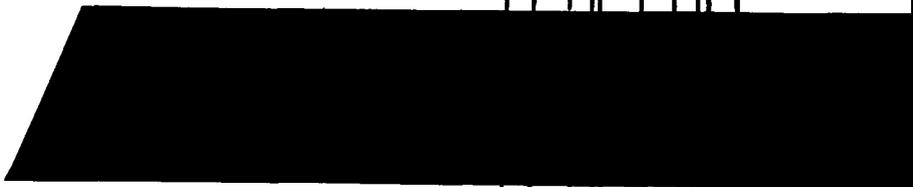


Bulletin of the
UNIVERSITY OF
MINNESOTA



Volume LIX, Number 2

January 15, 1956

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

UNIVERSITY OF MINNESOTA

Minneapolis Minnesota

1956



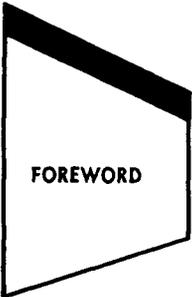
SUMMER SESSION

First Term

June 11-July 14

Second Term

July 16-August 18



FOREWORD

The University of Minnesota Summer Session provides one of the most varied and distinguished summer programs to be found anywhere. It offers training on the graduate and undergraduate levels for students in education; in science, literature, and the arts; in engineering and other technical fields; in medicine; in nursing; in home economics; in most branches of agriculture; and indeed in virtually every major field of instruction to be found in the curriculum of a great American university.

This bulletin, describing the summer program in general and listing more than one thousand formally organized courses, provides a broad overview of the Summer Session activities.

It is a cordial invitation to participate in a program of carefully planned study and recreation for the summer of 1956. We hope that you will be among those who accept the invitation.



Special Programs

**WORKSHOP
ON SCHOOL
PSYCHOLOGY**

This workshop, presented jointly by the College of Education, the Institute of Child Welfare, and the Department of Psychology, is designed to provide information, instruction, and observation experience on problems and methods, both to persons now employed as school psychologists and as a means of further preparing persons already trained in psychological fields for the rapidly developing specialty of school psychology.

The workshop, which is to run through the second term, offers 9 graduate credits, although some registrations can be accepted from adult special students. All workshop participants will take a basic course in Introduction to School Psychological Services (Educational Psychology 152) and a Laboratory-Seminar course (Educational Psychology 153 or Child Welfare 200). Both of these courses are limited to students accepted as members of the workshop. In addition, each registrant will elect one three-hour course from the curricula of sponsoring or related departments.

For further information regarding the workshop and for application forms, write to Dean of Summer Session, 650 Johnston Hall, University of Minnesota, Minneapolis 14.

**LANGUAGE
ARTS**

Several departments are co-operating in a special first term program in the Language Arts . . . reading, speaking, writing, listening, children's literature. Supplementing the courses will be two Institutes at the Center for Continuation Study, to be held June 25 through June 29 and August 20 through August 24, respectively. These Institutes will emphasize sound practices for elementary and secondary school instruction in the language arts.

**DRIVER
EDUCATION**

The course in Driver Education (101 under Curriculum and Instruction) will provide the special background required for high school instructors in driver training. Sections will be avail-

able both terms on the Minneapolis Campus. Because registration is limited, interested summer students should apply in advance for this work.

**HIGHER
EDUCATION
WORKSHOPS**

The very useful higher education workshops (228 under Curriculum and Instruction) will be available again. The first term workshop is planned for representatives from the liberal arts colleges of the North Central area, and the second term group will emphasize the problems of the teacher-education institutions.

**WORKSHOP FOR
INDUSTRIAL
ARTS
TEACHERS**

In the first term, Howard Nelson and William A. Kavanaugh will conduct a workshop on the industrial arts program for junior high schools. The present strong interest in improving junior high school programs makes this a particularly useful workshop for industrial arts teachers who wish to evaluate and replan their own work at the junior high school level.

**WORKSHOPS
FOR SCHOOL
ADMINISTRATORS**

As a part of the advanced graduate program (one year beyond the Master's degree) leading to the certificate of Specialist in Education—School Administration, a workshop on the Improvement of Instruction in the Elementary School (240 under Curriculum and Instruction) is scheduled for the first term. The course will require half-time work from the participants for the full term of five weeks. The group will be limited in size, and the completion of a Master's degree program for school superintendents is required for enrollment.

A special announcement concerning the Specialist in Education program will be sent to those who request it: write to Dean of Summer Session, 650 Johnston Hall, University of Minnesota, Minneapolis 14.

**WORKSHOP IN
TEACHING
DISPLAY**

For teachers and co-ordinators in distributive education, a two-week Workshop in Teaching Display (147 under Curriculum and Instruction) will provide assistance in handling their many problems in this area. A more detailed announcement will be available through the Dean of Summer Session, 650 Johnston Hall, University of Minnesota, Minneapolis 14.

**JUNIOR HIGH
SCHOOL
PROGRAMS**

One of the national leaders in the movement for improving junior high school programs, Professor Roscoe Cramer, will give a course on junior high school problems in the first term (167 under Educational Administration).

**LANGUAGE
TEACHING**

For high school and junior college teachers of French, German, and Latin, there will be three special courses in the first term (187A, 187B, 187C under Curriculum and Instruction). The course for each language will deal with the analysis of syntactical materials, free composition, appreciation of style, creative translation and the development of effective teaching techniques for these areas. Many teachers will want to combine one of these courses with others in the languages and with the work of the Language Houses.

**SPECIAL PRO-
GRAM FOR
TEACHERS OF
THE VISUALLY
HANDICAPPED**

The American Foundation for the Blind is assisting the University of Minnesota in an important first-term offering for teachers of the visually handicapped. Included will be a workshop on educational procedures and school curriculum adaptation with blind children, scheduled at Tuttle Demonstration School where observation will be provided; a course on teaching Braille, with a section for beginners and one for those with a working knowledge of the Braille system; and a course on visual impairment (178, 179, 180 under Curriculum and Instruction).

A limited number of scholarships are available through the American Foundation for the Blind. For information write to Dean of Summer Session, 650 Johnston Hall, University of Minnesota, Minneapolis 14.

DEMONSTRATION FACILITIES The University High School and the Tuttle Demonstration Elementary School will both be in operation during the first term. All school staff members will be welcome to observe these programs.

The Institute of Child Welfare conducts a nursery school and a kindergarten in which students may observe children of preschool ages.

In both terms, the Psycho-Educational Clinic will be available for summer students who wish to observe its individual and group remedial projects.

EFFICIENT READING Adult reading needs are a matter of real concern. The course Efficient Reading (see index), designed for the average and above-average adult reader, provides a unique combination of activities for improving reading speed, comprehension, and vocabulary.

SPEECH AND DRAMA INSTITUTE As a special feature of the University High School program, a Speech and Drama Institute will be open to high school students. The Institute will have two sections: (1) a group of thirty high school students working on forensic activities, oral interpretation of literature, extemporaneous and other public speaking, discussion, and debate, (June 18 through July 20); (2) a second group of thirty for work on dramatics for high school students,

(June 11 through July 14). High school speech teachers are urged to register for the regular graduate courses of the Summer Session in order that they may take advantage of the observation opportunities available in the Speech and Drama Institute in the University High School.

For a more detailed announcement concerning the Institute write to Dean of the Summer Session, 650 Johnston Hall, University of Minnesota, Minneapolis 14.

**INTRODUCTION
TO
ELEMENTARY
EDUCATION**

Introductory courses for prospective elementary school teachers, not ordinarily available in the Summer Session, will be given this year. These courses (75A, first term, and 75B, second term, under General Education) have been planned particularly for persons with Bachelor's degrees who now wish to prepare themselves for teaching in the elementary schools.

**FARM SHOP
MANAGEMENT**

A new course, Agricultural Engineering 130, is designed to meet the needs of high school agriculture teachers in the fields of shop program administration, demonstrations, job records, and shop problems relating to the farming program of students.

**PROGRAM IN
AUDIOLOGY**

Under the Department of Speech and Theater Arts, in co-operation with the Audiology Clinic at the University Hospitals, there will be four special courses and an institute for parents of deaf children. The first term courses are Speech 152, Hearing Disorders; and Speech 157, Clinical Practice in Audiology. Second term courses are Speech 127, Language Training for the Deaf; and Speech 156, Auditory Training.

The institute which will follow the close of the second term will be designed to help the parent of the deaf child deal with the special problems involved.

**INSTITUTE FOR
HIGH SCHOOL
TEACHERS
OF THE
PHYSICAL
SCIENCES**

From June 18 to July 21 the Departments of Physics and Chemistry will conduct a program of refresher courses in the basic and fundamental phases of their sciences and additional courses in the recent advances in these sciences. The program is designed explicitly for the needs of high school teachers and will occupy their full time. Scholarships covering tuition and living expenses will be available. Six credit hours in the Graduate School will be given to those who satisfactorily complete the work and are seeking a Master's degree in education.

Those interested in the Institute should write to Dean J. W. Buchta, 225 Johnston Hall, University of Minnesota, Minneapolis 14.

**INSTITUTE FOR
HIGH SCHOOL
TEACHERS OF
MATHEMATICS**

From June 18 to July 21 the Department of Mathematics will conduct a program in the basic and applied aspects of mathematics as these are related to the pedagogical needs of high school teachers. Scholarships covering tuition and living expenses will be available. Six credits in the Graduate School will be given to those who have been admitted to the Graduate School and who satisfactorily complete the work in the program. These credits will be applicable toward advanced degrees for those whose major subject is education and whose minor subject is mathematics and for those whose major subject is mathematics.

Those interested in making application for the Institute should write to B. R. Gelbaum, Associate Professor of Mathematics, 119 Folwell Hall, University of Minnesota, Minneapolis 14.

**PUBLIC HEALTH
NURSING**

Two workshops for public health nurses will provide opportunities for short-time study in rehabilitation nursing and in mental hygiene applied to supervision in public health nursing. For

further information, see the section on Schools and Colleges, Public Health.

**INSTITUTE ON
MINNESOTA
GOVERNMENT
AND POLITICS**

An Institute on Minnesota Government and Politics (Political Science 114) to be held the first two weeks of the second term, July 16-27 inclusive, is intended to introduce to those who attend the sessions the organization and operation of political parties in Minnesota, and the nomination and election of candidates for public office, including campaign management, financing, strategy, and techniques. The role of issues, political interest groups, the political parties, the media of communication in the formation of public opinion, and the expression of that opinion at the polls, will be emphasized throughout. Some attention will be devoted to the national party conventions, both of which are scheduled to be held after the Institute, in mid-August.

The topics will be presented by panels consisting of persons drawn from both major political parties in Minnesota, including party officials, candidates and workers, journalists, educators, elected public officials, and leaders of political interest groups.

A related course on American Political Parties, Political Science 137, may be taken during the last three weeks of the second term.

**ECONOMIC
EDUCATION**

A special overview of current national and international economic problems is embodied in a second-term course in Current Economic Issues (Econ. 129, School of Business Administration) intended for the nonmajor, including the teacher of social science who seeks some understanding of the economic side of everyday life. The course will be of particular value to teachers

who have attended or are using the materials from recent Economic Education Workshops.

**JOURNALISM
AND
COMMUNI-
CATIONS**

The School of Journalism program contains courses for both undergraduate and graduate students interested in professional training, and it provides courses for advisers of student publications in high schools, junior colleges, and colleges.

The School also offers five courses and two graduate seminars in the area of mass communications. Courses that carry senior college and graduate credit include Critical Writing, The Press in a Dynamic Society, Interpretation of Contemporary Affairs, History of Journalism, and Mass Communications. A graduate seminar open to students on this level of instruction will deal each term with Special Problems in Mass Communications. For those in the advertising sequence, Advertising Copy Writing is offered.

Murphy Hall, the School of Journalism building, is the headquarters of both the National Scholastic Press Association and the Associated Collegiate Press. Students are welcome to visit these organizations and to obtain counsel on publication problems from the staffs of NSPA and ACP.

**CULTURAL
RESOURCES
OF THE
TWIN CITIES**

The School of Home Economics will give a course in Cultural Resources of the Twin Cities (Home Economics 119). The University is located in an area rich in a broad range of the arts and this course will provide students an opportunity to take advantage of them. Architecture (both public buildings and homes), home landscaping, interior design and furnishings, painting, sculpture, ceramics, costume and food, optional areas:

music, theater, and film. There will be lectures by practicing professional artists and designers, field trips to art galleries, studios, public buildings, homes, and commercial establishments.

**IMPROVING
PATIENT CARE**

A special course, Improving Nursing Care Through Effective Night Supervision, will be offered during the first term of the Summer Session. Miss Pauline Heymann, instructor in surgical nursing and night supervisor, surgical nursing service of the Cornell University-New York Hospital School of Nursing, will be the instructor. Miss Heymann has devoted considerable time to study and research in this aspect of nursing care. Course content will include discussion of problems peculiar to administration and supervision of nursing care at night. (See Nu.Ad. 173, School of Nursing)

**MODERN
LANGUAGE
INSTITUTE**

During the first term of the Summer Session, the Modern Language Institute will sponsor residence houses, located near the campus, for graduate and undergraduate students of French, Spanish, and German. All activities will be carried on in the language elected by the student. The directors will be Professor Herman Ramras for the Deutsches Haus; Associate Professor Santiago A. Cunco for the Casa Hispánica; and Associate Professor Guy Desgranges for the Maison Française. In each house there will be native assistants.

PROGRAMS

The program will consist of regular departmental courses conducted in the morning; practical conversation sections at the residence houses in the afternoon; and lectures, round-table discussions, plays, films, music, and dances in the evening. Thus, each house will constitute a milieu for training in the language

and culture of the country and will provide a unique opportunity for improvement in the spoken language.

This year opportunity for observation of and participation in language instruction on the grade school level will also be provided.

The Institute has proved valuable to students and others who desire training in speaking a foreign language . . . those planning to apply for Fulbright or SPAN scholarships, or to join other foreign study groups . . . teachers or potential teachers of French, Spanish, or German, whether or not they are working for graduate degrees . . . men and women training for positions with the government, international organizations, or private business.

**FEES AND
SCHOLARSHIPS**

Each language program carries 10 quarter credits for the elementary group and 9 for advanced and graduate students. A special fee of \$40, in addition to regular Summer Session fees, is charged for the program offered in a language residence house. Room and board are additional. Several scholarships are available for the Maison Française and the Deutsches Haus.

**STATISTICS
INTERDISCIPLINARY**

Interdisciplinary work in statistics sponsored by the Graduate School Committee on Statistics will be given first term by the distinguished mathematical statistician, Professor S. N. Roy of the Institute of Statistics, the University of North Carolina. Two courses, 138B, Analysis of Variance and Multivariate Analysis—II, and 139B, Statistical Models in the Social Sciences, will be offered in the Department of Mathematics in the College of Science, Literature, and the Arts, and will be of interest to all students of statistics.

**A SUMMER
TRAVEL
COURSE IN
EUROPEAN
ART**

The summer travel course in European art will be conducted by the Department of Art under the auspices of the Summer Session. It will cover the main phases of ancient, medieval, Renaissance, and modern art in a series of lectures, guided visits, and discussions held at important cultural centers, museums, and cathedrals. Among the cities to be visited are Paris, Avignon, Nimes, Arles, Nice, Genoa, Pisa, Rome, Florence, Siena, Venice, Verona, Innsbruck, Salzburg, Munich, Rothenburg, Speyer, Luxembourg, Brussels, Bruges, and London. Five credits will be given in Art 59 to students successfully completing the course.

The group will depart from Montreal by steamer on June 28, spend approximately six weeks in Europe, and disembark in Montreal on August 30.

For information write to Dean of Summer Session, 650 Johnston Hall, University of Minnesota, Minneapolis 14.

**AMERICAN
STUDIES
PROGRAM**

During the summer of 1956, visiting professors in art, literature, and sociology will offer courses in various aspects of American culture, as will members of the University of Minnesota staff in these and other departments (anthropology, economics, education, history, journalism, music, philosophy, and political science). A visiting professor will also conduct an American Studies seminar.

The American Studies summer program is designed for candidates for the B.A., the M.A., and the Ph.D. degrees. Candidates for these degrees enroll in the above courses conducted by the participating departments and in American Studies semi-

nars designed to integrate these courses. Knowledge of a foreign civilization is also required of all candidates.

**INSTITUTE FOR
COLLEGE
TEACHERS
OF BIOLOGY**

An Institute for College Teachers of Biology will be conducted this summer under the auspices of the National Science Foundation at the Lake Itasca Forestry and Biological Station. Members will enroll in one graduate course, carry out an individual research program, and participate in seminars on problems related to the teaching of biology. Ten stipends will be available.

Inquiries concerning this program should be addressed to Dean of Summer Session, 650 Johnston Hall, University of Minnesota, Minneapolis 14.

**INSTITUTE FOR
HIGH SCHOOL
TEACHERS OF
BIOLOGY**

Plans are being formulated for an Institute for High School Teachers of Biology to be held at the Lake Itasca Forestry and Biological Station. Teachers who would be interested in spending a summer in this field laboratory with other high school biology teachers should inquire of the Dean of the Summer Session, 650 Johnston Hall, University of Minnesota, Minneapolis 14.

**FLORENTINE
RENAISSANCE**

A new course, Florentine Renaissance, Humanities 63, given for the first time last summer, will be repeated in 1956 in the second term. Based on the spring quarter course, Renaissance Heritage, it presents a more intensive study of the aesthetic, moral, and political values of our European heritage by concentrating on the brilliant rebirth of artistic and social activity that occurred in fifteenth- and sixteenth-century Florence.

**RADIO AND
TELEVISION**

Two courses in radio and television at the senior college level, Speech 65, Radio and Television Speech; and Speech 66, Radio and Television Drama; will be given in the Department of Speech and Theater Arts. Advanced work at the graduate level can be arranged on an individual basis under Speech 181-182-183, Readings in Speech.

The television production unit at KUOM in Eddy Hall on campus will be in operation throughout both sessions and will provide opportunity for observation and participation on an extra-curricular basis.

**SCANDINAVIAN
AREA STUDIES**

The Scandinavian Area Studies program, held alternate summers at the University of Wisconsin and the University of Minnesota, for the summer of 1956 is scheduled to be held at the University of Minnesota. For detailed information consult Professor Alrik Gustafson, Department of Scandinavian Languages, 13 Folwell Hall, University of Minnesota, Minneapolis 14.

**MUSIC
EDUCATION**

Of interest to teachers of both vocal and instrumental music is a new course in music education, Recent Research and Literature (Mu.Ed. 170). It is designed to help teachers evaluate their materials and appraise new publications in such a way that they can make musically and educationally appropriate choices among them for use in their schools.



Dates of Summer Session
University Facilities
Faculty
Housing and Food Service
Admission and Registration

General Information

**GENERAL
INFORMATION**

A more complete Summer Session bulletin is issued annually in March. Copies of that bulletin or additional copies of this preliminary bulletin may be obtained by addressing your request to Dean of Summer Session, 650 Johnston Hall, University of Minnesota, Minneapolis 14.

The University of Minnesota is on the quarter system, and the Summer Session is so organized that the two terms make it possible for the student to complete a full quarter's academic work.

**DATES OF
SUMMER
SESSION**

The Summer Session consists of two terms of five weeks each: June 11 to July 14 and July 16 to August 18. Students may register for subjects of their choice in either or both terms. Registration and payment of fees for the first term close at 4:00 on Tuesday, June 12. First term classes on the Minneapolis Campus will begin Tuesday, June 12, at 8:00 a.m. while classes on the St. Paul Campus will begin at 7:30 a.m.

Registration and payment of fees for the second term close at 4:00 p.m. on Monday, July 16. Classes for this term will open Tuesday, July 17.

Most individual courses are planned for completion in a single term.



*Aerial view of the Minneapolis
Campus, situated on the banks
of the Mississippi.*

Academic procession—president, faculty, and officers of the University.



UNIVERSITY FACILITIES

The Summer Session student has available all the facilities of a great university; its distinguished faculty . . . its libraries . . . laboratories . . . classrooms . . . and its highly specialized technical equipment. An expanding physical plant, with more than 1,000 buildings, serves his needs.

SEVERAL CAMPUSES

The Minneapolis Campus is located on the banks of the Mississippi River, overlooking the heart of the Minneapolis business district. St. Paul is also readily accessible, thus making available to the student the recreational and cultural advantages of two large metropolitan centers.

The Institute of Agriculture is located on the St. Paul Campus and includes the College of Agriculture, Forestry, and Home Economics, and the School of Veterinary Medicine. A variety of related courses is offered on the St. Paul Campus, and extensive laboratory and recreational facilities are also available. The Minneapolis and St. Paul campuses are joined by an intercampus bus line which gives regular service free to students enrolled for classes on both campuses.

The Lake Itasca Forestry and Biological Station, located on historically famous Lake Itasca in Itasca State Park is scheduled for the first term. It offers courses in various fields of biology. (See index)

Facilities of the Duluth Campus, and courses offered at Duluth, are discussed elsewhere in this bulletin. (See index)

LIBRARIES

Full library privileges are available to the summer student. Among the finest university libraries in existence, the University of Minnesota Libraries contain more than one and three-quarter million volumes and a wide variety of periodicals and pamphlets. Large, comfortable reading rooms provide an excellent atmosphere for study.

Departmental libraries on both campuses contain special collections of value to students.



University students soon become acquainted with the many facilities of the library.

Other available library facilities in the Twin Cities area include the Minneapolis Public Library, the St. Paul Public Library, the Minnesota Historical Society, and the James Jerome Hill Reference Library of St. Paul.

**SPEECH AND
HEARING CLINIC**

Students with speech and hearing problems may use the facilities of the University Speech and Hearing Clinic during the summer. These offices are located at 205 Shevlin Hall.

**STUDENTS'
HEALTH
SERVICE**

The Students' Health Service, in quarters across from the Church Street entrance of the University Hospitals, maintains a dispensary and hospital exclusively for students. The students' hospital provides hospitalization for students whenever necessary. Home calls are made in case of emergency.

The staff of physicians, dentists, and nurses is on duty throughout the year.

FACULTY

The summer faculty is made up of distinguished instructors drawn largely from the staff of the University of Minnesota, and augmented by eminent scholars from other institutions. This faculty, numbering about 1,000, includes people with international reputations in a variety of fields.

**HOUSING AND
FOOD SERVICE
COMSTOCK HALL**

Ada Comstock Hall, a modern residence hall for women, overlooks the Mississippi River and is next to the Coffman Memorial Union. It has excellent living accommodations for 275 students. Well-planned, healthful meals are served under the direction of a trained dietitian. Applications for reservations, which should be sent directly to Comstock Hall as early as possible, will be filled in the order of the date received.

Write for applications and additional information to Director of Women's Residences, Comstock Hall, University of Minnesota, Minneapolis 14.

SANFORD HALL

Sanford Hall, another University dormitory for women, is located on University Avenue near the entrance to the campus. It will be open to graduates and undergraduates for room only, at very

reasonable rates. This provides comfortable living in double and single rooms.

Sanford Hall will not be open during the second term.

For applications and additional information, write as early as possible to Director of Sanford Hall, University of Minnesota, Minneapolis 14.

**WINCHELL
COTTAGES**

The Winchell Cottages for Women offer attractive, low-cost housing on a co-operative basis, for both terms. They are located on University Avenue near Sanford Hall. No meals are served in the summer.

Residents must furnish their towels, rugs, and curtains as desired. Students cut expenses by sharing the work in each house.

For applications and additional information, write directly to Director of Winchell Cottages, 212 12th Avenue S.E., University of Minnesota, Minneapolis 14.

**MEREDITH HALL,
ST. PAUL CAMPUS**

If there is a sufficient number of requests, Meredith Hall on the St. Paul Campus will be open to women during the first term. Inquiries should be made to the Director of Dormitories, School of Agriculture, University of Minnesota, St. Paul 1.

**DINING HALL
DORMITORY,
ST. PAUL
CAMPUS**

Contingent upon the number of applications, Dining Hall Dormitory on the St. Paul Campus will be open to men during the first term. Inquiries should be made to the Director of Dormitories, School of Agriculture, University of Minnesota, St. Paul 1.

