 5:30-8:00, West
Bank 125, Morrison

Spring Quarter

105 M 5:30-8:00, West
Bank 125, Morrison

Hist 105S. A Symposium on the Dark Ages (A.D. 300-1150). 3 degree credits. \$27.

A course for credit offered in conjunction with a special lecture series (please see a fuller description under "Liberal Arts Programs" on page 46). Students are expected to attend the lectures in the series and to participate in the preparatory classes given immediately before the lectures. Lectures and classes will together treat major questions of social, institutional, and intellectual development in the early Middle Ages.

Special Term—March 13-May 1

W 7:00-9:30, Natural History Museum 3, Hoyt and Morrison

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

109: The years 1900-1918. Background and causes of World War I; history of Europe during 4 years of war. 110: From 1918 to present. The Paris Conference and peace treaties; the new political and social order in central and eastern Europe; problems of the Western democracies; the attempt at a new world order and its collapse; the background and history of World War II. Students wishing

Symbols explained on page 36.

Evening and Special Classes

graduate credit should inquire at time of registration. (No prerequisite for 109 or 110. Need not be taken in sequence)

Fall Semester

109 W 6:20-8:00 Ford 155, Deutsch

Spring Semester

110 W 6:20-8:00, West Bank 150, Deutsch

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

125B: The Reign of Nicholas II to 1914. 126B: 1914-1929: World War I, revolutions, civil war, new economic policy. 127B: The Soviet Regime from 1929 to the present. Students wishing graduate credit should inquire at time of registration. (No prerequisite for 125B, 126B, or 127B. Need not be taken in sequence)

Fall Quarter

125B M 5:30-8:00, Ford
120, Stavrou

Winter Quarter

126B M 5:30-8:00, West
Bank 125, Stavrou

Spring Quarter

127B M 5:30-8:00, West
Bank 125, Stavrou

Hist 125C-126C.† The Modern Near East: The Balkans and the Arab World. 3 degree credits each semester. \$27 each semester.

125C: From the Fall of Constantinople (1453) to the beginning of the 19th century. 126C: From the beginning of the 19th century to the present. Students wishing graduate credit should inquire at time of registration. (No prerequisite for 125C or 126C. Need not be taken in sequence)

Fall Semester

125C M 8:10-9:50, Ford 150, Stavrou

Spring Semester

126C M 8:10-9:50, West Bank 115, Stavrou

Hist 135-136.† History of World War II. 3 degree credits each semester. \$27 each semester.

135: The campaign in Poland: the "phony war"; German-Soviet agreements; the Winter War; the German invasion of Scandinavia; the war in the West; Hitler's "New Order"; breakdown of German-Soviet relations and the campaign of 1941 in the East; Hitler's occupation policies in Russia; the war in Africa; the U.S. and the war to Pearl Harbor. 136: Period 1942-1945. Students wishing graduate credit should inquire at time of registration. (No prerequisite for 135 or 136. Need not be taken in sequence)

Fall Semester

135 W 8:10-9:50, Ford 155, Deutsch

Spring Semester

136 W 8:10-9:50, West Bank 150, Deutsch

Hist 144B-145B.† The History of American Labor. 3 degree credits each semester. \$27 each semester.

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. 144B: 1873-1917. 145B: 1917-1963. Students wishing graduate credit should inquire at time of registration. (No prerequisite for 144B or 145B. Need not be taken in sequence)

Fall Semester

144B Th 8:10-9:50, Ford 130, Berman

Spring Semester

145B Th 8:10-9:50, West Bank 110, Berman

Hist 147-148.† American Economic History. 3 degree credits each semester. \$27 each semester.

147: From the Revolution to 1860. 148: Developments since 1860. Students wishing graduate credit should inquire at time of registration. (No prerequisite for 147 or 148. Need not be taken in sequence)

Fall Semester

147 M 6:20-8:00, Ford 185, Loehr

Spring Semester

148 M 6:20-8:00, West Bank 140, Loehr

Symbols explained on page 36.

Course Offerings—Arts and Sciences

Hist 148A, 146A. History of the South. 3 degree credits each semester. \$27 each semester.

148A: 1890-1960. 146A: 1607-1840. Courses are the end and the beginning of a sequence, 146A-147A-148A, covering the period 1607 to the present; the sequence will be completed in 1963-64. Students wishing graduate credit should inquire at time of registration. (No prerequisite for 148A or 146A. Need not be taken in sequence)

Fall Semester

148A Th 8:10-9:50, Ford 185, Noble

Spring Semester

146A Th 8:10-9:50, West Bank 140, Noble

Geog 114. Historical Geography of North America. (See page 67.)

Interdisciplinary Programs

Communication

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

A practical course intended to prepare the student to meet more effectively the various vocational and social demands, to write and talk to others, and to receive communication from them. Constant practice in writing and speaking is uniquely based upon some understanding of how language functions to convey meaning. 1: The fundamental patterns of meaning in English, word meaning, social meaning, good usage. 2: The use of language to influence human behavior. 3: Mass communication of press, film, and radio, and how to receive it with critical discrimination. (Prerequisite: Preparatory Composition or satisfactory score on English Placement Test, as explained on page 62. Meets all requirements which are satisfied by Engl 1B-2B-3B, Freshman English, *except* in the Institute of Technology. Must be taken in sequence)

Fall Quarter

1 W 6:20-9:50, Johnston 122

Winter Quarter

2 W 6:20-9:50, Johnston 122

Spring Quarter

3 W 6:20-9:50, Johnston 122

Humanities

Qualified students wishing to register for 51, 52, 53, or 54 are referred to the course descriptions of Hum 1, 2, 3, 4; students registering under Upper Division numbers will be required to do extra work and perform at a higher level in examinations and papers. Likewise, qualified students wishing to register for Hum 61, 62, 63 are referred to the descriptions of Hum 11, 12, 13.

Hum 1. Humanities in the Modern World I. (** Hum 51) 3 degree credits. \$27.

An introduction to the study of the humanities in the modern world, including the old regime, the revolution, neoclassicism and romanticism, from about 1740 to 1820. Materials used are history, prose, criticism, literature, poetry, and art. Authors: Pope, Voltaire, Rousseau, Burke, Goethe, Tolstoy. See note at beginning of humanities section. (No prerequisite. Repeated spring semester)

Fall Semester

T 7:50-9:30, StP Ext Center 2G
W 6:20-8:00, Nicholson 122, MacInnes

Spring Semester

M 8:10-9:50, Johnston 122

Fall Quarter

M 5:30-8:00, Johnston 113
T 5:30-8:00, Johnston 113
Th 6:30-9:00, Robbinsdale Senior High School 231

Symbols explained on page 36.

Evening and Special Classes

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

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

<i>Winter Quarter</i>		<i>Spring Semester</i>	
M	5:30-8:00, Johnston 113	T	7:50-9:30, StP Ext Center
T	5:30-8:00, Johnston 113		2G
Th	6:30-9:00, Robbinsdale Senior High School 231	W	6:20-8:00, Nicholson 122, MacInnes

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

The impact of science and evolution; religion and morals in a changing world, from about 1840 to 1914. Authors: the evolutionists, Kierkegaard, Nietzsche, Chekhov, Thomas Mann. See note at beginning of humanities section. (No prerequisite. Repeated spring quarter)

<i>Fall Semester</i>		<i>Spring Quarter</i>	
M	8:10-9:50, Johnston 115	M	5:30-8:00, Johnston 113
		T	5:30-8:00, Johnston 113
		Th	6:30-9:00, Robbinsdale Senior High School 231

Hum 4. Humanities in the Modern World IV. (**Hum 54) 3 degree credits. \$27.

Civilization between two wars: the impact of psychoanalysis, communism, 20th century liberalism, new problems of human value and authority. Authors: Freud, Lenin, T. S. Eliot, Kafka, and others. See note at beginning of humanities section. (No prerequisite. Repeated spring semester)

<i>Fall Semester</i>		<i>Spring Semester</i>	
T	6:20-8:00, Johnston 115	M	8:10-9:50, Johnston 122

Hum 11. The Greek Heritage. (**Hum 61) 3 degree credits. \$27.

Greece through the Peloponnesian War. Emphasizes Golden Age of Athens; tragic visions of the dramatists, classical art and architecture, Athenian democracy, concepts of reason and justice, Homer, Hesiod, the dramatists, Plato, Aristotle, Thucydides, and, in contrast, *The Book of Job*, Greek art and architecture. See note at beginning of humanities section. (No prerequisite)

<i>Fall Quarter</i>	
Th	6:20-8:50, Johnston 115

Hum 12. Roman and Medieval Heritage. (**Hum 62) 3 degree credits. \$27.

Roman state. Hellenistic and Roman civilization. Epicureanism and Stoicism, Neoplatonism, Hebrew background and setting for Christianity. Christian doctrine, medieval society, faith, theocracy, Lucretius, Marcus Aurelius, Epictetus, New Testament, Augustine, church documents, Thomas Aquinas, Dante. Early Christian, Romanesque, and Gothic art. See note at beginning of humanities section. (No prerequisite)

<i>Winter Quarter</i>	
Th	6:20-8:50, Johnston 115

Hum 13. The Renaissance and Reformation. (**Hum 63) 3 degree credits. \$27.

The 14th-17th centuries. Rise of Italian communes, commercial life, banking; age of Lorenzo the Magnificent in Florence; ideal of beauty in art, politics, and morals; universal man. High renaissance and the power of Rome. Pietism and Reformation in Germany. Counter Reformation in Spain and France. Golden Age of Spain and beginnings of Age of Reason. Readings from Pico della Mirandola,

Symbols explained on page 36.

Course Offerings—Arts and Sciences

Machiavelli, Castiglione, Luther, Calvin, Loyola, Montaigne, Pascal, Cervantes. Renaissance and baroque art and architecture. See note at beginning of humanities section. (No prerequisite)

Spring Quarter

Th 6:20-8:50, Johnston 115

Hum 21. American Life. 3 degree credits. \$27.

The concept of individualism and the place of the individual in American society as recorded in history, social thought, literature, and the arts. Authors: Franklin, Emerson, Thoreau, Whitman, Twain, and others. Music of Charles Ives. Architecture of Frank Lloyd Wright. (No prerequisite)

Fall Semester

T 8:10-9:50, Johnston 115, Agee

Fall Quarter

Th 5:15-7:45, StP Ext Center 3G

Hum 22. American Life. 3 degree credits. \$27.

The role of religious and philosophic attitudes in the formation of American beliefs. Authors: Roger Williams, Jonathan Edwards, William James, Veblen, Henry Adams, T. S. Eliot, and others. Selected religious painting, architecture, and music. (No prerequisite)

Winter Quarter

Th 5:15-7:45, StP Ext Center
3G

Spring Semester

T 8:10-9:50, Johnston 115.
Agee

Hum 23. American Life. 3 degree credits. \$27.

The rise of American intellectual and cultural nationalism and its place in the modern world. Authors: Paine, Jefferson, Whitman, Henry James, Dos Passos, and others. Selected painting, architecture, and music. (No prerequisite)

Spring Quarter

Th 5:15-7:45, StP Ext Center 3G

Hum 51, 52, 53, 54. Humanities in the Modern World. 3 degree credits each term. \$27 each term.

Fall Semester, Fall Quarter, and Spring Semester (51)—Winter Quarter and Spring Semester (52)—Fall Semester and Spring Quarter (53)—Fall Semester and Spring Semester (54)

See course descriptions, days, times, places, and instructors as listed under Hum 1, 2, 3, and 4. Courses numbered above 50 carry Upper Division credit and are open only to students at that level. They need not be taken in sequence.

Hum 61, 62, 63. The European Heritage. 3 degree credits each quarter. \$27 each quarter.

Fall Quarter (61)—Winter Quarter (62)—Spring Quarter (63)

See course descriptions, days, times, places, and instructors as listed under Hum 11, 12, and 13. Courses numbered above 50 carry Upper Division credit and are open only to students at that level. They need not be taken in sequence.

Personal Orientation

*PO 1. How to Study. 2 degree credits (see course description). \$27.

Practical assistance to the student in developing efficient methods of study and concentration, organizing material, preparing for examinations, and improving reading ability. Attention to the

Symbols explained on page 36.

Evening and Special Classes

orientation of students in their attitudes and motivation, and the relation of these to satisfactory performance. (No prerequisite. Class limited to 20 students. Repeated spring semester. Students intending to use this course in a degree program should consult an adviser before registering)

Fall Semester

M 6:20-8:00, Johnston 307, Carlson
M 8:10-9:50, Johnston 307, Carlson

Spring Semester

W 6:20-8:00, Johnston 307, Carlson
W 8:10-9:50, Johnston 307, Carlson

Family Studies. (See page 64.)

Social Science

These courses provide a broad framework within which the student may develop an understanding of man, his institutions, ideas, and values. The courses are organized around central themes of human existence. Selections from the various social sciences as well as from the humanities are studied. All of the courses attempt to provide an integrated study of the factors—historical, political, economic, social, psychological, and cultural—that influence and are influenced by man's conduct. Each course is organized around a basic theme.

SSci 1. Introduction to Social Science. (SSci 51) 4 degree credits. \$36.**

Personality is the basic theme for SSci 1. The student is confronted with problems involved in developing a personality and he is introduced to different interpretations and concepts of personality. He studies personality as shaped by culture and society, and as a shaper of culture and society. Readings include selections from the works of Sigmund Freud, Jean Piaget, Clyde Kluckhohn, Henry Murray, Bronislaw Malinowski, Aristotle, Tolstoy, and others. (No prerequisite. Repeated spring semester)

Fall Semester

Th 5:45-8:00, Ford 40, Berman

Spring Semester

Th 5:45-8:00, Johnston 115, Berman

SSci 2. Introduction to Social Science. (SSci 52) 4 degree credits. \$36.**

Work is the basic theme for SSci 2. The student is introduced to the various ways of organizing the work process. He is shown the economic, sociological, and psychological implications of the ways in which work is organized. Many problems of a modern industrial economy and society are discussed, and alternatives are explored. Such problems as business cycles, automation, economic power and controls are considered. Readings include selections from the works of Plato, Frank Knight, George Orwell, C. Wright Mills, Paul Samuelson, Henry Dickinson, H. G. Wells, and Wilhelm Roepke. (No prerequisite)

Fall Semester

M 5:45-8:00, Johnston 126, Uppal

SSci 3. Introduction to Social Science. (SSci 53) 4 degree credits. \$36.**

Community is the basic theme for SSci 3. The course centers on the ties that bind people to one another. Various concepts of community are examined; the student explores different ways in which men live together—their institutions, social classes, and groups. Throughout the course questions concerning social ideals are raised. The course enables the student to understand better his involvement and participation in various aspects of community life through a clarification of the basic issues of community. Readings include selections from the works of Ortega, Aldous Huxley, Robert Redfield, Louis Wirth, W. Lloyd Warner, Aristotle, Mussolini, Lenin, John Stuart Mill, Bertrand Russell, Reinhold Niebuhr, and others. (No prerequisite. Repeated spring semester)

Fall Semester

T 5:45-8:00, Johnston 126, Drobac

Spring Semester

W 5:45-8:00, Johnston 205, Drobac

Symbols explained on page 36.

Course Offerings—Arts and Sciences

SSci 51. Introduction to Social Science. 4 degree credits. \$36.

Fall Semester—Spring Semester

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

SSci 52. Introduction to Social Science. 4 degree credits. \$36.

Fall Semester

See course description, day, time, place, and instructor as listed under SSci 2.

SSci 53. Introduction to Social Science. 4 degree credits. \$36.

Fall Semester—Spring Semester

See course description, day, time, place, and instructor as listed under SSci 3.

Family Studies. (See page 64.)

Italian

Ital 1A-2A. Beginning Conversational Italian. 3 degree credits each semester. \$27 each semester.

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

Fall Semester

Spring Semester

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

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

Ital 3A-4A. Conversational Italian. 3 degree credits each semester. \$27 each semester.

A continuation of Ital 1A-2A. (Prerequisite: 2A or # for 3A; 3A or # for 4A)

Fall Semester

Spring Semester

3A W 6:20-8:00, Folwell 108, Pellegrini-Seim

4A W 6:20-8:00, Folwell 108, Pellegrini-Seim

Journalism

Jour 13. Introduction to Journalistic Writing. 3 degree credits. \$27.

Lectures and assignments in journalistic media and audiences; fundamentals of fact-gathering and fact-writing for newspapers, broadcasting, and advertising. Adequate typing skill advisable for credit students. (Prerequisite: Engl 3B or #. Repeated spring semester)

Fall Semester

Spring Semester

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

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

Jour 18. Principles of Advertising. 3 degree credits. \$27.

The role and function of advertising in modern society. A survey of techniques and practices in creating advertising, emphasizing copy, research, and media fields. Problems and cases in advertising. (Prerequisite: 13 or #)

Fall Semester

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

Symbols explained on page 36.

Evening and Special Classes

***Jour 57. Layout and Typography for Publications and Advertising.** 3 degree credits. \$27 plus \$5 laboratory fee.

Planning the typography of display and text. Classification of type faces and historical development. Evaluation of type families. Practice in layout and paste-up. Copyfitting. Hand and photo composition in typography laboratory. (Prerequisite: 13 or 18 or #. Class limited to 20 students)

Spring Semester

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

***Jour 60. Graphic Processes for Publications and Advertising.** 3 degree credits. \$27 plus \$5 laboratory fee.

Study of letterpress, offset, gravure, and silk screen by lecture, demonstration, field trip, and movie. Evaluation of processes. Use of engravings, art, and illustration techniques. Significant graphic art developments. Practice in publication and advertising design. (Prerequisite: #. Class limited to 20 students)

Fall Semester

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

***Jour 69. Business News and Feature Writing.** 3 degree credits. \$27.

For persons in advertising or in specialized publications. Gathering material and writing of magazine articles, news stories, feature articles, and other types of copy. Analysis of audiences in the magazine and in the newspaper fields. (Prerequisite: Engl 3B or #. Class limited to 18 students)

Fall Semester

W 6:20-8:00, Murphy 302

Jour 78. Public Relations. 3 degree credits. \$27.

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

Fall Semester

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

***Jour 79. Advertising Copy Writing.** 3 degree credits. \$27.

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

Spring Semester

Th 6:20-8:00, Murphy 212

Jour 124. International Communications and Foreign Affairs. 3 degree credits. \$27.

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; Upper Division courses in history, political science, or international relations recommended)

Fall Semester

Th 6:20-8:00, Murphy 302, Nixon

Symbols explained on page 36.

Library Science

Lib 53. School Library Management. 3 degree credits. \$27.

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. (Prerequisite: admission to minimum certification program)

Spring Quarter

T 6:30-9:00, Library 4A

Lib 55. Library Administration. 3 degree credits. \$27.

Principles of library administration, organization and management. A general course for all librarians; prerequisite for graduate study. (No prerequisite)

Fall Quarter

TTh 4:30-5:45, Library 4A,
Ozolins

Winter Quarter

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

Lib 62. Reference I. 3 degree credits. \$27.

Intensive study of outstanding and useful reference books and tools most frequently used by students and librarians. Includes landmark reference books, indexes, and periodical guides. The theory and practice of reference work is also considered. A prerequisite for graduate study. (No prerequisite)

Winter Quarter

TTh 4:30-5:45, Library 4A,
Wezeman

Spring Quarter

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

Lib 70. Selection of Library Materials. 3 degree credits. \$27.

Theory, principles, and techniques of selection; an introduction to the basic tools for selection of books, magazines, pamphlets, phonograph records, films, etc., for all types of libraries. A prerequisite for graduate study. (No prerequisite)

Spring Quarter

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

Lib 74. Library Materials in the Classroom. 3 degree credits. \$27.

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

Fall Quarter

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

Lib 83. Cataloguing and Classification. 3 degree credits. \$27.

Basic principles of descriptive cataloguing, including rules of entry, subject headings and classification in libraries, for all types of libraries. A prerequisite for graduate study. (No prerequisite)

Fall Quarter

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

Lib 153. The History of Books and Printing. 3 degree credits. \$27.

Bookmaking in its various forms from earliest times to the present. Evolution of the alphabet; the manuscript book; the invention and spread of printing; the design of the modern book. Em-

Symbols explained on page 36.

Evening and Special Classes

phases the aesthetic and technical aspects. Students wishing graduate credit should inquire at time of registration. (Prerequisite: #)

Spring Quarter

MW 4:30-5:45, Library 4A,
Shove

Lib 156. Special Libraries. 3 degree credits. \$27.

Procedures, practices, and problems of newspaper, music, insurance, medical, technical, and other special libraries. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 55)

Winter Quarter

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

Mathematics (Science, Literature, and the Arts)

The following mathematics courses are being offered for the benefit of prebusiness students and SLA nonmathematics majors only. They are not designed for the student who wishes to continue with Institute of Technology advanced mathematics courses or for SLA mathematics majors. If in doubt about your registration for mathematics courses please consult an adviser.

Placement Examination in High School Algebra

The prerequisite for admission to Math T, Trigonometry, and/or Math 10, College Algebra and Analytic Geometry, is the satisfactory completion *within 1 year of date of application* of ITM 9, Higher Algebra or its equivalent in high school (not a trade school) or in an institution of higher learning. If you have not completed such a course within the period stated you must take a placement examination. *If you have never had a course in higher algebra, you should register for ITM 9.* You cannot establish eligibility for admission to either Math T or Math 10 by the placement examination alone.

Your first step is to register for Math T and/or Math 10 before the date of the final placement examination for the semester as listed below. At the time of registration you will fill out an "Application for Admission" to Math T, Trigonometry, and/or Math 10, College Algebra and Analytic Geometry. If you can check any of the items in Section A, you are qualified to take Math T and/or Math 10 and need not take the placement examination. If you cannot qualify under Section A, then you must check in Section B the date on which you will take the placement examination. The application must be given to the tally clerk at time of registration.

You will be notified by mail before the first meeting of the class Math T and/or Math 10 if eligible to remain or if you must transfer to ITM 9, Higher Algebra (scheduled on the same nights). If you must transfer, it should be done immediately (without penalty). You may, of course, cancel your registration in Math T and/or Math 10 and receive a full refund. In any event, the transfer or cancellation must be made on official transfer or cancellation forms in an Extension office and, if not completed by the end of the first week of classes, the regular transfer fee will be charged and/or the published refund policy will apply.

No student will be permitted to stay in Math T, Trigonometry, and/or Math 10, College Algebra and Analytic Geometry, unless he has completed the necessary prerequisites and has passed or been exempted from taking the placement examination in High School Algebra. After the official registration period *no registrations* will be accepted and *no transfers* permitted *except* in instances in which the student is not qualified to continue or by special permission of the associate director. The placement examination will be given on the following dates:

Fall Semester

7:00 p.m., Friday, September 14, Nicholson 211
7:00 p.m., Wednesday, September 19, Nicholson 211
7:00 p.m., Wednesday, September 19, StP Ext Center 2E

Spring Semester

7:00 p.m., Monday, February 11, Nicholson 211
7:00 p.m., Wednesday, February 13, Nicholson 211
7:00 p.m., Wednesday, February 13, StP Ext Center 2E

Symbols explained on page 36.

Math T. Trigonometry. (Open to prebusiness and SLA students) 3 degree credits. \$27.

A prebusiness or SLA course in analytic trigonometry emphasizing identities, equations, and properties of the trigonometric functions; right and oblique triangles without logarithmic computation. (Students who plan to take several courses in mathematics in evening classes should begin with ITM 11, not Math T.) (Prerequisite: plane geometry and either Y or ITM 9 or equivalent and satisfactory score on placement examination in high school algebra explained on page 80. May be taken concurrently with 10)

Fall Semester

T 8:10-9:50, Folwell 109

Math 10. College Algebra and Analytic Geometry. (Open to prebusiness students and SLA nonmathematics majors only.) 5 degree credits. \$45.

A course for students requiring only some analytic geometry and college algebra without trigonometry, or whose background does not include logarithms. (Students who plan to take several courses in mathematics in evening classes should register for ITM 11, not Math 10.) Functions and graphs, quadratic equations, permutations and combinations, probability, systems of equations, determinants, graphing of linear and quadratic equations, conics in standard position, logarithms. (Prerequisite: Y or ITM 9 or equivalent and satisfactory score on placement examination in high school algebra explained on page 80. Repeated spring semester)

Fall Semester

TTh 6:20-7:45, Folwell 109

Spring Semester

TTh 6:20-7:45, Ford 115

Math 40. Introduction to Calculus. (Open to prebusiness students and SLA nonmathematics majors only.) 5 degree credits. \$45.

A 1-semester course designed for those who wish a brief introduction to calculus which includes some integration. (Students planning to take more than 1 course in calculus in evening classes should not take Math 40 and must consult an adviser before registering.) Functions and limits, differentiation of algebraic, trigonometric, exponential, and logarithmic functions with applications to velocity and acceleration, maxima and minima, approximations by differentials. Integration with standard forms with application to area, volume, simple differential equations. (Prerequisite: 10 and either T or T or equivalent, or ITM 11 and 12)

Spring Semester

TTh 6:20-7:45, Ford 120

Music

Applied Music

Individual instruction in music offered by the Department of Music is open to students not able to attend day classes by registration through the General Extension Division. Private lessons are given in piano, organ, voice, violin, trumpet, and all other orchestral instruments.

All applicants for applied music instruction must first, prior to the beginning of a quarter, obtain an "Approval for Registration Form" and fulfill any necessary audition requirements through the Department of Music, 107 Scott Hall. Time and place of lessons are also arranged through the Department of Music office, and final examinations will be taken during day-time hours. The "Approval for Registration Form" must be presented by the student to an Extension Division office at the time of registration during the appropriate quarter registration period.

The courses offered, and their fees, will be found in the program of classes for the College of Science, Literature, and the Arts in the *Class Schedule*. In addition to the regular tuition and fees, a \$4 registration fee will be charged for each quarter course. The usual fee for late registration will also be charged. For further information, consult any office of the General Extension Division or the office of the Department of Music.

Mus. Enjoying Music. No credit. \$18 each quarter.

Enjoying and understanding music heard in today's concert halls, theaters, and homes. Various types, forms and styles of instrumental and vocal music, including symphony, opera, chamber music

Symbols explained on page 36.

Evening and Special Classes

and solo works. Fall: baroque and classical periods. Winter: late classical and romantic periods. Spring: late romantic and modern periods. (No prerequisite. Students may enter any quarter)

Fall Quarter	Winter Quarter	Spring Quarter
M 6:20-8:00, Scott 4, Ivory	M 6:20-8:00, Scott 4, Ivory	M 6:20-8:00, Scott 4, Ivory

*Mus. Piano Playing for Pleasure (Group Piano) I-II. 2 certificate credits each semester. \$27 each semester.

Practical piano for the person who wishes to play the piano for pleasure. Emphasis on sight reading, transposition, harmonization, improvisation, accompanying. Student will learn to chord and to play simple tunes. (No prerequisite for I; I or # for II. Each section is limited to 20 students)

Fall Semester	Spring Semester
I T 7:00-9:00, Music Education 103	I Th 7:00-9:00, Music Education 103
I Th 7:00-9:00, Music Education 103	II T 7:00-9:00, Music Education 103

Mus 1A. Introduction to Music. 3 degree credits. \$27.

Basic elements of music, such as notation and characteristics of musical tone, fundamental musical concepts of rhythm, melody, harmony, polyphony, form; demonstrated by recordings and performance of music of all types in Western civilization. (No prerequisite)

Fall Semester

M 6:30-8:30, Scott 104

Mus 1T-2T-3T. Music Theory. 3 degree credits each quarter. \$27 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)

Fall Quarter	Winter Quarter	Spring Quarter
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

Mus 40-41-42. University Symphony Orchestra. 1½ degree credits each semester. \$13.50 each semester.

Standard orchestral literature performed. Open to players of orchestral instruments from Twin Cities area. Those enrolled with consent of chairman of Music Department are given the opportunity of rehearsing with the University Symphony and participating in three annual concerts given in Northrop Auditorium. (Prerequisite: Auditions and #. Need not be taken in sequence)

Fall Semester	Spring Semester
40-41 T 7:00-9:30, Northrop Aud	41-42 T 7:00-9:30, Northrop Aud

Mus 43. University Chorus. 1 degree credit each quarter. \$9 each quarter.

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

Fall Quarter	Winter Quarter	Spring Quarter
T 7:30-9:30, Nicholson Aud	T 7:30-9:30, Nicholson Aud	T 7:30-9:30, Nicholson Aud

Mus 50-51-52. American Music. 2 degree credits each quarter. \$18 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

Symbols explained on page 36.

Course Offerings—Arts and Sciences

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 for 50, 51, or 52. Need not be taken in sequence. For nonmusic majors)

Fall Quarter	Winter Quarter	Spring Quarter
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 73-74-75. Introduction to Opera. 3 degree credits each semester. \$27 plus \$1 materials fee each semester.