**MEN'S RESIDENCE
HALL**

Centennial Hall, an ultra-modern men's dormitory with a large number of single rooms, will be available. A room and board contract (board—Monday through Friday) will be offered pro-

*Men's residence halls are cool
and tree shaded.*



vided there is a sufficient number of residents. Otherwise, contracts will be for room only. Early application is suggested. For application forms and additional information, write to Director of Centennial Hall, University of Minnesota, Minneapolis 14.

**PRIVATE
RESIDENCES**

There is available a considerable number of rooms in private homes and rooming houses. These facilities are University-inspected and approved and are listed with the Student Housing Bureau, 204 Eddy Hall.

All regularly enrolled students are required to live in University-approved residences and those taking rooms elsewhere must apply to the director of the Student Housing Bureau for approval. The Housing Bureau also helps married students obtain housekeeping facilities.

**FOOD
SERVICE**

In addition to the dining facilities in the residence halls, Coffman Memorial Union offers a variety of accommodations.

Well-prepared food at moderate prices and quick, efficient service are featured in the Cafeteria and Fountain Grille. The Commuters' Lunchroom is open with vending machine service.

Party and banquet dining facilities will be available for both lunch and dinner to all campus organizations and groups during the second term.

**ADMISSION AND
REGISTRATION**

ADMISSION

The courses of the Summer Session are open to all qualified high school graduates, regularly admitted students of the University including those attending regular session, and those with previous college work. Recent high school graduates must be regularly admitted before enrolling in the Summer Session. Students beginning their University attendance during the Summer Session who wish to attend during the academic year must submit credentials in the usual way.

**SPECIAL
STUDENTS**

Students with previous college work who wish to attend the Summer Session only may do so without filing credentials, provided they are in good standing and are not candidates for a degree. Such students will be classified as "special" for the Summer Session only.

Persons about 24 years of age or older who have not had previous college work and who are not candidates for a degree but wish to complete certain specific college subjects will also be considered for admission as special students for Summer Session only.

Attendance during the Summer Session in no way guarantees special students admission to the regular academic year. Special students who wish to be considered for admission to a subsequent term **must file regular admission applications early in the summer.**

**GRADUATE
STUDENTS**

The procedure for admission of graduate students is discussed in the section on the Graduate School. (See index)

**DEGREE
CANDIDATES**

Those who expect to become *candidates for a degree* at the University during the Summer Session must have filed an application for admission and have been regularly admitted to a college of the University.

All students should consult the *General Information Bulletin* for detailed requirements governing admission and the granting of degrees. The *General Information Bulletin* and specific college bulletins may be obtained by writing to Office of Admissions and Records, University of Minnesota, Minneapolis 14.

**REGISTRATION
DATES**

In order that short Summer Session terms may prove of maximum value and that work of courses may not be interfered with by late entrants, students are urged to complete their registration on the following dates:

First term Registration: Monday, June 11, 8 a.m. to
4 p.m.

Fee payment, last day without penalty:
Tuesday, June 12

Second term Registration and fee payment: Monday, July
16, 8 a.m. to 4 p.m.

**LATE
REGISTRATION**

Late fees are charged for the first term as follows for payment of fees on:

Wednesday, June 13.....	\$2.00
Thursday, June 14.....	3.00
Friday, June 15.....	4.00
Monday, June 18.....	5.00

No registrations are allowed for the first term after Thursday, June 14, without special permission of the dean of the school or college concerned.

Late fees for the second term are as follows for payment of fees on:

Tuesday, July 17.....	\$2.00
Wednesday, July 18.....	3.00
Thursday, July 19.....	4.00
Friday, July 20.....	5.00

No registrations will be accepted for the second term later than Thursday, July 19, without special permission of the dean of the school or college concerned.

No provision is made for allowing exemption from late registration fees to those who are unable to reach the University during regular registration days.

**PLACE OF
REGISTRATION**

At the beginning of the first term, registration in all colleges except the College of Agriculture, Forestry, and Home Economics and the School of Veterinary Medicine will be in the Main Ballroom, Coffman Memorial Union. Registration in the College of Agriculture, Forestry, and Home Economics and the School of Veterinary Medicine will be at 203d Coffey Hall, St. Paul Campus.

The University of Minnesota reserves the right to cancel any and all courses in which registration is insufficient to warrant continuation of the course.

**CHANGES IN
REGISTRATION**

After a student's registration has been accepted by the recorder, any change must be approved by the Committee on Student Scholastic Standing or dean of the college in which the student is registered. *Only in exceptional cases will any change be made after classes have begun.*

FEES

The following fees are payable each term by each full-time student (whether resident or nonresident) at time of registration and must be paid before registration is complete:

Tuition fee (per term).....	\$50.00
Incidental fee (per term).....	8.50
	<hr/>
Total fee (per term).....	\$58.50

PART-TIME FEES

The following fees are payable each term at time of registration by each student taking 4 credits or less (whether resident or nonresident) and must be paid before registration is complete:

Part-time tuition fee (4 credits or less)	
(per term)	\$39.00
Incidental fee (per term).....	8.50
	<hr/>
Total fee (per term).....	\$47.50

INCIDENTAL FEE

The incidental fee of \$8.50 per term entitles each student to the privileges of Coffman Memorial Union, Health Service, and the recreation program including the *Minnesota Daily*.

SPECIAL FEES

Regular tuition fees as provided during the academic year will be charged all students in the School of Nursing. In the Schools of Medicine, Dentistry, Law, and Veterinary Medicine, residents pay regular Summer Session tuition fees; nonresidents pay tuition at the summer rate or academic year rate, whichever is higher. Special tuition fees are collected in the Biological Station. All students pay the Summer Session incidental fee.

In addition, course fees are charged for Civil Engineering Camp, Modern Language Institute, Music, Physical Education, Public Health, and Itasca Biological Station as indicated in the section on course fees in the regular *Bulletin of the Summer Session*.

Graduate students who have completed all of their graduate work with the exception of their thesis may register for thesis work only upon payment of \$26 tuition per term and the incidental fee.

Summer Session staff members are entitled to the same fee privileges in the summer as during the academic year. Eligible staff members pay at the resident rate in the Graduate School as follows: more than 3 credits, \$23 per term; 3 credits or less or thesis only, \$11.50 per term; plus incidental fee.

AUDITORS

Fees for auditors are the same as for students registered for credit.

AMOUNT OF WORK

A maximum of 9 quarter credits or two 5-credit courses is considered a full program for either term. Registration for a greater number requires special permission from the Committee on Student Scholastic Standing or the dean of the school or college in which the student is registered.

EXAMINATIONS

Examinations are normally held at the last scheduled class hour for each course.

Sports
Excursions
Films
Coffman Memorial Union
St. Paul Campus Union
Concerts and Lectures
University Theater
Museum of Natural History
University Gallery

Summer Recreation



**SUMMER
RECREATION**

The University of Minnesota Summer Session has a planned program of activities available on campus at very little or no cost to the student.

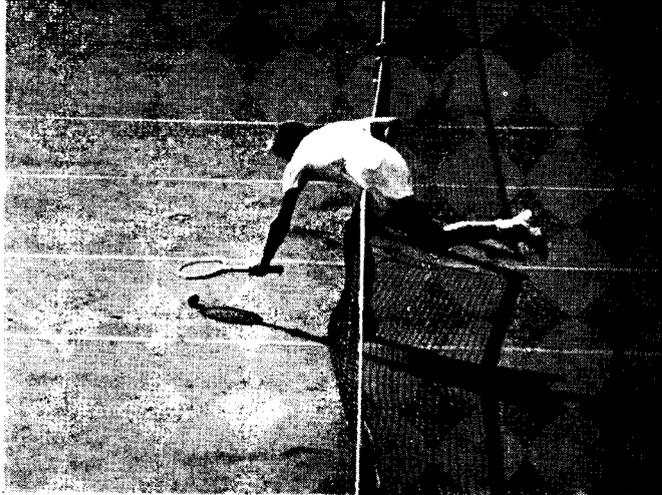
In addition to this program, the location of the University makes possible the use of the cultural and recreational facilities of a large metropolitan area. Lakes and lagoons on which to canoe, swimming beaches, picnic grounds in parks and along the roadsides, evening concerts on lake shores and in parks, art centers, museums, libraries, beautiful stores for shopping and browsing, a wide choice of places for dining, as well as the many professional entertainments provided by a large city, are within easy access from the campus by public or private transportation.

**SPORTS
PROGRAM**

A program of tennis and golf tournaments as well as other competitive sports is arranged each summer. A daily sports hour for women including such activities as aerial darts, badminton, and table tennis is planned at the Norris Gymnasium. At scheduled hours, swimming pools with attendants and instructors in charge are available for men in Cooke Hall and for women in Norris Gymnasium. Most of these activities have no extra charge except for towel service.

Tennis and golf tickets will be issued to regularly enrolled Summer Session students upon presentation of their fee statements and payment of a small fee. A greens fee is also charged

Tennis, golf, and other sports tournaments are popular.



for use of the golf course. Without tickets a slightly higher charge per session of play is made for use of the tennis courts.

SPORTS FACILITIES

Facilities for healthful exercise are offered by the University's physical education plants. These include recreation fields . . . an 18-hole golf course . . . gymnasiums and swimming pools in Cooke Hall for men and Norris Gymnasium for women . . . Northrop Field containing facilities for baseball, track, and diamond ball . . . 25 tennis courts . . . space for other sports such as badminton, horseshoes, handball, squash, table tennis, and archery.

EXCURSIONS

Conducted excursions may be taken to points of historical, industrial, educational, and recreational interest. The transportation fee is the only cost of these tours.

FILMS

A feature film, either foreign or domestic, will be shown one day a week. Another weekly feature is the Newsreel Theater which shows motion pictures of current events, travel pictures, and various educational films. A program of educational films of a type which can be used in the classroom is of special interest to teachers. These film programs are shown with the co-operation of the Department of Audio-Visual Education.



University Theater student actors in "Twelfth Night."

UNIVERSITY THEATER

Performances of legitimate drama have become an outstanding feature of the Summer Session. The University Theater, recognized as one of the leading off-Broadway playhouses, will present a season of exceptional plays.

COFFMAN MEMORIAL UNION

Summer Session students will find an informal, friendly spirit in the Coffman Memorial Union which offers a pleasant respite from the rigors of classroom activities. Quiet and comfortable lounges, efficient dining rooms and varied recreation rooms give the Union a pleasant setting for informal, social, and recreational activities.

FACILITIES

Facilities include billiards, table tennis, and a coeducational game room for recreation . . . an Art Craft Workshop for general hobby craft—woodworking, leather work, ceramics, weaving, photography . . . the large cafeteria and fountain grille for dining . . . men's, women's, and coeducational lounges for resting and studying . . . the outdoor terrace overlooking the Mississippi for lounging or dining . . . the Terrace Reading Room for recreational reading . . . a modern ballroom for informal dancing parties and dance instruction sessions . . . the University Post Office and Union Bookstore . . . and barber and beauty shops.

**UNION
PROGRAM**

The Union provides a diversified program during the summer which includes instruction in folk and modern dancing, instruction classes in bridge, personal grooming, and social hours, parties, musical programs, and art exhibits. These are all available to students without charge. Some of the dancing and social hour programs are conducted on the outdoor terrace.

**ST. PAUL
CAMPUS
UNION**

The Union on the St. Paul Campus will be open throughout the Summer Session.

Facilities include lounges, newspaper and magazine service, billiards, table tennis, television, photography darkroom, conference rooms, and a kitchenette for use by social groups.

Ice cream, cold drinks, and light lunches are available at the fountain grille. Club service and take-out picnic supplies may be obtained by University groups.

**CONCERTS AND
LECTURES**

Through the Department of Concerts and Lectures, the Summer Session provides a program covering a wide field of musical features . . . symphonies . . . chamber music . . . piano and vocal soloists. Convocations and numerous lectures are also featured in this program. Addresses are by outstanding scientists, literary figures, artists, and observers of national and international affairs.

Folk dancing at the Union is popular with students.



**MUSEUM OF
NATURAL
HISTORY**

The Minnesota Museum of Natural History, located on the campus at Seventeenth and University avenues, contains a series of lifelike exhibits of animal and plant life selected from various parts of the state.

In addition to public exhibits, extensive scientific series of birds, mammals, and other natural history materials are housed here for those interested in more careful study in these fields.

The exhibition corridors are open to the public from 9:00 to 5:00 o'clock daily and from 2:00 to 5:00 o'clock on Saturdays, Sundays, and most holidays during both summer terms.

The Museum's modern auditorium is widely used by many campus departments.

**UNIVERSITY
GALLERY**

Exhibitions of national and international scope are arranged for the summer student. The University Gallery is open 8:30 a.m. to 4:00 p.m. Monday through Friday except on official holidays.

Exhibition space and the offices of the Gallery are on the third floor of Northrop Memorial Auditorium. In addition to the general exhibitions of paintings, prints, sculpture, and other creative arts, special study exhibitions are arranged to supplement textbooks and lectures in the art classes. Pictorial reference materials are available in 315 Northrop.

RENTAL SERVICE

Students registered for the Summer Session may borrow framed reproductions and prints from the University Gallery located on the third floor, East Corridor. This rental service will be open from 10:00 a.m. to 1:00 p.m. Tuesday through Thursday the first week of each term. The rental fee is 25 cents for one term, or 50 cents for two terms. The pictures are due on Thursday of the last week of the term for which they are rented.

ART LIBRARY

A library for art students is in Room 307 of Northrop Memorial Auditorium where reference books are available.

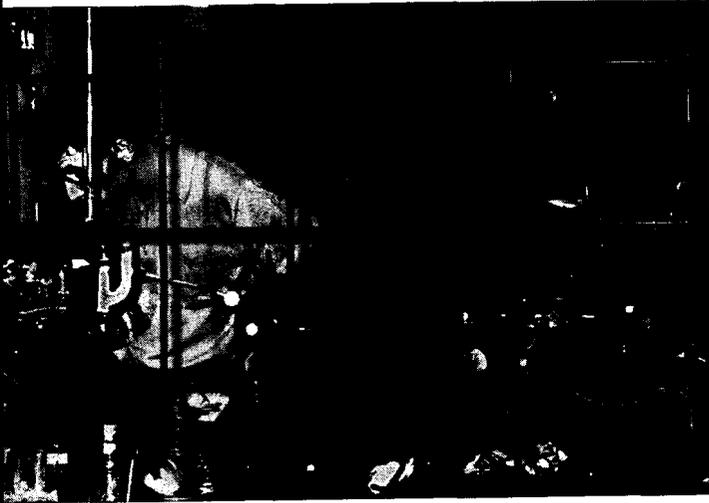
Schools and Colleges

Graduate School
College of Science, Literature,
and the Arts
Institute of Technology
College of Engineering
School of Chemistry
School of Mines and
Metallurgy
School of Business Administra-
tion (including Economics)
Institute of Agriculture
College of Agriculture, For-
estry, and Home Economics
School of Veterinary
Medicine
Law School
General College
College of Education
Physical Education for Men
Physical Education for Women
Institute of Child Welfare
Medical School
School of Nursing
School of Public Health
School of Dentistry
Biological Station



**GRADUATE
SCHOOL**

The Graduate School of the University of Minnesota brings together in a single organization all programs and offerings of the University which lead to the higher degrees of master of arts, master of science, and doctor of philosophy.



The Graduate School facilities include excellent laboratories for research.

The University's libraries, laboratories, and clinics, supplemented by libraries, hospitals, and other institutions in the Twin Cities, offer excellent facilities and possibilities for graduate students. These privileges are, in general, open to those who have received Bachelor's degrees from accredited colleges and universities and who are adequately prepared for graduate work in their chosen fields of study.

APPLICATIONS

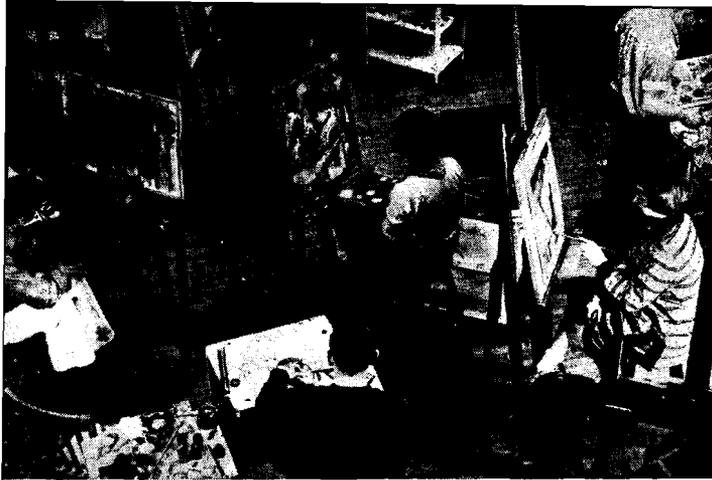
Students must make application for admission at least four weeks before the opening of the term they expect to attend in order to avoid delay, last-minute disappointment, and possible penalty for late registration. Applications for admission, except for University of Minnesota graduates, must be accompanied by an official transcript in duplicate of all undergraduate work, including degrees earned and a single official transcript of all graduate work completed. University of Minnesota graduates must submit certified copies of their scholastic records. Application forms may be secured by writing to the Dean of the Graduate School, 316 Johnston Hall, University of Minnesota, Minneapolis 14.

Students, *before their arrival at the University*, should have assurance from the Graduate School that they are adequately prepared and will be accepted as majors in their chosen field. Admission to the Graduate School does not imply admission to candidacy for an advanced degree. After a student has studied in this Graduate School for one or more terms and on application for degree candidacy, the staff will determine whether or not he should be encouraged to work for a degree.

The *Bulletin of the Graduate School* contains detailed information on requirements and work in the Graduate School. A copy may be obtained by writing to the Dean of Admissions and Records, University of Minnesota, Minneapolis 14.

COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

The College of Science, Literature, and the Arts is the largest undergraduate college of the University of Minnesota, offering instruction leading to the Bachelor's degree in all of the liberal arts and science subjects. A broad and varied program of general education offered in the first two years prepares students for further liberal education, professional or vocational curricula, or for taking one's place in society without further formal education. In addition to programs for a major in most of the subjects of a liberal arts college, students may elect in the college pre-



A corner of the art studio in Jones Hall.

professional curricula, or professional curricula in journalism, librarianship, or social work.

Summer courses offered by the College are chosen from the College's regular curricula to provide students a wide variety of programs in general education, liberal arts and sciences, and vocational or professional studies. This selection of courses is made from the offerings of twenty-seven departments, and includes in addition to the departments listed many courses suitable for interdepartmental majors.

Courses in each of the departments of the College will be found in the section on List of Courses and will be seen to include introductory, intermediate, and advanced work. A few of the programs of the College are discussed in the following paragraphs.

ART

Professional training in the Department of Art includes professional studio work and industrial art as well as graduate work. The departmental library and galleries will be open for historical and creative research.

ENGLISH

A variety of courses useful either for the student interested in literature and literary history and criticism or the student seeking special competence for graduate, professional work, or teaching is provided by the Department of English.

GENERAL STUDIES

Courses in the Department of General Studies cut across departmental lines and are designed particularly for the student specializing in other subjects who wants a liberal understanding of the humanities and the social sciences, or work in family life and personal orientation.

HISTORY

The summer offerings in the Department of History are carefully selected from the regular curriculum. The student will find a wide choice in American and European, ancient and medieval history.

LIBRARY SCHOOL

The Library School offers courses leading to a Master's degree and a 23 credit program leading to certification for school library work. Courses are offered on a rotation plan in alternate summers for students not able to enroll during the regular academic year. Basic courses required for admission to the Master's degree program, some of the graduate courses, and certification courses are offered in both summer terms.

Preparation for professional librarianship embraces five years of study beyond secondary school, including one year of professional content. The Master's degree program in Library School meets this requirement. Inquiries concerning admission to this program should be addressed to Dean of Summer Session, 650 Johnston Hall, Minneapolis 14.

MUSIC

Students interested in obtaining a cultural background and those preparing to become teachers of music and professional performers may take courses in applied music, music literature, music history, and music theory under nationally known musicians.

Students wishing a broader knowledge of symphonic literature will be interested in the courses, Symphonies of Beethoven and Symphonies of the Romantic Era. The courses in American Music should interest the general student and be of special interest to those majoring in American studies.

Instruction in Class Piano (Mus. 11C) and Class Voice (Mus. 12C) will be presented for the first time during a Summer term for those interested in studying piano or voice for their own pleasure or cultural development. This will be of great value to anyone in the field of education, especially elementary education. Class Voice presents the basic techniques in voice production and breath control; Class Piano teaches the primary triads enabling students to play accompaniments to simple folk melodies.

Students with a knowledge of piano who are interested in teaching private or class piano to children and/or adults will profit from Normal Piano (Mus. 70) which outlines materials as well as modern methods used in this type of instruction.

Class piano instruction in the Music Department.



The concertmaster of the Minneapolis Symphony Orchestra will be on campus this summer to instruct those particularly interested in string work (Music 60B-61B-62B).

PHILOSOPHY

Courses in the Philosophy Department are planned for the student whose objective is an understanding and appreciation of philosophy as a part of a liberal education or preparation for professional work. Also, there are advanced courses for students possessing previous competence in this field.

PSYCHOLOGY

Specialized courses in the fields of experimental psychology, human and animal behavior, differential psychology, and social and political psychology are available in the Psychology Department. Included are courses for the nonpsychology major as well as professional courses for those for whom psychology will be essentially a "tool subject" such as the psychology of individual differences, clinical psychology, abnormal psychology, psychology of advertising, and psychology in personnel work.

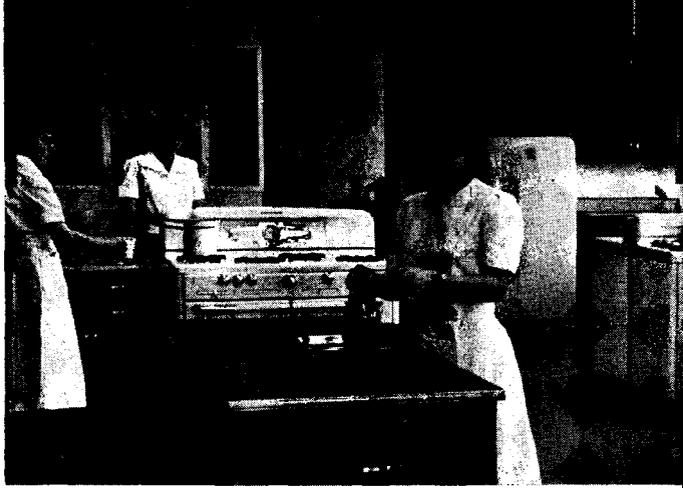
SOCIOLOGY

Sequences in general sociology, social problems and social policy, and social research are among the offerings in the Sociology Department. In co-operation with the School of Social Work, a special sequence is designed as preparation for graduate study in the School of Social Work.

INSTITUTE OF TECHNOLOGY

The Institute of Technology includes the College of Engineering, the School of Architecture, the School of Chemistry, and the School of Mines and Metallurgy.

Students in the Home Economics laboratory on the St. Paul Campus.



A limited number of courses in civil, electrical, and mechanical engineering; drawing and descriptive geometry; mathematics, and mechanics and materials are listed for students in the College of Engineering.

In the School of Chemistry, inorganic, analytical, organic, and physical chemistry will be given. Students are able to acquire a Master's degree in chemistry by attendance at summer sessions only.

**INSTITUTE OF
AGRICULTURE
COLLEGE OF
AGRICULTURE,
FORESTRY, AND
HOME ECONOMICS
AND THE
SCHOOL OF
VETERINARY
MEDICINE**

There are many courses, primarily for graduate students, in the College of Agriculture, Forestry, and Home Economics and in the School of Veterinary Medicine. Most departments correlate thesis and problem work with work in the Agricultural Experiment Station.

High school teachers of agriculture may take advanced courses in those agricultural fields which are applicable to the requirements of the Department of Agricultural Education (see College of Education).

The School of Home Economics' program includes courses for graduate and undergraduate students, for experienced teachers, and other home economists. Transfer students and students wishing to qualify for vocational certification may wish

to meet some of their requirements through Summer Session attendance. Courses in a variety of subject matter areas are offered. Individual needs of graduate students may be met through special problems courses in the areas of foods, nutrition, institution management, related art, and home economics education. Courses will be offered in both terms of the Summer Session.

Information concerning admission to the Graduate School should be obtained from the Dean of the Graduate School, 316 Johnston Hall. Students wishing information regarding courses at the graduate level should confer with the graduate staff of the department or school in which they will be working.

GENERAL COLLEGE

The General College two-year program in higher education leads to the degree of associate in arts. The aim of this program is to give the student a general education which will prepare him for the personal, vocational, civic, and cultural problems of his life in the community.

Courses are planned to be as complete as possible in themselves in order to give an understanding of basic principles. They are not merely introductions to more specialized courses in the same field.

Courses successfully completed in the Summer Session may be applied toward fulfilling the requirements leading to the degree. For general information about the college program, requirements for the associate in arts degree, and requirements for transfer to other colleges, students should consult one of the administrative or counseling officials, or the *Bulletin of the General College*.



*Calculating business ratios
in the laboratory.*

**LAW
SCHOOL**

A student who has completed at least one year of work in this Law School or in another accredited law school may take the courses listed in this bulletin (see index). Beginning students are admitted to the regular courses in the fall quarter only.

Registration for a single term is not possible because all courses will continue through both terms without interruption.

**SCHOOL OF
BUSINESS
ADMINISTRATION
(including
ECONOMICS)**

The School of Business Administration offers a broad foundation in economics and in the several aspects of management of a business organization in addition to specialized courses, available at both undergraduate and graduate levels. The University's location in a metropolitan area presents opportunities for close observation of business in action.

Admission to this School ordinarily follows completion of a two-year prebusiness program in a liberal arts or technical school. The admission requirements take account of the varying needs and interests of students. Under certain circumstances, mature students who have special objectives in business but do not

technically meet the formal admission requirements may be admitted to take selected courses consistent with individual objectives.

The undergraduate curriculum is planned both for regular students and for visitors at Minnesota who wish to make progress toward their degrees during the summer.

Graduate work in both economics and business administration is planned to meet the needs of (1) high school and college faculty members and others whose graduate work is limited largely to summer sessions, and (2) graduate students at Minnesota and elsewhere who wish to accelerate their progress toward advanced degrees. Graduate work should be arranged through the Graduate School.

COLLEGE OF EDUCATION

The College of Education summer offerings emphasize the needs of teachers, school administrators, counselors, and other educational workers. In addition to courses in curriculum and instruction, philosophy of education, educational psychology, and administration for both elementary and secondary school staff members, there are offerings in the vocational fields of business and distributive education, agricultural education, industrial education, and home economics education. Advanced work is available for music and art educators, for teachers of health and physical education, and for recreation workers, as well as for teachers of all high school subjects and of elementary grades.

Counselors will find in both terms the courses they need for state certificates. In elementary education, with the demand for well-qualified principals rising sharply, basic courses in administration and supervision will be available both terms. Elementary

teachers completing work for undergraduate degrees, as well as those carrying on graduate study, will find a wide selection of courses in their special area, including an exceptionally fine offering in the language arts.

Music education courses, helpful to elementary teachers as well as to music education majors, will be offered both terms. For a new course in Recent Research and Literature (Mu.Ed. 170) see section on Special Programs.

All teachers are urged to examine the broad offerings of the College of Science, Literature, and the Arts, where the various departments have many valuable courses for teachers in the summer terms. Teachers will wish to strengthen their liberal and general education through the summer offerings in the humanities and the social sciences, literature, speech, music, art, and all of the other liberal arts departments. The School of Business Administration, also, offers special work for teachers, including courses providing much-needed materials in economic education. Both secondary and elementary school teachers may plan a program combining courses in professional education with the liberal and general education courses of the other divisions of the University, emphasizing either their own teaching subjects or related and broadening activities.

**PHYSICAL
EDUCATION
FOR MEN**

Teachers will find a full program of professional courses. Students may work toward the degree of bachelor of science with either a major or minor in physical education or in recreation, master of education with a major in physical education or in recreation, master of arts with a major in physical education, or doctor of philosophy in education with major emphasis in physical education.

**PHYSICAL
EDUCATION
FOR WOMEN**

Regular professional courses lead to the degree of bachelor of science with major in physical education, master of education with major in physical education offered in the College of Education, master of arts with major in physical education offered

in the Graduate School, or doctor of philosophy with major in education and emphasizing physical education and school health education.

During the first Summer Session in 1956 the department is planning a short institute on Functional Posture Education. The purpose of the institute is to assist particularly teachers who are concerned with modern approaches to the daily habits of children in erectness of carriage, correct use of the foot in walking, and well-balanced use of the body in everyday activities. Principles of relaxation, weight control, and functional exercise for adults will also be considered. A national leader will present sound and practical procedures that may be used at the elementary and secondary levels. There will also be demonstrations to show the application of procedures to children and adults.

Students wishing to qualify as part-time teachers of physical education in Minnesota may take courses toward an undergraduate minor in physical education and an undergraduate minor in school health education.

A regular program of teaching demonstrations in physical education will be presented during the first term at the Tuttle Demonstration Elementary School.

Instruction is given on the University golf courses.



Children at sand play provide opportunities for observation.



**CREDIT FOR
REQUIRED
PHYSICAL
EDUCATION**

Since the various colleges of the University either require physical education or give elective credit in this field, certain courses are open to students who wish to satisfy this need or interest.

**RECREATIONAL
OPPORTUNITIES**

All women students may use the facilities of Norris Gymnasium for Women for leisure recreation . . . recreational swimming . . . tournaments and individual practice in golf, archery, tennis . . . sports demonstrations . . . movies . . . and clinics.

**INSTITUTE OF
CHILD WELFARE**

Courses in the Institute of Child Welfare are planned not only for graduate and undergraduate students but also to meet the needs of experienced teachers and professional workers who wish to increase their knowledge and skill in working with children.

There are beginning and advanced courses in child psychology, adolescent psychology, behavior problems of children, child development, childhood education, and parent education. The nursery school and kindergarten will provide facilities for observation and participation.

Special attention is called to courses listed under *Curriculum and Instruction* and *Methods and Student Teaching* in the College of Education.

Graduate courses meet some of the requirements for a Master's degree under either Plan A or Plan B. Your attention is called to the announcement of the Workshop in School Psychology under the Special Program section.

MEDICAL SCHOOL

The University of Minnesota Medical School is known as one of the leading centers for medical instruction and training in the United States. Its newly expanded University Hospitals' facilities, as well as affiliation with the Minneapolis Veterans Hospital and other Twin Cities hospitals, provide the Summer Session student of medicine with unusual opportunities for study.

All medical students except members of the present fourth-year class will attend required courses during the first term. These courses are continued from the spring quarter and are not open to registrants from other medical schools.

However, certain other required courses as well as elective courses in both preclinical and clinical departments will be given during both summer terms for medical students at the University of Minnesota, accredited students from other medical schools, and graduate physicians. These courses lead to training programs for physicians, nurses, physical therapists, occupational therapists, medical and X-ray technologists, medical officers of public health, public health nurses, public health engineers, and health educators.

EXTERNSHIPS

The clinical departments of Medicine, Neurology and Psychiatry, Obstetrics, Pediatrics, Radiology, and Surgery will offer elective externships at the University Hospitals and in the Minneapolis Veterans Hospital. These externships are open to sophomore and junior medical students at the University of Minnesota who have completed the required first Summer Session term, and to physicians and qualified medical students from other institutions dur-

ing both terms. For information outlining clinical opportunities write to the department head of the service in which you are interested, University of Minnesota Hospitals, Minneapolis 14.

**REGISTRATION
AND GRADUATE
CREDIT**

Registration of students from other medical schools will be on June 11. Students who wish to earn graduate credit must register through the Graduate School office. (See section on Graduate School.) Final approval of registration in any course in the Medical School must be obtained from the Medical School office. For more detailed information regarding courses, fees, etc., consult the regular *Bulletin of the Summer Session*.

**SCHOOL OF
NURSING**

The basic professional program in the School of Nursing leads to the degree of bachelor of science with a major in professional nursing. For the graduate nurse, the School conducts programs leading to the bachelor of science degree in nursing education and in nursing administration. A four-quarter certificate program in practical nursing begins in the fall quarter. Programs leading to the degree of master of education in nursing education and master of nursing administration in nursing service administration are available for qualified professional nurses.

For qualified graduate nurses, there are courses in ward administration, methods of teaching, personnel work, the survey in nursing education, and nursing service administration. A special course is planned, Improving Nursing Care Through Effective Night Supervision, about which additional information is given under Special Programs in the front of this bulletin.

**NURSING
SCHOOL
FEES**

Students in the School of Nursing working toward the bachelor of science degree in professional nursing and students registered in the practical nursing curriculum will pay the same fees as

charged during the academic year; graduate nurses will register in the College of Education or the School of Nursing and pay the Summer Session fees.

**SCHOOL OF
DENTISTRY**

Clinical instruction in operative dentistry, prosthesis, crown and bridge, oral surgery, pedodontia, periodontia, and oral diagnosis is open to eligible dental students.

**SCHOOL OF
PUBLIC HEALTH**

The School of Public Health program of courses is of special interest to public health nurses. Besides the usual basic courses for those beginning their formal training in this field, suitable electives will be available each term for advanced students. Workshops provide opportunities for those who can devote only a short time to summer study.

A workshop on Rehabilitation Nursing (148 under Public Health) during the week of June 25-July 6 will consider special nursing problems that arise in connection with the rapidly growing field of rehabilitation of the handicapped and crippled. This will be followed during the first two weeks of the second term (July 16-27) by another workshop (175 under Public Health) which will deal with principles of human relations in public health nursing supervision. These workshops are limited in registration. Inquiries should be addressed directly to the School of Public Health.

**BIOLOGICAL
STATION**

The Lake Itasca Forestry and Biological Station which is open during the first term is located in the famous Itasca State Park with its wide variety of natural habitats all within easy reach of the Station's several well-equipped laboratories. A wide selection of undergraduate courses in botany, entomology, and zoology is available. Field courses stress natural history and ecology as well as the taxonomy and identification of organisms.

Graduate and independent research work opportunities are particularly inviting. Arrangements can be made by qualified graduate students and researchers to continue their research through the entire field season. These arrangements must be made well in advance of the opening of the session on June 11.

**TWO INSTITUTES
FOR TEACHERS
OF BIOLOGY**

COLLEGE

An Institute for College Teachers of Biology will be conducted at the Station this summer under the auspices of the National Science Foundation. Members will enroll in one graduate course, carry out an individual research program, and participate in seminars on problems related to the teaching of biology. Ten stipends are available.

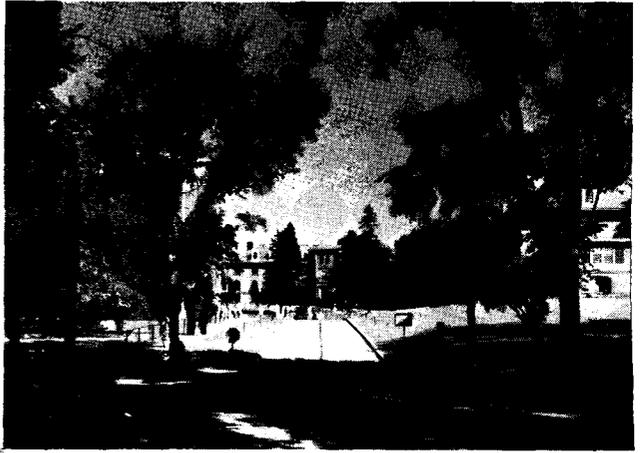
HIGH SCHOOL

Plans are being formulated for an Institute for High School Teachers of Biology to be held at the Station for teachers interested in spending a summer in this field laboratory with other high school biology teachers.

For more detailed information regarding any of these programs write to Dean of Summer Session, 650 Johnston Hall, University of Minnesota, Minneapolis 14.



*Collecting aquatic insects
at the Lake Itasca Station.*



General Information
Master of Arts Degree
Bachelor of Science Program
Studies in Rural Education
Workshop in Advanced Painting
Accounting and Statistics
American Southeast Tour
Audio-Visual Education
Speech and Hearing Clinic
Facilities of Special Interest
Recreation

Duluth Branch

**DULUTH
BRANCH**

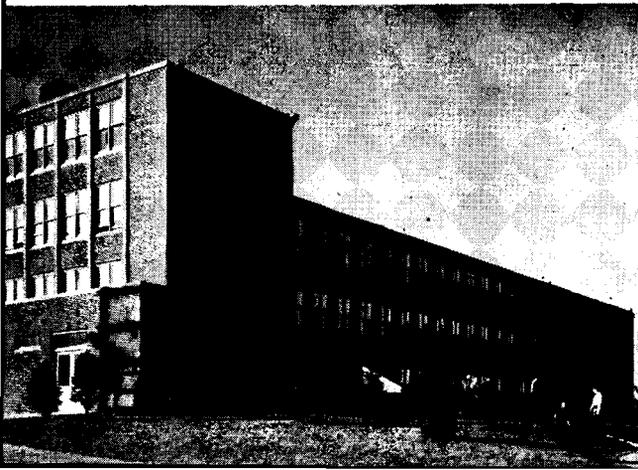
**GENERAL
INFORMATION**

A highly diversified list of courses at both graduate and undergraduate levels is available at the University of Minnesota Duluth Branch. (For course listings, see index)

In a spectacular setting and invigorating climate that assures visual beauty and physical comfort for summer study, the Duluth Branch overlooks majestic Lake Superior, the largest fresh-water body in the world. Lake Superior contributes both an ever-changing panorama of interlake vessel traffic and natural beauty and lake-cooled air to the pleasure and comfort of the Duluth Branch summer student. Duluth's average July temperature is 64.9 degrees. Because of a low pollen count, Duluth attracts large numbers of hayfever sufferers who migrate here in summer for quick relief. Many trout streams tumble through Duluth proper to meet Lake Superior. Spectacular falls, inland lakes, scenic golf courses, deep-sea fishing grounds, bridle paths, and other nearby attractions offer invigorating diversion.

**MASTER OF
ARTS DEGREE**

Under a plan integrated with the Graduate School of the University, it is now possible to complete the master of arts degree on the Duluth Campus with majors in education and in curriculum and instruction. The master of arts program is designed especially to serve elementary school teachers and principals, secondary school teachers, and rural teachers. The master of arts program will be implemented with a wide selection of courses especially for summer students.



The Science building is one of six new facilities on UMD's beautiful 196-acre upper campus overlooking Lake Superior

Clinic and classroom experiences with children are available on the UMD campus in summer.



The master of arts program at Duluth is on the B plan, and involves course work without thesis or language requirement. Oral and written tests and approval of the student's program are administered by committees appointed by the Graduate School. Complete details of Plan B requirements may be found in the current *Bulletin of the Graduate School*.

Students who wish graduate credit must apply for admission to the Graduate School, 316 Johnston Hall, University of Minnesota, Minneapolis 14, at least four weeks in advance of the term they wish to enter. (See section on Graduate School)

**BACHELOR OF
SCIENCE PROGRAM**

Teachers wishing to complete requirements for the bachelor of science degree will find a wide selection of undergraduate courses both in professional education and in fields related to their specific teaching interests. The summer schedule of courses is especially helpful to in-service teachers who cannot pursue bachelor of science studies during the regular year. Bachelor of arts graduates interested in teaching also will find it convenient to take summer courses toward the bachelor of science degree.

**STUDIES IN RURAL
EDUCATION**

Continuing its tradition of offering special work in the field of rural education, UMD will present a group of courses which will be of specific value to rural teachers and administrators. Emphasis will be placed upon the problems of organizing rural

community programs and the development of rural schools in the light of the best current practices. Ample opportunity will be available for students to explore specific problems arising in their own localities and to seek answers with sympathetic fellow students and colleagues. For details: Division of Education and Psychology, University of Minnesota, Duluth Branch, Duluth 5.

**WORKSHOP IN
ADVANCED
PAINTING**

A vital force in contemporary art, Dong Kingman, noted American watercolorist, will be the guest artist for the eighth annual workshop in advanced painting during the second summer term. Kingman thus extends an impressive tradition. His UMD workshop predecessors include Charles Burchfield, the late Yasuo Kuniyoshi, Max Weber, Arnold Blanch, Millard Sheets, Fletcher Martin, and Philip Evergood. Hundreds of American and Canadian art students have enjoyed stimulating instruction in the invigorating atmosphere of UMD's Lakeshore Studio overlooking beautiful Lake Superior. Kingman, who recently returned from a six-month mission in the Far East as a State Department cultural emissary, has taught in many art schools, including Columbia, where he is now teaching. A former Guggenheim foundation fellow, Kingman has watercolors among permanent collections in many private and public museums, including the Metropolitan, the Museum of Modern Art, and the Art Institute of Chicago. For details: Humanities Division, University of Minnesota, Duluth Branch, Duluth 5.

**ACCOUNTING
AND
STATISTICS**

Elementary courses in accounting and statistics have been arranged in an integrated manner over the first and second summer terms in a pattern convenient for students who wish to concentrate in these fields of study.

**AMERICAN
SOUTHEAST
TOUR**

This is the third in the series of tours sponsored by the Social Studies Division. Previous tours were to the Far West and to New England. The 1956 tour will include Washington, D. C., Florida, Cuba, New Orleans, and intermediate points of historical interest. Lectures at universities enroute will enrich the

student's depth of understanding of the history and social organization of the areas included in the tour. For details: Social Studies Division, University of Minnesota, Duluth Branch, Duluth 5.

**AUDIO-VISUAL
EDUCATION**

For increased competence in this area, teachers and audio-visual workers may be interested in two graduate courses—Audio-Visual Materials in Education and Audio-Visual Materials and Equipment Laboratory. In the former course, emphasis will be on characteristics, advantages, limitations, and practical schoolroom use of visual materials both non-projection and projection; the student will receive practice in operation of equipment. In the latter course, designed for the advanced student, motion picture production techniques, photography techniques, three-dimensional materials, sound recordings, slide-making, new visual devices and duplication processes will be included. (The course is being offered to help meet an increasing demand for such study at a number of American colleges and universities.) Enrollment in these courses is limited. Persons interested may write to the Division of Education and Psychology to make a reservation.

**SPEECH AND
HEARING CLINIC**

Opportunity is provided for observation at the fourth annual clinic for children with speech and hearing disorders, held June 18 to August 10. Supervised clinical experience with university credit may also be attained, based upon teaching experience and course background. Those interested in such an experience may obtain details from the clinic director.

RECREATION

The Duluth Campus and the community in which it is located are rich in a variety of cultural and recreational activities which the UMD summer students will find a welcome supplement to their summer program. Thousands of vacationers find Duluth's climate and recreational resources healthful and relaxing. On the UMD special events calendar are numerous stimulating convocations and films, picnics, outings to points of industrial or

scenic interest, boat excursions on Lake Superior, faculty-student sports events and other activities. Boating, fishing, golfing, tennis, picnicking—all are within a few minutes' drive of the campus.

**FACILITIES OF
SPECIAL INTEREST**

UMD's Darling Observatory, located at 910 West Third Street, is one of the Duluth Campus' most popular summer facilities. Once each month the observatory is opened for lectures and observation with the nine-inch refractor.



Darling Observatory and its curator, Frank Halstead, offer one of the most popular attractions on the UMD Summer Session special events calendar.

On UMD's upper campus, new buildings offer exceptional facilities for study, research, and recreation. Recently completed buildings are a \$700,000 library and a \$1,300,000 student service center and dormitory. Completing the upper campus are the health and physical education building with an official inter-collegiate pool; the science group with a 400-seat lecture auditorium; and an Air Force ROTC building. On the lower campus are cafeteria, dormitory, student lounge, administrative offices, and classrooms.



List of Courses

LIST OF COURSES

THE FOLLOWING LIST of courses may be somewhat revised and amplified in the complete bulletin to meet the changing trend in enrollment. The University of Minnesota reserves the right to cancel courses when competent teaching staff is unavailable.

The number of credits given for each course follows the title of the course in parentheses. Courses 1 to 49 carry credit in the Junior College; courses 50 to 99 carry credit in the Senior College; courses 100 to 199 carry Senior College credit and graduate credit for those registered in the Graduate School; courses 200 and above are open only to those registered in the Graduate School.

INSTITUTE OF AGRICULTURE

COLLEGE OF AGRICULTURE, FORESTRY, AND HOME ECONOMICS

Agricultural Biochemistry

First Term	203	Research Problems (2-5)	Staff
Second Term	203	Research Problems (2-5)	Staff

Agricultural Economics

First Term	180	Farm Accounting (3)	Engene
	200	General Seminar in Agricultural Economics (3)	Staff
Second Term	201	General Seminar in Agricultural Economics (3)	Staff

Agricultural Education

See courses listed under the College of Education.

Agricultural Engineering

First Term	130	Farm Shop Management (3)	Henderson
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Agronomy and Plant Genetics

First Term	201	Research in Farm Crops (3-9)	Dunham, Schmid
	241	Research in Plant Genetics (3-9)	Myers, Burnham, Rinke, Thomas, Lambert
	244	Laboratory Methods in Plant Breeding (1½)	Staff
Second Term	201	Research in Farm Crops (3-9)	Dunham, Schmid
	241	Research in Plant Genetics (3-9)	Myers, Burnham, Rinke, Thomas, Lambert
	244	Laboratory Methods in Plant Breeding (1½)	Staff

Animal Husbandry

First Term	213	Research in Animal Husbandry (3-5)	Ferrin, Hanson, Harvey, Winters
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Second Term	213	Research in Animal Husbandry (3-5)	Ferrin, Hanson, Harvey, Winters
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Dairy Husbandry

First and Second Terms	208	Research in Dairy Production (ar.)	Petersen, Williams, Clifton, Graham
	209	Research in Dairy Manufacturing (ar.)	Combs, Coulter, Thomas, Morris
	215	Research in Dairy Bacteriology (ar.)	Olson, Jezeski
		Previous graduate study at the University of Minnesota required.	

Entomology and Economic Zoology

First Term **	197	Introduction to Research (2 or more)	Staff
	204	Research in Entomology (3 or more)	Staff
Second Term ††	197	Introduction to Research (2 or more)	Staff
	204	Research in Entomology (3 or more)	Staff

Forestry

Graduate courses will be shown in the complete Summer Session Bulletin. Students interested at this time should write to the School of Forestry.

Second Term	<i>(Offered at Lake Itasca)</i>		
	Open to students registered in forestry in the University, or who have had one year in a junior college or other college and plan to register in forestry.		
	2	Important Forest Plants (2)	Rees
	5	Field Forest Ecology (2)	Hansen
	6	Field Measurements (2)	Brown
	Ent.13	Field Zoology (2)	Krogstad
	Soil.3A	Field Forest Soils (1)	Arncman

Home Economics

First Term	F.L.15	The Home and Its Furnishings (3)	Myren
	27	Related Art Problems (3)	Esteros
	34	Nutrition Problems (4)	Peterson
	49	Household Equipment (3)	Stulberg
	53	Advanced Clothing (3)	Ar.
	71	Demonstrations (1)	Trammell
	86	Home Management Laboratory (4)	Jeary, Stephens
	115	Economic and Social Aspects of Clothing (3)	Ar.
	119	Cultural Resources of the Twin Cities (2-3)	Esteros
	139	Advances in the Management and Preparation of Food (3)	Trammell
	180	Home Planning and Furnishing (5)	Myren
	184	Home Management Principles (3)	Jeary
	185	Family Relationships (3)	Gallagher
	295	Home Economics Problems (1-5)	Leichsenring, Noble, Esteros
Second Term	86	Home Management Laboratory (4)	Segolson
	295	Home Economics Problems (1-5)	Pilcher

** For entomology and economic zoology courses given at Lake Itasca Biological Station, see index.

†† See Forestry for other course offerings.

Home Economics Education

See courses listed under College of Education.