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 73-74; 73-74 for 74-75. Must be taken in sequence. For nonmusic majors)

<i>Fall Semester</i>	<i>Spring Semester</i>
73-74 W 6:20-8:00, Wulling 7, Knowles	74-75 W 6:20-8:00, Wulling 7, Knowles

Mus 147-148-149. Opera Production. 3 degree credits each semester. \$27 plus \$4 laboratory fee each semester.

Student is given opportunity to prepare and perform operatic roles both standard and contemporary. A union of musical and dramatic interpretation is emphasized. In addition to ensemble work scheduled private instruction is given. All projects and roles will be sung in English. Coaching session may be arranged with instructor. (Prerequisite: auditions and #. Need not be taken in sequence)

<i>Fall Semester</i>	<i>Spring Semester</i>
147-148 M 6:20-8:00, Wulling 7, Knowles	148-149 M 6:20-8:00, Wulling 7, Knowles

Natural History

***NatH. Birds of Minnesota.** Special Class. \$27.

A laboratory and field class in identifying and enjoying the birds of this region. Early meetings will make use of collections of the Museum of Natural History, but as soon as weather permits the class will meet in field locations on *Sunday mornings at 7:30*. (No prerequisite. Class limited to 20 students)

<i>Spring Semester</i>
W 6:20-8:00, Museum of Natural History 309, Museum Staff

Nursing

The School of Nursing at the University of Minnesota welcomes inquiries from registered nurses who may wish to continue their studies in the direction of a degree program in one of the nursing fields. Interested R.N.'s are urged to contact the School of Nursing and ask for the assistance of an adviser in planning an organized course of study.

***NuAd 85. Fundamentals of Nursing Service Administration.** 3 degree credits. \$27.

Principles of administration applied to nursing service; organization; administrative relationships; personnel policies, practices, relationships; staff education; income and expenditure, budgeting, salary schedules; public relations; records and reports. (Open to registered nurses. Class limited to 35 students)

Winter Quarter
T 6:00-8:20, Owre 111, Harris

Symbols explained on page 36.

Evening and Special Classes

NuEd 73. Principles of Education in Nursing. (See page 123.)

Philosophy

Philosophy courses with "A" following the course number are somewhat abridged counterparts of corresponding day school courses carrying more credits. They carry regular academic credit, but they will fulfill requirements for a major in philosophy only by special arrangement with the Department of Philosophy.

Phil 1A. Problems of Philosophy. 3 degree credits. \$27.

Introduction to the subject; the main fields of investigation; permanent problems; principal methods and schools of philosophy; historical and contemporary use. (No prerequisite. Repeated spring semester)

Fall Semester

T 6:20-8:00, Johnston 114, Maxwell

Spring Semester

M 6:20-8:00, Johnston 114, Trentman

Phil 2A. Logic. 3 degree credits. \$27.

A study of the difference between logical and fallacious reasoning; the functions and uses of language; rules of good definitions and sound argument. (No prerequisite. Repeated spring semester)

Fall Semester

M 6:20-8:00, Johnston 115, Terrell
M 7:50-9:30, StP Ext Center 2B, Trentman
W 8:10-9:50, Johnston 113, Mason

Spring Semester

T 6:20-8:00, Johnston 114, Maxwell
W 8:10-9:50, Johnston 114, Mason

Phil 3A. Ethics. 3 degree credits. \$27.

An examination of the problems which arise when human beings attempt to think systematically about conduct and values (are there absolute standards?); the problem of free will; and a survey of historical views about the right and the good. (No prerequisite. Repeated spring semester)

Fall Semester

Th 6:20-8:00, Johnston 113, Kielkopf

Spring Semester

Th 6:20-8:00, Johnston 113, Kielkopf

Phil 10. Science and Religion. 2 degree credits. \$18.

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

Spring Quarter

M 7:50-9:30, StP Ext Center 2B

Phil 11A. World Religions. 3 degree credits. \$27.

Selected passages from scriptures of five living world religions: Hinduism, Buddhism, Islam, Judaism, and Christianity. Attempts to describe convictions, ethics, practices, principal historical changes, and major cultural and social significance of each. (No prerequisite)

Fall Semester

T 8:10-9:50, Johnston 114

Phil 50A. Ancient Philosophy. 3 degree credits. \$27.

The origin of Greek thought, from Thales to Aristotle, with special emphasis on Plato and Aristotle. (No prerequisite)

Fall Semester

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

Symbols explained on page 36.

Course Offerings—Arts and Sciences

Phil 52A. Modern Philosophy. 3 degree credits. \$27.

Rise and development of modern philosophy. The scientific revolution of Copernicus and Galileo; attempts at a new philosophy by Descartes, Leibniz, Locke, Berkeley, Hume; criticism of these earlier attempts by Kant and Hegel. (No prerequisite)

Spring Semester

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

Phil 107. Philosophy in Modern Literature. 3 degree credits. \$27.

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 #)

Spring Semester

T 8:10-9:50, Johnston 114, Terrell

Photography

Students in all photography classes must furnish their own cameras.

*Art 10. Basic Photography I. 3 degree credits. \$27 plus \$10 laboratory fee.

A course for beginners, with little or no experience in photography. The course will include lectures and demonstrations dealing with basic photographic equipment and materials, general camera and darkroom techniques, history, and criticism. There will be some laboratory work in the use of the camera, in contact printing, and enlarging. This class is of interest to people who need a working knowledge of photography in professions other than photography, and for those who want to know how to use a camera efficiently. (No prerequisite. Repeated spring semester. Limited to 20 students)

Fall Semester

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

Spring Semester

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

*Art 11. Basic Photography II. 3 degree credits. \$27 plus \$10 laboratory fee.

A course for amateurs with some experience and familiarity with special photographic equipment and techniques. Work will include some assigned projects, lectures, and demonstrations, but special attention will be given to individual interests and requirements. (Prerequisite: Art 10 or equivalent with #. Repeated spring semester. Limited to 20 students)

Fall Semester

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

Spring Semester

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

Phot. Color Photography I. 3 certificate credits. \$27 plus \$5 laboratory fee.

A foundation course in the growing field of color photography, designed to provide 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. (Experience or instruction in black and white photography is desirable, but not a prerequisite. Repeated spring semester)

Fall Semester

W 6:20-8:00, Wesbrook 202, Webb

Spring Semester

T 6:20-8:00, Wesbrook 202, Webb

Phot. Color Photography II. 3 certificate credits. \$27 plus \$5 laboratory fee.

A workshop course in which the student participates in supervised group projects. Course includes lecture demonstrations, field trips, and attention to such subjects as color portraiture, darkroom techniques, color experiments, and special problems. (Prerequisite: Color Photography I)

Spring Semester

W 6:20-8:00, Wesbrook 202, Webb

Symbols explained on page 36.

Political Science

Pol 1-2.† American Government and Politics: Parts I and II. 3 degree credits each semester or quarter. \$27 each semester or quarter.

1: The impact of international events upon the American system of government and the tremendous part that government plays in our lives. This course is designed to provide an intelligent understanding of certain fundamental features of our governmental system: the nature of our Constitution, the protection of individual rights and liberties, political parties, public opinion, nominations, and elections. Special attention will be given throughout to current developments. 2: Recognizing that the American citizen must have an understanding of our system of government if he is to play an active and intelligent part in helping it meet the problems of the future, this course is designed to provide a description, analysis, and evaluation of the legislative, executive, and judicial branches of our government (national, state, and local) with special attention to current developments. (No prerequisite 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, Ford 155, Chase
1 W 6:00-7:40, StP Ext Center 2A, Mitau

Spring Semester

2 M 6:20-8:00, West Bank 145, Chase
2 W 6:00-7:40, StP Ext Center 2A, Mitau

Fall Quarter

1 W 6:30-9:00, Robbinsdale
Senior High School
134, Scott

Winter Quarter

2 W 6:30-9:00, Robbinsdale
Senior High School
134, Scott

Pol A-B. The State in the Modern World. 3 degree credits each semester. \$27 each semester.

An examination of principles, structure, and operation of the modern state. Emphasis on nation state; historical development; democratic government (United States, Great Britain); totalitarian government (Nazi Germany, Soviet Russia); conflict between states. (No prerequisite for A or B. Need not be taken in sequence)

Fall Semester

A W 6:20-8:00, Ford 150, Sorauf

Spring Semester

B W 6:20-8:00, West Bank 135, Sorauf

Pol 25. World Politics. 3 degree credits. \$27.

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

Fall Semester

Th 6:20-8:00, Ford 120, Rogers

Spring Quarter

W 6:30-9:00, Robbinsdale Senior High School
134, Klein

Pol 26. American Foreign Policy. 3 degree credits. \$27.

An introduction to the institutions and processes which determine American foreign policy. Traditional and postwar foreign policies. (No prerequisite)

Spring Semester

Th 6:20-8:00, West Bank 135, Rogers

Pol 50. Political Behavior. (**Pol 167) 3 degree credits. \$27.

An introduction to the study of mass political behavior. The study of political personality, attitude formation and public opinion. Voting behavior, partisanship, and other forms of political participation will be considered. (No prerequisite)

Fall Semester

T 8:10-9:50, Ford 130, Flanigan

Symbols explained on page 36.

Course Offerings—Arts and Sciences

Pol 51. Political Behavior. (Pol 168) 3 degree credits. \$27.**

An introduction to the political behavior of leaders, the theories of political systems, and the role of organizations. The study of groups and elites. Power, bargaining, and planning in the analysis of political leadership. (No prerequisite)

Spring Semester

T 8:10-9:50, West Bank 115, Flanigan

Pol 53. American Political Campaigns and Elections. (Pol 138) 3 degree credits. \$27.**

Examination of national, state, and local campaigns and elections, including field work in local parties and election campaigns. (No prerequisite)

Fall Semester

M 8:10-9:50, Ford 160, Backstrom

Pol 54. Chinese Government. (*Pol 154) 3 degree credits. \$27.

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 115, Turner

Pol 55. Government of the Soviet Union. (*Pol 143) 3 degree credits. \$27.

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, Ford 170, Turner

Pol 56. The Legislative Process. (*Pol 108) 3 degree credits. \$27.

Organization, procedure, representation, and politics in lawmaking by the Congress and state legislatures. (No prerequisite)

Spring Semester

M 8:10-9:50, West Bank 105, Backstrom

Pol 57. African Government and Politics. (*Pol 148) 3 degree credits. \$27.

An introductory survey of the political traditions, constitutional development, and international relations of the emerging African states. (No prerequisite)

Spring Semester

T 6:20-8:00, West Bank 105, Dodge

Pol 74. Metropolitan Government and Politics. (*Pol 118) 3 degree credits. \$27.

Government organization, power structures, and problems of metropolitan areas, with illustrations from the Minneapolis-St. Paul area. (No prerequisite)

Spring Semester

M 6:20-8:00, West Bank 105, Scott

Symbols explained on page 36.

Evening and Special Classes

Pol 84. International Relations and Organization. (*°Pol 184) 3 degree credits. \$27.

Fundamental principles. Development and conditions of success. United Nations and regional organizations. (No prerequisite)

Fall Semester

W 6:20-8:00, Ford 130, Klein

Pol 90. American Political Thought. (Pol 160) 3 degree credits. \$27.**

From colonial times to present: Puritanism; Constitution; utopianism; Calhoun; history of anarchist, socialist, populist, and syndicalist thought; social Darwinism; conservatism; political thought in law and literature. (No prerequisite)

Fall Semester

Th 8:10-9:50, Ford 160, Cooperman

Pol 92. Recent Political Thought. (*°Pol 162) 3 degree credits. \$27.

Main currents from Marx to present; Marx, Marxism, and their critics; non-Marxist socialism; syndicalism; anarchism; Catholic and Protestant theories; conservatism; pacifism; political thought in law and literature. (No prerequisite)

Spring Semester

Th 8:10-9:50, West Bank 105, Cooperman

Pol 108. Legislative Organization and Procedure. 3 degree credits. \$27.

Spring Semester

See course description, day, time, place, and instructor as listed under Pol 56. Students wishing graduate credit should inquire at time of registration.

Pol 118. Local Government. 3 degree credits. \$27.

Spring Semester

See course description, day, time, place, and instructor as listed under Pol 74. Students wishing graduate credit should inquire at time of registration.

Pol 138. American Political Campaigns and Elections. 3 degree credits. \$27.

Fall Semester

See course description, day, time, place, and instructor as listed under Pol 53. Students wishing graduate credit should inquire at time of registration.

Pol 143. Government and Politics of the Soviet Union. 3 degree credits. \$27.

Fall Semester

See course description, day, time, place, and instructor as listed under Pol 55. Students wishing graduate credit should inquire at time of registration.

Pol 148. African Government and Politics. 3 degree credits. \$27.

Spring Semester

See course description, day, time, place, and instructor as listed under Pol 57. Students wishing graduate credit should inquire at time of registration.

Symbols explained on page 36.

Course Offerings—Arts and Sciences

Pol 154. Chinese Government and Politics. 3 degree credits. \$27.

Spring Semester

See course description, day, time, place, and instructor as listed under Pol 54. Students wishing graduate credit should inquire at time of registration.

Pol 160. American Political Thought. 3 degree credits. \$27.

Fall Semester

See course description, day, time, place, and instructor as listed under Pol 90. Students wishing graduate credit should inquire at time of registration.

Pol 162. Recent Political Thought. 3 degree credits. \$27.

Spring Semester

See course description, day, time, place, and instructor as listed under Pol 92. Students wishing graduate credit should inquire at time of registration.

Pol 167. Political Behavior. 3 degree credits. \$27.

Fall Semester

See course description, day, time, place, and instructor as listed under Pol 50. Students wishing graduate credit should inquire at time of registration.

Pol 168. Political Behavior. 3 degree credits. \$27.

Spring Semester

See course description, day, time, place, and instructor as listed under Pol 51. Students wishing graduate credit should inquire at time of registration.

Pol 184. International Relations and Organization. 3 degree credits. \$27.

Fall Semester

See course description, day, time, place, and instructor as listed under Pol 84. Students wishing graduate credit should inquire at time of registration.

Jour 124. International Communications and Foreign Affairs. (See page 78.)

Public Administration Courses

Your attention is called to the Public Administration Certificate program; see page 10.

Pol 58. Governmental Accounting. (*Acct 185C, Governmental Accounting, page 105)
3 degree credits. \$27.

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

Fall Semester

Th 6:20-8:00, Ford 130, Magraw

Symbols explained on page 36.

Evening and Special Classes

Pol 60. Organization and Management. (Pol 131) 3 degree credits. \$27.**

Study of administrative organization and management, emphasizing formal and informal organization structure, current reorganization theory, policy formulation, planning, decision-making, direction, and responsibility. (No prerequisite)

Fall Semester

T 8:10-9:50, Ford 170, Warp

Pol 62. Public Personnel Administration. 3 degree credits. \$27.

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 organization; obligations and responsibilities of public employees; retirement systems. (No prerequisite)

Spring Semester

M 6:00-7:40, StP Ext Center 3E, Jackson

Pol 63. Public Financial Administration. 3 degree credits. \$27.

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

Fall Semester

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

Pol 67. Administrative Analysis. 3 degree credits. \$27.

A study of the techniques of analyzing the organization and methods of administrative agencies. Topics include organization surveys, work simplification, space and equipment layouts, evaluation of forms, preparation of procedural manuals, and problems of control, delegation, and co-ordination. (No prerequisite. Qualified students may register for Acct 145C. Consult instructor)

Spring Semester

Th 6:20-8:00, West Bank 105, Magraw

Pol 73. City and County Planning. 3 degree credits. \$27.

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

Fall Semester

M 6:00-7:40, StP Ext Center 3E, Loeks

Pol 76. Business and Government. (Pol 126) 3 degree credits. \$27.**

A survey of the impact of government economy. Topics dealt with include factors conditioning the role of government, the problems of depressions, labor and government, government and agriculture, monopoly and giantism, public utility regulation, financial controls, conservation, public ownership, and national economic planning. Attention is focused on current major economic issues. (No prerequisite)

Spring Semester

T 6:20-8:00, West Bank 115, Warp

Symbols explained on page 36.

Course Offerings—Arts and Sciences

Pol 126. Government and the Economic Order. 3 degree credits. \$27.

Spring Semester

See course description, day, time, place, and instructor as listed under Pol 76. Students wishing graduate credit should inquire at time of registration.

Pol 131. Public Administration. 3 degree credits. \$27.

Fall Semester

See course description, day, time, place, and instructor as listed under Pol 60. Students wishing graduate credit should inquire at time of registration.

Psychology

Psy 1A. Application of Psychology to Living. 3 degree credits. \$27.

This course is devoted to psychology in personal relationships and in the achievement of mental health. It centers, for the most part, around our fundamental needs—the source of all our actions and satisfactions—and it presents principles highly applicable in the life of every person. (No prerequisite. May be taken with the same satisfaction before or after Psy 1-2. Elective credit in SLA. Not to be confused with Elementary Psychology A. Repeated spring semester)

Fall Semester

M 6:20-8:00, Nicholson 213, Kingsley
Th 8:10-9:50, Nicholson 213, King

Spring Semester

M 6:20-8:00, Nicholson 213, Kingsley
Th 8:10-9:50, Nicholson 207, King

Psy 1-2.† General Psychology. 3 degree credits each semester. \$27 each semester.

This course is designed to orient the student to the whole field of psychology. Its emphasis is upon methods of investigation. Required for most other courses in psychology. (No prerequisite for 1; 1 for 2. Must be taken in sequence)

Fall Semester

1 W 6:20-8:00, Nicholson Aud, Burreis
1 Th 7:50-9:30, StP Ext Center 2A, Macker
2 T 6:20-8:00, Nicholson 211, Meier

Spring Semester

2 W 6:20-8:00, Nicholson Aud, Burreis
2 Th 7:50-9:30, StP Ext Center 2A, Macker
1 T 6:20-8:00, Nicholson 211, Meier

***Psy 4-5.† Introductory Laboratory Psychology.** 2 degree credits each semester. \$27 each semester.

Experiments illustrating the subject matter of contemporary psychology. Included are human and animal learning, problem solving, visual perception, measurement of general and special abilities and personality traits. Supplies the laboratory science requirement in the Lower Division. (Prerequisite: 1 for 4; 2 and 4 for 5 or ¶1-2. Must be taken in sequence. Sections limited to 36 students)

Fall Semester

4 T 8:10-9:50, Psychology 211, Dahlke
4 W 8:10-9:50, Psychology 211

Spring Semester

5 T 8:10-9:50, Psychology 211, Dahlke
5 W 8:10-9:50, Psychology 211

Psy 70. Principles of Psychological Measurement. 3 degree credits. \$27.

Designed to present statistical methods necessary to the practical application of psychological concepts. Especially useful to persons who work with psychological tests or with any sort of objective evaluation technique. Special emphasis is given to psycho-physical methods and to techniques of attitude scaling, directed toward the needs of persons engaged in analysis of public opinion or in market research. Topics discussed include presentation and arrangement of data, measures of central tendency and dispersion, attitude scaling techniques (including the Likert, Thurstone, and Guttman methods),

Symbols explained on page 36.

Evening and Special Classes

psycho-physical methods, sampling methods and problems of forecasting, tests of significance of differences, and correlation analysis. (Prerequisite: 2 or ‡)

Fall Semester

Th 8:10-9:50, Johnston 122, Dawis

Spring Semester

Th 8:10-9:50, Johnston 114, Dawis

Psy 119. Psychology of Personality. 3 degree credits. \$27 plus \$1 laboratory fee.

Personality growth, dynamics and variations viewed from an eclectic approach to developmental theories of intra-individual and interpersonal factors influencing character and personality from conception to maturity. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 2)

Fall Semester

W 6:20-8:00, Psychology 115, Gilberstadt

Spring Semester

W 6:20-8:00, Psychology 115, Gilberstadt

Psy 122-123. † Vocational Development and Personnel Psychology. 3 degree credits each semester, §Psy 160. \$27 plus \$1 laboratory fee each semester.

Deals with selecting, counseling, training, and maintaining an efficient labor force in industry. Theory and practice of giving, interpreting, and evaluating psychological tests and interviewing; constructing and using rating scales; training, maintaining, and promoting employees. There will also be actual practice in the use of psychological tests. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 2 for 122; 122 for 123. Must be taken in sequence)

Fall Semester

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

Spring Semester

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

Psy 125-126. Psychology of Individual Differences. 3 degree credits each semester. \$27 each semester.

Quantitative studies of such factors as age, sex, race and nationality, physical traits, family heredity, and environment in the causation of individual differences in abilities and temperament. Students wishing graduate credit should inquire at time of registration. (Prerequisite: for 125, 2, 5, 70 or ‡; 125 for 126. Must be taken in sequence)

Fall Semester

125 T 8:10-9:50, Johnston 122, Dawis

Spring Semester

126 T 8:10-9:50, Johnston 122, Dawis

Psy 144-145. † Abnormal Psychology. 3 degree credits each semester. \$27 each semester.

Normal and abnormal behavior contrasted. Dynamics, and particularly the social determinants, of personality and maladjustments. Students wishing graduate credit should inquire at time of registration. (Prerequisite: for 144, 9 credits in psychology, or 6 credits in psychology with either Zool 1-2-3 or 12 credits in social science; 144 for 145. Must be taken in sequence)

Fall Semester

144 Th 6:20-8:00, Psychology 115, Stieper

Spring Semester

145 Th 6:20-8:00, Psychology 115, Stieper

Psy 156. Psychology of Advertising. 3 degree credits. \$27.

Psychological analysis of the basic principles underlying advertising and selling. Consumer research is stressed. Research techniques for investigating advertising problems and the analysis of consumer wants are considered in detail. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 2 and Econ 2)

Spring Semester

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

Symbols explained on page 36.

Public Health

PubH 50. Personal and Community Health. 3 degree credits. (§2, 3, 3A, 3B; 4, 5, 51, 52). \$27.

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

Fall Semester

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

PubH 53. Introduction to Public Health. 5 degree credits. \$45.

Occurrence and prevention of communicable, degenerative, and industrial diseases; protection of food, water, and milk; maternal and child health. (Prerequisite: 3 or 50 and course in microbiology)

Fall Semester

T 7:00-9:30, St. Joseph's Hospital,
(Mary Hall), Schuman

PubH 75. Introduction to Environmental Sanitation. 3 degree credits. \$27.

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

Spring Semester

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

Scandinavian Languages

Danish

Scan 13-14. Beginning Danish. 3 degree credits each semester. \$27 each semester.

This course is intended for students with little or no previous knowledge of the Danish language. It stresses the oral approach and reading selections of cultural value. (No prerequisite for 13; 13 or # for 14)

Fall Semester

13 Th 6:20-8:00, Folwell 12, Landa

Spring Semester

14 Th 6:20-8:00, Folwell 12, Landa

Finnish

Scan 17-18. Beginning Finnish. 3 degree credits each semester. \$27 each semester.

Intended for beginners with little or no previous knowledge of Finnish; stresses fundamentals of grammar, correct pronunciation, reading, practice in conversation and simple composition. (No prerequisite for 17; 17 or # for 18)

Fall Semester

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

Spring Semester

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

Norwegian

Scan 1-2. Beginning Norwegian. 3 degree credits each semester. \$27 each semester.

This course, intended for students who have little or no previous knowledge of Norwegian, stresses spoken Norwegian, but provides in addition the essentials of grammar and some practice in simple composition. (No prerequisite for 1; 1 or # for 2)

Fall Semester

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

Spring Semester

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

Symbols explained on page 36.

Evening and Special Classes

Scan 3-4. Intermediate Norwegian. 3 degree credits each semester. \$27 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 M 6:20-8:00, Folwell 12, Gunderson

Spring Semester

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

Swedish

Scan 7-8. Beginning Swedish. 3 degree credits each semester. \$27 each semester.

Intended primarily for beginners in Swedish. A minimum of grammar, with emphasis on simple composition and conversation, and some reading of elementary Swedish prose. (No prerequisite for 7; 7 or # for 8)

Fall Semester

7 T 6:20-8:00, Folwell 12, Trentman

Spring Semester

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

Slavic and Oriental Languages

Arabic

Arab 1A-2A. Spoken Arabic. 3 degree credits each semester. \$27 each semester.

One Arabic dialect will be taught for conversational purposes. (No prerequisite for 1A; 1A or # for 2A)

Fall Semester

1A W 6:20-8:00, Folwell 103

Spring Semester

2A W 6:20-8:00, Folwell 103

Chinese

Chin 1-2. Beginning Modern Chinese (Mandarin). 3 degree credits each semester. \$27 each semester.

An introductory course to modern written and spoken Chinese intended to provide a basis for developing a modest reading and conversational ability. (No prerequisite for 1; 1 or # for 2)

Fall Semester

1 M 6:20-8:00, Folwell 304, Mather

Spring Semester

2 M 6:20-8:00, Folwell 304, Mather

Japanese

Jap 1-2. Beginning Modern Japanese. 3 degree credits each semester. \$27 each semester.

An introductory course to modern written and spoken Japanese intended to provide a basis for developing a modest reading and conversational ability. (No prerequisite for 1; 1 or # for 2)

Fall Semester

1 M 6:20-8:00, Folwell 305½, Copeland

Spring Semester

2 M 6:20-8:00, Folwell 305½, Copeland

Jap 3-4. Intermediate Japanese. 3 degree credits each semester. \$27 each semester.

Intended for students with some experience in modern written and spoken Japanese. The course will attempt to develop ability in reading newspapers and other comparatively simple material. (Prerequisite: 2 or # for 3; 3 or # for 4)

Fall Semester

3 M 8:10-9:50, Folwell 305½, Copeland

Spring Semester

4 M 8:10-9:50, Folwell 305½, Copeland

Symbols explained on page 36.

Course Offerings—Arts and Sciences

Russian

Russ 1-2. Beginning Russian. 3 degree credits each semester. \$27 each semester.

A beginning course with emphasis on grammar and reading. Exercises in sentence structure. Translation of narrative and expository prose. (No prerequisite for 1; 1 or # for 2)

Fall Semester

1 M 6:20-8:00, Folwell 101, Nice

Spring Semester

2 M 6:20-8:00, Folwell 305, Nice

Russ 3-4. Intermediate Russian. 3 degree credits each semester. \$27 each semester.

Readings from 19th-century authors, review of essential grammar, practice in spoken Russian. (Prerequisite: 2 or # for 3; 3 or # for 4)

Fall Semester

3 T 6:20-8:00, Folwell 304, Nice

Spring Semester

4 T 6:20-8:00, Folwell 304, Nice

Russ 20-21. Advanced Russian. 3 degree credits each semester. \$27 each semester.

Discussions in Russian on assigned readings. Designed for students who have had 2 or more years of Russian. (Prerequisite: 4 or # for 20; 20 or # for 21)

Fall Semester

20 Th 6:20-8:00, Folwell 304, Nice

Spring Semester

21 Th 6:20-8:00, Folwell 304, Nice

Russ 50-51. Russian Conversation. 3 degree credits each semester. \$27 each semester.

A continuation of Russ 20-21 at an advanced level. (Prerequisite: 21 for 50; 50 or # for 51)

Fall Semester

50 W 6:20-8:00, Folwell 304, Nice

Spring Semester

51 W 6:20-8:00, Folwell 304, Nice

Semitic

Sem 124-125-126. Introduction to Biblical Hebrew. 3 degree credits each quarter. \$27 each quarter.

Grammatical essentials intended to lay a good foundation for reading and exegetical study of the Bible are stressed. Careful attention is given to the mastery of verb and noun forms. The standard lexicons, grammars and critical commentaries are used. (No prerequisite for 124; 124 for 125; 125 for 126. Must be taken in sequence)

Fall Quarter

124 M 6:00-8:30, Folwell
103, Pearson

Winter Quarter

125 M 6:00-8:30, Folwell
103, Pearson

Spring Quarter

126 M 6:00-8:30, Folwell
103, Pearson

Social Work

All courses listed below are open to persons employed in both group work and casework agencies. They are not part of the regular, required sequence of courses of the graduate school of social work, and credits earned may not be used in lieu of required courses in that program.

SW 101. Family Diagnosis and Treatment—Problems and Prospects. 3 degree credits. \$27.

The family seen as a unit, with social roles which affect their interaction with one another, and their relationships with the outside world. The course will deal with key concepts in under-

Symbols explained on page 36.