Horticulture

First Term	190-191-192	Special Problems in Horticulture (2-4)	Staff
	247	Report on Special Horticultural Topics (9 or less)	Staff
	249	Research in Horticultural Crop Breeding (9 or less)	Currence, Krantz, Hutchins, Wilcox
Second Term	190-191-192	Special Problems in Horticulture (2-4)	Staff
	247	Report on Special Horticultural Topics (9 or less)	Staff
	249	Research in Horticultural Crop Breeding (9 or less)	Currence, Krantz, Hutchins, Wilcox

Plant Pathology and Botany **

First and Second Terms	206	Research in Plant Pathology (ar.)	J. J. Christensen, Eide, Hart, C. M. Christensen, Dossdall, Kernkamp, King, DeVay, French, Kommedahl
	210	Special Problems in Mycology (ar.)	J. J. Christensen, C. M. Christensen, Dossdall
	257	Research Problems in Applied Plant Physiology (ar.)	Landon, DeVay
	263	Research Problems in Agricultural Botany (ar.)	J. J. Christensen, Kommedahl

Poultry Husbandry

First and Second Terms	214	Research in Poultry Husbandry (ar.)	Johnson and staff
	215	Research in Poultry Nutrition (ar.)	Johnson
	216	Research in Poultry Breeding (ar.)	Shoffner
	218	Research in Poultry Products (ar.)	Swanson

Rhetoric

First Term	22	Public Speaking (3)	Nichols
	47	Efficient Reading (4 sec.) (3)	Mondale, Wright
	51	Exposition (3)	Nichols
Second Term	22	Public Speaking (3)	Drake
	47	Efficient Reading (4 sec.) (3)	Seymour, Wright

Soils

First and Second Terms	202 ††	Research Problems in Soils (2-5)	Martin, Burson, Caldwell, MacGregor, Schmidt, Arneman, Blake
	Second Term †† 3A	Field Forest Soils (1)	Arneman

** For plant pathology and botany courses given at Lake Itasca Biological Station, see index.

†† Offered only at Lake Itasca.

‡‡ Before registering, students must have approval of instructor in charge.

SCHOOL OF VETERINARY MEDICINE

First and Second Terms	128§§	Problems in Veterinary Bacteriology and Public Health (ar.).....	Pomeroy and staff
	130††	Problems in Animal Physiology (ar.).....	Sellers
	157‡‡	Veterinary Post-mortem Pathology (ar.).....	Sautter, Kernkamp
	158‡‡	Veterinary Surgical Pathology (ar.).....	Sautter, Kernkamp
	191**	Special Studies in Veterinary Anatomy (ar.).....	Kitchell, Weber
	201‡‡	Advanced Animal and Poultry Pathology (ar.).....	Sautter, Fenstermacher, and staff
	205§§	Advanced Veterinary Bacteriology (ar.).....	Pomeroy, Fenstermacher, and staff
	210†††	Advanced Veterinary Surgery and Radiology (ar.).....	Spurrell
	220†††	Advanced Veterinary Surgery (ar.).....	Arnold

BIOLOGICAL STATION

First Term

Botany

112	Aquatic Flowering Plants (4).....	Ogden
116	Summer Flora of Minnesota (4).....	Ogden
135	Ecology of the Itasca Region (4).....	Bray
138	Analysis of Vegetation (4).....	Bray
155	Fresh-water Algae (4).....	Norris
196	Problems (1-5).....	Staff
208	Research Problems in Taxonomy (1-5).....	Ogden
224	Research Problems in Ecology (1-5).....	Bray
236	Research Problems in Cryptogams (1-5).....	Norris

Entomology and Economic Zoology

59	Field Entomology (4).....	Peterson
124	Biology of Immature Insects (4).....	Peterson
162	Ecology of Terrestrial Vertebrates (4).....	Marshall
196	Special Problems in Entomology and Economic Zoology (ar.).....	Marshall, Peterson

Plant Pathology and Botany

56	Introduction to the Study of Fungi (4).....	C. M. Christensen
156	Advanced Study of Fungi (4).....	C. M. Christensen
210	Special Problems in Mycology (ar.).....	C. M. Christensen

Zoology

55	Natural History of Invertebrates and Fishes (4).....	Eddy
115	Advanced Natural History of Invertebrates and Fishes (4).....	Eddy

** Veterinary Anatomy.

†† Veterinary Physiology and Pharmacology.

‡‡ Veterinary Pathology and Parasitology.

§§ Veterinary Bacteriology and Public Health.

††† Veterinary Surgery and Radiology.

119	Limnology (4)	Eddy
135	Advanced Ornithology (4)	Emlen
197	Problems in Ornithology, Ecology, and Limnology (ar.)	Eddy, Emlen

SCHOOL OF BUSINESS ADMINISTRATION (including ECONOMICS)

First Term	Econ.3	Elements of Money and Banking (3)	Ar.
	Econ.5	Elements of Statistics (3)	Neter
	Econ.6	Principles of Economics (3)	Scott, Coen
	Econ.24	Principles of Accounting (3)	Nightingale
	Econ.26	Principles of Accounting (3)	Nelson
	Econ.50	Insurance Principles (3)	Williams
	B.A.51	Business Law: Contracts (3)	Wright
	B.A.54	Elementary Accounting (combined course) (4)	Lund
	B.A.58	Elements of Public Finance (3)	Borak
	B.A.66	Managerial Costs (3)	Meyers
	B.A.71	Transportation: Services and Charges I (3)	Nightingale
	Econ.73	Manpower Economics and Labor Problems (3)	Ar.
	B.A.74	Business Statistics A (3)	Neter
	Econ.75	Corporation Finance (3)	Borak
	Econ.81	Intermediate Economic Analysis: Firms and Households (3)	Chipman
	B.A.89	Production Management (3)	Wickesberg
	Econ.107	Insurable Risks and Insurance (3)	Williams
	B.A.112	Time Series Analysis and Quality Control (3)	Neter
	B.A.114	Retail Store Management (3)	Werner
	B.A.116	Property and Liability Insurance I (3)	Williams
	Econ.124	Theory of Employment, National Income, and Price Level I (3)	Chipman
	B.A.130	Managerial Cost Accounting (3)	Meyers
	Econ.144	Economic Analysis: Firms and Households (3)	Chipman
	Econ.149	Business Cycles (3)	Scott
	B.A.150	Intermediate Accounting I (3)	Lund
	B.A.152	Cost Accounting (3)	Meyers
	Econ.155	The Modern Corporation (3)	Borak
	B.A.159	Advanced Accounting (3)	Nelson
	B.A.160	Readings in Business Administration (ar.)	Staff
	Econ.160	Readings in Economics (ar.)	Staff
	Econ.161	General Manpower Economics and Labor Problems (3)	Ar.
	Econ.163	Union Government and Policies (3)	Troxezz
	Econ.165	Current Trends in Industrial Relations (1)	Staff
	Econ.169	Labor Legislation: Economic Security (3)	Troxezz
	Econ.172	Economics of Transportation (3)	Nightingale
	Econ.176	Introduction to International Economics (3)	Coen
	B.A.184	Scientific Management in Industry (3)	Wickesberg
	B.A.187	Administration of Production (3)	Wickesberg
	Econ.189	Principles of Public Finance (3)	Borak
	Econ.251	Seminar in Industrial Relations (3)	Yoder
B.A.299	Graduate Research in Business Administration (ar.)	Staff	
Econ.299	Graduate Research in Economics (ar.)	Staff	
Second Term	Econ.7	Principles of Economics (3)	Ar.
	Econ.25	Principles of Accounting (3)	Reighard and ar.
	B.A.55	Elementary Accounting (combined course) (4)	Eaton

Econ.64	Economics of Money and Banking (3)	Smith
B.A.65	Analysis of Financial Statements (3)	Reighard
Econ.73	Manpower Economics and Labor Problems (3)	Mahoney
B.A.77	Survey in Marketing (3)	Lewis
Econ.80	Intermediate Economic Analysis: Income and Employment (3)	Ar.
Econ.85	Government Regulation of Business (3)	Buttrick
Econ.103	Advanced Price Theory (3)	Boddy
B.A.113	Sales Management (3)	Lewis
Econ.125	Theory of Employment, National Income and Price Level II (3)	Buttrick
Econ.129	Current Economic Issues (3)	Smith
B.A.139	Corporate Statements (3)	Reighard
Econ.142	Monetary and Banking Policy (3)	Smith
Econ.143	Economic Analysis: Income and Employment (3)	Ar.
B.A.146	Investments (3)	Matthews
B.A.151	Intermediate Accounting II (3)	Matthews
B.A.153	Cost Accounting (3)	Eaton
B.A.156	Finance Management (3)	Ar.
B.A.160	Readings in Business Administration (ar.)	Staff
Econ.160	Readings in Economics (ar.)	Staff
Econ.161	General Manpower Economics and Labor Problems (3)	Ar.
B.A.167	Introduction to Industrial Relations (3)	Seltzer
B.A.168	Advanced Personnel Administration (3)	Heneman
Econ.175	Government Regulation of Market Behavior (3)	Buttrick
B.A.180D	Senior Topics: Industrial Relations (3)	Seltzer
Econ.185	Economics of Marketing (3)	Lewis
B.A.299	Graduate Research in Business Administration (ar.)	Staff
Econ.299	Graduate Research in Economics (ar.)	Staff

INSTITUTE OF CHILD WELFARE

First Term	80	Child Psychology (3)	Ar.
	130	Motor, Linguistic, and Intellectual Development of the Child (3)	Ar.
	140	Behavior Problems (3)	Cummings
	150	Childhood Education (3)	Helgerson
	170	Parent Education (3)	Cummings
	270	Readings and Research in Child Development (3)	Staff

See also Ed.C.I. 162 and 163, listed under Curriculum and Instruction, and Ed.T. 77 and 78, under Methods and Student Teaching, College of Education.

Second Term	131	Personality, Emotional and Social Development of the Child (3)	Templin
	132	Later Childhood and Adolescence (3)	Bassham
	140	Behavior Problems (3)	Bassham
	142	Psychology of Atypical Children (3)	Templin
	270	Readings and Research in Child Development (3)	Staff

For information regarding the Workshop in School Psychology see Special Programs.

SCHOOL OF DENTISTRY

See index.

COLLEGE OF EDUCATION

Agricultural Education

First Term	82	Teaching Agriculture in the Secondary School (4)	Kitts
	124	Teaching Units in Livestock Breeding (3)	Swanson
	154	Rural Education and Community Leadership (3)	Swanson
	171	Teaching Procedures in Agriculture (3)	Granger
	221	Field Problems (3)	Peterson, Kitts, Swanson
	232	Research in Agricultural Education (3-9)	Peterson, Kitts, Swanson
Second Term	91	Supervised Teaching Experience (6)	Kitts, Swanson
	221	Field Problems (3)	Peterson, Kitts, Swanson
	232	Research in Agricultural Education (3-9)	Peterson, Kitts, Swanson

Art Education

First Term	17	Pictorial Expression for Elementary Education (3)	Bratlee
	18	Design Activities for Elementary Education (3)	Hastie
	19	Functional Arts and Crafts in Elementary Education (3)	Bratlee
	158	Art Education in Europe (3)	Gayne
	184	Improving Art Programs in the Elementary School (3)	Gayne
	189	Application of Aesthetic Theory in Education (3)	Hastie
	295	Problems in Art Education (ar.)	Gayne, Hastie
	296	Seminar in Art Education (1)	Staff
Second Term	17	Pictorial Expression for Elementary Education (3)	Wold
	18	Design Activities for Elementary Education (3)	Wold
	184	Improving Art Programs in the Elementary School (3)	Gayne
	295	Problems in Art Education (ar.)	Gayne
	296	Seminar in Art Education (1)	Staff

See also Department of Art, College of Science, Literature, and the Arts.

Educational Administration

First Term	General Courses		
	117	Schools in Rural Areas (3)	Archer
	124	Public School Administration (3)	Wakefield
	210	Financial Aspects of Public School Business Administration (3)	Prentis
	225	Pupil Personnel Administration (3)	Lane
	226	School Plant Planning and Management (3)	Prentis
	227	Teacher and Employee Administration (3)	Lane
	228	Special Problems in Educational Administration (1-3)	Lane, Prentis, Wakefield
	230	Public Relations for Schools (3)	Wakefield
	236	Field Study in Educational Administration (0-10)	Domian

Elementary Education

115	Administration of the Elementary School (3)	Curtin
118	The Community School (3)	Archer

Secondary Education

167	The Junior High School (3)	Cramer
218	Recent Literature in Secondary Education (ar.)	R. Keller, Mitchell

264	Administration of Instructional Activities in the Secondary School (3).....	Ar.
265	Administration of the Noninstructional Activities in the Secondary School (3).....	Mitchell
270	Special Problems in Secondary Education (ar.).....	Bossing, R. Keller, Mitchell

Higher Education

274	The Junior College (3).....	R. Keller
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Second Term General Courses

124	Public School Administration (3).....	Wakefield
210	Financial Aspects of Public School Business Administration (3).....	Prentis
225	Pupil Personnel Administration (3).....	Lane
226	School Plant Planning and Management (3).....	Prentis
227	Teacher and Employee Administration (3).....	Lane
228	Special Problems in Educational Administration (1-3).....	Lane, Prentis, Wakefield
230	Public Relations for Schools (3).....	Wakefield
236	Field Study in Educational Administration (0-10).....	Domian

Elementary Education

115	Administration of the Elementary School (3).....	Curtin
200	Seminar in Elementary School Administration (3).....	Archer, Goossen, Curtin, Ruddled

Secondary Education

218	Recent Literature in Secondary Education (ar.).....	R. Keller, Mitchell
263	Organization of the Secondary School (3).....	Abel
264	Administration of Instructional Activities in the Secondary School (3).....	Mitchell
270	Special Problems in Secondary Education (ar.).....	Bossing, R. Keller, Mitchell

Curriculum and Instruction

First Term General Courses

101	Driver Education (June 18-29) (2).....	Neal and ar.
105	Audio-Visual Materials in Education (3).....	Pearson
106	Co-ordinating an Audio-Visual Education Program (3).....	Pearson
145	Reading Difficulties (3).....	Bond
151	Diagnosis and Treatment of Learning Difficulties (3).....	Clymer
171	Curriculum Laboratory Practice (3).....	Bossing
174-175-176	Clinical Methods and Practice in Speech Pathology (3 each).....	Bryngelson
178	Educational and Social Implications of Visual Impairment (3).....	Abel and ar.
179	Principles and Methods of Teaching Braille (Sec. 1, for beginners; Sec. 2, for those with working knowledge of the Braille system) (3).....	Kenmore, Petrucci
180	Workshop: Educational Procedures and School Curriculum Adaptation with Blind Children (3).....	Abel and ar.
205	Problems in Audio-Visual Education (ar.).....	Pearson

227	Problems in Rural Education (ar.).....	Archer
243	Recent Research in Reading (3).....	Bond, Clymer
271	Problems in Curriculum Construction (ar.).....	Archer, Bossing, Boeck, Goossen, D. Johnson, Curtin, Ruddell
273	Problems in Reading (ar.).....	Bond, Clymer

Elementary Education

60	The Teaching of Reading in the Elementary School (3).....	Odland
61	The Teaching of the Social Studies in the Elementary School (3).....	Schwab
62B	The Teaching of Arithmetic in the Intermediate Grades (3).....	Ruddell
102	Teaching the Social Studies in the Elementary School (3).....	Schwab
103	Teaching of Science in the Elementary School (3).....	Boeck
119	Elementary School Curriculum (2 sec.) (3).....	Jarolinck
121	Selecting Literature for the Elementary School (3).....	D. V. Smith
123	Speech in the Elementary School (3).....	Henrikson
143	Teaching and Supervision of Reading in the Elementary School (3).....	Odland
149	Teaching and Supervision of Arithmetic in the Elementary School (3).....	Ruddell
150	Supervision and Improvement of Instruction (2 sec.) (3).....	Goossen
153	Supervision and Teaching of English in the Elementary School (3).....	Chase
162	Laboratory in Nursery School and Kindergarten Instructional Practices (3).....	Headley
163	Plastic Materials, Story Telling, and Social Studies for Young Children (3).....	Headley
186	Laboratory in Elementary Instructional Practices (2).....	Jensen
240	Improvement of Instruction in the Elementary School (4).....	Curtin, Cramer
261	Special Problems in the Improvement of Instruction (ar.).....	Goossen, Curtin, Ruddell

Secondary Education

113	High School Curriculum (3).....	Bossing
114	Development of the Core Curriculum (3).....	Bossing
125	Occupational Information Laboratory (3).....	White
131	Advanced Course in Teaching the Technical Business Subjects (3).....	Price
135	Group Procedures in Guidance (3).....	Borow
137A	Materials and Methods in Co-operative Part-Time Classes (3).....	Meyer
139	Co-ordination Techniques (3).....	Meyer
140	Teaching of Speech (3).....	D. K. Smith
144	Teaching of Reading in Secondary Schools (3).....	Chase
147	Workshop in Teaching Display (June 18-29) (2).....	E. Nelson
155	Materials Laboratory for Social Studies Teachers (3).....	McCune
156	Trends in Business Education (3).....	Price
158	Materials and Methods in Office and Clerical Practice (3).....	Ar.
187A	The Teaching of the Analysis of the French Language (2).....	Falk

187B	The Teaching of the Analysis of the German Language (2)	Menze
187C	The Teaching of the Analysis of the Latin Language (3)	Bock
192	Mathematics Laboratory (3)	D. Johnson
199E	Internship (ar.)	Fitzgerald
201	Problems in Teaching the Social Studies (ar.)	McCune
225	Special Problems in Supervision of Instruction in Secondary Schools (ar.)	R. Keller
238	Problems in Distributive Education (ar.)	Meyer
239	Problems in Business Education (ar.)	Price
266	Supervision of High School Instruction (3)	Ar.
287	Advanced Course in the Teaching of Science (3)	Boeck
294	Advanced Course in Curriculum and Methods in Secondary School English (3)	D. V. Smith
296	Special Problems in Teaching English (ar.)	D. V. Smith

Higher Education

228	Workshop: Problems of Higher Education and Teacher Education (June 11-July 6) (6)	Cooper, Eckert, Corcoran, McKeefery, and consultants
250	Higher Education in the United States (3)	Eckert
252	Effective College Teaching (3)	McCune

Second Term *General Courses*

101	Driver Education (July 30-August 10) (2)	Neal and ar.
105	Audio-Visual Materials in Education (3)	Pearson
109	Audio-Visual Materials and Equipment Laboratory (3)	Pearson
133	Consumer Education in the Schools (3)	Price
145	Reading Difficulties (3)	Tinker
171	Curriculum Laboratory Practice (3)	Bossing
174-175-176	Clinical Methods and Practice in Speech Pathology (3 each)	Bryngelson
205	Problems in Audio-Visual Education (ar.)	Pearson
227	Problems in Rural Education (ar.)	Archer
271	Problems in Curriculum Construction (ar.)	Archer, Bossing, Boeck, Goossen, D. Johnson, Curtin, Ruddell
273	Problems in Reading (ar.)	Tinker, Reynolds, Clymer

Elementary Education

102	Teaching the Social Studies in the Elementary School (3)	Jarolimek
103	Teaching of Science in the Elementary School (3)	Boeck
119	Elementary School Curriculum (3)	Jarolimek
121	Selecting Literature for the Elementary School (3)	Odland
143	Teaching and Supervision of Reading in the Elementary School (3)	Clymer
146	Current Developments in Language Expression in the Elementary School (3)	Archer
149	Teaching and Supervision of Arithmetic in the Elementary School (3)	Ruddell
150	Supervision and Improvement of Instruction (3)	Goossen
261	Special Problems in the Improvement of Instruction (ar.)	Goossen, Curtin, Ruddell

Secondary Education

113	High School Curriculum (3)	Bossing
122	Literature for Adolescents (3)	Kegler
125	Occupational Information Laboratory (3)	White
135	Group Procedures in Guidance (3)	Borow
136	Organization and Administration of Distributive Education (3)	Meyer
141	Co-operative Part-Time Work Experience Programs (3)	Meyer
144	Teaching of Reading in Secondary Schools (3)	Tinker
161	Curriculum Construction in Business Education (3)	Price
168	Current Developments in the Social Studies (3)	McCune
170B	Curriculum and Course of Study Construction (3)	Bossing
199E	Internship (ar.)	Fitzgerald
201	Problems in Teaching the Social Studies (ar.)	McCune
225	Special Problems in Supervision of Instruction in Secondary Schools (ar.)	R. Keller
238	Problems in Distributive Education (ar.)	Meyer
239	Problems in Business Education (ar.)	Price
266	Supervision of High School Instruction (3)	Abel

Higher Education

228	Workshop: Problems of Higher Education and Teacher Education (July 23-August 17) (6)	Grim, Boeck, Mork, Allen, and consultants
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EDUCATIONAL PSYCHOLOGY

First Term

General Courses

60	Introduction to Measurement and Statistics (3)	Collier
110	Measurement in the Classroom (3)	D. Johnson
116	Introduction to Statistical Methods in Education (3)	Collier
116a	Introduction to Statistical Methods in Education—Laboratory (2)	MacEachern
125	Group Dynamics in Education (3)	Flanders
140	Instruments and Techniques of Measurement (3)	Edson
150	Clinical Practice in Remedial Teaching (3)	Reynolds, Clymer
151	Clinical Practice in Educational Diagnosis (3)	Reynolds, Balow
159	Personality Development and Mental Hygiene (3)	Swan
184	Education of the Slow-Learning Child (3)	Reynolds
193	Psychology of Human Learning (3)	Mork
208	Methods in Educational Research (3)	P. O. Johnson
216	Statistical Methods in Education (3)	P. O. Johnson
216a	Statistical Methods in Education—Laboratory (2)	MacEachern
233	Problems in Guidance and Personnel Work (ar.)	Dugan, Borow, Edson
253	Research Problems (ar.)	Dugan, P. O. Johnson, Edson, Flanders, Mork, Reynolds
290	Individual Differences (3)	Flanders
293	Psychology of Learning (3)	Mork

Secondary Education

133	Basic Procedures in Student Personnel Work (2 sec.) (3)	Borow, White
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134	School Counseling Procedures (3).....	Dugan
282	Practice in High School Personnel Work (3).....	Swan

Second Term General Courses

110	Measurement in the Classroom (2 sec.) (3).....	D. Johnson
116	Introduction to Statistical Methods in Education (3).....	Stecklein
116a	Introduction to Statistical Methods in Education—Laboratory (2)	MacEachern
117	Basic Principles of Measurement (3).....	Collier
150	Clinical Practice in Remedial Teaching (3).....	Reynolds, Clyner
151	Clinical Practice in Educational Diagnosis (3).....	Reynolds, Balow
152	Introduction to School Psychological Services (3).....	Gray
153	Seminar and Laboratory in School Psychological Services (3)	Gray
159	Personality Development and Mental Hygiene (3).....	Jones
182	Education of Exceptional Children (3).....	Reynolds
193	Psychology of Human Learning (3).....	Mork
217	Statistical Methods in Education (3).....	Collier
217a	Statistical Methods in Education—Laboratory (2).....	MacEachern
233	Problems in Guidance and Personnel Work (ar.).....	Dugan, Borow
253	Research Problems (ar.)	Dugan, Mork, Reynolds

Secondary Education

133	Basic Procedures in Student Personnel Work (3).....	White
134	School Counseling Procedures (3).....	Dugan

General Education

First Term	Ed.75A	Introduction to Elementary School Teaching (5).....	Balow
Second Term	Ed.75B	Introduction to Elementary School Teaching (5).....	Balow

History and Philosophy of Education

First Term	110	Intercultural Education (3).....	Kosaki
	141	Critical Issues in Contemporary Education (3).....	Clopton
	156	History of Ideas in American Education (3).....	Clopton
	180	The School and Society (2 sec.) (3).....	Dupuis
	241	Problems in the History and Philosophy of Education (ar.)	Clopton, Dupuis
Second Term	131	Comparative Education (3).....	Beck
	180	The School and Society (2 sec.) (3).....	Beck, Atherton
	241	Problems in the History and Philosophy of Education (ar.).....	Beck

Home Economics Education

First Term	191	Advanced Course in the Teaching of Home Economics (3).....	Ar.
	193A	Home Economics Curriculum (Secondary Level) (3).....	Ar.
	243	Trends in Home Economics (3).....	Rose
	293	Problems in Home Economics Education (1-9).....	Rose
Second Term	192	Evaluation in Home Economics (3).....	Ford
	293	Problems in Home Economics Education (1-9).....	Ford

Industrial Education

First Term	101	Tests in Industrial Subjects (3).....	Kavanaugh
	106	Industrial Education Workshop—Industrial Arts in the Junior High School (3-6).....	H. Nelson, Kavanaugh
	107	Co-ordination (3).....	Widdowson
	109	Conference Leading for Industry (3).....	Widdowson
	200	Research Problems (3-6-9).....	Micheels, H. Nelson, Kavanaugh
Second Term	251	Research in Industrial Education (3).....	Micheels
	103	Instructional Aids (3).....	Kavanaugh
	110	Vocational Guidance (3).....	H. Nelson
	200	Research Problems (3-6-9).....	H. Nelson, Kavanaugh

Methods and Student Teaching

First Term *Nursing Education*

Ed.T.51A	The Teaching of Nursing (2).....	Norris, Dunning
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Elementary Education

Ed.T.77	Student Teaching in the Nursery School (3).....	Helgerson
Ed.T.78	Student Teaching in the Kindergarten (3).....	Helgerson

Secondary Education

Ed.T.52	Student Teaching (ar.).....	Grim
Ed.T.84A-B-C	Practice and Field Work in Recreation Leadership (2).....	Fitzgerald
Ed.T.85A-B-C	Practice and Field Work in Recreation (1 or 2).....	Fitzgerald

Second Term *Nursing Education*

Ed.T.51A	The Teaching of Nursing (2).....	Norris, Dunning
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Secondary Education

Ed.T.84A-B-C	Practice and Field Work in Recreation Leadership (2).....	Fitzgerald
Ed.T.85A-B-C	Practice and Field Work in Recreation (1 or 2).....	Fitzgerald

Music Education

First Term	51	Teaching of Music (3).....	C. Nelson
	52	Teaching of Music (3).....	C. Nelson
	60-61-62	Supervision and Teaching of Music (3).....	Ivory
	104	Advanced Topics in Vocal Music Education (3).....	Caswell
	105	Advanced Topics in Instrumental Music Education (3).....	Ivory
	160	Organization and Supervision of Vocal-Instrumental Music in Secondary Schools (3).....	Ivory, Caswell
	224	Research Problems (3-9).....	Ivory, Caswell
	225E	Advanced Applied Music (2-4).....	Ar.
Second Term	51	Teaching of Music (3).....	Caswell
	52	Teaching of Music (3).....	Ivory
	170	Recent Research and Literature (3).....	Ivory, Caswell
	224	Research Problems (3-9).....	Ivory, Caswell
	225E	Advanced Applied Music (2-4).....	Ar.

See also Department of Music, College of Science, Literature, and the Arts.

Physical Education for Men

First Term	1A	Beginning Golf (1)	Bolstad
	1B	Intermediate Golf (1)	Bolstad
	1C	Beginning Swimming (1)	Piper
	5A	Touch Football, Calisthenics, Tactics (1)	Shawbold
	5B	Gymnastics (1)	Shawbold
	5C	Stunts, Contests, Softball, Baseball (1)	Shawbold
	9A	Fundamental Rhythms, Folk Dance (1)	Piper
	9B	Square and Ballroom Dance (1)	Piper
	50	Human Anatomy (3)	Osell
	73-74-75	Directed Teaching (2)	Piper
	101	Principles of Physical Education (3)	Keller
	135	Tests and Measurements in Physical Education (3)	Keller
	224	Research Problems in School Health Education, Physical Education and Recreation (ar.)	Graduate Staff
	233	The Administration of Physical Education in Schools (3)	Donnelly
	236	Recent Literature and Research in Physical Education and Recreation (3)	Donnelly
	241	Administration of Public Recreation (3)	Fitzgerald
	Second Term	2A	Intermediate Golf (1)
2B		Intermediate Swimming (1)	Piper
8		Tennis and Golf (1)	Piper
65		Adapted Physical Education (3)	Osell
67		Football Coaching (2)	Warmath and staff
73-74-75		Directed Teaching (2)	Piper
110		Recreation Surveys (3)	Fitzgerald
155		Instructional Aids in Health, Physical Education and Recreation (3)	Piper
224		Research Problems in Health Education, Physical Education and Recreation (ar.)	Graduate staff
234		The Curriculum in Physical Education (3)	Donnelly
261A	Seminar in Contemporary Problems in Physical Education (3)	Donnelly	

Physical Education for Women

First Term	7	Tennis for Beginners (1)	Ar.
	8	Golf for Beginners (1)	Ar.
	10	A Teachers' Course in Fundamentals of Physical Education (1)	Jaeger
	18	Elementary Folk Dancing, Games and Methods (2)	Lampe
	32	Elementary Swimming (1)	Ar.
	37	Individual and Dual Sports and Methods (2)	Jaeger
	81	Posture Education and Functional Exercise (2)	Wilson
	84	Physical Education Program in Elementary and Secondary Schools (3)	Jaeger
	118E	Problems in Teacher Education in Health, Physical Education, and Recreation (ar.)	Graduate staff
	124	Supervision of Physical Education (3)	Baker
	130	Contributions of Basic Sciences to Physical Education (3)	Wilson
	224	Research Problems in Health Education, Physical Education, and Recreation (ar.)	Graduate staff
Second Term	117	Advanced Course in School Health Instruction (3)	Slocum
	118E	Problems in Teacher Education in Health, Physical Education, and Recreation (ar.)	Graduate staff
	224	Research Problems in Health Education, Physical Education, and Recreation (ar.)	Graduate staff

GENERAL COLLEGE

First Term	8A	Applied Mathematics (3)	Rassweiler
	10A	Human Biology: Fundamental Similarities in the Living World (3)	Dearden
	23A	Art Laboratory (3)	Safer
	30A	Invitation to Literature: Western World I (3)	Kivits
	31A	Writing Laboratory: Personal Writing (3)	Draxten
	37	Social Trends and Problems (3)	Stovall
	40B	The Logic of Straight Thinking (3)	McCoy
Second Term	43A	Background of the Modern World (3)	Stovall
	5	Home Life: Marriage and Family Living (3)	Anderson
	10B	Human Biology: How the Living Machinery in Man Works (3)	Dearden
	19A	Problems of Business Transactions (3)	Rassweiler
	31B	Writing Laboratory: Organizing Ideas (3)	Stockdale
	32A	Oral Communication: Basic Principles (3)	Olson
	44B	Current History (3)	F. J. Harris

LAW SCHOOL

First and	Income Taxation (3)	Visiting Professor
Second Terms	Estate and Gift Taxation (3)	Visiting Professor
(combined)	Insurance (3)	McClure
	Family Law (3)	Paulsen
	Conflicts (3)	Paulsen
	Creditors' Remedies (6)	Sovern

COLLEGE OF MEDICAL SCIENCES

MEDICAL SCHOOL

Anatomy

First Term	104	Human Histology (4)	Williams
	111	Human Neurology (6)	Campbell
	156	Advanced Anatomy (ar.)	Graduate staff
	204	Research in Anatomy (ar.)	Graduate staff
Second Term	156	Advanced Anatomy (ar.)	Graduate staff
	204	Research in Anatomy (ar.)	Graduate staff

Anesthesiology

First and	265	General Anesthesia (12)	Van Bergen
Second Terms	266	Regional Anesthesia (4)	Van Bergen
(combined)	267	Pre- and Postoperative Evaluation (2)	Van Bergen
	268	Seminar in Anesthesia (2)	Van Bergen
	269	Research in Anesthesia (ar.)	Van Bergen

Bacteriology and Immunology

First Term	53	General Bacteriology (5)	Johansson
	114	Medical Mycology (3)	Roth
	201	Research (ar.)	Syvertson

Second Term	116	Immunology (4)	Watson
	201	Research (ar.)	Watson

Medicine

First Term	102	Clinical Laboratory Medicine (5)	Evans and staff
	104	Introduction to Internal Medicine (6)	Spink and ar.
	111	Junior Medicine Clerkship (6)	Spink, Tobian
	123	Dermatology and Syphilology (3)	Fisher
	140	Externship in Medicine (3)	Spink
	157	Ward Clinics in Dermatology (ar.)	Fisher
	158	Clinics in Dermatology (ar.)	Fisher
	165	Seminar in Dermatology (ar.)	Fisher
	201	Clinical Medicine (ar.)	Spink, Tobian
	202	Diseases of the Cardiovascular Apparatus (ar.)	Tobian
	203	Research in Medicine (ar.)	Spink, Evans, Schwartz, Tobian
	206	Clinical Conference (1)	Spink, Tobian
	207	Clinical Pathological Conference (1)	Tobian
	226	Clinical Dermatology and Syphilology (ar.)	Fisher
	Second Term	111	Junior Medicine Clerkship (6)
157		Ward Clinics in Dermatology (ar.)	Fisher
158		Clinics in Dermatology (ar.)	Fisher
165		Seminar in Dermatology (ar.)	Fisher
201		Clinical Medicine (ar.)	Hoffbauer
203		Research in Medicine (ar.)	Hoffbauer, Schwartz
206		Clinical Conference (1)	Hoffbauer
207		Clinical Pathological Conference (1)	Hoffbauer
208		Clinical Radiological Conference (1)	Hoffbauer
226	Clinical Dermatology and Syphilology (ar.)	Fisher	

Obstetrics and Gynecology

First Term	201	Advanced Obstetrics and Gynecology, Part I (ar.)	McKelvey, Janda, Kaiser, Prem, and staff
	205	Advanced Obstetrics and Gynecology, Part II (ar.)	McKelvey, Janda, Kaiser, Prem, and staff
	209	Advanced Obstetrics and Gynecology, Part III (ar.)	McKelvey, Janda, Kaiser, Prem, and staff
	216	Research (ar.)	McKelvey, Janda, Kaiser, Prem, and staff
	301	Externship (6)	McKelvey, Janda, Kaiser, Prem, and staff
Second Term	204	Advanced Obstetrics and Gynecology, Part I (ar.)	Janda, Kaiser, Prem, and staff
	208	Advanced Obstetrics and Gynecology, Part II (ar.)	Janda, Kaiser, Prem, and staff
	212	Advanced Obstetrics and Gynecology, Part III (ar.)	Janda, Kaiser, Prem, and staff
	219	Research (ar.)	Janda, Kaiser, Prem, and staff
	302	Externship (6)	Janda, Kaiser, Prem, and staff

Otolaryngology

First and	230	Clinical Otology (3)	Boies and staff
Second Terms	231	Clinical Rhinology and Laryngology (3)	Boies and staff
	232	Surgery of the Ear, Nose, and Throat (3)	Boies and staff

Pathology

First Term	104	Autopsies (ar.)	Dawson, McCartney
	106	Diseases of the Heart (2½)	McCartney
	111	Conference on Autopsies (1)	Dawson
	112	Diagnosis of Tumors (2½)	McCartney
	113	Surgical Pathology (ar.)	McCartney
	201	Research (ar.)	Dawson, McCartney
Second Term	104	Autopsies (ar.)	Dawson, Hebbel
	111	Conference on Autopsies (1)	Dawson
	112	Diagnosis of Tumors (2½)	Hebbel
	113	Surgical Pathology (ar.)	Hebbel
	120	Diseases of the Lungs (1)	Dawson
	121	Diseases of the Alimentary Tract (1)	Hebbel
	201	Research (ar.)	Dawson, Hebbel

Pediatrics

First Term	124	Junior Clinical Clerkship (6)	John Anderson and staff
	152	Fundamental Principles of Nutrition and Metabolism as Applied to Children (1)	John Anderson and staff
	154	Endocrinology as Applied to Pediatrics (1)	John Anderson and staff
	162	Common Behavior Disturbances in Childhood (1)	Jensen, Quast, Engstrom
	170	Rheumatic Infection and Heart Diseases in Childhood (1)	Dwan, Good, R. Anderson, P. Adams
	174A	Dispensary Externship in Pediatrics (4)	John Anderson and staff
	174B	In-Patient Externship in Pediatrics (4½)	John Anderson and staff
	200	Graduate Seminar in Pediatrics (1½)	John Anderson and senior staff
	202	Pediatric Clinic (5)	John Anderson and senior staff
	204	Three-Month Residency in Pediatrics (7)	John Anderson and senior staff
	208	Pediatric Research (ar.)	John Anderson and senior staff
	210	Special Clinics in Pediatrics (1)	Jensen, Dwan, Stoesser
	Second Term	152	Fundamental Principles of Nutrition and Metabolism as Applied to Children (1)
154		Endocrinology as Applied to Pediatrics (1)	John Anderson and staff
162		Common Behavior Disturbances in Childhood (1)	Jensen, Quast, Engstrom
170		Rheumatic Infection and Heart Diseases in Childhood (1)	Dwan, Good, R. Anderson, P. Adams
174A		Dispensary Externship in Pediatrics (4)	John Anderson and staff
174B		In-Patient Externship in Pediatrics (4½)	John Anderson and staff
200		Graduate Seminar in Pediatrics (1½)	John Anderson and senior staff
202		Pediatric Clinic (5)	John Anderson and senior staff
204		Three-Month Residency in Pediatrics (1-7)	John Anderson and senior staff
208		Pediatric Research (ar.)	John Anderson and senior staff
210		Special Clinics in Pediatrics (1)	Jensen, Dwan, Stoesser

Pharmacology

First Term	9	Pharmacology for Nurses (1)	Cranston and assistants
	102	Pharmacology for Medical Students (3)	Bieter, Wright, and staff

	109	Pharmacological Problems (ar.)	Bieter, Wright, Cranston
	110	Toxicology (ar.)	Wright
	203	Research in Pharmacology (ar.)	Bieter, Wright, Cranston
Second Term	9	Pharmacology for Nurses (1)	Ertel
	203	Research in Pharmacology (ar.)	Bieter

Physical Medicine and Rehabilitation

First and	103	Physical Therapy Clinic (ar.)	Kottke, Kubicek
Second Terms	200	Physical Medicine Service (ar.)	Staff
	203	Poliomyelitis Clinic (1)	Kottke and staff
	210	Research in Physical Medicine (ar.)	Kottke, Kubicek

Physiological Chemistry

First Term	100	Physiological Chemistry (7)	Armstrong, Glick, Carr
	153	Problems in Physiological Chemistry (ar.)	Armstrong, Glick, Carr
	205	Research in Physiological Chemistry (ar.)	Armstrong, Glick, Carr
Second Term	101	Physiological Chemistry (6)	Barnum, Van Pilsun, Bollum
	153	Problems in Physiological Chemistry (ar.)	Barnum, Van Pilsun
	205	Research in Physiological Chemistry (ar.)	Barnum, Van Pilsun

Physiology

First Term	4	Human Physiology (4)	McClintock, Thompson
	107	Human Physiology (5)	Visscher, Brown, King
	203	Research in Physiology (ar.)	Visscher, Brown, Johnson, King
Second Term	51	Human Physiology (6)	Ar.
	203	Research in Physiology (ar.)	Ar.

Psychiatry and Neurology

First Term	103	Junior Clinical Clerkship in Psychiatry and Neurology (6)	Hastings, Baker, Hathaway, Glueck
	120	Emotional Growth, Development (1)	Hastings, Glueck
	145	Reading in Psychiatry (ar.)	Hastings, Hathaway, Glueck
	145x	Reading in Neurology (ar.)	Baker
	155	Therapeutics in Neurology (2)	Baker
	208	Clinical Neurology (4)	Baker
	208x	Clinical Psychiatry (12)	Hastings, Hathaway, Glueck
	208y	Clinical Child Psychiatry (12)	Jensen
	209	Research in Psychiatry and Neurology (ar.)	Hastings, Baker, Hathaway, Glueck
	212	Survey of Neuropathology (1)	Staff
	221	Psychometric Clerkship (2)	Hathaway
	226	X-ray Conference (1)	Baker
	228	Research in Neuropathology (ar.)	Staff
	231	Applied Electroencephalography (1)	Staff
	233	Applied Neuropathology (1)	Staff
	243	Prolonged Psychotherapy (1)	Hastings, Hathaway, Glueck
	245	Case Conference for Psychologists (1)	Hathaway
Second Term	145	Reading in Psychiatry (ar.)	Schiele, Kiesler
	145x	Reading in Neurology (ar.)	Brown

152	Externship in Psychiatry (6)	Schiele, Schofield, Kiesler
153	Externship in Neurology (6)	Brown
208	Clinical Neurology (4)	Brown
208x	Clinical Psychiatry (12)	Schiele, Schofield, Kiesler
208y	Clinical Child Psychiatry (12)	Jensen
209	Research in Psychiatry and Neurology (ar.)	Schiele, Schofield, Brown, Kiesler
212	Survey of Neuropathology (1)	Staff
221	Psychometric Clerkship (2)	Schofield
226	X-ray Conference (1)	Brown
228	Research in Neuropathology (ar.)	Staff
231	Applied Electroencephalography (1)	Staff
233	Applied Neuropathology (1)	Staff
243	Prolonged Psychotherapy (1)	Schiele, Schofield, Kiesler
245	Case Conference for Psychologists (1)	Schofield, Kiesler

Radiology

First Term	111	Medical Roentgenologic Conference (1)	Nice
	121	Roentgen Diagnosis, Radium Therapy, for Junior Medical Students (cont.)	Nice, Stenstrom
	124	Pediatric Roentgenologic Conference (1)	Feinberg
	135c	Surgical Roentgenologic Conference (1)	Nice and staff
	163a	Neurosurgical Roentgenologic Conference (1)	Peterson
	200	Research in Roentgenology (ar.)	Nice
	204	Research Related to Radiation Therapy (ar.)	Stenstrom and staff
	206	Roentgenoscopy (3)	Nice and staff
	207	Roentgen and Radium Therapy (ar.)	Stenstrom and staff
	209	Roentgen Diagnosis (3)	Nice and staff
	210	Roentgen Technique (2)	Nice and staff
	238	Roentgen-Surgical Pathology Conference (1)	Nice, Hebbel
	240	Conference in Radiation Therapy (1)	Stenstrom and staff
	Second Term	109	Externship in Roentgen Diagnosis and Radiation Therapy (4)
111		Medical Roentgenologic Conference (1)	Nice
124		Pediatric Roentgenologic Conference (1)	Feinberg
135c		Surgical Roentgenologic Conference (1)	Nice and staff
163a		Neurosurgical Roentgenologic Conference (1)	Peterson
200		Research in Roentgenology (ar.)	Nice
204		Research Related to Radiation Therapy (ar.)	Stenstrom and staff
206		Roentgenoscopy (3)	Nice and staff
207		Roentgen and Radium Therapy (ar.)	Stenstrom and staff
209		Roentgen Diagnosis (3)	Nice and staff
210		Roentgen Technique (2)	Nice and staff
238		Roentgen-Surgical Pathology Conference (1)	Nice, Hebbel
240		Conference in Radiation Therapy (1)	Stenstrom, Vermund

Surgery

First Term	121	Principles of Surgery (3)	Wangensteen and staff
	135	Junior Clinical Clerkship (6)	Wangensteen and staff
	135g	Applied Surgical Anatomy (3)	Wangensteen and staff
	152	Problems in Clinical Investigation (ar.)	Wangensteen and staff
	167	Problems in Experimental Surgery (ar.)	Wangensteen and staff
	216	Surgical Research (ar.)	Wangensteen and staff
	250	Urological Surgery (ar.)	Creedy

	252	Urological Conference (ar.).....	Creedy
	253	Research in Urology (ar.).....	Creedy
Second Term	152	Problems in Clinical Investigation (ar.).....	Wangensteen and staff
	167	Problems in Experimental Surgery (ar.).....	Wangensteen and staff
	200	Out-Patient Clinic in Surgery (ar.).....	Wangensteen and staff
	211	Operative Surgery (ar.).....	Wangensteen and staff
	214	Surgical Ward Conference (ar.).....	Wangensteen and staff
	215	Roentgenological-Surgery Conference (ar.).....	Wangensteen and staff
	216	Surgical Research (ar.).....	Wangensteen and staff
	218	Medical-Surgical Pathology Conference (ar.).....	Wangensteen and staff

School of Nursing * *

First Term	Nu.Ad.160	Ward Administration (5).....	Grainger
	Nu.Ad.173	Improving Nursing Care Through Effective Night Supervision (3).....	Heymann
	Nu.Ad.175	Elements of Administration in Nursing (5).....	Harris, Miller
	Nu.Ad.176	Elements of Administration in Nursing (5).....	Harris, Miller
	Nu.Ad.193	Principles of Administration Applied to Nursing Service Administration (3).....	Harris, Miller
	Nu.Ed.162	Personnel Work in Nursing (3).....	Johnston
Second Term	Nu.Ad.170	Foundations of Nursing Service Administration (3).....	Harris, Miller
	Nu.Ad.193	Principles of Administration Applied to Nursing Service Administration (3).....	Harris, Miller
	Nu.Ed.190	The Survey in Nursing Education (3).....	Harrington

School of Public Health

First Term	50	Personal and Community Health (3).....	Bates
	62	Public Health Nursing I (5).....	Sanburn
	65	Field Work in Public Health Nursing (15).....	Murphy
	69	Nursing in Health Programs for School-Age Children (3).....	Murphy
	95	Human Nutrition (3).....	Stief
	100	Elements of Preventive Medicine and Public Health (for medical students only) (6).....	Thomson
	110	Biometric Principles (3).....	Johnson
	111	Biostatistics Laboratory (2).....	Ar.
	133	Mental Hygiene (3).....	Cline
	148	Workshop on Rehabilitation and Public Health Nursing (3).....	Cline, Eleanor Anderson
Second Term	59	Health of the School Child (3).....	Eichenlaub
	60	Tuberculosis and Its Control (2).....	Myers
	63	Public Health Nursing II (4).....	Murphy
	65	Field Work in Public Health Nursing (15).....	Sanburn
	75	Introduction to Environmental Sanitation (3).....	Bond
	100	Elements of Preventive Medicine and Public Health (5).....	Anderson
	119	Field Practice in Environmental Sanitation (Ar.).....	Bond
	130	Biostatistics III (3).....	Bearman
	131	Biostatistics Laboratory III (2).....	Johnson
	175	Principles of Human Relations in Public Health Nursing Supervision (3).....	Cline, vonBergen

** See also Ed.T. 51A, The Teaching of Nursing, College of Education, Methods and Student Teaching.

COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

American Studies

First Term	Hum.21	American Life I (3).....	Kwiat
	201	Introduction to American Studies (3).....	Cottrell
	250	Readings in American Civilization (ar.).....	Ar.
Second Term	Hum.22	American Life II (3).....	Ar.
	112	Cultural Regions of the United States (3).....	Fishwick
	251	Readings in American Civilization (ar.).....	Ar.

Note: See also approved courses in participating departments as listed in the *Program in American Studies*.

Anthropology

First Term	1A	Introduction to Anthropology: Prehistoric Man and Culture (3).....	Spencer
	117	Indians of South America (3).....	Leslie
	140	Field Trip in Archaeology (1-6).....	Wilford
	165	Personality and Culture (3).....	Spencer
Second Term	2A	Introduction to Anthropology: Cultural Anthropology (3).....	Leslie
	80	American Indian (3).....	Ar.
	118	Pre-Columbian Civilizations of Mexico and Central America (3).....	Leslie
	140	Field Trip in Archaeology (1-6).....	Wilford
150	Contact of Cultures (3).....	Ar.	