Evening and Special Classes

standing the family and methods of helping them cope with their problems. (Prerequisite: current employment in a social work agency, or #)

Spring Semester

T 6:20-8:00, West Bank 140, Boehm

***SW 148. Personality Development. 3 degree credits. \$27.**

The purpose of the course is to provide social workers with a working understanding of aspects of psychoanalytic theory as they relate to social work practice. Focus will be on those mental and defense mechanisms which cause or influence human behavior. Students wishing graduate credit should inquire at time of registration. (Prerequisite: current practice in a social work agency or related institution, or #. Limited to 25 students)

Spring Semester

M 6:20-8:00, West Bank 205, Saloshin

***SW 165. Practical Problems in the Casework Process. 3 degree credits. \$27.**

This course is designed for the social caseworker who is currently employed by a social agency. The emphasis will be on application of principles and concepts of social casework. There will be a consideration of case material and a use of this material in relating the basic concepts and principles to practice. Students wishing graduate credit should inquire at time of registration. (Prerequisite: current employment in a social work agency or #. Limited to 25 students)

Fall Semester

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

SW 175. Practical Problems in Social Group Work. 3 degree credits. \$27.

Identification of the dynamics of individual and group behavior as these influence social work with groups. The role of the group worker, principles basic to use of the method, and the use and meaning of program content will be discussed. (Prerequisite: current employment in a social work agency, or #)

Fall Semester

M 6:20-8:00, Ford 160, Cohn and Guzie

Sociology

Soc 1. Man in Modern Society. 3 degree credits. \$27.

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

Fall Semester

M 8:10-9:50, Ford 155, Stone

Spring Semester

M 6:20-8:00, West Bank 225, Forster

M 6:00-7:40, StP Ext Center 2H

Soc 3. Social Problems. (Formerly Soc 49) 3 degree credits. \$27.

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

Fall Semester

M 6:00-7:40, StP Ext Center 2H

Th 6:20-8:00, Ford 180, Johnson

Spring Semester

Th 6:20-8:00, West Bank 225, Johnson

Symbols explained on page 36.

Course Offerings—Arts and Sciences

Soc 14. Rural Sociology. (Not offered 1962-63)

Soc 45A-B. Social Statistics. (Not offered 1962-63)

Soc 53. Elements of Criminology. 3 degree credits. \$27.

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

Fall Semester

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

Soc 112. World Population Problems. 3 degree credits. \$27.

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

Spring Semester

M 8:10-9:50, West Bank 225, Forster

Soc 120. Social Psychology. 3 degree credits. \$27.

Research and theory regarding the relation of the individual to social groups. Emphasis on the socialization processes; effects of social interaction and isolation; individual behavior under conditions of social organization and disorganization; cultural influence and its limits. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 1 or #)

Fall Semester

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

Soc 123. Minority Group Relations. 3 degree credits. \$27.

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

Fall Semester

T 8:10-9:50, Ford 160, Forster

Soc 140. Social Organization. (Not offered 1962-63)

Soc 141. The Family. 3 degree credits. \$27.

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

Spring Semester

Th 8:10-9:50, West Bank 225, Johnson

Soc 151. Comparative Social Organization. (Not offered 1962-63)

Soc 171. Social Life and Cultural Change. 3 degree credits. \$27.

Theories of social change, with particular attention to their methodological problems. Materials drawn from the comparative social thought and structure of antiquity utilized as basic data for analysis. (Prerequisite: 1 or #)

Fall Semester

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

Symbols explained on page 36.

Evening and Special Classes

Soc 180. Methods of Social Research. (Not offered 1962-63)

Spanish

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

Span 1C-2C. Beginning Spanish. 5 degree credits each semester. \$45 each semester.

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

Fall Semester

1C M 6:20-9:20, Folwell 206, Narvaez

Spring Semester

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

Span 3C-4C. Beginning Spanish. 5 degree credits each semester. \$45 each semester.

A continuation of the 5-credit sequence in Beginning Spanish. (Prerequisite: 2C or # for 3C; 3C or # for 4C)

Fall Semester

3C M 6:20-9:20, Folwell 108

Spring Semester

4C M 6:20-9:20, Folwell 108

Span 1-2. Beginning Spanish. 3 degree credits each semester. \$27 each semester.

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

Fall Semester

1 M 6:20-8:00, Folwell 110, Rundorff
1 Th 6:20-8:00, Folwell 202, Cuneo
2 Th 6:20-8:00, Folwell 203

Spring Semester

1 Th 6:20-8:00, Folwell 206
2 M 6:20-8:00, Folwell 213, Rundorff
2 Th 6:20-8:00, Folwell 202, Cuneo

Span 3-4. Beginning Spanish. 3 degree credits each semester. \$27 each semester.

Review, composition, readings from modern authors. Attention to correspondence and commercial practice if desired. (Prerequisite: 2 or 1 year of preparatory Spanish or # for 3; 3 or # for 4)

Fall Semester

3 W 6:20-8:00, Folwell 208

Spring Semester

4 W 6:20-8:00, Folwell 208

Symbols explained on page 36.

Course Offerings—Arts and Sciences

Span 20. Intermediate Spanish Grammar and Composition. 5 degree credits. \$45.

Prepares students from Spanish 3C to continue with courses in the Spanish language at a higher level. Emphasis placed on a thorough review of Spanish grammar, and translation of highly idiomatic material from Spanish to English and from English to Spanish. (Prerequisite: 3C or #)

Spring Semester

M 6:20-9:20, Folwell 107

Span 55A-55B. Spanish Conversation. 3 degree credits each semester. \$27 each semester.

Informal discussion of current affairs and everyday topics. (Prerequisite: 4 or # for 55A; 55A or # for 55B)

Fall Semester

Spring Semester

55A W 6:20-8:00, Folwell 102

55B W 6:20-8:00, Folwell 102

Span 73C-73D. A Trip to Latin America and Spain. 3 degree credits each semester. \$27 each semester.

This course offers profitable information in English about the Spanish-speaking nations as well as half an hour of basic, simple Spanish language in each class period. Each student will prepare a notebook containing the Spanish vocabulary generally needed by travelers and a restricted number of practical grammar rules. Thus while enriching his mind with important and useful information on the geography, climate, art, music, places to visit, etc., of each of the Spanish-speaking countries, the student will acquire a beginning knowledge of the Spanish language. (Prerequisite: 1 or #)

Fall Semester

Spring Semester

73C W 6:20-8:00, Folwell 205, Cuneo

73D W 6:20-8:00, Folwell 205, Cuneo

Span 17A. Spanish for Graduate Students. No credit. \$30.

Fundamentals of grammar; reading of appropriate prose. Prepares for examinations in Spanish. (No prerequisite. Repeated winter and spring quarters)

Fall Quarter

Winter Quarter

Spring Quarter

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

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

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

Speech and Theater Arts

*Spch. Beginning Practical Speech Making. 3 certificate credits. \$27 plus \$5.50 materials and laboratory fee.

This course is designed particularly for the adult student who wants a practical application of the fundamentals of speech to his professional, business, and social needs. The primary purpose of the course is to develop confidence and effectiveness in speaking situations. Individual attention will be given to cases of nervousness, embarrassment, inadequacy, inferiority, and stage fright. Each student speaks before the class each meeting. Voice recordings and an analysis of the speaking voice will be made. (Prerequisite: high school graduate or #. Each section limited to 20 students. Repeated spring semester)

Fall Semester

Spring Semester

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

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

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

M 8:10-9:50, Folwell 5, Fulton

Spch. Advanced Practical Speech Making. (Not offered 1962-63)

Symbols explained on page 36.

Evening and Special Classes

Spch 5X-6X.†† Fundamentals of Speech. 3 degree credits each semester. \$27 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.)

Fall Semester

5X M 6:20-8:00, Folwell 306, Scott
5X W 7:50-9:30, StP Ext Center 2G,
Bormann

Spring Semester

5X T 6:20-8:00, Folwell 306, Shapiro
6X M 6:20-8:00, Folwell 306, Scott
6X W 7:50-9:30, StP Ext Center 2G,
Bormann

Spch 31. Introduction to the Theater. 3 degree credits. \$27.

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

Fall Semester

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

Spch 32. Beginning Acting: Creative Approach. 3 degree credits. \$27.

Creation and presentation of original scenes and skits. Ability to respond to the imaginative situation with individuality and effectiveness is stressed. (Prerequisite: 31)

Spring Semester

W 6:20-8:00, Scott 19, Adey

Spch 77. Theater Dance. 2 certificate credits. \$27.

A course in dance designed to acquaint actors with dance techniques and to give dancers a knowledge of theatrical performance. Course work will consist of European and American dance techniques, and the learning of period dance, musical comedy dance, and one major concert work. (Prerequisite: 32 or §)

Fall Semester

W 6:20-8:00, Scott 19, Moulton

***Spch. Voice and Diction.** 3 certificate credits. \$27.

A practical and beginning course in training the speaking voice as an expressive instrument. The emphasis is on understanding and practicing the physical skills, emotional attitudes, and vocal habits necessary for good voice production. Individual attention to common deficiencies in breath control, volume, pitch placement and melody, resonance, articulation, pronunciation, speech rhythm, and phrasing. The course is designed to help both students with mild vocal deficiencies and those with adequate voices who wish to increase their range of expressiveness. (No prerequisite. Class limited to 25 students)

Fall Semester

T 6:20-8:00, Folwell 306, Thompson

Spch. Theater Business Management. 3 certificate credits. \$27.

This course is designed for those interested in the planning and handling of theater publicity, advertising, box office and theater management in the college and community theater. (No prerequisite)

Spring Semester

Sat 1:30-3:10, Scott 3, Loppnow and guests

†† Credit for Spch 5X without Spch 6X by petition only.
Other symbols explained on page 36.

Study Skills

***Rhet 47. Efficient Reading.** 3 certificate credits (may be used on degree program by petition: 1 credit in SLA or Bus.; 3 credits in Educ, IT, or Ag). \$27 plus \$2 materials fee.

Designed for students, business, or professional people of up-to-average reading ability who wish to improve their reading speed and comprehension. Emphasis is on reading techniques of particular use in achieving or maintaining superior scholastic or professional status. Maximum use is made of the tachistoscope and the Harvard Reading Films, two recently developed visual aids. Parallels Efficient Listening and is a suggested follow-up for How to Study. (No prerequisite. Class limited to 32 students. Repeated spring semester)

Fall Semester

M 6:20-8:00, Ford 15, Wright
 M 8:10-9:50, Ford 15, Wright
 T 6:20-8:00, Ford 15, Horberg
 T 8:10-9:50, Ford 15, Horberg
 W 6:20-8:00, Ford 15, Price
 W 8:10-9:50, Ford 15, Price
 Th 6:00-7:40, StP Ext Center 3C, Thiss
 Th 7:50-9:30, StP Ext Center 3C, Thiss

Spring Semester

M 6:20-8:00, Ford 15, Wright
 M 8:10-9:50, Ford 15, Wright
 T 6:20-8:00, Ford 15, Horberg
 T 8:10-9:50, Ford 15, Horberg
 W 6:20-8:00, Ford 15, Price
 W 8:10-9:50, Ford 15, Price
 Th 6:00-7:40, StP Ext Center 3C, Thiss
 Th 7:50-9:30, StP Ext Center 3C, Thiss

SSk. Efficient Reading II. Special Class. \$25 plus \$2 materials fee.

A short, intensive course in efficient reading for students, business and professional people of above-average reading ability. A suggested follow-up for Efficient Reading (Rhet 47) or other reading efficiency training, either as an immediate continuation or refresher course. Emphasis on further refinement of reading techniques and skills of particular use in maintaining superior scholastic or professional status. No duplication of material with Efficient Reading I. Maximum use is made of the perceptoscope, a newly developed remote-control projector with multipurpose training functions. Repeated spring semester.

Special Term—September 26-November 21

W 6:20-8:00, Nicholson 207, Brown

Special Term—February 13-April 24

W 6:20-8:00, Nicholson 207, Brown

SSk. Vocabulary Building: How to Expand Your Word Power. 3 certificate credits. \$27 plus 25 cents materials fee.

A class designed to extend the range and increase the quality of one's vocabulary for social and business purposes and for the benefit of one's intellectual development in general. The core of the course consists of the study of 150 word elements which form the basis of thousands of English words. This approach not only enables an individual to enlarge his speaking, writing, and reading vocabulary in a short space of time but also provides him with the means of independently continuing that process indefinitely. Recommended as background for other courses in the communication field. (No prerequisite. Repeated spring semester)

Fall Semester

M 7:50-9:30, StP Ext Center 2G, Keeler
 T 6:20-8:00, Nicholson 207, Sheldon
 W 8:10-9:50, Nicholson 207, Stockdale

Spring Semester

M 7:50-9:30, StP Ext Center 2G, Keeler
 T 6:20-8:00, Nicholson 207, Sheldon
 W 8:10-9:50, Nicholson 207, Stockdale

Grammar Review. See English, page 64.

How to Study. See Interdisciplinary Programs, page 75.

Zoology

See Biology, page 61.

Symbols explained on page 36.

BUSINESS ADMINISTRATION

Your attention is called to the Master of Business Administration Program on page 30 and to the Business Administration Certificate programs; see pages 13 to 14.

Effective fall, 1962, the School of Business Administration has changed its prefix designations for degree courses previously having a BA prefix. In all 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.

Accounting

Your attention is called to the Accounting Certificate programs; see page 15.

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 book-keepers.

Persons with prior background or training may receive credit in one or more of these courses by passing an advanced standing examination. *These examinations will be given at the following times in Room 307, Vincent Hall.*

Acct 24 Wednesday, September 19, 7:00 p.m.
Wednesday, September 26, 7:00 p.m.
Wednesday, December 26, 7:00 p.m.
Wednesday, February 6, 7:00 p.m.

Acct 25 Thursday, September 20, 7:00 p.m.
Thursday, September 27, 7:00 p.m.
Thursday, February 7, 7:00 p.m.

Acct 26 Friday, September 21, 7:00 p.m.
Friday, September 28, 7:00 p.m.
Friday, February 8, 7:00 p.m.

The three courses are scheduled on three plans.

1. Regular semester class schedule for 3 credits each of 3 semesters for full first-year course. For students who wish regular class periods in order to take two classes the same evening or who do not wish to spend the time necessary for the more concentrated scheduling.
2. Quarter basis, 2½-hour classes, 3 credits each quarter, course completed in 1 year. For students who wish to complete the entire course in 1 year of 3 quarters of 11 weeks each. Students who find this schedule too rapid are in a position to change to the semester basis.
3. Combined course, meeting twice weekly in 2½-hour sessions, spring semester only, 1 year course covered in 1 semester. For those who wish to concentrate on completion of the course in the spring semester in order to begin advanced courses in the following term.

Course Offerings—Business Administration

Acct 24-25-26. Principles of Accounting. 3 degree credits each term, §Acct 55A-55B. \$27 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 M 6:20-8:00, Ford 85, Kerns
 24 T 6:00-7:40, StP Ext Center 3F, Creviere
 25 M 8:10-9:50, Ford 85, Cummings
 26 T 7:50-9:30, StP Ext Center 3F, Creviere
 26 Th 6:20-8:00, Ford 15, Pettersen

Spring Semester

24 Th 6:20-8:00, West Bank 125, Pettersen
 25 M 6:20-8:00, West Bank 230, Kerns
 25 T 6:00-7:40, StP Ext Center 3F, Creviere
 26 M 8:10-9:50, West Bank 125, Cummings

Fall Quarter

24 T 5:30-8:00, Ford 50, Urban
 24 W 5:15-7:45, StP Ext Center 3G, Spangler
 24 Th 6:30-9:00, Robbinsdale Senior High School 134

Winter Quarter

25 T 5:30-8:00, West Bank 110
 25 W 5:15-7:45, StP Ext Center 3G
 25 Th 6:30-9:00, Robbinsdale Senior High School 134

Spring Quarter

26 T 5:30-8:00, West Bank 110
 26 W 5:15-7:45, StP Ext Center 3G
 26 Th 6:30-9:00, Robbinsdale Senior High School 134

Acct 24-25-26. Principles of Accounting (Combined). 9 degree credits, §Acct 55A-55B. \$81.

This course covers Acct 24-25-26 complete in 1 semester. (No prerequisite. Registrations will be accepted for the entire course only)

Spring Semester

MTh 6:20-8:50, West Bank 220
 MTh 6:00-8:30, StP Ext Center 3F, Spangler

Second Year Accounting Courses

Acct 55C. Managerial Costs. (To be offered 1963-64)

Acct 55D. Analysis of Financial Statements. 3 degree credits. \$27.

Interpretation and analysis of financial statements for credit, investment, and managerial purposes. (Prerequisite: 26)

Spring Semester

Th 8:10-9:50, West Bank 145, Lund

Acct 105A-B-C. Intermediate Accounting. 3 degree credits each semester, §Acct 55D. \$27 each semester.

Second-year accounting for students intending to specialize in accounting or in business finance. 105A: Review of accounting processes, measurement of income, accounting treatment of inventory and plant. 105B: Accounting treatment of cash, receivables, investments, intangible assets, liabilities, and applications of actuarial mathematics. 105C: Accounting treatment of stockholders' equity, interpretation and analysis of financial statements. (Prerequisite: 26 and Econ 2 for 105A [see page 102 for advanced standing examinations]; 105A and Math 10 or equivalent for 105B; 105B for 105C)

Fall Semester

105A M 6:00-7:40, StP Ext Center 2H, Johnson
 105A Th 6:20-8:00, Vincent 306, Lund
 105C M 8:10-9:50, Vincent 307

Spring Semester

105B M 6:00-7:40, StP Ext Center 2H
 105B Th 6:20-8:00, West Bank 145

Symbols explained on page 36.

Evening and Special Classes

Acct 115A-115B. Cost Accounting. 3 degree credits each semester. §Acct 55C or Acct 66. \$27 each semester.

115A: Practices, principles, and procedures of handling production costs for use in inventory valuation and income determination. An examination of job order, process, and standard cost systems. A brief introduction to standard cost as a tool of cost control. 115B: An analysis of the use of cost information in managerial decision-making. (Prerequisite: 26, Econ 2 and Math 10 or equivalent for 115A [see page 102 for advanced standing examinations]; 115A for 115B)

Fall Semester

115A M 8:10-9:50, Vincent 306

Spring Semester

115B M 8:10-9:50, West Bank 145

Special Interest and Advanced Accounting Courses

Acct. Elementary Functional Wiring for Punched Card Equipment. 3 certificate credits. \$27.

A course for those interested in procedures for different types of machine operation. Major emphasis on different specialized equipment each semester. (Prerequisite: #)

Fall Semester

M 6:20-8:00, Ford 70

Acct 89B. Tabulating Equipment Applied to Business (Data Processing Techniques). 2 degree credits plus 1 certificate credit. \$27.

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 250, Ostlund

Acct. Introduction to Computers. 3 certificate credits. \$27.

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, Architecture 60,
D. J. Berkeley (co-ordinator)

Spring Semester

M 6:20-8:00, West Bank 235,
D. J. Berkeley (co-ordinator)

Acct 125. Auditing Principles and Procedures. 3 degree credits. \$27.

Verification of financial data, including consideration of auditing procedures and their application. Preparation of working papers and audit reports is emphasized. (Prerequisite: 105C or ¶105C)

Fall Semester

W 6:20-8:00, Vincent 306, Berryman

Acct 135A-B. Income Tax Accounting. 3 certificate credits each semester. (4 degree credits on completion of both courses consecutively.) \$27 each semester.

Principles involved in determining taxable net income and computation of federal and state income taxes for individuals, partnerships, and corporations. (Prerequisite: 105A for 135A; 135A for 135B. Must be taken in sequence. Not open to graduate students)

Fall Semester

135A M 8:10-9:50, Johnston 114, Rapoport

Spring Semester

135B M 8:10-9:50, West Bank 110, Rapoport

Symbols explained on page 36.

Course Offerings—Business Administration

Acct 145B. Internal Auditing. 3 degree credits. \$27.

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 auditors' functions, and detailed discussion of the performance of particular activities will be covered. (Prerequisite: 6 degree credits in Upper Division accounting)

Fall Semester

M 6:20-8:00, Vincent 306, Meyers

Acct 145C. Systems and Procedures. See Pol 67: Administrative Analysis, page 90.

Acct 185A. Advanced Accounting. 3 degree credits. \$27.

Consolidated statements, fiduciary and fund accounting, partnership accounting. (Prerequisite: 105C or ¶105C. Not open to graduate students)

Spring Semester

M 8:10-9:50, West Bank 230, Berryman

Acct 185B. Auditing and Public Accounting. 3 degree credits. \$27.

The work of public accountants, including internal controls, fraud, programming, standards of practice, reporting, ethics, legal responsibility, nonaudit work. (Prerequisite: 125)

Spring Semester

W 6:20-8:00, West Bank 145, Berryman

Acct 185C. Governmental Accounting. 2 degree credits plus 1 certificate credit. \$27.

Government budgets and fund accounting. (Prerequisite: 105A. Not open to graduate students)

Spring Semester

Th 6:20-8:00, West Bank 105, Magraw

Business English

Comp. Review of Business English. 3 certificate credits. \$27.

For those who have been out of school for a while or who had poor preparation for business English while in school. Modern, streamlined sentence structure, paragraphing, punctuation, and spelling. Brief introduction to letter form and organization. Emphasis on brevity, accuracy, meaning, and vividness. (No prerequisite. Repeated spring semester)

Fall Semester

M 8:10-9:50, Main Engineering 4, Lippert
T 6:00-7:40, StP Ext Center 3C, Lippert
W 6:20-8:00, Main Engineering 4, Lippert

Spring Semester

M 6:20-8:00, Main Engineering 4, Lippert
W 6:20-8:00, Main Engineering 4, Lippert

Comp. Business Correspondence. 3 certificate credits. \$27.

A practical class for people recognizing the value of effective expression in business letters. The principal types of letters will be analyzed and the written assignments will emphasize the development of a letter style capable of producing economical, clear, action-getting letters. (No prerequisite. Repeated spring semester)

Fall Semester

M 6:20-8:00, Main Engineering 4, Lippert
W 8:10-9:50, Main Engineering 215, Haga

Spring Semester

T 6:00-7:40, StP Ext Center 3C, Lippert
W 6:20-8:00, Main Engineering 215, Haga

Comp 58. Business Reports and Letters. (See description and statement in following course, Communication in Management.) 3 degree credits. \$27.

Symbols explained on page 36.

Evening and Special Classes

Comp. Communication in Management. 3 certificate credits. \$27.

Note—On approval of petition by instructor and the School of Business Administration, degree credit (not in excess of 3 credits) applicable on a business degree will be recognized for Communication in Management in lieu of Comp 58, provided class work has included appropriate supplementary assignments. Consult instructor at beginning of class term.

An advanced course for people working at the administrative level. Reviews and analyzes the forms and styles appropriate in the three major classes of management communication: downward (order-giving), upward (administrative reporting), and horizontal (clearance and review). In addition to the class assignments, each student will work out an individual communication project related to his specific job. (No prerequisite. Repeated spring semester)

Fall Semester

W 6:20-8:00, Main Engineering 215, Haga

Spring Semester

W 8:10-9:50, Main Engineering 215, Haga

Business Finance

BFin 56. Corporation Finance. 3 degree credits. \$27.

Principles governing the planning, raising, and control of short- and long-term funds for a business enterprise. Cash-flow, valuation, capital structures, investment banking, dividend policy, mergers, and reorganization. (Prerequisite: Econ 2 and Acct 26. Repeated spring semester)

Fall Semester

M 6:20-8:00, Vincent 207

M 8:10-9:50, Vincent 207

Spring Semester

M 6:20-8:00, West Bank 240

BFin 76. Financial Management. 3 degree credits. \$27.

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)

Spring Semester

M 8:10-9:50, West Bank 240

BFin 106. Securities Markets. 3 degree credits. \$27.

The institutional structure of the stock and bond markets. Internal organization and operation of the exchanges, the co-ordination of markets, problems of price behavior of the market as a whole and of specific types of securities. (Prerequisite: 56)

Spring Semester

W 6:20-8:00, West Bank 230

BFin 116. Investments. 3 degree credits. §Introduction to Investments. \$27.

The nature of different types of securities and the characteristics of industrial, utility, and financial enterprises and various government units from the viewpoint of the individual investor. Security analysis and portfolio needs. (Prerequisite: 56. Primarily for business and professional students)

Fall Semester

W 6:20-8:00, Ford 170

BFin. Introduction to Investments. 3 certificate credits. \$27.

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

Symbols explained on page 36.

Course Offerings—Business Administration

kinds of securities; statistical and investment analysis of securities; vocabulary and practices of the securities business; investment practice of various investor groups. (No prerequisite)

Fall Quarter

W 6:20-8:50, Johnston 115, Power

Business Law

BLaw 58, 78, 88, 98. **Business Law.** 3 degree credits each semester or quarter. \$27 each semester or quarter.

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)

Fall Semester

58 T 7:50-9:30, StP Ext Center 2A,
VanValkenburg
58 W 6:20-8:00, Ford 180, Moss
78 T 6:00-7:40, StP Ext Center 2A,
VanValkenburg
78 W 8:10-9:50, Ford 120, Moss
88 T 6:20-8:00, Ford 180, Thomas

Spring Semester

58 T 6:00-7:40, StP Ext Center 2A,
VanValkenburg
58 W 8:10-9:50, West Bank 230, Moss
78 T 7:50-9:30, StP Ext Center 2A,
VanValkenburg
78 W 6:20-8:00, West Bank 240, Moss
88 T 6:20-8:00, West Bank 225, Thomas
98 W 6:20-8:00, West Bank 205, Carroll
98 Th 6:20-8:00, West Bank 205, Olson

Spring Quarter

58 T 6:30-9:00, Robbinsdale
Senior High School
134

BLaw. **Common Legal Problems I, II.** 3 certificate credits each semester. \$27 plus \$1 materials fee.

The Common Legal Problems courses provide a comprehensive course in everyday legal principles, designed to assist the businessman, layman, and housewife to recognize their legal rights and more intelligently and efficiently manage their personal affairs. Any individual, whether married or single, housewife or businessman, is bound to come up against many legal problems in varied fields during a lifetime. In many cases these problems might never arise or might be considerably minimized if the persons involved could anticipate them and know in advance what are the basic rights and liabilities and what steps should be taken to enforce or guard them, whom to consult, etc. *Part I* will consider legal problems of the following types: the purchase, sale, rental, or lease of homes and other real property; the making of wills and handling of estates; the preparation of income tax returns; the rights of persons injured in accidents and the liability of persons causing accidents; liability for trespass on real property and other tortious conduct; the making of contracts; the sale of personal property. *Part II* will consider the rights and responsibilities of husband, wife, parent and child in their relations with each other; criminal acts and criminal trials; the formation and operation of a small business as a sole proprietorship, partnership or corporation; the right to benefits for disability and to retirement pensions under various legislation such as social security, workmen's compensation and old age assistance; the rules of the road governing operation of automobiles; the garnishment of wages; and the filing of mechanic's liens against real property. (No prerequisite for I or II. Need not be taken in sequence)

Fall Semester

I M 6:20-8:00, Johnston 106, Thorfinnson
and Peterson
II M 8:10-9:50, Johnston 106, Thorfinnson
and Peterson

Spring Semester

I M 6:20-8:00, West Bank 245, Thorfinnson
and Peterson
II M 8:10-9:50, West Bank 245, Thorfinnson
and Peterson

Symbols explained on page 36.

Evening and Special Classes

Economics

Econ B. The Scope, Methods and Applications of Economics. 3 degree credits. \$27.

Designed for the student who has no previous knowledge of the field and who would like to find out in a single semester course what economics is about. The course begins with a brief sketch of the chief problems around which the work of the great economists centered from Adam Smith's day to the present. Major branches of modern economics are then outlined for the student. Application of economics in the field of economic policy is stressed. (No prerequisite)

Fall Semester

Th 6:20-8:00, Vincent 1, Smith

Econ 1-2. Principles of Economics. 3 degree credits each term. \$27 each term.

Principles underlying economic activity and the way these principles work out through our economic institutions. Econ 1 covers demand and supply, competition and monopoly, and distribution of income. Econ 2 covers national income, money and banking, business cycles, and international trade. Econ 1 and 2 are prerequisite for most advanced courses in business administration and economics. (No prerequisite for 1; 1 for 2. Must be taken in sequence)

Fall Semester

1 M 6:20-8:00, Vincent 1
1 M 8:10-9:50, Vincent 1
1 T 6:00-7:40, StP Ext Center 3E,
Helmberger
1 T 6:20-8:00, Vincent 1, Borak
1 T 8:10-9:50, Vincent 1, Borak
1 W 6:20-8:00, Vincent 1
1 W 8:10-9:50, Vincent 1
2 Th 6:20-8:00, Vincent 207
2 Th 8:10-9:50, Vincent 207

Spring Semester

1 T 6:20-8:00, West Bank 145
1 T 8:10-9:50, West Bank 110, Borak
1 Th 8:10-9:50, West Bank 125
2 M 6:20-8:00, West Bank 130
2 T 6:00-7:40, StP Ext Center 3E,
Helmberger
2 T 6:20-8:00, West Bank 130
2 W 6:20-8:00, West Bank 130
2 W 8:10-9:50, West Bank 130

Fall Quarter

1 T 6:30-9:00, Robbinsdale
Senior High School
134

Winter Quarter

2 T 6:30-9:00, Robbinsdale
Senior High School
134

Econ 65. Intermediate Economic Analysis: The Firm. 3 degree credits, \$165. \$27.