Art

First Term	History and Criticism		
	1	Introduction to Art (3).....	Torbert
	59	Traveling Summer Course in European Art (5).....	Eitner
148	Modern Architecture (Nineteenth and Twentieth Centuries) (3).....	Torbert	

Design

23-24-25	Drawing and Design (3).....	Downs
73-74-75	Presentation Techniques (3).....	Downs

Drawing and Painting

20	Elements of Drawing (3).....	Quirt
70-71-72	Oil Painting (3).....	Quirt
70B-71B-72B	Oil Painting (3).....	Quirt
150-151-152	Problems in Painting (ar.).....	Quirt
200-201-202	Advanced Problems in Studio Work (ar.).....	Quirt

Printmaking

32	Elements of Printmaking (3).....	Myers
90-91-92	Printmaking (3).....	Myers
190-191-192	Problems in Printmaking (ar.).....	Myers
200-201-202	Advanced Problems in Studio Work (ar.).....	Myers

Photography

10	Photography (3).....	Liebling
11	Photography (3).....	Liebling

12	Photography (3)	Liebling
83-84-85	Photography II (3)	Liebling

Sculpture and Crafts

40	Sculpture I (3)	Morton
49	General Crafts (3)	Morton
200-201-202	Advanced Problems in Studio Work (ar.)	Morton

Second Term History and Criticism

1	Introduction to Art (3)	Torbert
68	Modern Art: Contemporary Art in Europe and America (3)	Torbert
158A	Twentieth-Century European and American Painting (3)	Torbert
197	Readings in American Culture and the Visual Arts (3)	Fishwick

Design

23-24-25	Drawing and Design (3)	Arnest
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Drawing and Painting

20	Elements of Drawing (3)	Rollins
52-53	Drawing II (3)	Rollins
60B-61B-62B	Water Color (3)	Rollins
70-71-72	Oil Painting (3)	Arnest
70B-71B-72B	Oil Painting (3)	Rollins
150-151-152	Problems in Painting (ar.)	Arnest
200-201-202	Advanced Problems in Studio Work (ar.)	Arnest

See also Department of Art Education, College of Education.

Astronomy

First Term	12	Descriptive Astronomy (3)	Luyten
	13	Stellar and Practical Astronomy (3)	Luyten

Botany

First Term **	4	General Botany (5)	Ar.
	194	Problems (1-5)	Staff
Second Term	5	General Botany (5)	Ar.
	195	Problems (1-5)	Staff

Classics

First Term	24	Technical Terms of Science, Medicine, and the Humanities (3)	McDonald
	45	Greek and Roman Mythology (3)	Bock
	124	Technical Terminology (3)	McDonald

For courses in language teaching in the College of Education, see Special Programs.

Communication

See index.

** For botany courses given at Lake Itasca Biological Station, see index.

Economics

See index.

English

First Term

Courses in Literature

22	Introduction to Literature (6)	Buckley
53	Nineteenth-Century English Novel (3)	Krieger
55	Shakespeare (3)	del Plaine
56	Shakespeare (3)	Montgomery
74	American Literature (3)	Hornberger
100	Old English (Anglo-Saxon) (6)	Clark
104	Emerson and Thoreau (3)	Bethurum
136	Advanced Shakespeare (3)	Bethurum
138	Nineteenth-Century Literature (3)	Montgomery
154	American Novel (3)	Levenson
162	Milton (3)	Unger
179	Calvinistic Element in American Literature (3)	Foster
188	Eighteenth-Century Literature (3)	Krieger
198	Seventeenth-Century Literature (3)	Unger
299	Independent Reading (3)	Staff

Courses in Composition

4	Freshman Composition (3)	Ar.
5	Freshman Composition (3)	Ar.
6	Freshman Composition (3)	Ar.
27	Advanced Writing (3)	del Plaine

Composition 4, 5, 6 open to students in the Institute of Technology.

Second Term

Courses in Literature

23	Introduction to Literature (6)	Steinmann
55	Shakespeare (3)	Christie
56	Shakespeare (3)	Christie
73	American Literature (3)	McDowell
75	Chaucer (3)	Allen
109	Romantic Poets of the Early Nineteenth Century (3)	Jackson
112	Crane and Howells (3)	Berryman
113	American Short Story (3)	Howe
127	Drama, 1700-1870 (3)	Jackson
129	Modern Drama (3)	Hillhouse
139	Nineteenth-Century Literature (3)	Stange
143b	Edith Wharton and William Faulkner (3)	Howe
165	Introduction to Modern English (3)	Allen
213	Bibliography and Methods of Literary Research (3)	Stange
297	Independent Reading (3)	Staff

Courses in Composition

6	Freshman English (3)	Ar.
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Composition 4, 5, 6 open to students in the Institute of Technology.

Family Life

See index.

Foreign Study Seminar

See index.

General Studies

First Term

Communication

3 Communication (3) O'Hara

Family Life

1 Preparation for Marriage (3) Dyer
1A Preparation for Marriage (3) Dyer
15 The Home and Its Furnishings (3) Myren

Foreign Study

161 Seminar for Foreign Study I (6) Fredricksen, Negay, Slusser

Humanities

1 Humanities in the Modern World I (3) Blum
3 Humanities in the Modern World III (3) Amberg
4 Humanities in the Modern World IV (3) Siegelman
21 American Life I (3) Kwiat
51 Humanities in the Modern World (3) Blum
61 The Greek Heritage (3) Vogelbaum
131 Humanities Proseminar (3) Ross

Natural Science

165 Science in World Affairs (3) Graubard

Personal Orientation

1 How to Study (2) Ar.

Social Science

1 Introduction to Social Science (3) Blum
3 Introduction to Social Science (3) Blum
11 International Relations (3) Turner

Second Term

Family Life

1 Preparation for Marriage (3) Luckey

Foreign Study

162 Seminar for Foreign Study II (6) Fredricksen, Negay, Slusser

Humanities

2 Humanities in the Modern World II (3) Bryan
4 Humanities in the Modern World IV (3) Bryan
22 American Life II (3) Ar.
52 Humanities in the Modern World (3) Ames
63 Renaissance and Reformation (Florentine) (3) Ames

Natural Science

175 Survey of Science History (3) Graubard

Personal Orientation

1 How to Study (2) Ar.

Social Science

2 Introduction to Social Science (3) Cooperman

Geography

First Term 4 Human Geography (5) Lukermann
70 Cartography (3) Eidt
90 Readings (ar.) Lukermann
109 Middle America (3) Eidt
301 Research Problems (ar.) Eidt

Second Term 101 Western, Central Europe (3) Webb
105 Mediterranean Region (3) Webb
118 Africa (3) Petterson
152 Industrial Geography (3) Petterson
301 Research Problems (ar.) Petterson

Geology and Mineralogy

First Term 1 General Geology (5) Thiel
100 Field Work in Northern Minnesota (3) Ar.
150 Black Hills Field Course (6) Ar.
170 Geologic Problems (3) Thiel

Second Term 2 Historical Geology (5) Sloan
170 Geologic Problems (3) Sloan

German

First Term 1 Beginning German (5) Wood
3 Beginning German (5) Prottengeier
4 Intermediate German (5) Prottengeier
93 German Civilization and Culture (3) Prottengeier
193 German Civilization and Culture (3) Prottengeier
165 Goethe's Faust (3) Ramras
176 Nineteenth-Century Drama: Kleist, Büchner (3) Wood

A Deutsches Haus is being planned. (See index)

For courses in language teaching in the College of Education, see Special Programs.

Second Term 2 Beginning German (5) Menze
142 Modern Drama in Translation: Hauptmann to Brecht (3) Menze

History

First Term 1 Civilization of the Modern World, Part I (3) Onion
2 Civilization of the Modern World, Part II (3) Onion
15 Ancient Civilization, Part II (3) Clift
20 American History, Part I (4) Chambers
21 American History, Part II (4) Beatty

	51	Ancient Civilization, Part II (3)	Clift
	62	Cultural History of China, Part I (3)	Mather
	79	United States in the Twentieth Century, Part I (3)	Chambers
	93	American Diplomatic History, Part I (3)	Beatty
	98	Minnesota and the Northwest, Part II (3)	Jordan
	101b	History of Rome, Part II (3)	Clift
	109	Europe in the Twentieth Century, Part I (3)	Kollman
	137a	American History, 1850-1900, Part I (3)	Loehr
	147	American Economic and Social History, Part II (3)	Loehr
	176c	Readings in Recent European History, Part I (3)	Kollman
	186d	Readings in Nineteenth-Century American History, Part II (3)	Jordan
Second Term	3	Civilization of the Modern World, Part III (3)	Wolf
	22	American History, Part III (4)	Noble
	67a	Renaissance and Reformation, Part III (3)	Hoyt
	86	American Colonies, Part I (3)	Tyler
	92	The American West, Part III (3)	Osgood
	105a	Renaissance and Reformation, Part III (3)	Hoyt
	107a	Continental Europe, Part II (3)	Wolf
	148a	History of the South, Part III (3)	Noble
	151	Social and Intellectual History of the United States, Part III (3)	Tyler
	175	Readings in Medieval and Renaissance History, Part III (3)	Hoyt
	187a	Readings in the West in American History, Part III (3)	Osgood

How to Study

See General Studies, Personal Orientation.

Humanities

See General Studies.

School of Journalism

First Term	18	Principles of Advertising (3)	Perry
	55	Advertising and Newspaper Typography (3)	Wilson
	73	Magazine Writing (3)	Charnley
	82	Supervision of School Publications (3)	Wilson
	106	Critical Writing (3)	Hage
	121	The Press in a Dynamic Society (3)	Gerald
	140	Interpretation of Contemporary Affairs (3)	Gerald
	290	Special Problems in Mass Communications (3)	Staff
Second Term	86	Advertising Copy Writing (3)	Perry
	110	History of Journalism (3)	Emery
	113	Mass Communications (3)	Jones
	290	Special Problems in Mass Communications (3)	Jones

Library School

First Term	53	School Library Management (3)	Carstens
	55	Library Administration (3)	Wezeman
	70	Reading Guidance (3)	Ar.
	74	Library Materials in the Classroom (2)	Hokinson
	157	School Library Problems (3)	Carstens
	163	Reference II (3)	Ar.

	172	Reading Guidance for Adolescents (3)	Hokinson
	176	Mass Media and the Library (3)	Berninghausen
	185	Independent Study Problems (ar.)	Staff
	259	Seminar in Library Problems (3)	Wezeman
Second Term	50	Libraries and Society (3)	Shove
	62	Reference I (3)	Jackson
	83	Cataloging and Classification (3)	Jackson
	171	Reading Guidance for Children (3)	Ar.
	185	Independent Study Problems (ar.)	Staff
	262	Literature of Natural Science (3)	Shove
	277	History of Children's Literature (3)	Ar.

Mathematics **

First Term	1	Higher Algebra (5)	Lindberg
	6	Trigonometry (5)	Varberg
	15	Elementary Mathematical Analysis I (5)	Sabidussi
	50	Differential Calculus (5)	Gibbens
	106	Differential Equations (3)	Carlson
	138B	Analysis of Variance and Multivariate Analysis—II (3)	Roy
	139B	Statistical Models in the Social Sciences (3)	Roy
	144-145A ††	Fourier Series and Orthogonal Functions (4½)	Orey
	187	Non-Euclidean Geometry (3)	Carlson
Second Term	6	Trigonometry (5)	Varberg
	7	College Algebra (5)	Krude
	16	Elementary Mathematical Analysis II (5)	Olmsted
	135	Integral Equations (3)	Gelbaum
	145B-146	Fourier Series and Orthogonal Functions (4½)	Hatfield
	176	Intermediate Differential Equations	Gelbaum

Music

First Term	1	Fundamentals of Music (2)	Ar.
	7B	Ear Training (3)	Fetler
	8A	Harmony (3)	Fetler
	10	Introduction to Music (4)	Riedel
	A	Piano (0)	Rymer, Weiser
	D	Voice (0)	Schuessler, Paige
	11	Piano (2-4)	Rymer, Weiser
	11C	Class Piano (2)	Duckworth
	12	Voice (2-4)	Schuessler, Paige
	12C	Class Voice (2)	Paige
	13	Violin (2-4)	Cullen
	13B	Violin (2-4)	Druian
	14	Viola (2-4)	Ar.
	15	Violoncello (2-4)	Jamieson
	16	Double Bass (2-4)	Fitch
	17	Flute (2-4)	Arnegard
	18	Oboe (2-4)	Angelucci
	19	Clarinet or Saxophone (2-4)	Handlon, Fitch

** See also Mathematics, Institute of Technology, and statement concerning an Institute for High School Teachers of Mathematics under Special Programs.

†† This course, together with 145B-146 in the second term, in one summer provides the material of a substantial 9-credit sequence as taught in the regular school year.

	20	Bassoon (2-4)	Santucci
	21	Trumpet (2-4)	Adelstein
	22	French Horn (2-4)	Linder
	23	Trombone or Baritone (2-4)	Isaeff
	24	Tuba (2-4)	Isaeff
	25	Percussion (2-4)	Dahlgren
	26	Harp (2-4)	Miller
	27	Organ (2-4)	Ar.
	60B-61B-62B	Instrumental Ensemble (2)	Druian
	70	Normal Piano (2)	Duckworth
	97-98-99	Counterpoint (2)	Fetler
	104A	American Music (3)	Riedel
	108	Heinrich Schütz: His Life and Works (3)	Riedel
	127-128-129	Composition (2)	Fetler
	132	Symphonies of the Romantic Era (3)	Oberg
	204	Graduate Applied Music (3)	Ar.
	209-210-211	Advanced Topics (3)	Oberg
	212	Special Problems (3-9)	Oberg
	227-228-229	Seminar in Composition and Orchestration (3)	Fetler
Second Term	1	Fundamentals of Music (2)	Duckworth
	7A	Ear Training (3)	George
	8B	Harmony (3)	George
	A	Piano (0)	Rymer, Weiser
	D	Voice (0)	Schuessler, Paige
	11	Piano (2-4)	Rymer, Weiser
	11C	Class Piano (2)	Duckworth
	12	Voice (2-4)	Schuessler, Paige
	12C	Class Voice (2)	Paige
	13 thru 27	See first term	
	33A	Music Literature (3)	Oberg
	60B-61B-62B	Instrumental Ensemble (2)	Druian
	106A	American Music (3)	Riedel
	127-128-129	Composition (2)	George
	131	Symphonies of Beethoven (3)	Oberg
	204	Graduate Applied Music (3)	Ar.
	212	Special Problems (3-9)	Oberg
	227-228-229	Seminar in Composition and Orchestration (3)	George

See also Department of Music Education, College of Education.

Personal Orientation

See General Studies.

Philosophy

First Term	1	Problems of Philosophy (3)	Sellars
	2	Logic (3)	Raab
	3	Ethics (3)	Terrell
	50	History of Philosophy (Ancient) (3)	Sellars
	106	American Philosophy since William James (3)	Raab
	107	Philosophy in Modern Literature (3)	Terrell
	160	Philosophy of Science (3)	Feigl
	190	Seminar (ar.)	Staff
Second Term	1	Problems of Philosophy (3)	Donagan
	2	Logic (3)	Shaw
	52	History of Philosophy (Modern) (3)	Shaw

137	Kierkegaard and Scandinavian Philosophy (3)	Magel
151	Aesthetics (3)	Donagan
182	Philosophy of Religion (3)	Magel
191	Seminar (3)	Staff

Physics

First Term	1	Introduction to Physical Science (Mechanics and Heat) (3)	Rassweiler
	1a	Physical Science Laboratory (1)	Ar.
	13	General Physics for Engineers—Third Quarter, Part I (Sound and Light) (2½)	Valasek
	14	Intermediate General Physics, Part I (2)	Valasek
Second Term	14a	Intermediate Physics Laboratory, Part I (½)	Ar.
	2	Introduction to Physical Science (Electricity and Magnetism) (3)	Rassweiler
	2a	Physical Science Laboratory (1)	Ar.
	13	General Physics for Engineers—Third Quarter, Part II (Sound and Light) (2½)	Wall
	14	Intermediate General Physics, Part II (2)	Wall
	14a	Intermediate Physics Laboratory, Part II (½)	Ar.

Political Science

First Term	A	State in the Modern World (3)	Sibley
	1	American Government and Politics (3)	Jones
	131	Public Administration (3)	Polley
	141	Comparative European Government (3)	Turner
	145	Government and Politics of Scandinavian Countries (3)	Roberts
	184	International Organization (3)	Jones
Second Term	222	Seminar in Recent Political Thought (3)	Sibley
	B	State in the Modern World (3)	Hulicka
	2	American Government and Politics (3)	Christensen
	25	World Politics (3)	McLaughlin
	114 **	Institute on Minnesota Government and Politics (3)	Flom
	120	Municipal Functions (3)	Ludwig
	137	American Political Parties (3)	Christensen
	143	Government and Politics of the USSR and Adjacent States (3)	Hulicka
183	Recent Problems in International Law (3)	McLaughlin	

Psychology

First Term	1-2	General Psychology (6)	Clark
	125-126	Psychology of Individual Differences (6)	Jenkins
	140	Social Psychology (3)	Kelley
	144-145	Abnormal Psychology (6)	Bird
Second Term	1-2	General Psychology (6)	Broen
	4-5	Introductory Laboratory Psychology (4)	Wrightsmann
	118	Psychology of Language (6)	Jenkins, Russell
	144-145	Abnormal Psychology (6)	Rosen
	156	Psychology of Advertising (3)	Longstaff
	160	Psychology in Personnel Work (3)	Longstaff

** For further information regarding the Institute, see index.

Romance Languages

First Term

French

1	Beginning French (5)	Ar.
3-4	Intermediate French (5)	Ar.
62	French Civilization and Culture (2)	Desgranges
147	The Drama of the Twentieth Century (2)	Falk
154	Nineteenth-Century Novel: Senancour, Constant, Stendhal, Fromentin (2)	Falk
259	Directed Readings (ar.)	Staff

A Maison Française is being planned. (See Index)

For a course of special interest to teachers of French, see Ed.C.I. 187A, Teaching of the Analysis of the French Language, under College of Education.

Spanish

1	Beginning Spanish (5)	Pattison
3	Intermediate Spanish (5)	Grismer
20	Intermediate Spanish (5)	Grismer
83	La Novela Hispano-Americana y los Problemas Sociales (2)	Cúnco
90	Spanish Civilization and Culture (2)	Pattison
132	History of Spanish Drama (2)	Grismer
259	Directed Readings (ar.)	Staff

A Casa Hispánica is being planned. (See Index)

Second Term

French

2	Beginning French (5)	Cleifton
142	Eighteenth-Century French Literature: Voltaire (2)	Cleifton
259	Directed Readings (ar.)	Cleifton

Spanish

2	Beginning Spanish (5)	Ar.
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Scandinavian Area Studies

First Term

Soc.117	Scandinavian Folk Movements (3)	Roberts
Pol.Sci.145	Government and Politics of the Scandinavian Countries (3)	Roberts

Second Term

Scand.161	The Nineteenth-Century Scandinavian Novel (3)	Ar.
Scand.171	Ibsen and the Beginnings of the Modern Drama (3)	Ar.

Social Science

See General Studies.

School of Social Work

First Term

Soc.50	Introduction to Theory and Practice of Social Work (3)	Cohn
Soc.91	Case Method Applied to the Study of Human Problems (3)	Cohn
C.W.140	Behavior Problems (3)	Cummings
275	Social Group Work (3)	Pernell
285	Special Studies in Social Work (1-9)	Pernell

Second Term	C.W.140	Behavior Problems (3)	Bassham
	260	Principles of Administration in Social Work (3)	Kidneigh
	285	Special Studies in Social Work (1-9)	Kidneigh

Sociology

First Term	1	Introduction to Sociology: Man in Modern Society (3)	Taves
	2	The American Community (3)	Martindale
	14	Rural Sociology (3)	Taves
	50	Introduction to Theory and Practice of Social Work (3)	Cohn
	91	Case Method Applied to the Study of Human Problems (3)	Cohn
	117	Scandinavian Folk Movements (3)	Roberts
	120	Social Psychology (3)	Stone
	140	Social Organization (3)	Stone
	170	Analytical Social Theory (3)	Martindale
	171	Social Life and Cultural Change (3)	Cottrell
Second Term	1	Introduction to Sociology: Man in Modern Society (3)	Donohue
	3	Social Problems (3)	Francis
	118	Delinquent Behavior (3)	Monachesi
	123	Intergroup Relations (3)	Francis
	162	Rural Social Institutions (3)	Donohue
	180	Methods of Social Research (3)	Monachesi

Speech and Theater Arts

First Term	1	Fundamentals of Speech (3)	Gilkinson, Smith, and staff
	2	Fundamentals of Speech (3)	Gilkinson, Smith, and staff
	3	Fundamentals of Speech (3)	Gilkinson, Smith, and staff
	51	Advanced Public Speaking (3)	Gilkinson
	61	Personal Development Through Speech (3)	Bryngelson
	65	Radio and Television Speech (3)	McGraw
	92	Stage Lighting (3)	Josal
	106	Discussion (3)	Smith
	109	Classical Rhetoric (3)	Smith
	111	Stage Direction (3)	Graham
	119	Introduction to Speech Correction (3)	Fletcher
	122	Introduction to Research (3)	Gilkinson
	126	History and Criticism of Public Address (3)	Gilkinson
	140	Introduction to Voice Science (3)	Fletcher
	152	Hearing Disorders (3)	Lassman
	157	Clinical Practice in Audiology (3)	Lassman
	163	Speech Pathology (3)	Bryngelson
	164-165-166	Clinical Methods and Practice in Speech Pathology (9)	Bryngelson, Henrikson, Ptacek
	181-182-183	Readings in Speech (9)	Staff
	191	Technical Stage Problems (3)	Josal
261	Seminar in Speech Pathology (3)	Bryngelson, Henrikson	
291-292-293	Research in Special Problems (9)	Staff	
Second Term	1	Fundamentals of Speech (3)	Howell and staff
	2	Fundamentals of Speech (3)	Howell and staff
	3	Fundamentals of Speech (3)	Howell and staff
	33	Beginning Acting: Stage Technique (3)	Moulton
	66	Radio and Television Drama (3)	McGraw
	81	Interpretative Reading (3)	Thompson
	103	Argumentation and Persuasion (3)	Howell
	106	Discussion (3)	Howell
	107	Platform Reading (3)	Thompson
	112	Stage Direction (3)	Whiting

127	Language Training for the Deaf (3)	Ar.
131	Creative Dramatics (3)	Graham
132	Children's Theater (3)	Graham
156	Auditory Training (3)	Ar.
164-165-166	Clinical Methods and Practice in Speech Pathology (9)	Bryngelson, Henrikson, Ptacek
169	Speech and Language in Human Behavior (3)	Ptacek
181-182-183	Readings in Speech (9)	Staff
203	Debate Coaching (2)	Howell
291-292-293	Research in Special Problems (9)	Staff

For speech courses listed under the College of Education see: Ed.C.I. 123, Speech in the Elementary School (3), Henrikson; Ed.C.I. 140, Teaching of Speech (3), Smith; and Ed.C.I. 174-175-176, Clinical Methods and Practice in Speech Pathology (3), Bryngelson.

See also Speech and Drama Institute under Special Programs.

Zoology

First Term **	1 ††	General Zoology (5)	Olson
	100	Zoological Techniques (ar.)	Staff
	197	Problems (ar.)	Ar.
Second Term	2 ††	General Zoology (5)	Merrell
	83	Introduction to Genetics and Eugenics (3)	Merrell
	101	Zoological Techniques (ar.)	Staff
	198	Problems (ar.)	Ar.

INSTITUTE OF TECHNOLOGY

COLLEGE OF ENGINEERING

Civil Engineering

First Term	23	Summer Camp (9)	Kersten, Fant, Johnson
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Drawing and Descriptive Geometry

First Term	4	Engineering Drawing (3)	Springer
	6	Engineering Drawing (3)	Schuck
	34	Lettering (1)	Schuck
Second Term	5	Descriptive Geometry (3)	Palmer
	10	Solid Geometry (0)	Kleinhenz
	34	Lettering (1)	Kleinhenz

Electrical Engineering

First Term	36	Electrical Engineering Survey (3)	Caverley
Second Term	37	Electrical Engineering Survey (3)	Cartwright

** For zoology courses given at Lake Itasca Biological Station, see index.

†† The entire course in elementary zoology includes both 1 and 2. No credit is given for 1 until the satisfactory completion of 2.

English (Engineering)

First Term	85	Advanced Technical Communication (3)	Haga
Second Term	85	Advanced Technical Communication (3)	Guthrie

Composition 4, 5, 6 in the Department of English in the College of Science, Literature, and the Arts are open to students in the Institute of Technology.