Behavior of firms under competitive and monopolistic conditions; factors influencing the firm's decisions regarding production, output, and prices. (Prerequisite: 2 or #)

Fall Semester

T 6:20-8:00, Ford 185, Coen
W 8:10-9:50, Vincent 307, Kahn

Econ 66. Intermediate Economic Analysis: Income and Employment. 3 degree credits, \$166. \$27.

Determinants of national income, employment, and price level, with particular attention to aggregate consumption and investment. (Prerequisite: 2 or #)

Spring Semester

T 6:20-8:00, West Bank 205, Coen
W 8:10-9:50, West Bank 205, Kahn

Econ 67. Money and Banking. 3 degree credits. \$27.

Historical development, present pattern, and economic role of financial institutions, with special emphasis upon commercial banks, the money supply, and the Federal Reserve System. (Prerequisite: 2 or #)

Spring Semester

Th 6:20-8:00, West Bank 240, Smith

Symbols explained on page 36.

Course Offerings—Business Administration

Econ 68. Elements of Public Finance. 3 degree credits, §168 or 178A. \$27.

Survey of government expenditures, budgeting, fiscal policy, debts, and taxes in terms of fiscal institutions, impact on business and the economy, and policy issues. (Prerequisite: 2 or #)

Spring Semester

T 6:20-8:00, West Bank 240, Borak

Econ 69. Government Regulation of Business. 3 degree credits, §169. \$27.

Economic aspects of public policy affecting the market process. Relations between market structure and economic efficiency and welfare; economic origins of monopoly and other business limitations on free competition; and purposes and effect of anti-trust laws and laws relating to "unfair business practices." (Prerequisite: 65 or 165 for business or economics majors; suitable background in law or political science for others; or #)

Spring Semester

W 6:20-8:00, West Bank 110

Econ 80. Survey of Economic Ideas. (Not offered 1962-63)

Econ 103. Economic Development. 3 degree credits. \$27.

Conditions necessary for increasing income, capital formation, measurement of economic growth, and problems of "underdeveloped" areas. (Prerequisite: 2 or #)

Fall Semester

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

Econ 104. International Economics. (Not offered 1962-63)

Econ 150A. Current Economic Issues. (Not offered 1962-63)

Econ 157. Business Cycles. 3 degree credits. \$27.

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 8:10-9:50, Vincent 1, Smith

Econ 160. Comparative Economic Systems. 3 degree credits. \$27.

Functions of all economic systems; theories of alternative economic systems, the market economy, liberal socialism, the centrally planned economy. Analysis of American and Soviet economies. (Prerequisite: 2 or #)

Spring Semester

Th 8:10-9:50, West Bank 115, Smith

Econ 172. Labor Market Behavior and Regulation. 3 degree credits. \$27.

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: IR 52 or #)

Spring Semester

Th 6:20-8:00, West Bank 140

Symbols explained on page 36.

Evening and Special Classes

Econ 182. Economic Security. 3 degree credits. \$27.

Public and private approaches to problems of economic insecurity. Nature and causes 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: IR 52 or #)

Fall Semester

Th 6:20-8:00, Johnston 105

Hist 147-148. American Economic History. (See page 72.)

Industrial Relations

Your attention is called to the Industrial Relations Certificate program; see page 12.

IR 52. Systems of Industrial Relations: Labor Marketing. 3 degree credits. \$27.

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 #. Repeated spring semester)

Fall Semester

M 6:00-7:40, StP Ext Center 3G, Woods
W 6:20-8:00, Vincent 207, Heneman

Spring Semester

W 6:20-8:00, West Bank 140, Carlson

IR 72. Systems of Industrial Relations: Manpower Management. 3 degree credits. \$27.

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. (No prerequisite. Repeated spring semester)

Fall Semester

W 8:10-9:50, Vincent 207, Mohr

Spring Semester

W 6:20-8:10, West Bank 140, Nash
W 6:00-7:40, StP Ext Center 3G, Woods

IR 142. Conflict and Collective Bargaining. 3 degree credits. \$27.

Nature of industrial conflict in employment relations pointing up the stresses contributing to conflict situations. Collective bargaining as an approach to conflict resolution, and public and private approaches to the regulation of collective bargaining and the resolution of conflict. (Prerequisite: 52 or 72 or #)

Spring Semester

Th 6:20-8:00, West Bank 245, Mohr

IR 162. Union Government and Policies. 3 degree credits. \$27.

Internal administration and government of unions; economic and social issues; hours, wages, and other conditions of employment. (Prerequisite: 52 or 152 or #)

Fall Semester

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

Symbols explained on page 36.

Course Offerings—Business Administration

IR. Human Relations in Industry. 3 certificate credits. \$27.

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)

Spring Semester

W 8:10-9:50, West Bank 245, Sorenson

IR. Supervision I: Elements of Supervision. 3 certificate credits. \$27 plus \$1 materials fee.

A general discussion of basic principles of supervision in the office and factory. Survey of principles for the handling of day-to-day problems of supervisors with emphasis upon human relations aspects of such problems. Deals with such problems as selection, induction and training of new employees, employee appraisal, giving orders, handling grievances, discipline, and employee morale. Extensive use of class discussion of practical problems drawn from office and plant situations. (No prerequisite. Repeated spring semester)

Fall Semester

M 7:50-9:30, StP Ext Center 3F
T 6:20-8:00, Ford 30

Spring Semester

M 6:00-7:40, StP Ext Center 2A
T 8:10-9:50, West Bank 205

IR. Supervision II: Advanced Techniques of Supervision. 3 certificate credits. \$27.

Emphasizes specialized supervisory techniques based upon principles outlined in Supervision I. Includes discussion of research in supervisory methods and practices and their relative success in application in the office and plant. Methods of supervisory training, morale measurement, job analysis and job evaluation, safety programs, wage and salary administration, principles of organization and communications are among the topics discussed. Extensive use is made of discussion method and case studies. (Prerequisite: Supervision I or #. Repeated spring semester)

Fall Semester

M 8:10-9:50, Ford 30
T 8:10-9:50, Ford 30

Spring Semester

M 6:20-8:00, West Bank 255
M 7:50-9:30, StP Ext Center 2H

IR. Supervision III: Techniques of Employee Training. 3 certificate credits. \$27.

Primary emphasis is on the training techniques a line supervisor could use in developing his employees. Course content includes discussion of basic principles of training, training on an individual basis, group training, and special problems of orienting the new employee, making use of staff training services, safety training and evaluation of training. Extensive use is made of class discussion, role playing, case studies, and demonstrations. (Prerequisite: Supervision II or #)

Fall Semester

M 6:00-7:40, StP Ext Center 3F
T 6:20-8:00, Ford 70

Hist 144B-145B. The History of American Labor. (See page 72.)

Insurance

Ins 53. Risk Management and Insurance. 3 degree credits. \$27.

Recognition, measurement, and evaluation of insurable personal, property, and liability risks of economic units. Tools of risk management; assumption, loss prevention, transfer, and others with emphasis on insurance. Design and implementation of the optimum risk management program. Government regulation of insurance. (Prerequisite: Econ 2 or #. Repeated spring semester)

Fall Semester

M 8:10-9:50, Ford 185, Williams

Spring Semester

M 8:10-9:50, West Bank 120, Williams

Symbols explained on page 36.

Evening and Special Classes

College of Life Underwriters Curriculum.

In co-operation with the Minneapolis and St. Paul chapters of the American College of Life Underwriters (CLU), this year the Extension Division is offering Parts I, II, III, IV, and V of the CLU educational program (see listing below). Many of the regularly listed courses elsewhere in this bulletin may be of assistance to those who are preparing for examination on other parts of the curriculum. Full information on the American College of Life Underwriters study program may be obtained from the annual announcement of CLU which is available at Extension offices or through the Minneapolis or St. Paul chapters of the Chartered Life Underwriters.

Minneapolis—G. B. Serrill, 409 Minnesota Federal Building, Federal 3-4396

St. Paul—David York, 1005 Pioneer Building, Capital 5-4616

CLU Part I. Fundamentals of Life and Health Insurance, A-B. 3 certificate credits each semester. \$27 each semester.

This course is designed as preparation for the annual CLU examination in Part I. The subject matter will cover such topics as needs and uses; types of contracts; the arithmetic of premiums and reserves; introduction to health insurance; contract provisions; structure of the business; fundamentals of programming and settlement options. (No prerequisite for Part IA; Part IA 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 4:00-5:40, StP Ext Center 3F, Wheeler
A M 4:00-6:00, 430 Oak Grove, Preston

Spring Semester

B M 4:00-5:40, StP Ext Center 3F, Wheeler
B M 4:00-6:00, 430 Oak Grove, Preston

CLU Part II. Group Insurance, Health Insurance and Pensions, A-B. 3 certificate credits each semester. \$27 each semester.

This course is designed as preparation for the annual CLU examination in Part II, as conducted by the American College of Life Underwriters. The subject matter will cover group life insurance, individual health insurance, group health insurance, pensions, problems of old age, unemployment, and disability. (No prerequisite for Part IIA; Part IIA for Part IIB. 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,
Blackwell

Spring Semester

B M 4:30-6:30, 3701 Wayzata Blvd,
Blackwell

CLU Part III. Law, Trusts, and Taxation, A-B. 3 certificate credits each semester. \$27 each semester.

This course is designed as preparation for the annual CLU examination in Part III, as conducted by the American College of Life Underwriters. The subject matter will cover such topics as business law; legal aspects of life insurance; estates, wills, and trusts; taxation. (No prerequisite for Part IIIA; Part IIIA for Part IIIB. Must be taken in sequence)

Fall Semester

A T 4:30-6:30, 3701 Wayzata Blvd

Spring Semester

B T 4:30-6:30, 3701 Wayzata Blvd

CLU Part IV. Finance and Economics, A-B. 3 certificate credits each semester. \$27 each semester.

This course is designed as preparation for the annual CLU examination in Part IV, as conducted by the American College of Life Underwriters. Section A will cover family and business finance. Section B will be devoted to the study of basic principles of economics. (No prerequisite for Part IV—A; Part IV—A for Part IV—B. Must be taken in sequence. For details as to the conduct of the course and for information concerning the CLU educational program and its requirements, see notice above)

Fall Semester

A T 4:30-6:30, 3701 Wayzata Blvd, Barker

Spring Semester

B T 4:30-6:30, 3701 Wayzata Blvd, Barker

Symbols explained on page 36.

Course Offerings—Business Administration

CLU Part V. Business Insurance and Estate Planning, A-B. 3 certificate credits each semester. \$27 each semester.

This course is designed as preparation for the annual CLU examination in Part V. The subject matter will cover settlement options and programming; life insurance for business purposes; estate planning; human behavior and motivation; ethics. (Prerequisite: Part I, II, III and IV for Part V—A; Part V—A for Part V—B. Must be taken in sequence)

Fall Semester

A Th 4:30-6:30, 3701 Wayzata Blvd, Larkin

Spring Semester

B Th 4:30-6:30, 3701 Wayzata Blvd, Larkin

Property and Casualty Insurance Curriculum.

The University of Minnesota co-operates with the Insurance Institute of America and the American Institute for Property and Casualty Underwriters, Inc., by offering an educational program that provides the basic courses needed by those who wish to take the examinations of either or both of the institutes. The Insurance Institute of America courses are considered excellent preparation for the more difficult American Institute courses which lead to the Chartered Property and Casualty Underwriters (CPCU) award. Complete details of the program of training under both institutes are printed in the institutes' annual announcements, copies of which may be obtained from the General Extension Division of the University of Minnesota. (Co-ordinator for CPCU program for 1962-63 will be Bernard C. Bengtson, CAPital 4-3737)

IIA Parts A, B, and C. 3 certificate credits each for Parts A and B; \$27 each quarter. 2 certificate credits for Part C, \$18.

Based on the Part A, Part B, and Part C Topical Outlines of the Insurance Institute of America. Provides a background in property and liability insurance and serves as a preparatory course for the CPCU program. *Part A:* Economic and social influences of insurance; types of risk and kinds of insurance to meet them; legal principles important to property and liability insurance; historical development of insurance; rate making; types of insurers and their organization; underwriting and re-insurance; analysis of insurance contracts; regulation. *Part B:* An intensive study of fire and marine insurance contracts. *Part C:* An intensive study of casualty insurance contracts. (It is highly recommended but not required that all parts be taken in sequence)

Fall Quarter

A M 5:30-8:00, Vincent 210,
Williams

Winter Quarter

B M 5:30-8:00, West Bank
110, Williams

Special Term—March 25- May 13

C M 5:30-8:00, West Bank
110, Williams

CPCU Part I. Insurance Principles and Practices, A-B. 3 certificate credits each semester. \$27 each semester.

An intensive course in the basic principles of property and casualty insurance, designed as preparation for examination I for the Chartered Property Casualty Underwriter (CPCU) award offered by the American Institute for Property and Casualty Underwriters, Inc. The course will be conducted by a panel of instructors selected from practicing insurance men, co-ordinated and supervised by the University School of Business Administration. (Prerequisite: at least 3 years' general experience or the equivalent in formal study and acceptance of special registration application; consult any Extension office)

Fall Semester

A M 6:20-8:00, Ford 180, Bengtson
(co-ordinator)

Spring Semester

B M 6:20-8:00, West Bank 260, Bengtson
(co-ordinator)

CPCU Part II. Insurance Principles and Practices, A-B. 3 certificate credits each semester. \$27 each semester.

An intensive course in the basic functional aspects of insurance, designed as preparation for examination II for the Chartered Property Casualty Underwriter (CPCU) award offered by the American Institute for Property and Casualty Underwriters, Inc. The course will be conducted by a panel of instructors selected from practicing insurance men, co-ordinated and supervised by the Univer-

Symbols explained on page 36.

Evening and Special Classes

sity School of Business Administration. (Prerequisite: CPCU Part I or at least 3 years' *general* experience or the equivalent in formal study and acceptance of special registration application; consult any Extension office)

Fall Semester

A M 8:10-9:50, Ford 180, Bengtson
(co-ordinator)

Spring Semester

B M 8:10-9:50, West Bank 260, Bengtson
(co-ordinator)

CPCU Part IV. Law, A-B. 3 certificate credits each semester. \$27 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 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, Ford 160, Peet

Spring Semester

B Th 6:20-8:00, West Bank 260, Peet

Management

Mgmt 60. Management and Management Control. 3 degree credits. \$27.

Managerial authority and responsibilities, organizational relationships, and effective executive action. Managerial problems of policy formulation involving decisions based upon a knowledge of all the major functions in the firm. (Prerequisite: to be taken at the end of the core group)

Spring Semester

M 8:10-9:50, West Bank 150, Peterson

Mgmt 70. Fundamentals of Management. 3 degree credits. \$27.

The principal functional areas of management: planning, organizing, staffing, directing, and controlling. Examines attributes of good organization, establishment of goals, policies, and procedures; control systems and techniques; providing necessary factors and relationships to achieve organizational objectives. (Prerequisite: to be taken after the core group or #)

Spring Semester

T 8:10-9:50, West Bank 220

Mgmt 80. Administrative Practices. 3 degree credits. \$27.

Develops awareness and perception of the executive's relationships with individuals and groups in the firm. Opportunity to develop administrative abilities, to think and act responsibly, to make decisions which provide opportunities for others in the organization to work effectively toward individual and organizational goals. (Prerequisite: to be taken after the core group or #)

Spring Semester

T 6:20-8:00, West Bank 220

Marketing

Mktg 57. Principles of Marketing. 3 degree credits. \$27.

Marketing functions and institutions. Channels of distribution. Retail and wholesale trades. Pricing policies and practices. Marketing policies and methods for consumers' goods, producers' goods, and raw materials. (Prerequisite: Econ 2. Repeated spring semester)

Fall Semester

M 6:20-8:00, Ford 50
W 6:20-8:00, Ford 120

Spring Semester

M 6:20-8:00, West Bank 415
W 6:20-8:00, West Bank 215

Symbols explained on page 36.

Course Offerings—Business Administration

Mktg 87. Credits and Collections. 3 degree credits. \$27.

Nature and types of credit and of credit instruments and agencies; qualifications and work of credit manager; valuation and use of financial statements and credit reports; collection methods and correspondence; bankruptcy and adjustments; credit limits and control. (Prerequisite: 57)

Fall Semester

Th 6:20-8:00, Ford 50

Mktg. Principles of Credits and Collections II. 3 certificate credits. \$27.

This course is designed to follow Mktg 87 with emphasis upon analysis of financial statements as a source of credit information; legal remedies used in collection of delinquent accounts; handling insolvent accounts and bankruptcies; adjustment problems and the use of adjustment bureaus; credit insurance; activities and services of credit associations; measures of credit department efficiency, and other important phases of credit work. (Prerequisite: 87 or #)

Spring Semester

Th 6:20-8:00, West Bank 415

Mktg 97. Market Analysis and Research. 3 degree credits. \$27.

Techniques used in marketing research. Emphasis on marketing information which can aid in the solution of marketing problems. Selected nonsurvey and survey research techniques. (Prerequisite: 57 and QA 51)

Fall Semester

Th 6:20-8:00, Vincent 307

Mktg 117. Sales Management. 3 degree credits. \$27.

Sales policies and planning, sales organization, selection, training, and compensation of salesmen, control of sales performance, sales budgets, and cost control. Case materials. (Prerequisite: 57)

Spring Semester

M 6:20-8:00, West Bank 215

Introduction to Computers. (See page 104.)

National Institute of Credit Curriculum

The University of Minnesota co-operates with the Credit and Financial Management Association of Minneapolis and the St. Paul Chapter of the National Association of Credit Men in a program of training leading toward the awards of Associate and Fellow of the National Institute of Credit (the educational branch of the National Association of Credit Men). Those interested in working for these awards should be registered with the National Institute of Credit at the Association office (502 Thorpe Building, Minneapolis; Telephone FEderal 6-8356) and should receive advice there as to an approved program of study. Course registrations for evening classes should be made at any of the Extension Division offices, indicated on page 4 of the Evening Classes bulletin.

The curriculum of the National Institute of Credit, together with selected Extension Division courses, follows. (The suggested Extension courses should prove valuable to those contemplating work toward a University degree or an Extension certificate as well as for the Institute awards. For further information, consult the Extension Committee on Student Scholastic Standing.)

Institute Curriculum

†† *Approved Equivalent Extension Courses*

Associate Award

Business Economics
Basic Accounting
Business Correspondence
Credit and Collection Principles
Advanced Credits

Econ 1-2, Principles of Economics
Acct 24-25-26, Principles of Accounting
Business Correspondence
Mktg 87, Credits and Collections
Principles of Credits and Collections II

†† Electives and substitutions or transfers of credits may be approved on petition to the educational committees of the local association chapters. For further information on this program, please consult Mr. Lindholm in the Association office (Thorpe Building).

Other symbols explained on page 36.

Evening and Special Classes

Fellow Award Program (in addition to preceding courses)

Law of Contracts and Agency
Law of Business Transactions or Negotiable
Papers

Public Speaking
Salesmanship or Marketing

Credit Management Problems
Financial Statement Analysis
Psychology (Applied, General, or Business)

Techniques of Supervision
Office Management or
Personnel Management
Electives

BLaw 58-78, Business Law
BLaw 88, Business Law

Beginning Practical Speech Making
Basic Salesmanship, or
Mktg 57, Principles of Marketing

No equivalent course
Acct 55D, Analysis of Financial Statements
Psy 1A, Application of Psychology to
Living, or

Psy 1-2, General Psychology, or
Psy 122-123, Vocational Development and
Personnel Psychology

Supervision I
OMgt 99, Office Management—Management of
Administrative Services

Office Management

Your attention is called to the Management of Administrative Services Certificate programs; see page 16.

OMgt 36. Office Procedures. 3 degree credits. \$27.

Editing and revising correspondence; communications; basic indexing and filing problems; intra-office relationships. (Prerequisite: 34 or #)

Fall Semester

W 6:20-8:00, Vincent 209

OMgt 79A. Administrative Secretarial Studies. 3 degree credits. \$27.

Office situations and problems in the work of an administrative assistant to an executive. Office procedures and secretarial dictation and transcription. (Prerequisite: 34 and 39 or #)

Spring Semester

W 6:20-8:00, Vincent 209

OMgt. Scientific Management in the Office. 3 certificate credits. \$27.

The office as a producing unit; organization and control of clerical services; selection of equipment and supplies; flow of work layout and working conditions; office personnel; relation of the office to operating divisions; work simplification; scientific management as applied to the office. (No prerequisite)

Spring Semester

T 6:20-8:00, West Bank 415, Northcott

OMgt 99. Office Management—Management of Administrative Services. 3 degree credits. \$27.

Problems involving organization, planning, and control of administrative services. Communications; records management; equipment analysis and control; forms and supplies; flow of work, layout, and environment; office personnel. (Prerequisite: Econ 2 or #)

Spring Semester

T 6:20-8:00, West Bank 415, Northcott,
Donaldson

Symbols explained on page 36.

Production

Prod 50. Production Management. 3 degree credits. \$27.

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

Fall Semester

M 6:20-8:00, Johnston 122, Peterson
M 8:10-9:50, Johnston 122, Peterson

Spring Semester

M 6:20-8:00, West Bank 150, Peterson

Introduction to Computers. (See page 104.)

Quantitative Analysis

QA 5. Elements of Statistics. 3 degree credits. \$27.

Elementary concepts in statistical methods. Sources and collection of data; tabular and graphic presentation; frequency distributions; probability; sampling; introduction to statistical estimation and decision-making. (Prerequisite: Math 7 or 8 or 10 or 15 or ITM 11. Repeated spring semester)

Fall Semester

M 6:20-8:00, Vincent 307
T 6:20-8:00, Vincent 307
W 6:20-8:00, Vincent 2

Spring Semester

T 6:20-8:00, West Bank 425
W 6:20-8:00, West Bank 220

QA 51. Business Statistics. 3 degree credits. \$27.

Basic concepts of regression and correlation; statistical estimation and decision-making, applications to such fields as survey sampling, acceptance sampling, and statistical quality control; introduction to time series analysis and index numbers. (Prerequisite: 5)

Fall Semester

T 8:10-9:50, Vincent 2
W 6:20-8:00, Vincent 309

Spring Semester

T 8:10-9:50, West Bank 425

Introduction to Computers. (See page 104.)

Real Estate

The University of Minnesota co-operates with the National Association of Real Estate Boards and with the Real Estate Boards of St. Paul and Minneapolis in a program of educational training leading toward competence in the professional aspects of real estate practice. Instructing staff for each course will be made up of a number of practicing realtors in the Twin Cities. Co-ordinator for the Real Estate Boards: Bernard G. Rice, 415 Minnesota Federal Building, Minneapolis.

RE. Fundamentals of Real Estate Practice. 3 certificate credits. \$27.

Economic functions of the real estate business; fundamental practices of the real estate office and other realtors; real estate valuations; methods of appraising; brokerage; principles of real estate

Symbols explained on page 36.

Evening and Special Classes

management; ethics of real estate practice. Basic course; should be taken prior to any other courses in real estate curriculum. (No prerequisite)

Fall Semester

M 6:20-8:00, Physics 133, Rice (co-ordinator)

RE. Real Estate Financing and Insurance. 3 certificate credits.

A study of financing methods and practice relating to conventional, FHA, VA, and combination loans; secondary financing; special loans on leases, farms, industrial and commercial properties; and primary phases of insurance procedures in the average real estate office. (No prerequisite)

Fall Semester

W 6:20-8:00, Ford 85, Rice (co-ordinator)

RE. Real Estate Sales Brokerage. 3 certificate credits. \$27.

A study of the basic principles and practices involved in the conduct of real estate sales from beginning to end; evaluation, listing, advertising, contracts and leases, financing and taxes, property showing, selling techniques, code of ethics. (No prerequisite)

Spring Semester

W 6:20-8:00, West Bank 155, Rice
(co-ordinator)

RE. Real Estate Appraisal. 3 certificate credits. \$27.

Detailed consideration of principles and practices involved in appraising various types of real property for various purposes. Factors determining valuations; making and reporting appraisals. Appraisals procedures in various legal actions. (No prerequisite)

Spring Semester

M 6:20-8:00, West Bank 155, Rice
(co-ordinator)

Real Estate Law (BLaw 98, Business Law). (See page 107.)

Salesmanship

Sal. Salesmanship. 3 certificate credits. \$27.

Selling principles that influence people to buy; why people spend money for something. Presentation of the product or service; magic words, descriptive words; types of buyers; resistances that cause failures; the buyer's mind at time of close, closing techniques. (No prerequisite. Repeated spring semester)

Fall Semester

M 6:20-8:00, Johnston 114, Stanchfield
Th 6:00-7:40, StP Ext Center 3E, Stanchfield

Spring Semester

M 6:20-8:00, West Bank 435, Stanchfield
Th 6:00-7:40, StP Ext Center 3E, Stanchfield

Secretarial Procedures

Your attention is called to the Secretarial Certificate program; see page 11.

OMgt 36. Office Procedures. (See page 116.)

OMgt 79A. Administrative Secretarial Studies. (See page 116.)

Symbols explained on page 36.

Transportation

Tran 54. Transportation I: Principles. 3 degree credits. \$27.

Roles, interests and relationships of users of the service, carriers, and regulatory agencies in the transportation field. National transportation policy approach. Organization of the transportation industry and administration of the transportation function by users of the service in their business activities. Economic aspects of railway, highway, pipeline, water, and air transportation. Current transportation problems; national transportation policy. (Prerequisite: Econ 2)

Fall Semester

M 6:20-8:00, Vincent 301, Nightingale

Tran 174. Transportation II: Traffic Management. 3 degree credits. \$27.

Principles of transport control and their application within the industrial (noncarrier) firm; carrier traffic management. Principles governing construction, interpretation, and application of rail, motor, water, express, pipeline, freight forwarder, and air freight classifications and tariffs. Problems involving determination of charges on typical movements within and between major freight rate territories. (Prerequisite: 54)

Spring Semester

M 6:20-8:00, West Bank 425, Nightingale

Tran 184A. Highway Transportation. 3 degree credits. \$27.

Economic aspects; national policy; services, pricing, operations, and management of the motor carrier industry; federal and state regulatory policies and problems; ICC motor carrier cost studies; intercity and urban passenger operations and problems; the transit problem of the cities. (Prerequisite: 54)

Spring Semester

W 6:20-8:00, West Bank 435, Harper

Tran 194A-B. Topics in Transportation: Advanced Traffic Management I-II. 3 degree credits each semester. \$27 each semester.

Transportation rates, transport control practices, and their applications within the individual firm. Analysis of important current ICC cases and decisions affecting users of the service and carriers. (Prerequisite: 174 for 194A; 194A for 194B. Must be taken in sequence)

Fall Semester

194A M 8:10-9:50, Vincent 309,
Nightingale

Spring Semester

194B M 8:10-9:50, West Bank 425,
Nightingale

Tran. Interstate Commerce Practice and Procedure I-II. 3 certificate credits each semester. \$27 each semester.

Advanced study of state and federal regulatory laws and U. S. Supreme Court cases governing rail and highway transportation. Attention to practice and procedure before rate and classification committees, state commissions, and the Interstate Commerce Commission. Preparation of informal, formal, and investigation and suspension cases before regulatory commissions. (Prerequisite: 194A or # for I; I for II. Must be taken in sequence)

Fall Semester

I W 6:20-8:00, Vincent 210, Nightingale

Spring Semester

II W 6:20-8:00, West Bank 425, Nightingale

Symbols explained on page 36.

EDUCATION

Prospective Teachers: Persons interested in undergraduate programs preparing them to teach in elementary or secondary schools should make an appointment through the General Extension Division with an adviser in the College of Education. Most professional education courses must be taken in day school, when schools are in session for observation. However, all programs in the College of Education emphasize the preparation of the teacher in general education and in the teaching subjects. Many evening offerings listed in the Arts and Sciences section of this bulletin may be taken by prospective teachers for later use toward degree programs in the College of Education.

Teachers-in-Service: Many courses in academic fields are available for teachers through evening class registration. Attention is called particularly to offerings listed under Arts and Sciences in this bulletin. Professional education courses available through evening classes are limited because of an extensive offering in the late afternoon and Saturday morning hours as part of the day school program of the College of Education.

Renewal of Teaching Certificates: Former teachers wishing to renew certificates should check with the State Department of Education concerning their individual requirements. Those who need an additional 8 quarter credits may select courses in education pertinent to their teaching level (elementary or secondary) or courses in the major teaching field. Secondary teachers are especially urged to emphasize current work in the teaching subject itself.

Art Education

ArEd 17. Pictorial Expression for Elementary Education. 3 degree credits. \$27 plus \$2 materials fee.

Survey of art in life and education. Materials, techniques, and ideas important to children's art expression, relationship to adult expression, and significance in educational growth. (No prerequisite)

Fall Quarter

W 6:20-8:50, Wulling 240,
Gayne

Spring Quarter

W 6:00-8:30, StP Ext Center
3G, Templeton

ArEd 18. Design Activities for Elementary Education. 3 degree credits. \$27 plus \$2 materials fee.

Relationships between art and nature. Problems in inventions, arrangement and decoration, color, lettering, poster, and bulletin board displays. (No prerequisite)

Fall Quarter

W 6:00-8:30, StP Ext Center
3G, Templeton

Winter Quarter

W 6:20-8:50, Wulling 240,
Gayne

ArEd 19. Functional Arts and Crafts in Elementary Education. 3 degree credits. \$27 plus \$2 materials fee.

Influence of art on modern life. Typical opportunities for integrated experiences. Clothing, architecture and interior design, community planning, commercial and industrial design, puppetry, dramatics, intercultural relations, holiday projects, etc. (No prerequisite)

Winter Quarter

W 6:00-8:30, StP Ext Center
3G, Templeton

Spring Quarter

W 6:20-8:50, Wulling 240,
Gayne

Symbols explained on page 36.

Child Development

CD 80. Child Psychology. 3 degree credits. \$27.

Science of child development and its applications. (Prerequisite: Psy 2. Repeated spring semester)

Fall Semester

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

Spring Semester

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

CD 90. Child Rearing. 3 degree credits. \$27.

Special Term—September 17-November 19

See course description, day, time, place, and instructor as listed under *Child Rearing* appearing below. Degree credit students will be required to do extra work involving observations, reports, and special examinations. Consult instructor at first class session for assignments.

CD 132. Adolescent Psychology. 3 degree credits. \$27.

Social, physical, mental, emotional, and personality development during adolescence. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 80)

Fall Semester

M 8:10-9:50, Folwell 101, Reed

CD 140. Behavior Problems. 3 degree credits. \$27.

Types, origins, development, and treatment. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 80 or equivalent)

Fall Semester

M 6:20-8:00, Folwell 104, Knights

CD 143. Problems of Mental Deficiency. 3 degree credits. \$27.

Diagnosis, care, training; social and vocational problems. (Prerequisite: 80)

Spring Semester

M 8:10-9:50, Folwell 101, Reed

CD. Child Rearing. No credit. \$18.

A practical course for parents and others interested in children. The course is designed to introduce current thinking in regard to child care philosophies and practices; to trace the development of children from birth through adolescence; to explain the child's behavior in terms of his progressive stages of development; and to relate the development and behavior to child care techniques. Class discussion is an important part of the course.

Special Term—September 17-November 19

M 6:20-8:20, CD 226, Peterson

Family Studies. (See page 64.)

Curriculum and Instruction

EdCI 103. Teaching of Science in the Elementary School. 3 credits. \$27.

Resources, materials, and their application in the elementary grades. Students wishing graduate credit should inquire at time of registration. (Prerequisite: senior class level, Ed 75B or teaching experience)

Fall Semester

M 6:20-8:00, Peik 365, Boeck

Symbols explained on page 36.

Evening and Special Classes

EdCI 105. Audio-Visual Materials in Education. 3 degree credits. \$27 plus \$6 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 media, such as teaching machines and closed circuit television equipment. Students wishing graduate credit should inquire at time of registration. (No prerequisite. Class meets for 4 hours and 10 minutes weekly, as indicated below)

Special Term—September 26 to October 31

W 4:30-6:10 and 7:10-9:40, Sibley High School,
West St. Paul, Pearson

EdCI 108. Nonprojected Audio-Visual Materials and Equipment Laboratory. 3 degree credits. \$27 plus \$6 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. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 105. Not open to students who have taken 109)

Note—EdCI 108 or EdCI 109 will be offered, dependent upon demand.

Special Term—November 7 to December 12

W 4:30-6:10 and 7:10-9:40, Sibley High School,
West St. Paul, Pearson

EdCI 109. Projected Audio-Visual Materials and Equipment Laboratory. 3 degree credits. \$27 plus \$6 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. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 105)

Note—EdCI 108 or EdCI 109 will be offered, dependent upon demand.

Special Term—November 7 to December 12

W 4:30-6:10 and 7:10-9:40, Sibley High School,
West St. Paul, Pearson

EdCI 153. Supervision and Teaching of English in Elementary Schools. 3 credits. \$27.

Improvement of instruction in language, spelling, and handwriting. Students wishing graduate credit should inquire at time of registration. (Prerequisite: Ed 75B or equivalent)

Spring Semester

M 6:00-7:50, StP Ext Center 3G, Dykstra

Educational Psychology

EPsy 60. Introduction to Measurement and Statistics. 3 degree credits. \$27.

A study of measures of central tendency, variability, and correlation, as well as principles of test construction. (Prerequisite: 6 credits in psychology)

Spring Semester

Th 6:20-8:00, Johnston 114, Hoyt

Symbols explained on page 36.

EPsy 110. Educational Measurement in the Classroom. 3 degree credits. \$27.

Principles and methods for construction, evaluation, and improvement of educational measurement in classroom instruction. Students wishing graduate credit should inquire at time of registration. (Prerequisite: senior class level or #)

Fall Semester

Th 6:00-7:40, StP Ext Center 3G, Hoyt

EPsy 140. Instruments and Techniques of Measurement. 3 degree credits. \$27.

Measuring intelligence, achievement, interests, attitudes, and personality traits; using measurement in education guidance, personnel work, administration, and supervision. Students wishing graduate credit should inquire at time of registration. (Prerequisite: senior class level, 110 or 117)

Fall Semester

Th 6:20-8:00, Burton 125, Edson

EPsy 159. Personality Development and Mental Hygiene. 3 degree credits. \$27.

This course purports to give the teacher a fresh way of looking at his task and at his relations with students by drawing upon modern concepts of mental health. The thesis is developed that emotional and intellectual growth in the classroom can best be fostered when the teacher understands and comes to grips with the motives and values which characterize his students. Topics treated include a description of the person in good mental health, an analysis of adjustment processes and of common sources of conflict and anxiety, psychological descriptions of the major grade-range groups in our schools and the mental health implication for dealing with them in the classroom; typical distinctions in the psychological makeup of successful and unsuccessful teachers; examination of sources of frustration in teaching and of behavior conducive to sound mental health in teaching. Students wishing graduate credit should inquire at time of registration. (Prerequisite: junior class level or teaching experience or #. Repeated spring semester)

Fall Semester

M 6:20-8:00, Nicholson 207, Borow

Spring Semester

M 6:20-8:00, Nicholson 207, Borow

EPsy 193. Principles of Psychology of Human Learning. 3 degree credits. \$27.

Application to school situation; motivation; rate of learning and forgetting; teaching of skills, meanings, attitudes; reasoning and problem solving; transfer of learning. Students wishing graduate credit should inquire at time of registration. (Prerequisite: teaching experience or #)

Spring Semester

M 6:20-8:00, Johnston 205, Kellogg

Nursing Education

***NuEd 73. Principles of Education in Nursing.** 3 degree credits. \$27.

Identification of principles of learning and teaching; application of principles in a variety of nursing situations; sources and selection of materials and organization for instruction; evaluation of learning. (Open to registered nurses. Class limited to 35 students)

Fall Quarter

T 6:00-8:20, Millard 118, Weise

NuAd 85. Fundamentals of Nursing Service Administration. (See page 83.)

ENGINEERING AND TECHNICAL SCIENCES

Your attention is called to the Engineering Science and Engineering Technician Certificate programs; see page 18.

Aeronautics

Ground School Courses for Air Pilots—General Information

The University Ground School offers several different courses at various times throughout the entire year (12 months). Each course is designed to meet the needs of pilots who are preparing for one of the following Federal Aviation Agency written and oral examinations: Private Pilot Certificate, Commercial Pilot Certificate, Flight Instructor Certificate, Instrument Rating, and Air Transport Rating. The Ground School is authorized to award F.A.A. Graduation Certificates upon satisfactory completion of a 50-hour basic course preparing for the Private Pilot Certificate, or upon satisfactory completion of a 150-hour advanced course (three 50-hour units) preparing for the Commercial Pilot Certificate. The University also awards 4 Extension Certificate credits for satisfactory completion of each 50-hour course or unit.

The University Ground School meets all requirements of, and is certificated by, the F.A.A. as an Approved Basic and Advanced Ground School, and as such offers to its students all of the privileges extended by the F.A.A. to such approved schools. It is to the flight student's advantage to complete the ground-school studies and F.A.A. written examinations as early as possible in his or her flight training program, as there is a 2-year time limit, following the completion of an F.A.A. written examination, before the related flight test must be passed.

In addition to the 50-hour basic course (described below) and the 150-hour advanced course, special accelerated short courses (described below) are offered from time to time, depending upon the demand, for pilots who have completed the 50-hour basic course and who are now preparing for the F.A.A. written and oral examinations for the Flight Instructor Certificate, the Instrument Rating, or the Air Transport Rating. In this way it is possible to satisfy pilots' ground-school requirements in the shortest possible time and at minimum expense.

Most classes meet on Tuesdays and Fridays, starting at 7 p.m., in 209 Aeronautical Engineering building on the Minneapolis Campus of the University. The director and principal instructor for all courses is Sam R. Hamilton.

Specific information regarding starting dates, class meeting schedules, tuition fees, and class load limits can be obtained from airport bulletin boards, or by calling the General Extension Division, telephone 373-3930, or by calling Mr. Hamilton at Midway 8-2559. Persons who need any further information regarding the different courses or who wish to be personally notified when a specific course is to be started should contact Mr. Hamilton.

Basic Ground School Course for Student, Private, and Commercial Pilots

This 7-week course, designed primarily for student pilots and prospective pilots who are preparing for the Federal Aviation Agency's written and oral examinations for certification as a private pilot, consists of 50 hours of instruction on air navigation, radio aids, meteorology, flight theory and analysis of flight maneuvers, aircraft and engine operation, civil air regulations, aircraft instruments, and other subjects pertaining to the safe, efficient, and economical operation of aircraft.

The course is open to all pilots and prospective pilots, regardless of their educational or flight-experience background. Although the course aims directly at fully preparing for the private pilot examinations (both written and oral), it also covers the more difficult parts of the F.A.A. Commercial Pilot written examination, as well as preparing for possible subsequent enrollment in any of the advanced accelerated ground-school courses described below.

The class meets twice a week, on Tuesdays and Fridays, at 7 p.m., for 7 weeks, in 209 Aeronautical Engineering building on the Minneapolis Campus of the University. The tuition fee is \$36, and registration must be completed not later than the second class meeting, either in the classroom or at any University Extension Division office. The instructor is Sam R. Hamilton.

Starting dates for the course are posted on airport bulletin boards from time to time throughout the entire year (12 months), or can be obtained by calling the General Extension Division, telephone

Course Offerings—Engineering and Technical Sciences

373-3930, or by calling Mr. Hamilton at Midway 8-2559. Persons who wish to be personally notified when the next basic course is to be offered should contact Mr. Hamilton.

Accelerated Ground-School Courses for Flight Instructors, the Instrument Rating and the Air Transport Rating

From time to time, depending upon the demand, the University Ground School offers special short courses preparing for the Federal Aviation Agency's written and oral examinations for the Flight Instructor Certificate, the Instrument Rating, or the Air Transport Rating. These accelerated courses are open to pilots who have completed the basic course described above, and who now need only a further short course of instruction for one of the advanced certificates or ratings issued by the F.A.A. The principal instructor is Sam R. Hamilton.

Specific information regarding starting dates, class meeting schedules, tuition fees, and class load limits can be obtained from airport bulletin boards, or by calling the General Extension Division, telephone 373-3930, or by calling Mr. Hamilton at Midway 8-2559. Persons who need any further information regarding these special short courses or who wish to be personally notified when a specific course is to be started should contact Mr. Hamilton.

Architecture

Arch. Architectural Drafting I-II-III-IV. No credit. \$40.50 each unit.

A basic course for those needing training for work in architecture. In general the main objectives for each unit will be: I: Drafting techniques. II: Construction details, house plans. III: Pictorial presentation, perspective. IV: Calculations for beams. Will include steel construction, all types of steel stresses including stresses, concrete beams, columns, floor slabs, 1- and 2-way construction as may be appropriate. (No prerequisite. Students may register for any unit with #)

Fall Semester

W 7:00-9:30, Main Engineering 302, Johnson

Arch. Refresher Course in Structural Design for Architects. Special Class. \$36.

This course is designed for practicing architects and will consist of lectures and problem sessions relating to structural design in steel, timber, and concrete. (No prerequisite)

Winter Quarter

T 6:30-9:00, Architecture 60, Self

Art. Home Design and Planning. (See page 55.)

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. (Replaces InCh 4-5) 5 degree credits each semester. \$45 plus \$5 laboratory fee each semester.

An introduction to chemistry from the standpoint of atomic structure; periodic properties of the elements and compounds derivable from structural considerations; a study of the laws governing the

Symbols explained on page 36.

Evening and Special Classes

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 6:20-9:20, Chemistry 325, †† Herr
Lect Th 6:20-8:00, Chemistry 325, Herr

Spring Semester

5 Lab T 6:20-9:20, Chemistry 325, †† Herr
Lect Th 6:20-8:00, Chemistry 325, Herr

GeCh 6. Principles of Solution Chemistry. (Replaces InCh 11) 4 degree credits. \$36 plus \$5 laboratory fee.

Lecture and laboratory work related to the chemistry of selected cations and anions. The detection and behavior of these 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, Herr
Lab Th 6:20-9:20, Chemistry 310, Herr

Organic Chemistry

OrCh 61-62.† Elementary Organic Chemistry. 5 degree credits each semester. \$45 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 Lect M 6:20-8:00, Chemistry 325,
Kowenko
Lab W 6:20-10:00, Chemistry 317 and
390, Kowenko

Spring Semester

62 Lect M 6:20-8:00, Chemistry 325,
Kowenko
Lab W 6:20-10:00, Chemistry 317 and
390, Kowenko

Civil Engineering

Your attention is called to the Senior Civil Engineering Technician program; see page 21.

CE 18. Surveying. 3 degree credits. \$27.

Theory and practice in length, angle, and elevation measurements; transit and level adjustments and use. Astronomic observations for azimuth. Field problems in traverses and level circuits. Adjustments of traverses, triangulation and level circuits. (Prerequisite: ITM 12. Some extra class periods held Saturday mornings for those without instrument experience)

Fall Quarter

W 6:20-9:40, Main Engineering
316, Fant

CE 19. Surveying. 3 degree credits. \$27.

Simple, compound, and spiral horizontal curves; vertical curves; elements of route surveying, grades, curvature, rise and fall, mass diagram and earthwork volume calculations. (Prerequisite: 18)

Winter Quarter

W 6:20-9:40, Main Engineering 316, Fant

†† First class meeting, only, in room 325 Chemistry.
Other symbols explained on page 36.

Course Offerings—Engineering and Technical Sciences

CE 20. Surveying. 3 degree credits. \$27.

Property and design surveys including land surveys, topographic surveys, design computations and methods, and construction surveys. Field problems in stadia mapping. (Prerequisite: 18)

Spring Quarter

W 6:20-9:40, Main Engineering 316, Fant

CE 31-32-33. Structural Design. (Not offered 1962-63)

CE 109. Geodetic Surveying. (Not offered 1962-63)

CE 111. Land Surveying. (Not offered 1962-63)

CE 112. Aerial Surveying and Photogrammetry. (Not offered 1962-63)

CE 130. Statically Indeterminate Structures. 3 degree credits. \$27.

Method of moment area. Williot diagram. Slope-deflection method. (Prerequisite: 33 or equivalent)

Fall Quarter

M 6:20-9:00, Experimental Engineering 22, Barker

CE 131. Structural Analysis. 2 degree credits. \$27.

Moment distribution method. (Prerequisite: 130)

Winter Quarter

M 6:20-9:00, Experimental Engineering 22, Barker

CE 132. Structural Design. 2 degree credits. \$27.

Continuous structures of steel and concrete. (Prerequisite: 131)

Spring Quarter

M 6:20-9:00, Experimental Engineering 22, Barker

CE 141. Reinforced Concrete. (Not offered 1962-63)

CE 142. Reinforced Concrete Design. (Not offered 1962-63)

CE 144. Prestressed Reinforced Concrete. (Not offered 1962-63)

CE. Highways and Pavements I and II. (Not offered 1962-63)

CE. Soil Engineering. (Not offered 1962-63)

CE. Plain Concrete. 3 certificate credits. \$27.

Properties and tests of concrete aggregate and cements. The design and computation of concrete mixtures, proportions, batch volumes, and costs. Properties of concrete, air-entrained concrete, methods of measuring air, light weight concrete, and construction procedure for unique types of construction.

Symbols explained on page 36.

Evening and Special Classes

Some laboratory experiments with class participation will be included. (Prerequisite: ITM 11 or equivalent)

Fall Semester

W 6:20-9:20, Experimental Engineering 193,
Pederson

Electrical Engineering

EE 61-62-63. Introductory Circuit Theory. 4 degree credits each quarter. \$36 each quarter.

Analysis of linear circuits excited by constant, exponential, and sinusoidal sources. Time and frequency analysis of the forced and free response of circuits and the concepts of power and energy in lumped constant elements. (Prerequisite: ITM 26A and Phys 14 for 61; 61 for 62; 62 for 63. Must be taken in sequence. Students attend twice a week)

Fall Quarter		Winter Quarter		Spring Quarter	
61	M 6:00-9:00, Electrical Engineering 237	62	M 6:00-9:00, Electrical Engineering 237	63	M 6:00-9:00, Electrical Engineering 237
	W 6:00-7:40, Mechanical Engineering 214		W 6:00-7:40, Mechanical Engineering 214		W 6:00-7:40, Mechanical Engineering 214

EE 71-72-73. Electromagnetic Fields and Materials. 4 degree credits each quarter. \$36 each quarter.

Properties and behavior of electromagnetic fields under static and time-varying conditions based upon the experimental laws of electromagnetism leading to Maxwell's equations; interaction of fields and matter; energy concepts; conductive, dielectric, and magnetic properties of materials. (Prerequisite: MM 27, ITM 26A and Phys 50 for 71; 71 for 72; 72 for 73. Must be taken in sequence. Concurrent registration in 81-82-83 strongly recommended. Students attend twice a week)

Fall Quarter		Winter Quarter		Spring Quarter	
71	M 6:00-8:40, Electrical Engineering 137	72	M 6:00-8:40, Electrical Engineering 137	73	M 6:00-8:40, Electrical Engineering 137
	W 6:00-7:40, Electrical Engineering 137		W 6:00-7:40, Electrical Engineering 137		W 6:00-7:40, Electrical Engineering 137

EE 81-82-83. Electrical Engineering Laboratory. 2 degree credits each quarter. \$18 plus \$10 lab fee each quarter.

Experimental study of electric circuits and electromagnetic fields. (Prerequisite: 61, 62, 63, and 71 or ¶71 for 81; 81 and 72 or ¶72 for 82; 82 and 73 or ¶73 for 83. Must be taken in sequence. Students attend twice a week)

Fall Quarter		Winter Quarter		Spring Quarter	
81	M 8:40-9:30, Electrical Engineering 137	82	M 8:40-9:30, Electrical Engineering 137	83	M 8:40-9:30, Electrical Engineering 137
	W 7:40-10:00, Electrical Engineering Labs		W 7:40-10:00, Electrical Engineering Labs		W 7:40-10:00, Electrical Engineering Labs

EE 111-112-113. Circuits and Fields. 3 degree credits each quarter. \$27 each quarter.

Lumped linear circuits in the transient and steady state; application of transform techniques in transient analysis; general multi-port network analysis. Fields, energy, and forces with application to electromagnetic and electromechanical devices. (Prerequisite: 63, 73, and ¶ITM 160 for 111; 111 for 112; 112 for 113. Must be taken in sequence)

Fall Quarter		Winter Quarter		Spring Quarter	
111	M 6:00-9:00, Architec- ture 30	112	M 6:00-9:00, Architec- ture 30	113	M 6:00-9:00, Architec- ture 30

Symbols explained on page 36.

Course Offerings—Engineering and Technical Sciences

EE 182A-B. Transistor Principles and Circuits. 3 degree credits. \$27 each quarter.

Properties of semiconductors, low-frequency characteristics of p-n junctions, low-frequency characteristics and equivalent circuits of transistors, voltage and current amplifiers, stabilization of operating point, class A, AB, and B, single-ended and push-pull amplifiers, feedback and d-c amplifiers, oscillators. (Prerequisite: degree in electrical engineering or physics or # for 182A; 182A for 182B. Must be taken in sequence)

Fall Quarter

182A TTh 7:00-8:15, Architecture 30

Winter Quarter

182B TTh 7:00-8:15, Architecture 30

EE 182C. High-Frequency Transistor Circuits. 3 degree credits. \$27.

High-frequency characteristics of p-n junctions and transistors, high-frequency broad and narrow-band amplifiers, large and small-signal transient response, high-speed switching circuits. Understanding of transmission line theory assumed. (Prerequisite: 182A or #)

Spring Quarter

182C TTh 7:00-8:15, Architecture 30

The following courses carry certificate credit and are offered as part of the Senior Electrical Engineering Technician program.

EE. Elements of Electric Circuits. 5 certificate credits. \$45 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 waveforms, nonlinear circuit elements, nonlinear circuit analysis methods. Electric and magnetic fields. Magnetic circuits. Lecture and laboratory. (Prerequisite: ITM 13A or #)

Fall Semester

T 6:00-9:00, Electrical Engineering 237

EE. Elements of Electronics I. 5 certificate credits. \$45 plus \$5 laboratory fee.

Electronic emission, conduction through vacuum and gases. Characteristics of vacuum and gas tubes. Photosensitive devices, electronic control circuits. Amplifier circuits, feedback; oscillators. Applications of vacuum and gas tube devices. Lecture and laboratory. (Prerequisite: Elements of Electric Circuits)

Spring Semester

T 6:00-9:00, Electrical Engineering 237

EE. Elements of Electronics II. 5 certificate credits. \$45 plus \$5 laboratory fee.

Semiconductor devices and their circuit application; conduction in semiconductors, transistor characteristics and equivalent circuits; transistor amplifiers, oscillators, and multivibrators. Tunnel diodes. Lectures, problems, and laboratory. Knowledge of circuit analysis using complex numbers is required. (Prerequisite: Elements of Electronics I or #)

Fall Semester

Th 6:00-9:00, Electrical Engineering 237

EE. Elements of Electronics III. 5 certificate credits. \$45 plus \$5 laboratory fee.

Terminal course of the certificate credit electronics sequence. Digital and analogue computer circuits—operational amplifiers, binary systems, memory units. Application of electronic instruments to measurements and instrumentation, transducers. Lecture and laboratory. (Prerequisite: Elements of Electronics II)

Spring Semester

Th 6:00-9:00, Electrical Engineering 237

Symbols explained on page 36.

Evening and Special Classes

EE. Refresher Course for Electrical Engineers. (Not offered 1962-63)

Engineering English

*Engl 85(IT). Advanced Technical Communication. 3 degree credits. \$27.

Technical writing, including reports and manuals, combined with the public speaking required of engineers, technical men, and those in the business and sales end of the technical industries. Stress in writing is on concise, definite, connected styles; use of numbers, abbreviations, and illustrations; organization of material; and proper levels of writing for different levels of readers. Stress in speaking is on preparation and organization; getting and holding interest; and on use of visual methods and materials. (Prerequisite: Engl 3B or Comm 3. Limited to 25 students. Repeated spring semester)

Fall Semester

T 8:10-9:50, Main Engineering 4, Lippert

Spring Semester

M 8:10-9:50, Main Engineering 4, Lippert

*Engl 86(IT). Advanced Technical Communication. 3 degree credits. \$27.

Technical and business letter writing combined with conference and interview technique for engineers, technical men, and those in the business and sales end of the technical industries. Letters include inquiry, reply, conference setup, adjustment, letter report, recommendation, and supervisory types (also job application, public relations, sales, and employee relations as the class may elect). Consideration of the technical magazine article. Speech work includes both planning and setting up, participating in, and following up conferences, and technical and supervisory interviews. (Prerequisite: 85[IT]. Limited to 25 students)

Spring Semester

T 8:10-9:50, Main Engineering 4, Lippert

Engl. Basic Technical Writing I-II. 3 certificate credits each semester. \$27 each semester.

Review of basic English and introduction to technical writing. Designed for people in the technical industries. Includes sentence design, spelling, and punctuation. Covers basic techniques of definition, description, process, procedure, and analysis writing. Organization and correlation into text of tables, diagrams, illustrations. Emphasis on accuracy, brevity, simplicity, and layout. Prepares students to write simple reports, specifications, procedures, material for manuals, supervisory materials, and basic letters of a technical nature. (No prerequisite)

Fall Semester

I W 8:10-9:50, Main Engineering 4, Lippert

Spring Semester

II W 8:10-9:50, Main Engineering 4, Lippert

Engineering Graphics

(Formerly Engineering Drawing)

EG 25 replaces 14, 15, and 16 as the basic drawing course required in the Institute of Technology. It is probable that some departments in the Institute will require additional graphic courses; these, however, are not presently available for the evening student. Any student who has completed EG 14 should conclude the graphic sequence by registering for 15 in the fall and 16 in the spring of 1962-63, so that he may receive appropriate credit. These courses will not be offered again.

EG 4 and 5 which are certificate credit courses present a slightly different approach to graphics. 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.

Symbols explained on page 36.

Course Offerings—Engineering and Technical Sciences

EG 4. Engineering Graphics. 3 certificate credits each semester. \$27 each semester.

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. Repeated spring semester)

Fall Semester

M 7:00-9:00, StP Ext Center 3C, Springer
W 6:00-8:00, Architecture 10, Palmer

Spring Semester

M 7:00-9:00, StP Ext Center 3C, Springer
T 6:00-8:00, Architecture 10, Bullen

EG 5. Engineering Graphics. 3 certificate credits. \$27.

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

Spring Semester

W 6:00-8:00, Architecture 10, Palmer

EG 15. Engineering Graphics. 3 degree credits. \$27. (Offered last time Fall 1962)

Engineering representation, analysis, and synthesis. Continuation of graphic solutions of space problems. Size description, common devices, applications of theory and standard practices. Axonometric oblique and perspective projection. Freehand sketching and shading. (Prerequisite: 14 and ITM 11 or ¶ITM 11)

Fall Semester

T 6:00-8:00, Architecture 10, Bullen

EG 16. Engineering Graphics. 3 degree credits. \$27. (Offered last time Spring 1963)

Graphical computations of engineering problems, involving graphic algebra, calculus, and statics. Functional scales, nomography, representation and analysis of empirical data. Engineering charts and algebraic checks on solutions of graphical space problems. (Prerequisite: 15 and ITM 12 or ¶ITM 12. Repeated spring semester)

Fall Semester

T 6:00-8:00, Architecture 55, Kleinhenz

Spring Semester

T 6:00-8:00, Architecture 55, Kleinhenz

EG 25. Engineering Graphics. 4 degree credits each semester. \$36 each semester. (Replaces EG 14, 15, and 16)

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 ITM 13A or ¶ITM 13A. Repeated spring semester)

Fall Semester

M 6:00-8:30, Architecture 10, Graphics Staff

Spring Semester

M 6:00-8:30, Architecture 10, Graphics Staff

General Engineering

***GE 70. The Slide Rule.** 1 degree credit. \$13.50.

Theory and computation practice necessary for those who wish to use the slide rule in ordinary computations. Drills on fundamental processes. (No prerequisite. Class limited to 25 students. Repeated spring semester)

Fall Semester

T 6:00-7:00, Architecture 40, Ziemke
T 7:00-8:00, Architecture 40, Ziemke

Spring Semester

T 6:00-7:00, Architecture 40, Ziemke
T 7:00-8:00, Architecture 40, Ziemke

Symbols explained on page 36.

Evening and Special Classes

Industrial Engineering

Your attention is called to the Senior Industrial Engineering Technician program; see page 23.

IE. Industrial Engineering and Management. 5 certificate credits. \$45.

A study of the problems and techniques of developing a highly efficient management team for a modern manufacturing concern. Includes discussions on business organization and financing, research and product development, standardization, plant layout and materials handling, production and inventory control, quality control, cost control, labor relations. (No prerequisite. Repeated spring semester)

Fall Semester

Spring Semester

T 6:20-9:20, Mechanical Engineering 214,
Nyquist

M 6:20-9:20, Mechanical Engineering 214,
Nyquist

IE. Motion and Time Study. 5 certificate credits. \$45 plus \$1 laboratory fee.