General Engineering

First Term	70	Slide Rule (1)	Springer
Second Term	70	Slide Rule (1)	Kleinhenz

Hydromechanics

First Term	103	Fluid Mechanics (5)	Olson
	104	Hydraulics Laboratory (1)	Olson

Industrial Engineering

First Term	90 ††	Industrial Assignment (1½)	Algren
	91 ††	Industrial Assignment (1½)	Algren
	92 ††	Industrial Assignment (1½)	Algren
	93 ††	Industrial Assignment (1½)	Algren
	94 ††	Industrial Assignment (1½)	Algren
	95 ††	Industrial Assignment (1½)	Algren
	150	Elements of Industrial Engineering and Management (3)	Block
Second Term	90 ††	Industrial Assignment (1½)	Algren
	91 ††	Industrial Assignment (1½)	Algren
	92 ††	Industrial Assignment (1½)	Algren
	93 ††	Industrial Assignment (1½)	Algren
	94 ††	Industrial Assignment (1½)	Algren
	95 ††	Industrial Assignment (1½)	Algren

Mathematics ††

First Term	12	College Algebra and Trigonometry II (5)	Culmer
	13	Analytic Geometry (5)	Loye
	25	Integral Calculus (5)	Stenberg
	80	Elementary Differential Equations (3)	Wilcox
	132	Introduction to Statistics and Probability (3)	Lindgren
	150	Calculus III: Intermediate Calculus (3)	Munro
	154	Vector Analysis (3)	Wilcox
	168	Elementary Complex Variables (3)	Munro
	Second Term	13	Analytic Geometry (5)
25		Integral Calculus (5)	Braden
80		Elementary Differential Equations (3)	Lindgren
152 §§		Calculus IV: Advanced Calculus (3)	Thompson
153 §§		Calculus V: Advanced Calculus (3)	Thompson

†† These courses carry 3 credits and will be given on a quarter basis. Credit not given for first term unless course is completed second term.

‡‡ See also Mathematics in the College of Science, Literature, and the Arts.

§§ 152 and 153 may be taken simultaneously; 150, 152, 153 form a 9 credit sequence regularly taught during the academic year.

Mechanical Engineering

First Term	22	Mechanisms of Automatic Machinery (3)	LaJoy
	90 ††	Industrial Assignment (1½)	Algren
	91 ††	Industrial Assignment (1½)	Algren
	92 ††	Industrial Assignment (1½)	Algren
	93 ††	Industrial Assignment (1½)	Algren
	94 ††	Industrial Assignment (1½)	Algren
	95 ††	Industrial Assignment (1½)	Algren
	130	Thermodynamics (3)	Ibele
	141	Heat Power Engineering (3)	Murphy
	160	Heating and Air Conditioning (3)	Threlkeld
Second Term	24	Elements of Machine Design (3)	Larsen
	34	Mechanical Engineering Laboratory II (2)	LaJoy
	90 ††	Industrial Assignment (1½)	Algren
	91 ††	Industrial Assignment (1½)	Algren
	92 ††	Industrial Assignment (1½)	Algren
	93 ††	Industrial Assignment (1½)	Algren
	94 ††	Industrial Assignment (1½)	Algren
	95 ††	Industrial Assignment (1½)	Algren
	131	Thermodynamics (3)	Ibele
	180	Refrigeration (3)	Threlkeld

Mechanics and Materials

First Term	26	Engineering Statics (5)	Anderson
	127	Engineering Dynamics (5)	Warner
	128	Engineering Solid Mechanics (5)	Doeringsfeld, Miller
	141	Solid Mechanics Laboratory (1)	Anderson, Miller
Second Term	127	Engineering Dynamics (5)	Doeringsfeld, Hsiao
	128	Engineering Solid Mechanics (5)	Miller

SCHOOL OF CHEMISTRY

Inorganic Chemistry

First Term	4	General Inorganic Chemistry (4)	Brasted
	9	General Inorganic Chemistry (5)	Ar.
	11	Semimicro Qualitative Analysis (4)	Britton
	12	Semimicro Qualitative Analysis (5)	Britton
	104	Chemistry of the More Representative Elements (3 or 4)	Britton
	105	Co-ordination Compounds (3)	Brasted
	301	Research in Inorganic Chemistry (ar.)	Brasted, Britton, and ar.
Second Term	5	General Inorganic Chemistry (4)	Reynolds
	10	General Inorganic Chemistry (5)	Pervier
	11	Semimicro Qualitative Analysis (4)	Pervier
	12	Semimicro Qualitative Analysis (5)	Pervier
	105	Atomic Structure and the Properties of the Elements Based Thereon (3)	Reynolds
302	Research in Inorganic Chemistry (ar.)	Pervier, Reynolds	

†† These courses carry 3 credits and will be given on a quarter basis. Credit not given for first term unless course is completed second term.

Analytical Chemistry

First Term	1	Quantitative Analysis (Gravimetric) (5)	Herr
	7	Quantitative Analysis (Premedic) (4)	Herr
	123	Advanced Analytical Chemistry (3)	Herr
	301	Research in Quantitative Analysis (ar.)	Herr

Organic Chemistry

First Term	61	Elementary Organic Chemistry (4)	Lauer
	102	Organic Qualitative Analysis (4)	Wright
	110	Organic Qualitative Analysis (4)	Wright
Second Term	62	Elementary Organic Chemistry (4)	Noland
	139	Advanced Preparations (4)	Wright

Physical Chemistry

First Term	104, 105	Physical Chemistry Laboratory (1 or 2)	Wertz
	107 **	Elementary Physical Chemistry (3)	Wertz
	301	Research in Physical Chemistry (ar.)	Wertz
Second Term	105, 106	Physical Chemistry Laboratory (1 or 2)	Wertz
	108 **	Elementary Physical Chemistry (3)	Wertz
	301	Research in Physical Chemistry (ar.)	Wertz

SCHOOL OF MINES AND METALLURGY

Metallurgy

First Term	124	Special Problems in Mineral Dressing (ar.)	Cooke
	156	Physical Metallurgy (3)	Jerabek
	160	Physical Metallurgy (3)	Jerabek
	170-171	Special Problems in Physical Metallurgy (1, 2, or 3)	Jerabek
	201	Research in Process Metallurgy (ar.)	Ar.
Second Term	124	Special Problems in Mineral Dressing (ar.)	Cooke
	170-171	Special Problems in Physical Metallurgy (1, 2, or 3)	Jerabek
	201	Research in Process Metallurgy (ar.)	Ar.

Mining Engineering

First Term	15	Mine Surveying Field Work (6)	Yardley, Lacabanne
	151-152-153	Special Mining Engineering Problems (ar.)	Ar.
Second Term	151-152-153	Special Mining Engineering Problems (ar.)	Ar.
Third Term	139	Mining Field Trip (6)	Pfleider, Bruzewski

Petroleum Engineering

First Term	155-156-157	Special Problems in Petroleum Engineering (ar.)	Lacabanne
Second Term	155-156-157	Special Problems in Petroleum Engineering (ar.)	Lacabanne

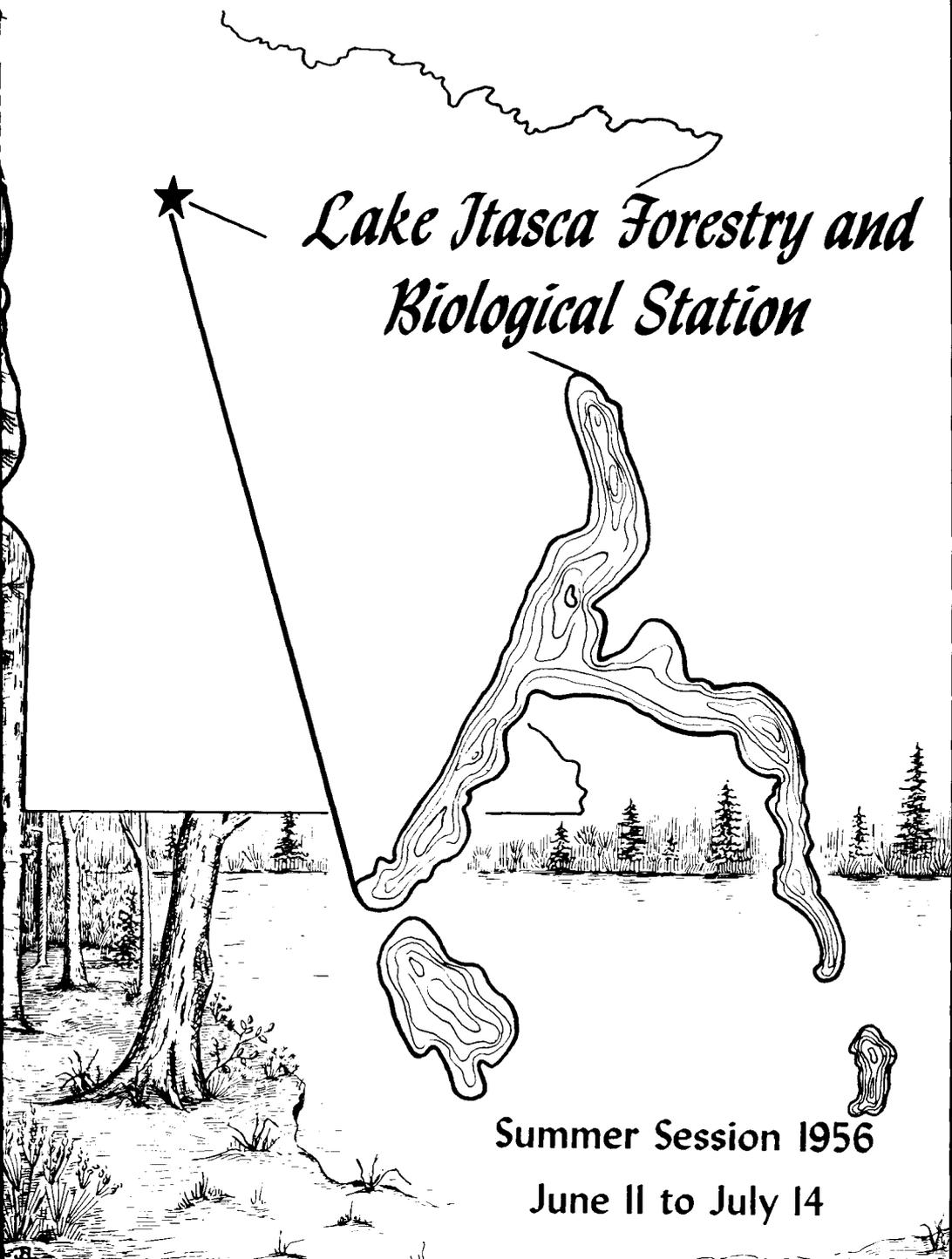
** Course 108 is a continuation of 107. The entire course 107-108 must be completed before credit will be assigned (6 credits). Grades will not be sent in at the end of the first term.

Bulletin of the

UNIVERSITY OF MINNESOTA



*Lake Itasca Forestry and
Biological Station*

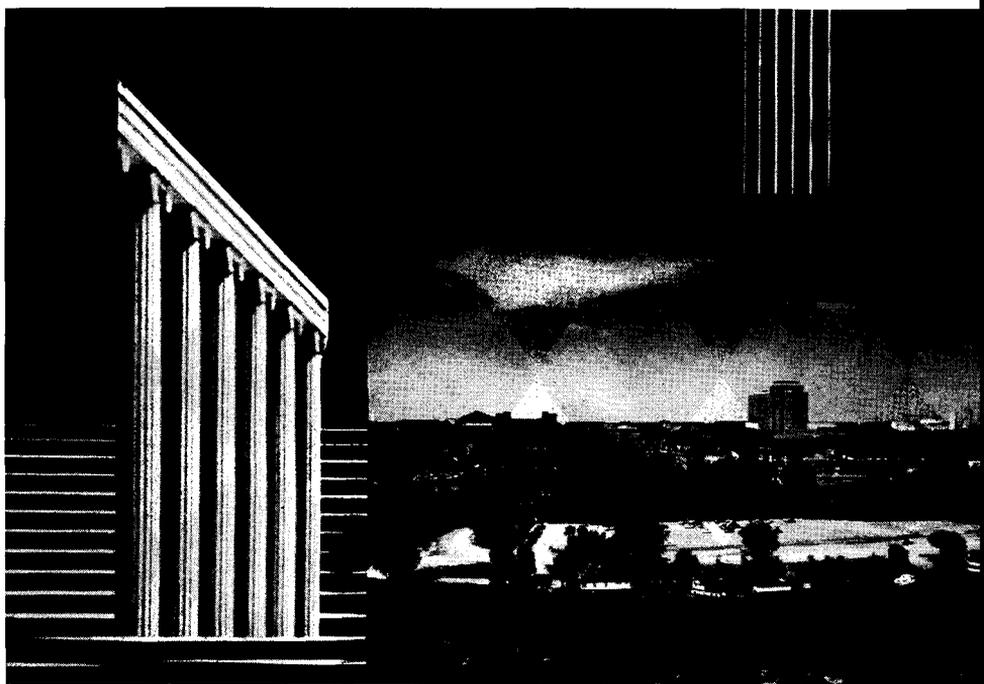


Summer Session 1956

June 11 to July 14



Bulletin of the
UNIVERSITY OF MINNESOTA



Summer Session 1956

First term - June 11 to July 14

Second term - July 16 to August 18

107. **Protozoology.** (Not offered in 1956)
115. **Advanced Natural History of Invertebrates and Fishes.** (4 cred.; prereq. 15 cred. in zoology; WS) Eddy
119. **Limnology.** (4 cred.; prereq. 15 cred. in zoology; MTh) Eddy
135. **Advanced Ornithology.** (4 cred.; prereq. 15 cred. in zoology; TF) Emlen
143. **Animal Parasites.** (Not offered in 1956)
- 197.* **Problems in Ornithology, Ecology, and Limnology.** (Cred. ar.; advanced students; prereq. Zool. 1-2-3 or equiv. and #) Staff

SCHOOL OF BUSINESS ADMINISTRATION

Admission

For admission to the School of Business Administration a student must have satisfied the requirements as listed in 1 of the 2-year pre-business courses in either the College of Science, Literature, and the Arts, the Institute of Agriculture, or the Institute of Technology. These requirements may be completed at another institution. A student must have a minimum of 90 credits, with 1 honor point per credit or a smaller number of credits determined as follows: for every 5 honor points in excess of 1 per credit, the number 90 is diminished by 1.

Special Students

High school graduates who have reached the age of 24 and can furnish evidence that they have had business experience in an executive capacity may be admitted as special students. If later they decide to become candidates for a degree, they must complete the requirements for admission.

Students in Other Schools or Colleges of the University

Regularly enrolled students in other schools or colleges of the University may be admitted to such courses in the School of Business Administration as are authorized by the faculties of the School of Business Administration and the school or college concerned. Such students are urged to select their business subjects in accordance with a definite plan and, as far as possible, to complete a systematic course of business study.

Note—Special provision has been made this summer for the direction of graduate students working on theses. For further information, inquire at the office of the dean of the School of Business Administration.

Courses fulfilling the requirements of independent work and the preparation of written reports for the Master's degree, Plan B, shall be of graduate level and shall be made part of an approved program only upon recommendation of the candidate's adviser and the instructor for the course.

First Term

Econ.3. Elements of Money and Banking. Basic principles of money and a description of the various types of financial institutions, their functions and relations to the whole economic organization. (3 cred., §B.A. 57; 2nd and 3rd qtr. fr., soph.; IV MTWThF; VH 6) Ar.

Econ.5. Elements of Statistics. Elementary concepts in statistical method. Statistical description; sources of data, techniques of presentation (tabular, graphic); frequencies, averages, index numbers; dispersion. Collection of data; sampling; sampling error and reliability. Inference. (3 cred., §Econ. 5A, 5B, or Soc. 45; 3rd qtr. fr., soph.; I MTWThF; VH 113) Neter

Econ.6. Principles of Economics. Fundamental principles of economics intended to serve as a foundation for advanced courses in business administration and economics. (3 cred.; soph., jr., sr.)

Sec. 1, I MTWThF, VH 2, Ar.

Sec. 2, III MTWThF, VH 113, Ar.

Sec. 3, V MTWThF, VH 2, Ar.

- Econ.24. Principles of Accounting.** The balance sheet, profit and loss statement and the recording process; uses of accounting data and special methods of recording. (3 cred., §B.A. 54; 3rd qtr. fr., soph.; II MTWThF; VH 6) Zulauf
- Econ.26. Principles of Accounting.** Long term liabilities, owners' equity, determination of income and analysis of financial statements. (3 cred., §B.A. 55; soph.; prereq. Econ. 25; II MTWThF; VH 306) Lund
- Econ.50. Insurance Principles.** Theory of risk and insurance; types of insurable risks; types of insurers; fundamentals of life and disability, property, and liability insurance contracts; sales, underwriting, actuarial, finance, and claims functions of insurers; internal and external regulation; social insurance. (3 cred., §Econ. 107; jr., sr.; prereq. Econ. 7 or equiv.; V MTWThF; VH 1) Williams
- B.A.51. Business Law: Contracts.** The law of contracts. (3 cred.; jr., sr.; prereq. Econ. 7 or equiv.; I MTWThF; VH 1) Wright
- B.A.54. Elementary Accounting.** (B.A. 54 and 55 form a combination of Econ. 24-25-26.) Accounting statements and the recording process; use of accounting data by management. (4 cred., §Econ. 24; to be counted as Junior College course when transferred to the College of Science, Literature, and the Arts; soph. [summer only], jr., sr.; II MTWThF and 2 hr. ar.; VH 2) Jaedicke
- B.A.58. Elements of Public Finance.** Survey of institutions, policy problems, and economic effects of public expenditures, budgeting, taxes, debts, and fiscal policy. This is a condensed course given especially for School of Business Administration students. (3 cred., §Econ. 189, 191-192; jr., sr.; prereq. Econ. 7 or equiv.; III MTWThF; VH 207) Borak
- B.A.66. Managerial Costs.** A general survey of cost accounting from the point of view of the executive who must use cost information in the conduct of his business. (3 cred., §B.A. 130, 152; jr., sr.; prereq. Econ. 26 or equiv.; III MTWThF; VH 306) Jaedicke
- Econ.73. Manpower Economics and Labor Problems.** Covers: (1) the marketing of manpower resources; (2) the institutional structure of labor markets; (3) economic and social problems arising out of labor marketing processes; and (4) methods, procedures, and proposals for solving these problems. (3 cred., §Econ. 161; jr., sr.; prereq. Econ. 7 or equiv.; IV MTWThF; VH 1) Cheit
- B.A.74. Business Statistics A.** Explanation and criticism of statistical techniques for dealing with economic time series; trend, seasonals, cycles; index numbers. Basic concepts in acceptance sampling; statistical control of quality in manufacturing operations. (3 cred., §B.A. 112; jr., sr.; prereq. Econ. 5 or equiv.; II MTWThF; VH 1) Neter
- Econ.75. Corporation Finance.** The corporation in comparison with other types of business units. Attention is given to organization and capital structure, raising fixed and circulating capital, treatment of corporate earnings, incentives to and forms of combination, and trusteeship and reorganization. (3 cred., §Econ. 155; jr., sr.; prereq. Econ. 3 and 7 or equiv.; IV MTWThF; VH 207) Borak
- Econ.81. Intermediate Economic Analysis: Firms and Households.** The analysis of individual decision-making, by firms and households, under conditions of monopoly, competition, and monopolistic competition. (3 cred., §Econ. 144; jr., sr.; prereq. 20 cred. in social science including Econ. 7 or equiv.; I MTWThF; VH 207) Ar.
- B.A.89. Production Management.** Location and layout of industrial plants; types of operating organizations; shop personnel; standards of operation; purchasing and inventory control; routing, scheduling, and dispatching of product; scientific management; practical problems in production con-

- trol. (3 cred., §B.A. 187; jr., sr.; prereq. Econ. 7 or equiv.; I MTWThF; VH 301) Wickesberg
- Econ.107. Insurable Risks and Insurance.** Risk and its adverse economic effects; methods of handling risk; theory of insurance and insurable risks; insurable personal, property, and liability risks; risk management; personal, property, and liability insurance contracts; production, underwriting, actuarial finance, and claims functions of insurers; industry and government regulation; social insurance. (3 cred., §Econ. 50; jr. and sr. with #, grad.; prereq. Econ. 7 or equiv.; V MTWThF; VH 1) Williams
- B.A.112. Time Series Analysis and Quality Control.** Covers: (1) the explanation and criticism of statistical techniques applied to time series analysis, (2) index numbers, and (3) statistical control of quality. (3 cred., §B.A. 74; jr. and sr. with #, grad.; prereq. Econ. 5 or equiv.; II MTWThF; VH 1) Neter
- B.A.114. Retail Store Management.** Comprehensive treatment of retailing principles and methods; relation of retailing to other parts of the economy; problems associated with the operation of stores of various types. (3 cred.; jr., sr., grad.; prereq. B.A. 77; III MTWThF; VH 2) Werner
- B.A.116. Property and Liability Insurance I.** Nature and relative importance of insurable property and liability risks; analysis of property and liability insurance contracts; insurance surveys—the optimum property and liability insurance program. (3 cred.; jr., sr., grad.; prereq. Econ. 50 or 107; III MTWThF; VH 6) Williams
- Econ.124. Theory of Employment, National Income, and the Price Level I.** Determination of the equilibrium values for real output, employment, the price level and the rate of interest under specified assumptions regarding the demand for and supply of money, the demand for and supply of labor, technical conditions of production and the investment and consumption functions. (3 cred.; jr., sr., grad.; prereq. Econ. 80 or equiv.; III MTWThF; VH 205) Ar.
- B.A.130. Managerial Cost Accounting.** Cost accounting and analysis from the point of view of its use by management in making decisions and setting policies, and in establishing controls over costs. (3 cred., §B.A. 66, 152; jr. and sr. with #, grad.; prereq. Econ. 26 or equiv.; III MTWThF; VH 306) Ar.
- Econ.144. Economic Analysis: Firms and Households.** The analysis of individual decision-making, by firms and households, under conditions of monopoly, competition, and monopolistic competition. (3 cred., §Econ. 81; jr. and sr. with #, grad.; prereq. Econ. 7 or equiv.; I MTWThF; VH 207) Ar.
- B.A.150. Intermediate Accounting I.** Principles and procedures involved in the valuation of assets and the determination of periodic income. (3 cred.; jr., sr., grad.; prereq. Econ. 26 or equiv.; I MTWThF; VH 6) Lund
- B.A.152. Cost Accounting.** Basic principles of cost accounting; job order and process cost systems. (3 cred., §B.A. 66 or 130; jr., sr., grad.; prereq. Econ. 26 or equiv.; II MTWThF; VH 207) Eaton
- Econ.155. The Modern Corporation.** Incorporation. The various types of corporate securities and their uses. Financial plans for industrial, utility, and other types of corporations. Financial affairs of an established business. General financial problems of the holding company, consolidations, mergers, and reorganizations. (3 cred., §Econ. 75; jr. and sr. with #, grad.; prereq. Econ. 3 and 7 or equiv.; IV MTWThF; VH 207) Borak
- B.A.159. Advanced Accounting.** Branch accounting, consolidated statements, estates and trusts, concerns in financial difficulties, and other specialized problems. (3 cred.; jr., sr., grad.; prereq. B.A. 151 and Math. 20; IV MTWThF; VH 306) Eaton

- B.A.160. Readings in Business Administration.** Special readings to be arranged with the student to cover areas in business administration especially useful to his individual program and objectives, but not available in the regular course offerings. (Cred. ar.; jr., sr., grad.; prereq. consent of adviser and instructor in field covered) Staff
- Econ.160. Readings in Economics.** Special readings to be arranged with the student to cover areas in economics especially useful to his individual program and objectives but not available in the regular course offerings. (Cred. ar.; jr., sr., grad.; prereq. consent of adviser and instructor in the field covered) Staff
- Econ.161. General Manpower Economics and Labor Problems.** Includes: (1) marketing of manpower resources; (2) institutional structure of labor markets; (3) economic and social problems arising out of labor marketing processes; and (4) methods, procedures, and proposals for solving these problems. This course covers the basic materials of Econ. 73 plus advanced discussion and special assignments. (3 cred., §Econ. 73; jr. and sr. with \$, grad.; prereq. Econ. 7 or equiv.; IV MTWThF; VH 1) Cheit
- Econ.163. Union Government and Policies.** An analysis of the structural nature and the operation of contemporary American unions, the nature of the internal administration and government of unions, and the economic and social issues arising out of relationships with managements as found in matters of hours, wages, and other conditions of employment. (3 cred.; jr., sr., grad.; prereq. Econ. 73 or 161; IV MTWThF; VH 2) Seltzer
- Econ.165. Current Trends in Industrial Relations.** Class meets once each week for 1 hour to discuss new developments in various phases of industrial relations. Discussion of trends, new problem areas, new research studies and findings, and other up-to-date happenings in industrial relations in management, unions, and the government. Sessions are led by the Industrial Relations Center staff members who are actively engaged in research and consultation. (1 cred.; jr., sr., grad.; prereq. B.A. 167; ar.) Staff
- Econ.169. Labor Legislation: Economic Security.** An analysis of (1) the origins and development of economic and social problems of the individual worker; (2) executive, legislative, and judicial attempts to deal with these problems; and (3) economic and social consequences of the developments. Treatment of "protective labor legislation" involving child labor, hours and wages, industrial accidents and illness, old age, and unemployment. (3 cred.; jr., sr., grad.; prereq. Econ. 73 or 161; II MTWThF; VH 113) Seltzer
- Econ.176. Introduction to International Economics.** The techniques of international economic analysis. The approach, while primarily theoretical, will indicate the relevance of the theory to current problems. The balance of payments; the foreign exchanges, free trade versus protection; techniques of trade control; international commercial policies; contemporary international economic problems and institutions. (3 cred.; jr., sr., grad.; prereq. Econ. 7 or equiv.; IV MTWThF; VH 113) Coen
- B.A.184. Scientific Management in Industry.** The origin and development of the movement to apply the methods of science to the management of industrial enterprises, the effects upon individual plant management and the influence upon "rationalism" in industrial society. (3 cred.; sr., grad.; prereq. B.A. 89 or 187; II MTWThF; VH 301) Wickesberg
- B.A.187. Administration of Production.** This nontechnical course develops the production function of business from the general management viewpoint. (3 cred., §B.A. 89; jr. and sr. with \$, grad.; prereq. Econ. 7 or equiv.; I MTWThF; VH 301) Wickesberg
- Econ.189. Economics of Public Finance.** Survey of public expenditures, budgeting, taxes, debts, and fiscal policy, with special emphasis on economic effects. Special attention is given to tax principles, practices, and policies.