Principles and techniques for effective work methods and analysis. Process charts, flow diagrams, paper work systems, work distribution tables, micromotion study. The role of the worker in the work environment. Fundamentals of work measurement: time study, work sampling, predetermined time systems, and standard data. Discussion of performance rating, number of cycles to study, allowances, and other factors necessary to develop an effective standard. (No prerequisite)

Spring Semester

T 6:20-9:20, Mechanical Engineering 208

IE. Inventory and Production Control. 5 certificate credits. \$45.

Development of systems for increasing plant efficiency through effective co-ordination of inventories, manpower, and equipment with sales. Lectures and discussion on sales forecasting, master scheduling, inventory control, work routing, scheduling of operations, dispatching, analysis of equipment requirements. (Prerequisite: ITM 11 or #)

Fall Semester

W 6:20-9:20, Mechanical Engineering 208,
Nystrom

IE. Introduction to Operations Research. 5 certificate credits. \$45.

Formulation, interpretation, and solution of the assignment, transportation, and general linear programming problems. Discussion of problems involving game theory, waiting lines, sequencing, replacement, dynamic and convex programming, and Monte Carlo methods. Applications of these techniques to general industrial problems, and in particular to problems of product mix, distribution, production scheduling, staffing, and simulation. (Prerequisite: ITM 11 or #. Inventory and Production Control is recommended but not required)

Spring Semester

W 6:20-9:20, Mechanical Engineering 302,
Nystrom

IE. Introduction to Reliability. 5 certificate credits. \$45.

Concepts of reliability, principles of designing for reliability, nature and causes of failures, experimental procedures associated with reliability investigations, life tests, accelerated life tests, use of field data. (Prerequisite: ITM 90 or #)

Spring Semester

T 6:20-9:20, Mechanical Engineering 214

IE. Manufacturing Cost Analysis. (Not offered 1962-63)

Symbols explained on page 36.

Course Offerings—Engineering and Technical Sciences

IE. Principles of Engineering Economy. (Not offered 1962-63)

IE. Statistical Quality Control. 5 certificate credits. \$45.

Determination of quality requirements and their relation to manufacturing costs. Establishing of quality control standards; inspection procedures and organization. Use of statistical sampling techniques and control charts for more effective inspection and reduction of costs. For those engaged in quality control, and others such as production supervisors, plant managers, and design engineers who are concerned with quality problems. (Prerequisite: ITM 11 or #)

Fall Semester

M 6:20-9:20, Mechanical Engineering 110,
McElrath

IE. Advanced Statistical Quality Control. (Not offered 1962-63)

Mathematics (Institute of Technology)

Placement Examination in High School Algebra

The prerequisite for admission to ITM 11, College Algebra and Trigonometry I, is the satisfactory completion *within 1 year of date of application* of ITM 9, Higher Algebra, or its equivalent in high school (not a trade school) or in an institution of higher learning. If you have not completed such a course within the period stated you must take a placement examination. *If you have never had a course in higher algebra, you should register for ITM 9.* You cannot establish eligibility for admission to ITM 11 by the placement examination alone.

Your first step is to register for ITM 11 before the date of the final placement examination for the semester as listed below. At the time of registration you will fill out an "Application for Admission" to ITM 11, College Algebra and Trigonometry I. If you can check any of the items in Section A, you are qualified to take ITM 11 and need not take the placement examination. If you cannot qualify under Section A, then you must check in Section B the date on which you will take the placement examination. The application must be given to the tally clerk at time of registration.

You will be notified by mail before the first meeting of the class (ITM 11, College Algebra and Trigonometry I) if eligible to remain or if you must transfer to ITM 9, Higher Algebra (scheduled on the same nights). If you must transfer, it should be done immediately (without penalty). You may, of course, cancel your registration in ITM 11 and receive a full refund. In any event, the transfer or cancellation must be made on official transfer or cancellation forms in an Extension office and, if not completed by the end of the first week of classes, the regular transfer fee will be charged and/or the published refund policy will apply.

No student will be permitted to stay in ITM 11, College Algebra and Trigonometry I, unless he has completed the necessary prerequisites and has passed or been exempted from taking the placement examination in High School Algebra. After the first week of classes *no registrations* will be accepted and *no transfers* permitted *except* in instances in which the student is not qualified to continue. The placement examination will be given on the following dates:

Fall Semester

7:00 p.m., Friday, September 14, Nicholson 211

7:00 p.m., Wednesday, September 19, Nicholson 211

7:00 p.m., Wednesday, September 19, StP Ext Center 3E

7:00 p.m., Wednesday, September 19, Robbinsdale Senior High School 231

Spring Semester

7:00 p.m., Monday, February 11, Nicholson 211

7:00 p.m., Wednesday, February 13, Nicholson 211

7:00 p.m., Wednesday, February 13, StP Ext Center 2E

Symbols explained on page 36.

Evening and Special Classes

ITM 5. Basic Mathematics. 5 certificate credits. \$45.

A practical course for anyone needing an elementary background in basic mathematics such as shop men in industry or machine work. It is also valuable as a refresher in elementary mathematics. It includes a study of the arithmetic of whole numbers, fractions and decimals; an introduction to algebra and linear equations; other topics selected from elementary algebra, geometry and trigonometry. (Prerequisite: arithmetic. Repeated spring semester)

Fall Semester

TTh 6:20-7:45, Main Engineering 229

Spring Semester

TTh 6:20-7:45, Main Engineering 229

ITM 6. Elementary Algebra. Entrance credit. \$54.

Elements of algebra to quadratic equations, equivalent to 1 year of ninth grade algebra. (Prerequisite: arithmetic. Entrance requirement for College of Agriculture, Forestry, and Home Economics; College of Veterinary Medicine; College of Science, Literature, and the Arts; and Institute of Technology. Repeated spring semester)

Fall Semester

MW 6:20-8:00, Main Engineering 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

ITM 7. Plane Geometry. Entrance credit. \$54.

Elements of plane geometry, equivalent to 1 year of high school plane geometry. (Prerequisite: arithmetic. Entrance requirement for College of Agriculture, Forestry, and Home Economics; College of Veterinary Medicine; College of Science, Literature, and the Arts; and Institute of Technology. Repeated spring semester)

Fall Semester

MW 6:20-8:00, Main Engineering 203

Spring Semester

MW 6:20-8:00, Main Engineering 203

ITM 8. Solid Geometry. Entrance credit. \$27.

Standard theorems and exercises; practice in special proofs and original exercises. (Prerequisite: plane geometry. Entrance requirement for Institute of Technology. Repeated spring semester)

Fall Semester

Th 6:20-8:00, Main Engineering 203

Spring Semester

Th 6:20-8:00, Main Engineering 203

ITM 9. Higher Algebra. Entrance credit. \$45.

Fundamental operations, linear equations, factoring, fractions, simultaneous linear equations, exponents, radicals, graphical methods, quadratic equations, ratio, variation, binomial theorem, and other topics. (Prerequisite: elementary algebra. Entrance requirement for Institute of Technology. Repeated spring semester)

Fall Semester

MW 6:20-7:45, Main Engineering 205
TTh 6:20-7:45, Main Engineering 205
TTh 6:00-7:25, StP Ext Center 2E

Spring Semester

MW 6:20-7:45, Main Engineering 205
TTh 6:20-7:45, Main Engineering 205
TTh 6:00-7:25, StP Ext Center 2E

ITM 11. College Algebra and Trigonometry I. 5 degree credits. \$45.

Trigonometric functions, right triangles, slide rule, oblique triangles, vectors, radian measure. Factoring, fractions, functions and graphs, linear equations, exponents and radicals, quadratic equations, systems of quadratic equations, proportion and variation, logarithms. (Prerequisite: 9, or equivalent)

Symbols explained on page 36.

Course Offerings—Engineering and Technical Sciences

lent, and satisfactory score on placement examination in high school algebra; explained on page 133. Repeated spring semester)

Fall Semester

MW 6:20-7:45, Main Engineering 106
TTh 6:20-7:45, Main Engineering 104
TTh 6:00-7:25, StP Ext Center 2F

Spring Semester

MW 6:20-7:45, Main Engineering 104
TTh 6:20-7:45, Main Engineering 104
TTh 6:00-7:25, StP Ext Center 2F

Fall Quarter

MW 6:30-8:40, Robbinsdale
Senior High School
231

ITM 12. College Algebra and Trigonometry II. 5 degree credits. \$45.

Inequalities, progressions, logarithmic and exponential equations. Trigonometric formulas and identities, trigonometric curves, inverse trigonometric functions, trigonometric equations, complex numbers. Theory of equations, permutations, combinations, probability, determinants. (Prerequisite: 11. Repeated spring semester)

Fall Semester

MW 6:20-7:45, Main Engineering 104
TTh 6:20-7:45, Main Engineering 106
MW 6:00-7:25, StP Ext Center 2E

Spring Semester

MW 6:20-7:45, Main Engineering 106
TTh 6:20-7:45, Main Engineering 106
TTh 6:00-7:25, StP Ext Center 2E

Winter Quarter

MW 6:30-8:40, Robbinsdale Senior High School 231

ITM 13A. Calculus I: Analytic Geometry and Calculus. 5 degree credits. \$45.

Fundamentals of analytic geometry, equation of straight line, graphs and equations. Functions, limits, derivative, applications to velocity, acceleration, geometry. Antiderivatives, rectilinear motion, area. Rules of differentiation, conic sections, maxima and minima, rates, calculus of trigonometric functions. (Prerequisite: 12. Repeated spring semester)

Fall Semester

T 6:20-9:20, Main Engineering 227
W 6:00-9:00, StP Ext Center 2F

Spring Semester

M 6:20-9:20, Main Engineering 215
T 6:20-9:20, Mines and Metallurgy 116

Spring Quarter

MW 6:30-8:40, Robbinsdale
Senior High School
231

ITM 24A. Calculus II: Analytic Geometry and Calculus. 5 degree credits. \$45.

Differentials, parametric equations. Definite integral, mean-value theorem, areas, volumes, work, energy, moments of inertia. Further topics in analytic geometry. Calculus of exponential, logarithmic and hyperbolic functions. Techniques of integration. (Prerequisite: 13A. Repeated spring semester)

Fall Semester

T 6:20-9:20, Main Engineering 215

Spring Semester

T 6:20-9:20, Main Engineering 227
W 6:00-9:00, StP Ext Center 3A

ITM 25A. Calculus III: Analytic Geometry and Calculus. 5 degree credits. \$45.

Further applications of integration, polar-coordinates, vectorial treatment of motion in a curve, methods of approximation. Solid analytic geometry with vectors, partial differentiation, multiple integration. (Prerequisite: 24A. Repeated spring semester)

Fall Semester

T 6:20-9:20, Main Engineering 203

Spring Semester

T 6:20-9:20, Main Engineering 215

Symbols explained on page 36.

Evening and Special Classes

ITM 26A. Calculus IV. Differential Equations and Calculus. 5 degree credits. \$45.

Further study of limits, L'Hospital's rule. Sequences, series, Taylor's formula. Convergence, absolute and conditional, improper integrals, power series, expansion of functions. Differential equations; equations of first order; standard methods of solutions; linear equations with constant coefficients, application; simultaneous equations, integration by series, numerical methods. (Prerequisite: 25A. Repeated spring semester)

Fall Semester

M 6:20-9:20, Main Engineering 215

Spring Semester

T 6:20-9:20, Main Engineering 203

ITM 90. Elementary Engineering Statistics. 3 degree credits. \$27.

Probability, permutations, and combinations. Frequency distributions. Introduction to sampling significance tests, regression charts. (Prerequisite: 24A)

Fall Semester

W 6:20-8:00, Mines and Metallurgy 120

ITM 147. Vector Analysis. 3 degree credits, §ITM 152, 154. \$27.

Scalar and vector products, derivatives, geometry of space curves, del operator, line and surface integrals, divergence and Stokes' theorem, transformation of co-ordinates, dyadics, applications. (Prerequisite: 25 or 25A)

Fall Quarter

Th 6:20-9:00, Main Engineering
305

ITM 148. Differential Equations. 3 degree credits, §ITM 150A. \$27.

Linear differential and difference equations with constant coefficients, isoclines, phase, plane, reduction in order, numerical solutions, series solutions, Bessel functions, Legendre polynomials, introduction to boundary value problems. (Prerequisite: 80 or 26A)

Winter Quarter

Th 6:20-9:00, Main Engineering 305

ITM 149. Determinants and Matrices. 3 degree credits, §ITM 142. \$27.

Determinants, matrices, linear equations, vector spaces, quadratic and bilinear forms, characteristic roots, applications to systems of ordinary differential equations. (Prerequisite: 25 or 25A)

Spring Quarter

Th 6:20-9:00, Main Engineering
305

ITM 151. Calculus V: Advanced Calculus. 3 degree credits. \$27.

Functions of one and several variables: continuity, Riemann integral, partial derivatives, Taylor's theorem, implicit function theorem, transformations, and mappings. (Prerequisite: 26 or 26A)

Fall Quarter

MW 6:20-7:45, Main Engineering
227

ITM 152. Calculus VI: Advanced Calculus. 3 degree credits. §ITM 147. \$27.

Maxima and minima in several variables, vector algebra and calculus, Green's and Stokes' theorems, integrals depending upon a parameter. (Prerequisite: 151)

Winter Quarter

MW 6:20-7:45, Main Engineering 227

Symbols explained on page 36.

Course Offerings—Engineering and Technical Sciences

ITM 153. Calculus VII: Advanced Calculus. 3 degree credits. \$27.

Infinite series, computation with series, series with variable terms, uniform convergence, power series. Fourier series and orthogonal functions, special functions. (Prerequisite: 151)

Spring Quarter

MW 6:20-7:45, Main Engineering 227

ITM 160. Operational Methods for Linear Systems. 3 degree credits. \$27.

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, applications to systems of ordinary differential equations, transfer function of a filter, time and frequency domain relations. (Prerequisite: 26A)

Fall Quarter

Th 6:20-9:00, Main Engineering 227

ITM 165A. Introduction to Programming Modern Digital Calculators. 3 degree credits. \$27.

Organization of a modern digital calculator. Number systems. Elementary coding, flow charts, code checking, techniques, scaling, subroutines, assembly techniques, interpretive programs. Informal laboratory. (Prerequisite: 25 or 25A. Repeated spring semester)

Fall Quarter

M 6:20-9:00, Main Engineering 305

Spring Semester

T 6:20-8:00, Main Engineering 305

ITM 165B-C. Theory and Programming of Modern Digital Calculators. 3 degree credits each quarter. \$27 each quarter.

Analysis of arithmetic operations, logical organization of arithmetic unit. Storage, control, and input-output units. Libraries, advanced assembly programs, interpretive systems, compilers. Applications to mathematical and physical problems. Informal laboratory. (Prerequisite: 165A and 26A for 165B; 165B for 165C)

Winter Quarter

165B M 6:20-9:00, Main Engineering 305

Spring Quarter

165C M 6:20-9:00, Main Engineering 305

Mechanical Engineering

For the first time in several years, the Department of Mechanical Engineering, Institute of Technology, is offering the third-year Upper Division classes ME 21-22-23 and 30-31-32. Satisfactory completion will permit credit toward the B.M.E. and other degrees in the Institute of Technology in accordance with departmental regulations.

Your attention is called to the Senior Mechanical Engineering Technician program on page 24.

ME 21. Mechanisms: Kinematic Analysis. 3 degree credits. \$27.

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.

Symbols explained on page 36.

Evening and Special Classes

(Prerequisite: Phys 14 and ITM 26A or ¶ITM 26A; or completion of courses in integral and differential calculus and sophomore-level college physics)

Fall Quarter

W 6:20-9:00, Mechanical Engineering 102

ME 22. Mechanisms: Dynamic Analysis. 3 degree credits. \$27.

The influence of mechanism inertia on energy transfer. Elimination of unbalance in rigid body mechanisms. Gyroscopic phenomena applied to mechanism design. (Prerequisite: 21)

Winter Quarter

W 6:20-9:00, Mechanical Engineering 102

ME 23. Mechanisms: Components and Synthesis. 3 degree credits. \$27.

Component classes. The synthesis of mechanisms to produce desired motion, optimum sequencing of open loop rigid mechanisms based upon energy loss and force transfer limitations. (Prerequisite: 22)

Spring Quarter

W 6:20-9:00, Mechanical Engineering 102

ME 30-31-32. Thermodynamics. 3 degree credits each quarter. \$27 each quarter.

Properties and processes for working fluids in engineering devices. Application of the fundamental laws correlating energy with heat and work. (Prerequisite: ITM 26A or ¶ITM 26A, Phys 14; or completion of courses in integral and differential calculus and sophomore-level college physics)

Fall Quarter

30 Th 6:20-9:00, Mechanical Engineering 110, Murphy

Winter Quarter

31 Th 6:20-9:00, Mechanical Engineering 110, Murphy

Spring Quarter

32 Th 6:20-9:00, Mechanical Engineering 110, Murphy

*ME. Machine Tool Fundamentals. 5 certificate credits. \$45 plus \$3 laboratory fee.

Lecture and laboratory course which covers all types of machines for production such as lathes, drill presses, shapers, milling machines, turret lathes, automatic screw machines, surface grinders, cylindrical grinders, centerless grinders, thread grinders, thread milling machines, jig boring machines, gear hobbers, gear shapers, and profile milling machines. Also topics in tool wear, surface finish, coolants, and metal cutting economics. (Prerequisite: ITM 11 or #. Class limited to 20 students)

Fall Semester

M 6:20-9:20, Mechanical Engineering 106, Reynolds

ME. Tool Design. 5 certificate credits. \$45 plus \$1 laboratory fee.

Lecture and laboratory course which covers tooling methods, selection of best machine for the manufacturing operations, design of jigs and fixtures, tool making procedures, and tool inspection methods. Analysis of piece part blueprints will be made to determine best sequences of manufacturing operation and estimating machining time to manufacture the part. (Prerequisite: ITM 11 or #)

Spring Semester

T 6:20-9:20, Mechanical Engineering 106

ME. Instrumentation and Automatic Control. 5 certificate credits. \$45.

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

Symbols explained on page 36.

Course Offerings—Engineering and Technical Sciences

or throttling type control effects. These fundamental control actions will be studied thoroughly in both lecture and laboratory. Both electrical- and air-operated controls are included. The remainder of the course will deal with industrial instruments and automatic controls. The theory of control will be covered mathematically, descriptively, and graphically. Basic modes of control built into commercial industrial controllers such as proportional, automatic reset, and rate response will be covered in detail. Methods of obtaining these responses such as electrically, hydraulically, or pneumatically will be analyzed. Typical industrial control circuits will be investigated. This will involve analysis of all component parts such as the process measuring means, recording or indicating instrument, controller, and final control elements. (Prerequisite: ITM 11)

Fall Semester

M 6:20-9:20, Mechanical Engineering 214,
Ogata

ME. Refrigeration. 5 certificate credits. (§Refrigeration and Air Conditioning I-II) \$45.

A course for those engaged in the design, construction maintenance, sale of refrigeration and air conditioning equipment and systems. Fundamental terms and definitions; air conditioning loads; psychrometry, use of psychrometric chart; air conditioning processes including cooling, dehumidification, heating and humidification, duct design, and centrifugal fans. (Prerequisite: ITM 11 or #)

Fall Semester

Th 6:20-9:20, Mechanical Engineering 208,
Rees

ME. Air Conditioning. 5 certificate credits. (§Refrigeration and Air Conditioning I-II) \$45.

A course for those engaged in the design, construction maintenance, and sale of refrigeration and air conditioning equipment and systems. Fundamental terms and definitions; refrigeration cycles including mechanical compression and absorption; refrigeration equipment including compressors, condensers, evaporators, expansion valves and control; properties of refrigerants; design problems involving estimating requirements and selecting equipment for various air conditioning and refrigeration applications. (Prerequisite: ITM 11 or #)

Spring Semester

Th 6:20-9:20, Mechanical Engineering 208,
Rees

ME. Value Engineering. 5 certificate credits each semester. \$45 each semester.

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: ITM 11 or #. Repeated spring semester)

Fall Semester

T 6:20-9:20, Mechanical Engineering 208,
Reynolds

Spring Semester

W 6:20-9:20, Mechanical Engineering 208,
Reynolds

ME. Refresher Course for Mechanical Engineers. (Not offered 1962-63)

*ME. Plastics Technology. 5 certificate credits. \$45 plus \$3 materials fee.

A laboratory and lecture course dealing with the materials, equipment, and methods used in the fabrication of plastic products. (No prerequisite. Class limited to 20 students)

Fall Semester

Th 6:20-9:20, Mechanical Engineering 106,
Holtby

Symbols explained on page 36.

Evening and Special Classes

Mechanics and Materials

MM 27. Rigid-Body Mechanics I. 3 degree credits. \$27.

Vector algebra. Application of the equations of equilibrium to the analysis of simple engineering structures and machines. Nature and influence of friction. Elementary theory of statically determinate framed structures. (Prerequisite: ITM 25A. MM 27 may be substituted for 92)

Fall Semester

Th 6:20-8:00, Experimental Engineering 25,
Doeringsfeld

MM 28. Rigid-Body Mechanics II. 3 degree credits. \$27.

Application of the principles of particle motion. Kinematics. Impulse-momentum and work-energy principles. Potential and potential energy, motion in a central force field. Introduction to forced and free mechanical vibrations. (Prerequisite: 27 and ITM 26A or ITM 80)

Spring Semester

Th 6:20-8:00, Experimental Engineering 25,
Doeringsfeld

MM 29. Rigid-Body Mechanics III. 3 degree credits. \$27.

Dynamics of rigid-body motions. Extension of the principles of impulse-momentum and work-energy. Euler's equations of motion. The gyroscope. Virtual work. Stability. (Prerequisite: 28)

Spring Semester

Th 6:20-8:00, Aeronautical Engineering 211,
Blatherwick

MM 40. Deformable-Body Mechanics I. 3 degree credits. \$27.

Stress and strain. Applications to tension and torsion members, beams, columns, and joints. Design considerations. Statically indeterminate members. (Prerequisite: 27. MM 40 may be substituted for 93)

Fall Semester

Th 6:20-8:00, Aeronautical Engineering 211,
Blatherwick

Metallurgy

Met. Physical Metallurgy I-II. 3 certificate credits each semester. \$27 each semester.

An introductory course for those engaged in heat treating, metal working, specification writing, inspection, or dealing in metal products. The structure of metals and alloys and the effect of working and heat treatment on structure and properties; steels, cast irons, surface treatments, and nonferrous alloys. This is a lecture course. No laboratory work involved. (No prerequisite for I; I for II)

Fall Semester

I M 6:20-8:00, Mines and Metallurgy 116,
Jerabek

Spring Semester

II M 6:20-8:00, Mines and Metallurgy 116,
Jerabek

Physics

Phys 11-12-13. General Physics for Engineers. 5 degree credits each semester. \$45 plus \$10 laboratory fee each semester.

11: Mechanics; lecture, discussion or laboratory, and quiz each week. 12: Heat, electricity, and magnetism; lecture and laboratory each week. 13: Wave motion, sound and light; lecture and labora-

Symbols explained on page 36.

Course Offerings—Engineering and Technical Sciences

tory each week. (Prerequisite: ITM 11 or ¶ITM 11 for 11; ITM 12 and Phys 11 for 12; ITM 13 or 13A and Phys 12 for 13. Must be taken in sequence)

Fall Semester

11 MW 6:30-8:30, Physics 150, Harris
13 MW 6:30-8:30, Physics 170

Spring Semester

12 MW 6:30-8:30, Physics 170, Harris

Phys 14-14A. Intermediate General Physics and Physics Laboratory. 5 degree credits.
\$45 plus \$10 laboratory fee.

Mechanics and electricity, selected topics. Lecture and quiz each week. (Prerequisite: 13, and ITM 24 or 24A or ¶ITM 24A. 14 and 14A must be taken concurrently unless 14A or equivalent has been previously completed)

Spring Semester

MW 6:30-8:30, Physics 166

Phys 50-50A. Intermediate General Physics and Physics Laboratory. 5 degree credits.
\$45 plus \$10 laboratory fee. (50 and 50A must be taken concurrently)

Selected topics in modern physics. (Prerequisite: 6 or 9 or 14, and ITM 25 or 25A or ¶25A)

Fall Semester

MW 6:30-8:30, Physics 166

Symbols explained on page 36.

RECREATION

Note that the recreational activities are offered in five groups: for girls only, for boys only, for boys and girls, for women only, and for men only. Recreation classes carry no credit and require no prerequisite. A health examination is required for admission to all recreation classes except golf.

Registration for all children's swimming classes must be made *by mail*. (If you have not received an "Application Form," please telephone—*do not write*—the campus office, telephone 373-3930.) The envelope containing your application must be postmarked *at or after* 1 p.m., Friday, August 31, 1962, for fall classes and cannot be considered for acceptance if postmarked after September 7 unless openings are available. Applications for spring classes must be postmarked *at or after* 1 p.m., Friday, January 18, 1963, for spring classes and cannot be considered for acceptance if postmarked after January 25 unless openings are available.

Activities Open to Girls

A health examination is required of all girls taking recreation classes. Each child must bring a letter from her own physician stating approval of the activity in which she is registered.

Swimming for Small Girls. †† Special Class. \$17 plus \$2 special fee.

A course in swimming for girls between the ages of 6 and 12 years. Each girl must bring a 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 (those 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)

Fall Semester

Beginners

- S 8:45-9:30, Norris Gym 51, Lampe
- S 11:00-11:45, Norris Gym 51, Lampe
- S 11:45-12:30, Norris Gym 51, Lampe

Advanced Beginners

- S 9:30-10:15, Norris Gym 51, Lampe
- S 10:15-11:00, Norris Gym 51, Lampe

Intermediates

- S 10:15-11:00, Norris Gym 51, Starr
- S 11:00-11:45, Norris Gym 51, Starr

Advanced

- S 9:30-10:15, Norris Gym 51, Starr

Spring Semester

Beginners

- S 8:45-9:30, Norris Gym 51, Lampe
- S 11:00-11:45, Norris Gym 51, Lampe
- S 11:45-12:30, Norris Gym 51, Lampe

Advanced Beginners

- S 9:30-10:15, Norris Gym 51, Lampe
- S 10:15-11:00, Norris Gym 51, Lampe

Intermediates

- S 10:15-11:00, Norris Gym 51, Starr
- S 11:00-11:45, Norris Gym 51, Starr

Advanced

- S 9:30-10:15, Norris Gym 51, Starr

†† Registration by mail only. See box above.
Other symbols explained on page 36.

Activities Open to Boys

Swimming for Boys.†† Special Class. \$17 plus \$2 special fee.

A course in swimming for boys between the ages of 6 and 12 years who are at least 48 inches tall. Each boy must bring a permit for swimming from his own doctor and furnish his own towel. Swimming suits are not worn. Each boy should be registered for an appropriate section according to his estimated ability. Sections are classified as follows: Nonswimmers; Beginners—those who can swim, but not 10 yards; Advanced Beginners—those who can swim 10 yards, but not in deep water; Intermediates—those who can swim 25 yards in deep water; Advanced Intermediates—those who can swim 25 yards of 2 or more strokes; Advanced. The first meeting will be used for the purpose of reclassifying swimmers where necessary.

Spring Semester

Nonswimmers

S 9:00-9:45, Cooke Hall

Beginners

S 9:45-10:30, Cooke Hall

S 10:30-11:15, Cooke Hall

Advanced Beginners

S 11:15-12:00, Cooke Hall

Intermediates

S 9:45-10:30, Cooke Hall

Advanced Intermediates

S 10:30-11:15, Cooke Hall

Advanced

S 11:15-12:00, Cooke Hall

Activities Open to Boys and Girls

Swimming for Boys and Girls.†† Special Class. \$17 plus \$2 special fee.

A course in swimming for children, beginners and advanced beginners. Children must be at least 7 years of age and at least 46 inches tall. Each child should bring a permit from his family doctor and furnish his own suit and towel. Woolen suits are not permitted. (Each section limited to 20 students)

Spring Semester

Beginners

S 9:00-9:40, StP Gymnasium, Nowotny

S 9:40-10:20, StP Gymnasium, Nowotny

Activities Open to Women

A health examination is required for all recreation classes except golf. A physician will be available at Norris Gymnasium for Women at the first class meeting only. The cost of the health examination is 75 cents. Anyone not taking the health examination must bring a letter from her own physician stating approval of the activity in which she is registered. Information about lockers will be given at the first class meeting. In swimming classes, a sterilized suit and towel are provided for each swimmer.

*Golf (Beginning)—for Women. Special Class. \$17 plus \$2 special fee.

For those who have no previous experience. Class and individual instruction in the fundamentals of golf. Discussion of rules, golf etiquette, and terminology. As much instruction as possible to be

†† Registration by mail only. See page 142.

Other symbols explained on page 36.

Evening and Special Classes

given in the spring at University Golf Course, weather permitting. Students furnish own clubs for outdoor play, and two golf balls. (Each section limited to 20 students)

Spring Semester

T	5:45-6:30, Norris Gym 60, Cochrane
T	6:30-7:15, Norris Gym 60, Cochrane
W	5:45-6:30, Norris Gym 60, Lampe
W	6:30-7:15, Norris Gym 60, Lampe
Th	5:45-6:30, Norris Gym 60, Lampe
Th	6:30-7:15, Norris Gym 60, Lampe

***Golf (Intermediate)—for Women.** Special Class. \$17 plus \$2 special fee.

A review of the fundamentals (as listed for Beginning Golf) with the work of the class planned to meet individual needs. Students furnish own clubs for outdoor play, and two golf balls. (Prerequisite: some knowledge of and experience in golf. Each section limited to 20 students)

Spring Semester

T	7:15-8:00, Norris Gym 60, Cochrane
W	7:15-8:00, Norris Gym 60, Lampe
Th	7:15-8:00, Norris Gym 60, Lampe

***Swimming (Beginning)—for Women.** Special Class. \$17 plus \$2 special fee.

For those who have had no previous experience in swimming. A health examination will be given at the first class meeting. (Each section limited to 25 students. Repeated spring semester)

Fall Semester

T 5:45-6:30, Norris Gym 51, Tinker

Spring Semester

T 5:45-6:30, Norris Gym 51, Stoner

***Swimming (Advanced Beginning)—for Women.** Special Class. \$17 plus \$2 special fee.

For those able to float and swim slightly but who are not yet at home in deep water. A health examination will be given at the first class meeting. (Each section limited to 25 students. Repeated spring semester)

Fall Semester

T 6:30-7:15, Norris Gym 51, Tinker

Spring Semester

T 6:30-7:15, Norris Gym 51, Stoner

***Swimming (Intermediate)—for Women.** Special Class. \$17 plus \$2 special fee.

For those who are able to swim in deep water but wish to perfect their swimming strokes. Instruction in diving is included. (Each section limited to 25 students)

Spring Semester

T 5:45-6:30, Norris Gym 58, Tinker

***Swimming (Intermediate-Advanced)—for Women.** Special Class. \$17 plus \$2 special fee.

For those who are able to swim in deep water but wish to perfect their swimming strokes. Instruction in diving is included. (Each section limited to 25 students)

Fall Semester

T 5:45-6:30, Norris Gym 58, Stoner

***Swimming (Advanced, Synchronized and Diving)—for Women.** Special Class. \$17 plus \$2 special fee.

For those who wish to learn advanced swimming strokes, synchronized swimming, and spring-board diving. (Each section limited to 25 students)

Spring Semester

T 6:30-7:15, Norris Gym 58, Tinker

Symbols explained on page 36.

Tennis (Beginning)—for Women. Special Class. \$17 plus \$2 special fee.

Group and individual instruction. First 11 weeks of instruction given indoors; last 6 weeks at the University tennis courts. Individual practice for the improvement of strokes. Students furnish own tennis rackets and balls. Tennis permits are necessary if University courts are used. (Consult instructor)

Spring Semester

W 5:45-6:30, Norris Gym 151, Lamb
W 6:30-7:15, Norris Gym 151, Lamb

Activities Open to Men

***Golf—for Men. Special Class. \$17 plus \$2 special fee.**

The fundamentals of golf. The first 8 or 10 meetings will be held in the golf gymnasium; the last 6 meetings will be held, weather permitting, at the University Golf Course. The outdoor schedule is adjusted to light. Students will furnish their own clubs and a minimum of five golf balls. (Each section limited to 20 men)

Spring Semester

M 6:00-7:00, South Tower, Stadium
M 7:00-8:00, South Tower, Stadium
M 8:00-9:00, South Tower, Stadium
T 6:00-7:00, South Tower, Stadium
T 7:00-8:00, South Tower, Stadium
T 8:00-9:00, South Tower, Stadium

Swimming—for Men. Special Class. \$17 plus \$2 special fee.

Class and individual instruction for beginners in all swimming strokes, in diving, and in fundamentals of lifesaving. Woolen bathing suits are not permitted. Each person must bring a permit for swimming from his own physician. (Other sections arranged on demand)

Spring Semester

W 8:05-8:50, Cooke Hall, Giles

Classes Listed by Quarters

Classes are listed here by quarters for convenience in planning your program. Please do not register using this list alone. Look up the class on the page referred to in the list.

Fall Quarter

- Accounting 24, page 102
Art 1, page 51
Art 50, page 52
Art 56, page 52
Art Education 17, page 120
Art Education 18, page 120
- Business Finance, page 106
- Civil Engineering 18, page 126
Civil Engineering 130, page 127
Classics 91, page 61
Classics 191, page 61
Communication 1, page 73
Composition X, page 64
- Economics 1, page 108
Electrical Engineering 61, page 128
Electrical Engineering 71, page 128
Electrical Engineering 81, page 128
Electrical Engineering 111, page 128
Electrical Engineering 182A, page 129
English 1B, page 62
English 2B, page 62
English 3B, page 62
English 52, page 63
Enjoying Music, page 81
- Grammar Review, page 64
- History 1, page 68
History 14, page 69
History 17, page 69
History 20, page 69
History 50, page 70
History 53, page 70
History 59, page 70
History 86, page 70
- History 90, page 70
History 100, page 71
History 103, page 71
History 125B, page 72
Home Design and Planning, page 55
Horticulture 10, page 49
Horticulture 41, page 49
Horticulture 60, page 49
Humanities 1, page 73
Humanities 11, page 74
Humanities 21, page 75
Humanities 51, page 75
Humanities 61, page 75
- Insurance Institute of America, Part A, page 113
- Library Science 55, page 79
Library Science 74, page 79
Library Science 83, page 79
- Mathematics 11, page 134
Mathematics 147, page 137
Mathematics 151, page 137
Mathematics 160, page 138
Mathematics 165A, page 138
Mechanical Engineering 21, page 137
Mechanical Engineering 30, page 138
Music 1T, page 82
Music 43, page 82
Music 50, page 82
- Nursing Education 73, page 123
- Political Science 1, page 86
- Semitic 124, page 95
Spanish 17A, page 99

Winter Quarter

- Accounting 25, page 103
Art 1, page 51
Art 50, page 52
Art 57, page 52
Art Education 18, page 120
Art Education 19, page 120
- Civil Engineering 19, page 126
Civil Engineering 131, page 127
Classics 92, page 61
Classics 192, page 61
Communication 2, page 73
Composition X, page 64
- Economics 2, page 108
Electrical Engineering 62, page 128
- Electrical Engineering 72, page 128
Electrical Engineering 82, page 128
Electrical Engineering 112, page 128
Electrical Engineering 182B, page 129
English 1B, page 62
English 2B, page 62
English 3B, page 62
English 53, page 63
Enjoying Music, page 81
- Grammar Review, page 64
- History 2, page 68
History 15, page 69
History 18, page 69
History 21, page 69

History 51, page 70
History 54, page 70
History 60, page 70
History 87, page 70
History 91, page 70
History 101, page 71
History 104, page 71
History 126B, page 72
Humanities 2, page 74
Humanities 12, page 74
Humanities 22, page 75
Humanities 52, page 75
Humanities 62, page 75

Insurance Institute of America, Part B, page 113

Library Science 55, page 79
Library Science 62, page 79
Library Science 156, page 80

Mathematics 12, page 135
Mathematics 148, page 136
Mathematics 152, page 136
Mathematics 165B, page 137
Mechanical Engineering 22, page 138
Mechanical Engineering 31, page 138
Music 2T, page 82
Music 43, page 82
Music 51, page 82

Nursing Administration 85, page 83

Political Science 2, page 86

Refresher Course in Structural Design, page 125

Semitic 125, page 95
Spanish 17A, page 99

Spring Quarter

Accounting 26, page 103
Art 1, page 51
Art 50, page 52
Art 58, page 52
Art 68, page 52
Art Education 17, page 120
Art Education 19, page 120

Business Law 58, page 107

Civil Engineering 20, page 120
Civil Engineering 132, page 127
Classics 93, page 61
Classics 193, page 61
Communication 3, page 73
Composition X, page 64

Electrical Engineering 63, page 128
Electrical Engineering 73, page 128
Electrical Engineering 83, page 128
Electrical Engineering 113, page 128
Electrical Engineering 182C, page 129
English 1B, page 62
English 2B, page 62
English 3B, page 62
English 54, page 63
Enjoying Music, page 81

Geography 114, page 67
Grammar Review, page 64

History 3, page 68
History 16, page 69
History 19, page 69

History 22, page 69
History 52, page 70
History 55, page 70
History 61, page 70
History 88, page 70
History 92, page 70
History 102, page 71
History 105, page 71
History 127B, page 72
Humanities 3, page 74
Humanities 13, page 75
Humanities 23, page 75
Humanities 53, page 75
Humanities 63, page 75

Library Science 53, page 79
Library Science 62, page 79
Library Science 70, page 79

Mathematics 13A, page 135
Mathematics 149, page 136
Mathematics 153, page 137
Mathematics 165C, page 137
Mechanical Engineering 23, page 138
Mechanical Engineering 32, page 138
Music 3T, page 82
Music 43, page 82
Music 52, page 82

Philosophy 10, page 84
Political Science 25, page 86

Semitic 126, page 95
Spanish 17A, page 99

Northwest Suburban Extension 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 Quarter

Accounting 24, page 103
Economics 1, page 108
English 1B, page 62

Humanities 1, page 73
Mathematics 11, page 134
Political Science 1, page 86

Winter Quarter

Accounting 25, page 103
Economics 2, page 108
English 2B, page 62

Humanities 2, page 74
Mathematics 12, page 135
Political Science 2, page 86

Spring Quarter

Accounting 26, page 103
Business Law 58, page 107
English 3B, page 62

Humanities 3, page 74
Mathematics 13A, page 135
Political Science 25, page 86

St. Paul Extension Center Classes

Classes offered at the St. Paul Extension Center, 555 Wabasha Street, 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

- Accounting 24, page 103
Accounting 26, page 103
Accounting 105A, page 103
- Business Law 58, page 107
Business Law 78, page 107
- College of Life Underwriters Curriculum, Part 1A, page 112
- Economics 1, page 108
Educational Psychology 110, page 122
Engineering Graphics 4, page 130
- German 1, page 68
- History 2, page 68
History 54, page 70
Humanities 1, page 73
Humanities 51, page 75
- Industrial Relations 52, page 110
- Mathematics 9, page 134
Mathematics 11, page 134
Mathematics 12, page 135
Mathematics 13A, page 135
- Philosophy 2A, page 84
Political Science 1, page 86
Political Science 73, page 90
Psychology 1, page 91
- Review of Business English, page 105
Rhetoric 47, page 101
- Salesmanship, page 118
Sociology 3, page 96
Speech 5X, page 100
Supervision I, page 111
Supervision III, page 111
- Vocabulary Building, page 101
- Writing Projects, page 64

Spring Semester

- Accounting 25, page 103
Accounting 24-25-26, page 103
Accounting 105B, page 103
- Business Correspondence, page 105
Business Law 58, page 107
Business Law 78, page 107
- College of Life Underwriters Curriculum, Part 1B, page 112
- Economics 2, page 108
Education, Curriculum and Instruction 153, page 121
Engineering Graphics 4, page 130
- German 2, page 68
- History 3, page 68
History 53, page 70
Humanities 2, page 74
Humanities 52, page 75
- Industrial Relations 72, page 110
- Mathematics 9, page 134
Mathematics 11, page 134
Mathematics 12, page 135
Mathematics 24A, page 135
- Political Science 2, page 86
Political Science 62, page 90
Psychology 2, page 91
- Rhetoric 47, page 101
- Salesmanship, page 118
Sociology 1, page 96
Speech 6X, page 100
Supervision I, page 111
Supervision II, page 111
- Vocabulary Building, page 101
- Writing Projects, page 64

Fall Quarter

- Accounting 24, page 103
Art Education 18, page 120
Composition X, page 64
- English 1B, page 62
- History 20, page 69
Humanities 21, page 75

Winter Quarter

Accounting 25, page 103
Art Education 19, page 120

Composition X, page 64

English 1B, page 62
English 2B, page 62

History 21, page 69
Humanities 22, page 75

Spring Quarter

Accounting 26, page 103
Art Education 17, page 120

English 2B, page 62
English 3B, page 62

History 22, page 69
Humanities 23, page 75

Philosophy 10, page 84

Faculty

Telephone numbers of faculty members may be obtained from the campus office of the General Extension Division, 373-3195, during office hours.

Owing to uncertainties of some departments as to future staff and unavoidable last minute additions and changes, this list is necessarily incomplete.

Abnet, Richard, M.F.A., Lecturer in Art
Adey, H. Lee, M.A., Instructor in Speech
Agee, William H., B.A., Instructor in Humanities
Alford, Harold J., M.A., Assistant Professor of English
Allen, Salome, Lecturer in Art
Aspnes, Grieg, B.S. in L.S., Lecturer in Library Science

Backstrom, Charles H., Ph.D., Assistant Professor of Political Science
Bagley, Marian, Lecturer in Art
Ballet, Arthur H., Ph.D., Associate Professor of Speech
Barker, David N., M.A., Lecturer in Insurance
Barker, Richard M., M.S.C.E., Instructor in Civil Engineering
Beatty, Ward J., Ph.D., Assistant Professor of Geography
Beatty, W. Donald, Ph.D., Associate Professor of History
Beauchamp, Peter, M.F.A., Instructor in Art
Bengtson, Bernard C., B.A., Lecturer in Insurance
Berkeley, D. J., B.B.A., Lecturer in Business Administration
Berkhofer, Robert E., Ph.D., Instructor in History
Berman, Hyman, Ph.D., Associate Professor of History (Interdisciplinary Programs)
Bernat, Leo A., B.Ch., Instructor in Business Administration
Berryman, R. Glenn, Ph.D., Associate Professor of Accounting
Bicchieri, M.A., Instructor in Anthropology
Blackwell, David J., C.L.U., Lecturer in Insurance
Blatherwick, Allan A., Ph.D., Associate Professor of Aeronautics and Engineering Mechanics
Boeck, Clarence H., Ph.D., Associate Professor of Education
Boehm, Werner W., Des.L., Professor of Social Work
Borak, Arthur M., Ph.D., Associate Professor of Economics
Bormann, Ernest, Ph.D., Associate Professor of Speech
Borow, Henry, Ph.D., Professor of Education
Brackney, Emmert M., Ph.D., Professor of Romance Languages
Breckenridge, Walter J., Ph.D., Director, Museum of Natural History
Brown, James I., Ph.D., Professor of Rhetoric
Bullen, Paul H., B.S.C.E., Assistant Professor of Mechanical Engineering
Burks, James F., Ph.D., Assistant Professor of Romance Languages
Busa, J. Peter, Visiting Lecturer in Art

Carlson, Richard H., B.A., Instructor in Psychology
Carlson, Robert E., M.A., Instructor in Industrial Relations
Carroll, John R., LL.B., Lecturer in Business Law
Chase, Harold W., Ph.D., Professor of Political Science
Cochrane, June, B.S., Instructor in Physical Education
Coen, Edward, Ph.D., Associate Professor of Economics
Cohn, Miriam R., M.S., Assistant Professor of Social Work
Cooperman, David, Ph.D., Associate Professor, Interdisciplinary Programs
Copeland, Edward M., Jr., B.A., Assistant Professor of Slavic and Oriental Languages
Creviere, J. Orville, Lecturer in Accounting
Cummings, William, B.B.A., Lecturer in Accounting
Cuneo, James A., Ph.D., Associate Professor of Romance Languages

Dahlke, Arnold E., M.A., Instructor in Psychology
Dawis, Rene, Ph.D., Research Associate in Industrial Relations
DeCosse, Cyril, Lecturer in Art
Deutsch, Harold C., Ph.D., Professor of History
Dietrichson, William, Lecturer in Art
Dodge, Dorothy, Ph.D., Lecturer in Political Science
Doeringsfeld, Harry, C.E., Professor of Mechanics and Materials
Donaldson, Ernestine, M.A., Associate Professor of Office Management
Donohue, John, B.A., Lecturer in Sociology

Downs, Allen M., M.A., Professor of Art
Downs, Phyllis, Lecturer in Art
Drobac, Donald, M.A., Instructor in Interdisciplinary Programs
Dykstra, Robert, M.A., Instructor in Education

Edson, William H., Ph.D., Professor of Education
Estelle, Robert F., M.A., Graduate Assistant in Romance Languages

Falk, Eugene H., Ph.D., Professor of Romance Languages
Fant, Jesse, M.S.C.E., Associate Professor of Civil Engineering
Fetler, Paul, Ph.D., Associate Professor of Music
Finnegan, John R., B.A., Lecturer in Journalism
Fischer, Immanuel C., M.S., Associate Professor of Engineering
Flanigan, William H., M.A., Instructor in Political Science
Fontaine, Gerald, Lecturer in Art
Forster, John, M.A., Associate Professor of Sociology
Fry, Clair, Lecturer in Art
Fulton, Albert M., Ph.M., Professor of Speech

Gayne, Clifton A., Jr., Ph.D., Professor of Art Education
Gilberstadt, Harold, Ph.D., Lecturer in Psychology
Giles, M. Robert, M.A., Associate Professor of Physical Education
Gingold, Benjamin A., B.Arch., Lecturer in Architecture
Gunderson, John, B.A., Instructor in Scandinavian Languages
Guzie, Frances P., M.S.W., Lecturer in Social Work

Haga, Clifford I., B.A., Assistant Professor of English
Hall, Thadd E., M.A., Instructor in History
Halonon, Arne, M.A., Lecturer in Scandinavian Languages
Hamilton, Sam R., B.E.E., M.A., Aeronautical Ground Instructor
Harper, Donald V., Ph.D., Associate Professor of Marketing and Transportation
Harris, J. Merle, M.A., Associate Professor of Physics
Harris, M. Isabel, M.Ed., Lecturer and Assistant to the Director, School of Nursing
Haupers, Clement, Lecturer in Art
Helmberger, John, Ph.D., Lecturer in Economics
Hendler, Raymond, Lecturer in Art
Heneman, Herbert G., Jr., Ph.D., Professor of Economics and Director, Industrial Relations Center
Herr, Wesley N., Ph.D., Associate Professor of Chemistry
Hickman, Rachel, M.A., Research Assistant in Child Development
Holt, Shirley R., M.A., Instructor in Anthropology
Holthy, Fulton, M.E.M.S., Associate Professor of Mechanical Engineering
Hopkins, Michael J., B.A., Color Consultant
Horberg, Richard, M.A., Instructor in Rhetoric
Houle, George, Ph.D., Assistant Professor of Music
Hoyt, Cyril J., Ph.D., Associate Professor of Education
Hoyt, R. Stuart, Ph.D., Professor of History

Ivory, Paul S., Ed.D., Associate Professor of Music

Jackson, John, M.S., Lecturer in Public Administration
Jensen, Don, B.F.A., Lecturer in Art
Jerabek, Henry S., Ph.D., Associate Professor of Metallurgy
Johnson, Alfred E., B.S., Lecturer in Architectural Drafting
Johnson, Arthur L., Ph.D., Associate Professor of Sociology
Johnson, Wallace, B.B.A., C.P.A., Lecturer in Accounting
Jones, Tom B., Ph.D., Professor of History

Kappel, Hugh, Lecturer in Art
Kaufmanis, Karlis, Mag-Sci., Associate Professor of Astronomy
Keeler, Stephen E., M.A., Instructor in Literature and Writing
Kellogg, Theodore, Ph.D., Associate Professor of Education
Kerns, Willis A., B.B.A., Lecturer in Marketing
Kielkopf, Charles, M.A., Instructor in Philosophy
King, Leslie A., Ph.D., Assistant Professor of Psychological Studies
Kingsley, Gordon, Ed.D., Associate Professor and Coordinator of Student Personnel Services
Klein, Walter W., B.A., Instructor in Political Science
Kleinhenz, William, M.S.M.E., Associate Professor of Mechanical Engineering
Klippel, Robert, Lecturer in Art
Knights, Robert, M.A., Research Assistant in Child Development
Knowles, Paul, M.M., Assistant Professor of Music
Kowenko, Nicholas, Ph.D., Assistant Professor of Chemistry
Kramer, Paul, Lecturer in Art

Lamb, Patricia, B.S., Instructor in Physical Education
 Lampe, Mary B., M.A., Assistant Professor of Physical Education
 Landa, Bjarne, Ph.D., Lecturer in Scandinavian Languages
 Larkin, Alfred R. W., Lecturer in Insurance
 LeBlanc, Robert G., M.A., Instructor in Geography
 LeSueur, Mac, Lecturer in Art
 Lewis, Leah M., B.S., Associate Professor of Interior Design
 Liebling, Jerome, Associate Professor of Art
 Lindsay, Robert, M.A., Instructor in Journalism
 Lippert, John W., B.S., Lecturer in English
 Loehr, Rodney C., Ph.D., Associate Professor of History
 Loeks, C. David, M.A., Lecturer in Public Administration
 Longstaff, Howard P., Ph.D., Professor of Psychology
 Loppnow, Merle W., B.A., Assistant to Director, University Theater
 Lukermann, Fred E., M.A., Assistant Professor of Geography
 Lund, Reuel I., Ph.D., Associate Professor of Accounting
 Lupori, Peter, M.Ed., Lecturer in Art

Macdonald, Agnes, M.A., Lecturer in English
 Macker, Clifford E., B.A., Instructor in Psychology
 Madeja, Stanley, Lecturer in Art
 Magraw, Daniel, M.A., Lecturer in Public Administration and Accounting
 Mahoney, Thomas A., Ph.D., Associate Professor of Economics and Industrial Relations
 Mandel, Nathan G., Ph.D., Assistant Professor of Family Life
 Mason, Herb, Lecturer in Art
 Mason, Homer E., Ph.D., Assistant Professor of Philosophy
 Mather, Richard B., Ph.D., Associate Professor of Slavic and Oriental Languages
 Maxwell, Grover, Ph.D., Associate Professor of Philosophy
 McElrath, Gayle W., M.S., Professor of Mechanical Engineering
 Meier, Manfred J., Ph.D., Assistant Professor of Psychology
 Menze, Edwin F., Ph.D., Associate Professor of German
 Meyers, Philip T., M.S., C.P.A., Assistant Professor of Accounting
 Mindak, William A., Ph.D., Associate Professor of Journalism
 Mitau, G. Theodore, Ph.D., Lecturer in Political Science
 Mohr, Coenraad, M.A., Instructor in Industrial Relations
 Montgomery, David, M.A., Instructor in History
 Morrison, Karl F., Ph.D., Assistant Professor of History
 Moss, Verne W., LL.B., Lecturer in Business Law
 Moulton, Robert, Ph.D., Associate Professor of Speech
 Mousseau, Roland, Lecturer in Art
 Murphy, Thomas, M.S., (Aero.E.), Associate Professor of Mechanical Engineering
 Myers, Malcolm, M.F.A., Professor of Art

Narvaez, Richard, Ph.D., Assistant Professor of Romance Languages
 Nash, Allan, M.A., Instructor in Industrial Relations
 Nelson, Marion John, Ph.D., Assistant Professor of Scandinavian Languages
 Nice, Philip E., M.A., Instructor in Slavic Languages
 Nightingale, Edmund A., Ph.D., Professor of Economics and Transportation
 Nixon, Raymond B., Ph.D., Professor of Journalism
 Noble, David W., Ph.D., Associate Professor of History
 Northcott, John P., B.A., Lecturer in Office Management
 Nowotny, Joseph A., M.Ed., Associate Professor of Physical Education
 Nyquist, Russell S., M.S.I.E., Instructor in Mechanical Engineering
 Nystrom, Lowell D., M.S.I.E., Instructor in Mechanical Engineering

Odom, Richard D., M.A., Research Assistant in Child Development
 Ogata, Katsuhiko, Ph.D., Professor of Mechanical Engineering
 Olsen, Paul, Lecturer in Art
 Olson, James D., LL.B., Lecturer in Business Law
 Ostlund, Robert R., A.A., Lecturer in Accounting
 Ozolins, Karlis, M.A., Lecturer in Library Science

Palmer, Lewis G., M.A., Assistant Professor of Mechanical Engineering
 Pearson, Anton, Th.D., Lecturer in Hebrew
 Pearson, Neville P., Ph.D., Assistant Professor of Education
 Pederson, Lyle P., M.S.C.E., Instructor in Civil Engineering
 Peet, William, B.A., Lecturer in Insurance
 Peterson, C. Harold, LL.B., Lecturer in Business Law
 Peterson, Elizabeth C., B.S., Lecturer in Child Development
 Peterson, Elvin L., B.B.A., Lecturer in Industrial Management
 Pettersen, Gerald, M.B.A., Lecturer in Accounting
 Phillips, Robert A., M.S., Assistant Professor of Horticulture
 Pitzer, Ronald L., M.A., Instructor in Family Life

Poisson, Philippe L., M.A., Teaching Assistant in Romance Languages
Pond, Patricia, M.A., Assistant Professor of Library Science
Power, George, B.A., Lecturer in Business Finance
Preston, Robert, B.A., C.L.U., Lecturer in Insurance
Price, Starling, B.S., Instructor in Rhetoric

Quick, Birney, Lecturer in Art

Ramras, Herman, Ph.D., Professor of German
Rapoport, Leonard A., LL.B., C.P.A., Lecturer in Accounting
Ratner, David, Lecturer in Art
Reed, Murray, Ph.D., Lecturer in Child Development
Rees, LaVerne W., M.S.M.E., Instructor in Mechanical Engineering
Rettegi, Steven, Lecturer in Art
Reynolds, James L., M.S.I.E., Instructor in Mechanical Engineering
Rice, Bernard C., B.A., Lecturer in Real Estate
Riedel, Johannes, Ph.D., Professor of Music
Robinson, Merrill P., B.A., Lecturer in Industrial Relations
Rogers, William C., Ph.D., Professor of Political Science
Root, Alfred Ronald, Ph.D., Lecturer in Business Administration
Rundorff, Dorothy, Ph.D., Instructor in Romance Languages
Rutman, Darrett B., Ph.D., Assistant Professor of History

Saloshin, Henriette, Ph.D., Professor of Social Work
Schuman, Leonard M., M.D., Professor of Public Health
Scott, Robert L., Ph.D., Associate Professor of Speech
Scott, William Robert, A.B., Instructor in Political Science
Seim, Livia P., Ph.D., Lecturer in Romance Languages
Self, Morris W., M.S.C.E., Lecturer in General Engineering
Selig, Karl L., Ph.D., Associate Professor of Romance Languages
Shapiro, George L., M.A., Assistant Professor of Speech
Sheldon, Dorothy L., M.A., Assistant Professor of Literature and Writing
Shove, Raymond H., M.A., Associate Professor of Library Science
Smith, Harlan, Ph.D., Associate Professor of Economics
Smythe, Cyrus F., Ph.D., Lecturer in Business Administration
Sorauf, Francis J., Jr., Ph.D., Assistant Professor of Political Science
Sorenson, Wayne, B.B.A., Research Associate in Industrial Relations
Spangler, William, B.B.A., Lecturer in Accounting
Springer, Richard D., B.C.E., Associate Professor of Mechanical Engineering
Stanchfield, Steele S., Lecturer in Salesmanship
Starr, Jeanette, B.S., Instructor in Physical Education
Stauffer, Lee D., M.P.H., Assistant Professor of Public Health
Stavrou, Theofanis G., Ph.D., Assistant Professor of History
Steen, Margaret F., M.S.W., Instructor in Social Work
Stein, Burton, Ph.D., Associate Professor of History
Stieper, Donald, Ph.D., Lecturer in Psychology
Stockdale, William A., M.A., Assistant Professor of Literature and Writing
Stone, Gregory P., Ph.D., Associate Professor of Sociology
Stoner, Lela J., M.A., Instructor in Physical Education
Sullivan, John M., M.A., Assistant Professor of Romance Languages
Sussman, Richard, Lecturer in Art
Swanson, Roy A., Ph.D., Associate Professor of Classics

Templeton, David E., M.A., Instructor in Art Education
Terrell, D. Burnham, Ph.D., Associate Professor of Philosophy
Thiss, Thomas N., B.A., Instructor in Rhetoric
Thomas, Frederick W., LL.B., Lecturer in Business Law
Thompson, David W., Ph.D., Professor of Speech
Thomson, Stewart C., M.S., M.D., M.P.H., Professor and Associate Director, School of Public Health
Thorfinson, Ross L., LL.B., Lecturer in Business Law
Tinker, Suzanne S., M.Ed., Assistant Professor of Physical Education
Torbert, Donald R., Ph.D., Professor of Art
Trentman, John, M.A., Instructor in Philosophy
Turner, John E., Ph.D., Professor of Political Science
Turnquist, Orrin C., Ph.D., Professor of Horticulture

Uppal, Jogindar, M.A., Instructor in Social Science
Urban, Gilbert W., B.B.A., Lecturer in Accounting

VanValkenburg, James, LL.B., Lecturer in Business Law

Waldfoegel, Melvin, M.A., Associate Professor of Art
Warp, George, LL.B., M.A., Professor of Political Science

Webb, Henry C., M.A., Lecturer in Photography
Webb, John W., Ph.D., Assistant Professor of Geography
Weise, Ruth D., M.A., Assistant Professor, School of Nursing
Wezeman, Frederick, M.A., Associate Professor of Library Science
Wheeler, Roger, C.L.U., Lecturer in Insurance
Williams, C. Arthur, Ph.D., Professor of Economics and Insurance
Wilson, Harold W., M.A., Associate Professor of Journalism
Wood, Cecil, Ph.D., Associate Professor of German
Wood, Frank H., Ph.D., Professor of German
Woodruff, Lloyd, Ph.D., Lecturer in Political Science
Woods, Richard G., M.A., Instructor in Industrial Relations
Wright, Eugene S., Ph.D., Assistant Professor of Rhetoric

Young, Elmer, M.A., Professor of Art

Ziemke, Norman R., B.S.C.E., Research Fellow in Civil Engineering

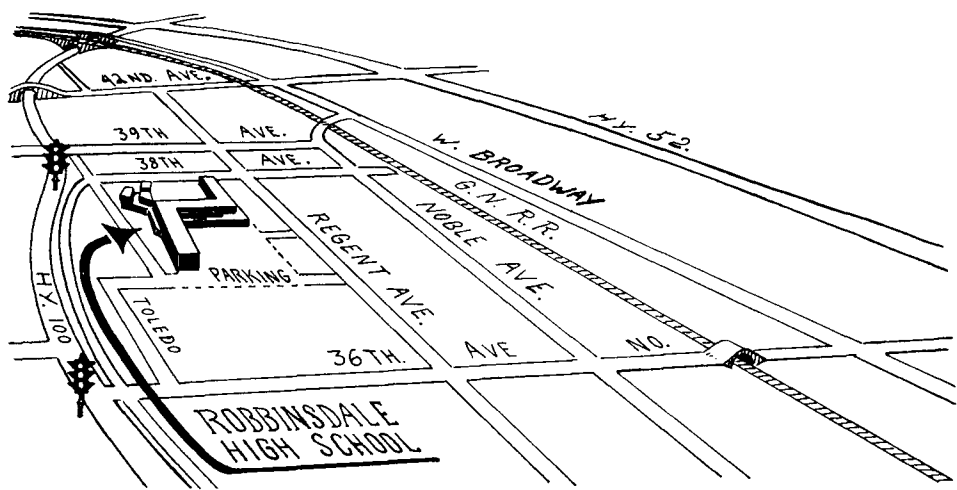
Index

(See Table of Contents, page 3)

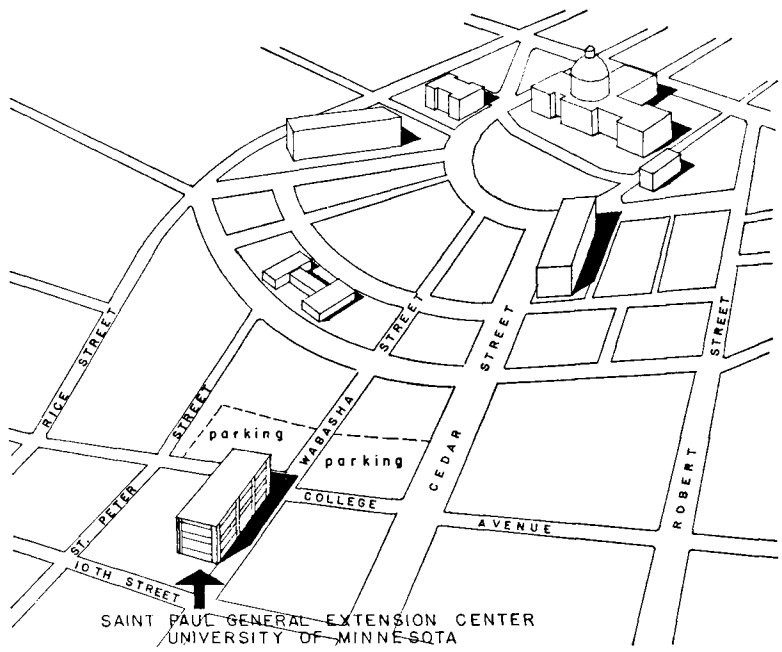
	Page		Page
Accounting	102	College of Life Underwriters Curriculum	112
Acting	100	Color, Use of	55
Additions to Registration	37	Committee on Student Scholastic Standing	2, 34
Administrative Practices	114	Communication	73
Admission Requirements	31	Composition	64
Advertising	77, 92	Computers, Use of	104
Aeronautics	124	Convocations	44
Agriculture	49	Correspondence Study	35
Air Pilots' Ground School	124	Counseling Services	42
Anthropology	51	Credits and Collections	115
Arabic	94	Credits, Meaning of	31
Architectural Drafting	126	Crop Judging	49
Architecture	55	Curriculum and Instruction Classes..	121
Armed Forces Members, Registration of	39, 40	Danish	93
Art	51	Data Processing Techniques	104
Art Education	120	Day School Students, Present or Former	36
Astronomy	61	Degree Programs	25
Athletic Facilities	44	Discontinued Classes	37
Auditor Status	34	Drama	63
Biology	61	Drawing, Engineering (Graphics).....	130
Birds of Minnesota	83	Drawing, General	53
Bulletins, University	25	Economics	108
Bus Route and Parking Facilities.....	163	Education Classes	120
Business Classes	102	Efficient Reading	101
Business English	105	Electrical Engineering	129
Business Finance	106	Electronics	129
Business Law	107	Engineering Classes	124
Business News Writing	78	Engineering Science and Technician Certificates	18
Business Reports	105	English	62
Calendar	5, 6	Business	105
Cancellations and Refunds	38	Composition	64
Ceramics	57	Engineering	130
Certificates, Extension	8	Foreign-Born	43
Certification for Teachers	120	Literature	62
Chartered Property Casualty Underwriters Curriculum	113	Placement Tests	62
Chemistry	125	Ethics	84
Child Development	121	Examinations, Special	32
Child Psychology	121	Faculty	34, 151
Chinese	94	Family Studies	64
Chorus, University	82	Fashion Illustration	58
Circuits and Fields	128		
Civil Engineering	126		
Classics	61		

	Page		Page
Fees	37	Library Science	79
Finance	106	Library, Use of University	43
Finnish	93	Limited Classes	38
Football Tickets	44	Literature, English	63
Foreign Born, Classes for	43	Loan Fund, Student	43
French	65	Logic	84
Gardening	49	Machine Tool Fundamentals	138
General Information	31	Management Organization	114
Geography	66	Market Analysis	115
Geology	67	Marketing	114
German	68	Master of Business Administration	30
Golf	143, 145	Mathematics	
Government and Politics	86	Engineering	133
Grade Point Average	33	Science, Literature, and the Arts..	80
Grades	33	Mechanical Engineering	137
Graduate Credits	32	Mechanics and Materials	140
Graduate Programs	30, 32	Metallurgy, Physical	140
Grammar Review	64	Minnesota Plan for Education of	
Graphic Processes	78	Women	47
Graphics, Engineering	130	Modern Art	52
Ground School	124	Music	81
Handicapped Students, Aids for	43	National Institute of Credit Cur-	
Health	93	riculum	115
Hebrew, Biblical	95	Natural History	83
History	68	Northwest Suburban Center (Map)	159
Holidays	5	Norwegian	93
Home Design and Planning	55	Nursing Administration	83
Horticulture	49	Nursing Education	123
How to Study	75	Office Management	116
Humanities	73	Offices and Office Hours	4
Income Tax Accounting	104	Opera, Introduction to	83
Incomplete Grades	33	Opera Production	83
Industrial Engineering	132	Oriental Languages	94
Industrial Management	132	Painting	53
Industrial Relations	110	Parking and Bus Routes	163
Insurance	111	Personal Orientation	75
Interdisciplinary Programs	73	Philosophy	84
Interior Design	54	Photography	85
Investments	106	Physics	140
Italian	77	Piano Playing for Pleasure	82
Japanese	94	Placement Test, Accounting	102
Journalism	77	Placement Test, English	62
Labor-Management Courses	110	Placement Test, Mathematics	80, 133
Landscape Planning	49	Planning, City and County	90
Late Registration and Fees	37	Plastics Technology	139
Lecture Series	46	Political Science	86
Legal Problems	107	Preparatory Composition	64
Lettering	56	Prerequisites	32
Liberal Arts Programs	46	Printmaking	53
		Private Music Lessons	81

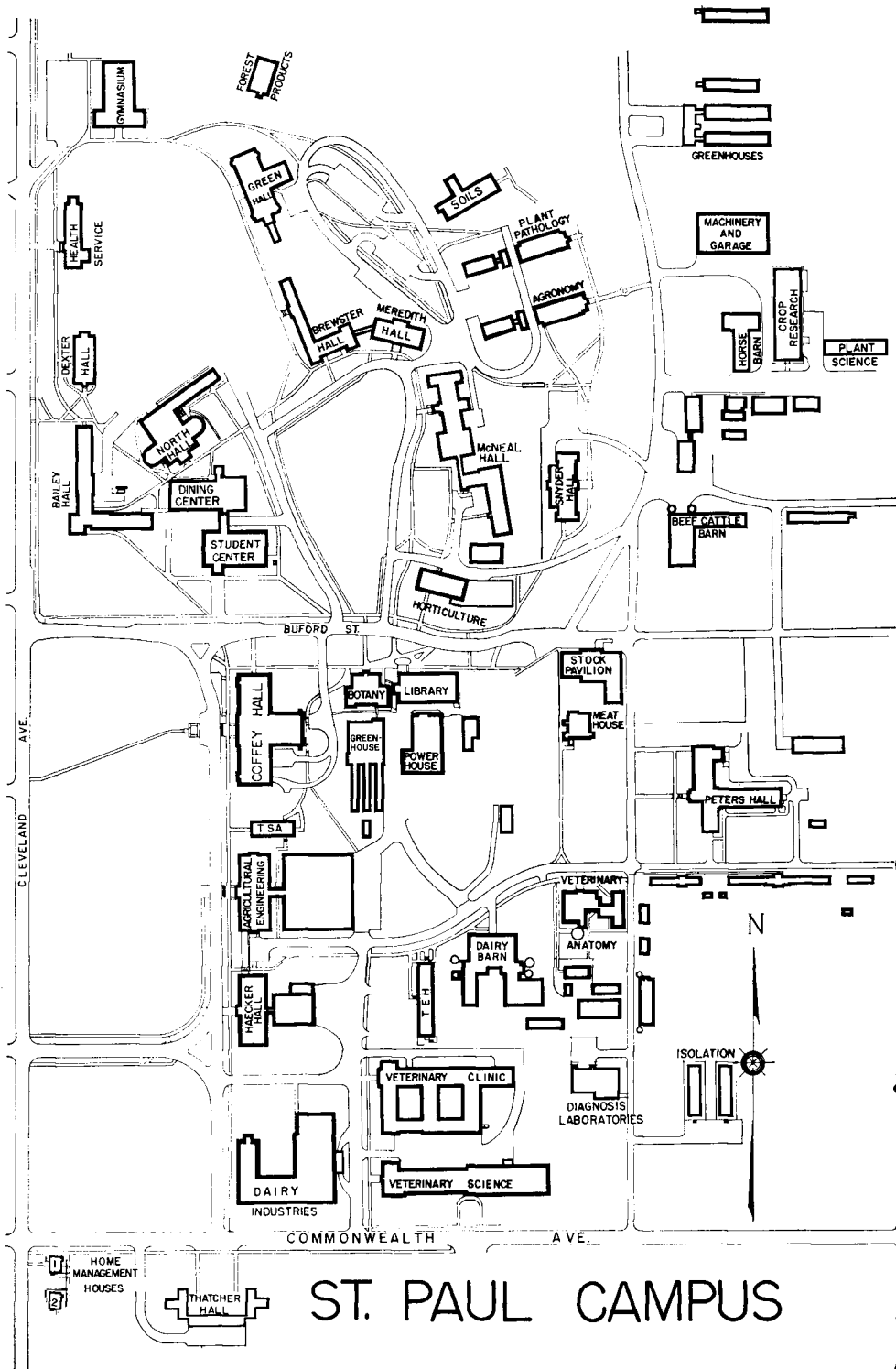
	Page		Page
Probation	34	Spanish	98
Production Control	132	Special Classes and Short Courses.....	34
Production Management	117	Speech	99
Property and Casualty Insurance		Statistics	
Curriculum	113	Business	117
Psychology	91	Education	122
Public Administration	89	Engineering	136
Public Finance	90	Student Counseling Bureau,	
Public Relations	78	Services of	42
Public Speaking	99	Study Skills	101
Quality Control	133	Supervision	111
Quantitative Analysis	117	Surveying	126
Quarter Classes	146	Swedish	94
Quarter Dates	6	Swimming	142, 144, 145
Reading, Efficient	101	Symbols, Explanation of	36
Real Estate	117	Symphony Tickets	44
Recess Periods	5	Tabulating Equipment Classes	104
Recreation Classes	142	Technical Sciences	124
Refrigeration and Air Conditioning..	139	Technology Classes	124
Refund Policy	38	Tennis	145
Regents, Board of	2	Theater Arts	99
Registration Hours	4	Theater Business Management	100
Registration Regulations	35	Thermodynamics	138
Reports on Grades	33	Tickets, Athletic, Symphony, Thea- ter, and Others	44
Residence Requirements	32	Transcripts (Grade Reports)	34
Rhetoric	101	Transfer of Classes	38
Russian	95	Transferring Credits	31
Sales Management	115	Transistor Principles	129
Salesmanship	118	Transportation Courses	119
Scandinavian	93	Tuition and Fees	37
Sculpture	57	Typography	78
Secretarial Certificate	11	Union, Use of Student	44
Secretarial Procedures	118	Veterans' Information	39
Securities Markets	106	Vocabulary Building	101
Semester Dates	5	Vocational Counseling and Tests	42
Seminar for Men	48	West Bank Campus Map	162
Seminars for Women	47	Women, Continuing Education of....	47
Semitic	95	Work Load, Student	37
Shakespeare	63	World Politics	86
Slavic and Oriental Languages	94	World Religions	84
Slide Rule	131	Writing Classes	64, 77
Social Science	76	Writing, Technical	130
Social Work	95		
Sociology	96		



NORTHWEST SUBURBAN EXTENSION CENTER—Classes will be held in the Robbinsdale Senior High School.

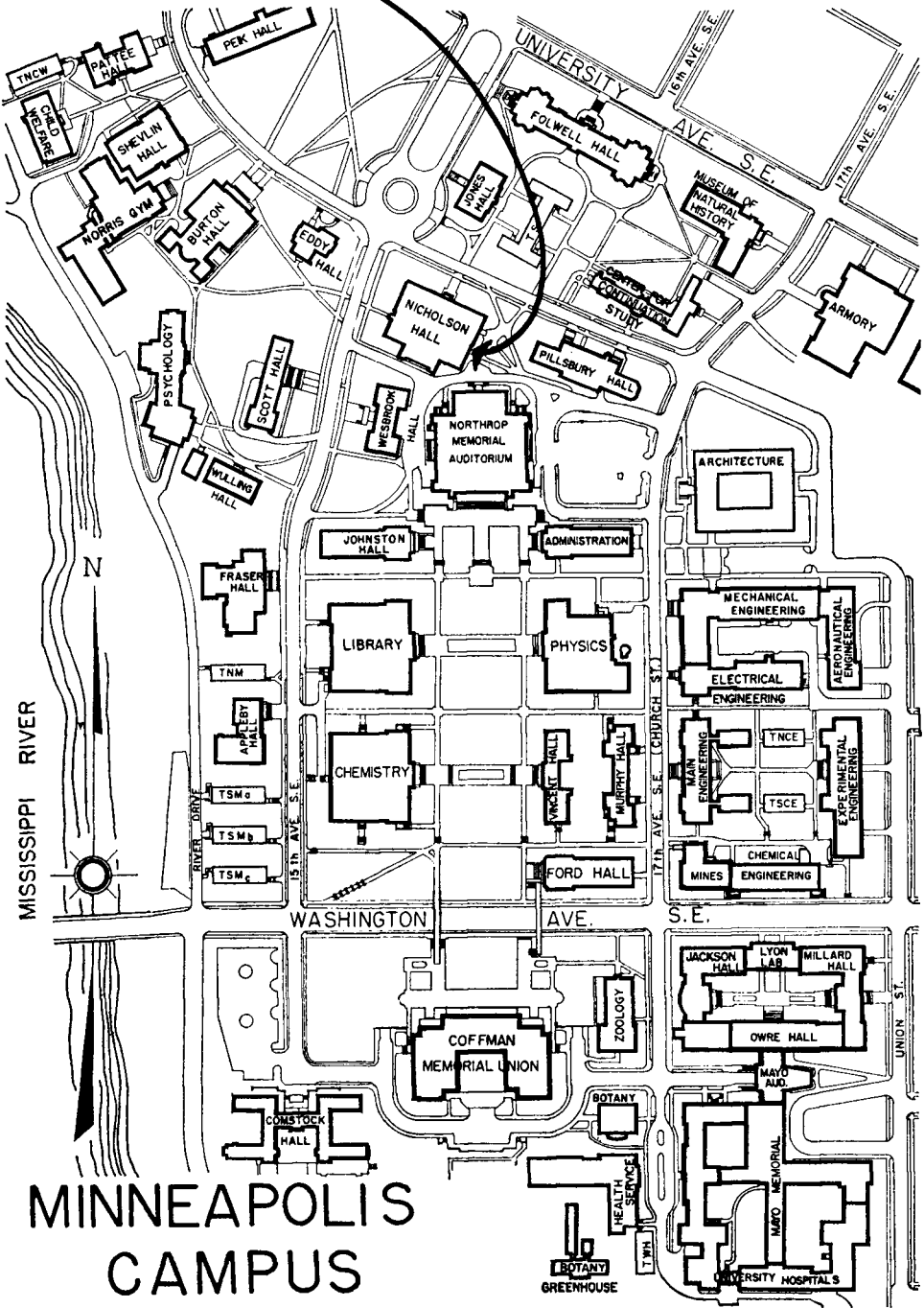


The ST. PAUL EXTENSION CENTER of the University is located in downtown St. Paul, at the intersection of Wabasha Street and College Avenue, at the foot of the Capital Approach. Most St. Paul Evening Classes are held in this building.

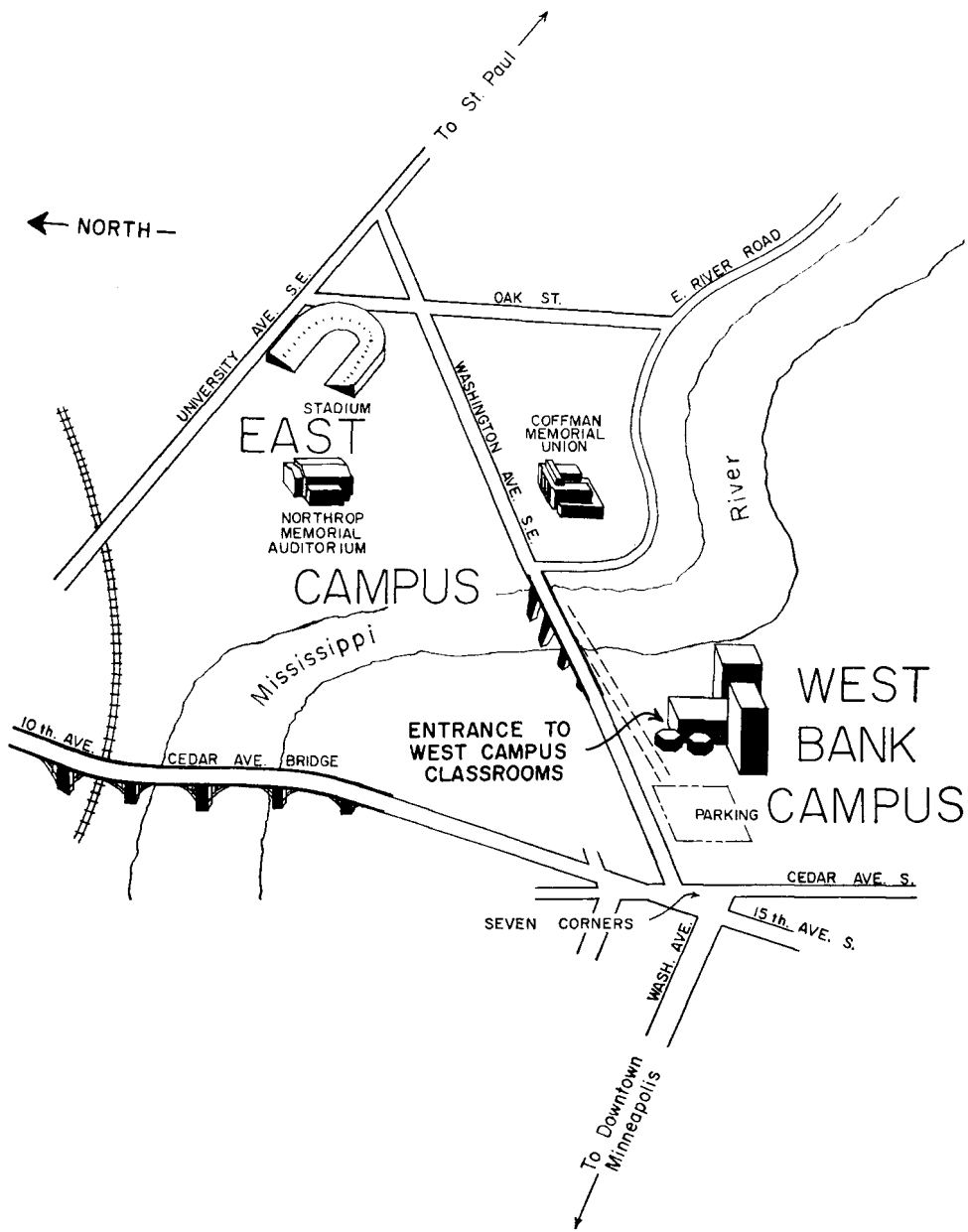


ST. PAUL CAMPUS


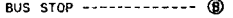

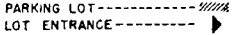

The MAIN OFFICE of the GENERAL EXTENSION DIVISION is located in NICHOLSON HALL. Students should use entrance immediately behind NORTHROP AUDITORIUM.

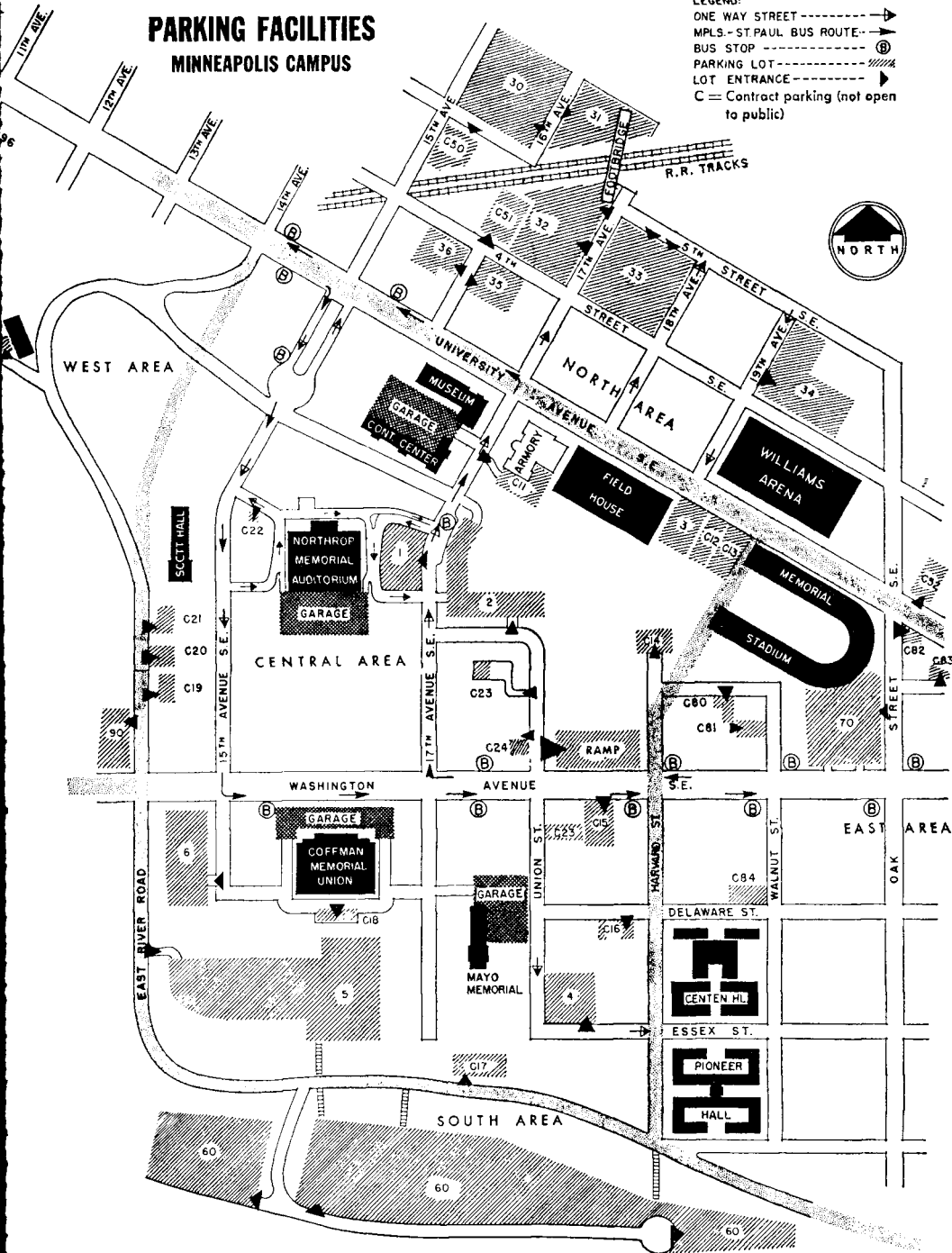


MINNEAPOLIS CAMPUS



PARKING FACILITIES MINNEAPOLIS CAMPUS

- LEGEND:**
- ONE WAY STREET 
 - MPLS.-ST. PAUL BUS ROUTE 
 - BUS STOP 
 - PARKING LOT 
 - LOT ENTRANCE 
 - C = Contract parking (not open to public)



Other Services of the General Extension Division . . .

Audio-Visual Extension Service

operates a large library of films, film strips, and slides available on a rental basis to schools, organizations, and individuals, offers advisory service and conducts institutes and workshops throughout the state. For information, contact: Audio-Visual Extension Service, 115 TSMa, University of Minnesota, Minneapolis 14.

Center for Continuation Study

presents institutes and short courses in professional and postgraduate, business, and cultural fields. For information, contact: Center for Continuation Study, University of Minnesota, Minneapolis 14.

Correspondence Study

offers some 300 high school, collegiate, and general courses by home study, designed to be used toward University degrees or certificates, for occupational advancement, or for development of special interests of the individual. For a bulletin, contact: Correspondence Study Department, 251 Nicholson Hall, University of Minnesota, Minneapolis 14.

Municipal Reference Bureau

co-operates with the League of Minnesota Municipalities in supplying information about city and village affairs to civic officials and others interested. For information, contact: Municipal Reference Bureau, 15 Walter Library, University of Minnesota, Minneapolis 14.

Radio and Television Broadcasting (KUOM)

broadcasts educational, musical, news, and sports programs to the Upper Midwest; its staff produces educational telecasts which may be shown on educational or commercial stations. For a schedule, contact: KUOM, 1 Eddy Hall, University of Minnesota, Minneapolis 14.

State Organization Service

assists voluntary nonprofit associations on a community or statewide basis by supplying them with secretarial, mimeograph, mailing, and general organizational services, subject matter aid, and space. For information, contact: State Organization Service, 15th and Washington Avenues Southeast, University of Minnesota, Minneapolis 14.

University of Minnesota Program Service

brings concerts, lectures, and assembly programs to audiences of the area and maintains a drama advisory service and loan play library. For information, contact: University Program Service, 229 Northrop Memorial Auditorium, University of Minnesota, Minneapolis 14.