(3 cred., §B.A. 58, Econ. 191-192; jr., sr., grad.: prereq. Econ. 7 or equiv.; III MTWThF; VH 207) Borak

Econ.251. Seminar in Industrial Relations. (3 cred.; grad.; ar.) Yoder

B.A.299. Graduate Research in Business Administration. (Cred. ar.; grad.) Staff

Econ.299. Graduate Research in Economics. (Cred. ar.; grad.) Staff

Second Term

Econ.7. Principles of Economics. (Continuation of Econ. 6) (3 cred.; soph., jr., sr.; prereq. Econ. 6)

Sec. 1, I MTWThF, VH 6. Ar.

Sec. 3, V MTWThF, VH 2, Ar.

Sec. 2, IV MTWThF, VH 207, Ar.

Econ.25. Principles of Accounting. Adjusting entries, work sheets, closing entries, cash inventories, depreciation, and an introduction to cost accounting. (3 cred., §B.A. 55; soph.; prereq. Econ. 24 or equiv.)

Sec. 1, II MTWThF, VH 2,
Reighard

Sec. 2, III MTWThF, VH 306, Ar.

B.A.55. Elementary Accounting. (Combined course—continuation of B.A. 54) Accounting valuation of assets, liabilities, and owners' equity; introduction to cost accounting; analysis of financial statements. (4 cred., §Econ. 25-26; to be counted as Junior College course when transferred to the College of Science, Literature, and the Arts; soph. [summer only], jr., sr.; prereq. B.A. 54; I MTWThF and 2 hrs. ar.; VH 306) Meyers

Econ.64. Economics of Money and Banking. Banking policy viewed from the social standpoint with primary reference to the problems of the Federal Reserve System. Selected problems in monetary policy; monetary reconstruction and monetary reform. (3 cred., §Econ. 142; jr., sr.; prereq. Econ. 3 and 80 or equiv.; IV MTWThF; VH 2) Smith

B.A.65. Analysis of Financial Statements. Interpretation and analysis of financial statements. Credit, investment, and managerial analysis of financial statements. Consolidated statements. Industrial, public utility, railroad statements. (3 cred., §B.A. 139, 151; jr., sr.; prereq. Econ. 26 or equiv.; III MTWThF; VH 2) Reighard

B.A.71. Transportation: Services and Charges I. Survey and economic aspects of national transportation policy; rail, highway, air, and water transportation facilities, services, rates, regulation, and current transportation problems. (3 cred., §Econ. 172; jr., sr.; prereq. Econ. 7 or equiv.; IV MTWThF; VH 1) Harper

Econ.73. Manpower Economics and Labor Problems. (See first term) (I MTWThF; VH 1) Mahoney

B.A.77. Survey in Marketing. Introductory analysis of (1) marketing institutions and their control; (2) market areas; (3) marketing costs; and (4) the operation of supply and demand in marketing. (3 cred., §Econ. 185; jr., sr.; prereq. Econ. 7 or equiv.; II MTWThF; VH 207) Lewis

Econ.80. Intermediate Economic Analysis: Income and Employment. The determinants of national income, employment, and price level, with particular attention to aggregate consumption and investment. (3 cred., §Econ. 143; jr., sr.; prereq. 20 cred. in social science including Econ. 7 or equiv.; I MTWThF; VH 207) Ar.

Econ.85. Government Regulation of Business. The economic aspects of legislation affecting the market processes. Topics studied include the economic origins of business limitations of free competition, the regulation of public utilities, the purposes and effect of anti-trust laws and laws relating to

- "unfair business practices," and government assistance to economic groups. (3 cred., §Econ. 175; jr., sr.; prereq. Econ. 81 for majors, suitable background in law or political science for others, or #; III MTWThF; VH 1) Buttrick
- Econ.103. Advanced Price Theory.** Theories of choice as applied to firms and resource owners, and the usefulness of such theories in predicting market behavior. (3 cred.; jr. and sr. with #, grad.; prereq. Econ. 81 or 144; II MTWThF; VH 113) Boddy
- B.A.113. Sales Management.** The management of selling activities including sales policies and planning, sales promotion, sales organization and channels of distribution, selection, training and compensation of salesmen, control of sales performance, sales budgets, and cost control. Extensive use of case materials. (3 cred.; jr., sr., grad.; prereq. B.A. 77 or Econ. 185; IV MTWThF; VH 6) Lewis
- Econ.125. Theory of Employment, National Income, and the Price Level II.** Effects of governmental monetary and fiscal policies upon the equilibrium levels of output, employment, prices, and interest rates. An introduction to dynamic analysis. (3 cred.; jr., sr., grad.; prereq. Econ. 124; II MTWThF; VH 205) Buttrick
- Econ.129. Current Economic Issues.** A special survey of current economic problems and their analysis, designed for the nonmajor, and of particular interest to teachers who wish to broaden their knowledge and to be brought up to date in their teaching of social studies courses. (3 cred.; jr., sr., grad.; III MTWThF; VH 205) Smith
- B.A.139. Corporate Statements.** Preparation of corporate statements and analysis from management, investment, and credit viewpoint. Report required analyzing statement of an assigned corporation. (3 cred., §B.A. 65, 151; jr. and sr. with #, grad.; prereq. Econ. 26 or equiv.; III MTWThF; VH 2) Reighard
- Econ.142. Monetary and Banking Policy.** An advanced course in money and banking policy viewed from the social standpoint with primary reference to the problems of the Federal Reserve System. Selected problems in monetary policy; monetary reconstruction and monetary reform. (3 cred., §Econ. 64; jr. and sr. with #, grad.; prereq. Econ. 3 and 80 or equiv.; IV MTWThF; VH 2) Smith
- Econ.143. Economic Analysis: Income and Employment.** The determinants of national income, employment, and price level, with particular attention to aggregate consumption and investment. (3 cred., §Econ. 80; jr. and sr. with #, grad.; prereq. Econ. 7 or equiv.; I MTWThF; VH 207) Ar.
- B.A.146. Investments.** A general or "cross cut" survey of the external and internal factors influencing the prices of securities, and of the principles of an investment policy for the individual investor. Emphasis is placed upon objective analysis from source materials of factors explaining price differentiation. (3 cred.; jr., sr., grad.; prereq. Econ. 75 or 155; III MTWThF; VH 6) Matthews
- B.A.151. Intermediate Accounting II.** Principles and procedures involved in the valuation of liabilities and stockholders' interest, and in analysis of financial statements. (3 cred., §B.A. 65, 139; jr., sr., grad.; prereq. B.A. 150; I MTWThF; VH 113) Matthews
- B.A.153. Cost Accounting.** (Continuation of B.A. 152) An introduction to budgetary control, standard costs, and distribution cost accounting. Analysis and interpretation of cost data for specialized uses. (3 cred.; jr., sr., grad.; prereq. B.A. 152; II MTWThF; VH 306) Meyers
- B.A.156. Finance Management.** The duties of the financial manager of a modern business. The various sources from which capital may be secured, the best use of a company's funds, and special financial problems which

arise in the typical business. (3 cred.; jr., sr., grad.; prereq. Econ. 75 or 155; I MTWThF; VH 2) Ar.

B.A.160. Readings in Business Administration. (See first term)

Econ.160. Readings in Economics. (See first term)

Econ.161. General Manpower Economics and Labor Problems. (See first term)
(I MTWThF; VH 1) Ar.

B.A.167. Introduction to Industrial Relations. A survey of policy and practice in manpower management. The course provides a professional viewpoint toward major functions, including policy formulation, determination of labor needs, job analysis, recruitment, selection, training and safety, service rating, employment stabilization, collective bargaining, and wage and salary administration. (3 cred.; jr., sr., grad.; prereq. Econ. 73 or 161; II MTWThF; VH 1) Belcher

B.A.168. Advanced Personnel Administration. Administrative aspects of industrial relations in both unions and management. Mechanisms and practices of manpower management policy determination and review. Development and use of personnel records and reports. (3 cred.; jr., sr., grad.; prereq. B.A. 167 or B.A. 167 with #; III MTWThF; VH 113) Heneman

Econ.172. Economics of Transportation. The economics of the agencies of modern transportation, including rail, water, highway, air, and pipe line. Relative advantage of each agency, national transportation policy, regulation, rate-making, taxation, co-ordination of services. (3 cred., §B.A. 71; jr., sr., grad.; prereq. 20 cred. in social science, including Econ. 7 or equiv.; IV MTWThF; VH 1) Harper

Econ.175. Government Regulation of Market Behavior. A study of the administrative and legislative controls in the United States in the following areas: general restraints of trade and monopoly, regulation of the standards of fair competition, licensing and regulation of entry into trade and professions, and the regulation of public utility rates and services. The emphasis will be on the economic and legal analysis of federal regulation, but state and local regulation will be studied. (3 cred., §Econ. 85; jr. and sr. with #, grad.; prereq. Econ. 81 or 144 for majors, suitable background in law or political science for others, or #; III MTWThF; VH 1) Buttrick

B.A.180D. Senior Topics: Industrial Relations. Designed to develop a familiarity with and evaluation of professional procedures and techniques employed in each of the major functions of manpower management. Individual and group projects prepare the student for employment in industrial relations at the staff level. (3 cred.; sr., grad.; admission limited to majors in industrial relations and to others who have satisfactorily completed B.A. 167 or equiv.; prereq. B.A. 167; IV MTWThF; VH 113) Belcher

Econ.185. Economics of Marketing. Covers: (1) the role of market distribution in our total economy; (2) the costs of market distribution; (3) regional specialization and market distribution; (4) public, quasi-public, and corporate control of market distribution; and (5) the role of the consumer in market distribution. (3 cred., §B.A. 77; jr., sr., grad.; prereq. Econ. 7 or equiv.; II MTWThF; VH 207) Lewis

B.A.299. Graduate Research in Business Administration. (See first term)

Econ.299. Graduate Research in Economics. (See first term)

INSTITUTE OF CHILD WELFARE (C.W.)

See *Workshop on School Psychology* under Special Programs

The Institute of Child Welfare was organized for three purposes: research in child development; training future workers with children; and bringing information to parents on the care and training of children. The Institute offers graduate and undergraduate courses and conducts a nursery school and kindergarten for demonstration and research purposes.

Nursery School and Kindergarten

The Nursery School and Kindergarten will be in session from 8 a.m. to 12 noon, beginning June 12 and closing July 13. Applications for the enrollment of children will be received at the office of the Institute. The fee will be \$35 for tuition, which includes a mid-morning snack. Parents are responsible for the transportation of their children to and from the school.

First Term

- 80. **Child Psychology.** (3 cred.; jr., sr.; prereq. Psy. 1-2; III MTWThF; CW 218) Overlade
- 130. **Development of Skill, Language, and Thought in the Child.** (3 cred.; sr., grad.; prereq. 12 cred. in psychology or equiv.; I MTWThF; CW 222) Overlade
- 140. **Behavior Problems.** (3 cred.; sr., grad.; prereq. 12 cred. in psychology, educational psychology, or sociology; II MTWThF; CW 222) Cummings
- 150. **Childhood Education.** Survey of early childhood education. (3 cred.; sr., grad.; prereq. 12 cred. in education; VI MTWThF; CW 222) Helgerson
- 170. **Parent Education.** (3 cred.; sr., grad.; prereq. 15 cred. in psychology, education, home economics, or sociology; IV MTWThF; CW 222) Cummings
- 270.* **Readings and Research in Child Development.** Independent readings and reports in any field such as physical growth, mental development, social behavior, nursery school theory, parent education, etc., which meets the approval of instructor. (Cred. ar.; grad. only; ar.) Staff

The following courses are also offered by the Institute of Child Welfare: Ed.T.77, Student Teaching in the Nursery School, and Ed.T.78, Student Teaching in the Kindergarten, listed under Methods and Student Teaching, in the College of Education; Ed.C.I. 162, Laboratory in Nursery School and Kindergarten Instructional Practices, and Ed.C.I. 163, Plastic Materials, Story Telling, and Social Studies for Young Children, listed under Curriculum and Instruction, in the College of Education.

Second Term

- 131. **Development of Personality and Social Behavior in the Child.** (3 cred.; sr., grad.; prereq. 12 cred. in psychology or equiv.; I MTWThF; CW 222) Templin
- 132. **Later Childhood and Adolescence.** (3 cred.; sr., grad.; prereq. 12 cred. in psychology or equiv.; II MTWThF; CW 222) Bassham

- 140. Behavior Problems.** (3 cred.; sr., grad.; prereq. 12 cred. in psychology, educational psychology, or sociology; IV MTWThF; CW 222) Bassham
- 142. Psychology of Atypical Children.** (3 cred.; sr., grad.; prereq. 12 cred. in psychology or equiv.; III MTWThF; CW 222) Templin
- 200.†† Observation and Experimental Study of Children.** Supervised observation of clinical and remedial procedures with children; case discussions; planning of individual projects. (3 cred.; registration limited to members of the Workshop on School Psychology; VI-VII MTWThF; CW 218) Overlade
- 270.* Readings and Research in Child Development.** (See first term) Staff

†† Graduate students should consult their advisers concerning the advisability of registering for this workshop under E.Psy. 153 or C.W. 200.

SCHOOL OF DENTISTRY

The School of Dentistry will not offer courses regularly scheduled in the dental curriculum unless the necessity arises to offer instruction for students who may fail and will need to remove such failures before being promoted to the next succeeding class. The clinic will remain open, however, for those who wish to receive instruction in clinical work or for those who may not have completed specified clinical or laboratory requirements for promotion.

The following instructors will be available:

First Term—Wittich, Hall, Clark, Speidel, Wykhuis, Yock, Gorlin, Jensen, Holland, Serr

Second Term—Wittich, Hall, Clark, Speidel, Wykhuis, Yock, Gorlin, Jensen, Holland, Serr, Jernall

Dentistry fees during the summer quarter are: full-time tuition, resident \$100, nonresident \$210; less than a full program may be paid for at the summer rate or academic year rate, whichever is higher. There will be an incidental fee of \$17.

COLLEGE OF EDUCATION

Courses in elementary and secondary education listed in the following pages may be used for *renewal of teaching certificates*. Former teachers re-entering the profession should consult the advisers in elementary and secondary education or the dean's office, College of Education, concerning a program for renewal of certificates.

Students should note that under the division headings Curriculum and Instruction, Educational Administration, Educational Psychology, and Methods and Student Teaching, the courses are grouped for those interested in elementary, secondary, and higher education fields. Under each of the four divisions, courses of general interest are listed *General Courses* and these are followed by the offerings in *Elementary Education*, *Secondary Education*, and *Higher Education*.

Professional courses in education presuppose completion of Junior College requirements in the University of Minnesota or the equivalent in colleges of similar grade elsewhere. Graduation from the 2-year curriculum of Minnesota state teachers colleges is accepted as equivalent. Students in the College of Education with this training may be admitted to any course for which they have satisfied the prerequisite.

For all general matters relating to admission, advanced standing, credits, honor points, curriculums, and requirements for graduation, students should consult the *Bulletin of the College of Education*, 1954-56.

Summer Session students who are not candidates for a degree do not need to make application for admission nor present credentials (see Admission and Registration). Students expecting to become candidates for a Bachelor's degree, however, should apply for admission as regular students in the College of Education by filling out the application form in the Office of Admissions and Records and filing in that office any credentials on the basis of which they wish to request advanced standing. They should also seek as early as possible the advice of the major adviser in the department concerned in order to learn the requirements of the curriculum they will need to complete. Adult special students are not regular degree candidates.

Counseling Services

The staff of the Student Personnel Office of the College will be available during both terms for consultation concerning admission, requirements of the teaching profession, and for counseling. Appointments should be made in 206 Burton Hall.

Committee on Student Scholastic Standing

Undergraduate students with questions concerning program adjustments and substitutions for required work should consult their advisers or the chairman of the Committee on Student Scholastic Standing. The office of the adviser for this committee will be 206 Burton Hall (Mr. Glotzbach) during both terms.

Workshops

Graduate Credit for Workshops—The amount of graduate credit in workshops which may be used on a Master's degree program is limited.

Graduate students planning to register for any workshop should consult their advisers concerning the possibility of using credit for the workshop in their graduate programs.

Workshops in Higher Education—Two workshops in higher education will be jointly sponsored by the College of Education and the North Central Association of Colleges and Secondary Schools. In the first term, the workshop will be scheduled from June 11 to July 6 for the study of problems in the liberal arts related to teacher education. In the second term, the workshop, scheduled from July 23 to August 17, has been planned for teachers college staff members studying the problems of teacher education. Applicants for either workshop should write to Dean of the College of Education, University of Minnesota, Minneapolis 14. (See Curriculum and Instruction, course 228.)

Workshop for School Administrators—As a part of the advanced graduate program (1 year beyond the Master's degree) leading to the certificate of Specialist in Education—School Administration, a workshop on the Improvement of Instruction in the Elementary School is scheduled for the first term. (See Curriculum and Instruction, course 240.) The course will require half-time work from the participants for the full term of 5 weeks. The group will be limited in size, and the completion of a Master's degree program for school superintendents is required for enrollment. A special announcement concerning the Specialist in Education program will be sent by the dean's office, College of Education, on request.

Workshop in Teaching Display—In the first term, a 2-week workshop will provide assistance for workers in distributive education on their many problems in teaching display. Further information about the display workshop may be obtained on request to 105 Burton Hall, University of Minnesota, Minneapolis 14. (See Curriculum and Instruction, course 147.)

Workshop and Special Courses in Industrial Education—See index, Industrial Education.

Summer Demonstration High School

The University High School, grades 7 to 12, will be in session in Peik Hall during the last 4 weeks of the first term and the first week of the second term. Instruction will be offered in the language arts, modern languages, social studies, science, and typing. Individual and group work in remedial reading and arithmetic will be provided. In addition, speech and drama institutes will be open to high school students. The summer program will emphasize remedial instruction and the enrichment of the student's background.

Admission to the University High School Summer Session is open to any pupil of normal high school age. Children of teachers or other professional workers who are attending the Summer Session of the University are especially welcomed. For information regarding fees and registration procedure, address the Principal, University High School, Minneapolis 14.

Students registered in Student Teaching (52 under Methods and Student Teaching) will be assigned to observation and student teaching in the classes of the high school. The facilities of the high school are available to the college classes in special methods and to other classes for demonstration purposes. (I, II, III, IV MTWThF.)

Summer Demonstration Elementary School

An elementary school, grades 1 to 6 inclusive, will be in operation during the last 4 weeks of the first term. A special resource classroom for blind children will be conducted in this elementary school. The school will be staffed by the principal and teachers of the Tuttle School which is used as the demonstration elementary school of the College of Education by a co-operative agreement with the Board of Education of the city of Minneapolis. The school, conducted on an activity basis, may be observed by students of elementary school methods and supervision. A laboratory course in elementary school practices is available. (See Curriculum and Instruction, course 186.) (I, II, III, IV TWThF; Tuttle School, Talmadge Ave. and 18th Ave. S.E.)

Psycho-Educational Clinic

The Psycho-Educational Clinic will be in operation during both terms for purposes of training, research, and service. The clinic program will include remedial reading classes for children whose difficulties have been previously diagnosed and for whom special remedial work has been recommended. These children will attend school 2 hours daily (9 to 11 a.m.), Monday through Friday, and the full 2-hour period will be used for individualized instruction. In addition, the Psycho-Educational Clinic will provide diagnosis and recommendation for school problem cases from the state on the same basis as during the school year. The services of the clinic, including the remedial reading classes, will provide demonstrations for various College of Education classes, as well as clinical practice opportunities for advanced students registered under Educational Psychology 150 and 151. Information may be obtained from the Director, Psycho-Educational Clinic, Pattee Hall, University of Minnesota, Minneapolis 14.

Nursery School and Kindergarten

The Institute of Child Welfare maintains a nursery school and kindergarten in the first term. (See Institute of Child Welfare.) These schools are also available for demonstration and observation. Courses offered by the Institute and listed under Institute of Child Welfare are given for teachers who wish nursery school and kindergarten training and for others interested in child development.

Offerings in Statistics

Graduate students interested in statistics will find basic courses listed under Educational Psychology. Those planning to major in statistics should refer to courses offered under the Mathematics Department, College of Science, Literature, and the Arts. (See Analysis of Variance and Multivariate Analysis II [Mathematics 138B], and Statistical Models in the Social Sciences [Mathematics 139], both given during the first term.)

Minimum Fee for Graduate Students

Graduate students who have completed all their graduate work with the exception of the thesis will be allowed to register for the Summer Session for thesis work only, upon the payment of a fee of \$26 per term plus incidental fee.

Detailed Description of Courses

For detailed description of courses and curriculums in education see the *Bulletin of the College of Education*, 1954-56.

Notice Concerning Starred Courses

Graduate students who wish to work on individual problems to count toward the 9 credits in problems courses required for the Master's degree under Plan B may register for this credit in any course starred (*) in the following list. Other students taking these courses will not be held to the same quality of individual problems work, nor will written reports always be required of them. (See Graduate School.)

AGRICULTURAL EDUCATION (Ag.Ed.)

First Term

- 82. Teaching Agriculture in the Secondary School.** Fundamentals of teaching agriculture to high school students; use of the home, farm, and community in structuring courses of study; the *Future Farmers of America*, the *Vo-Ag Planning and Record Book*; organization and management of the farm and school shop; building and utilizing teaching units. (4 cred.; jr., sr.; prereq. Ed. 55B; III-IV MTWThF; Hr 302) Kitts
- 124. Teaching Units in Livestock Breeding.** Development of teaching units based on recent research in the science of livestock breeding. Construction of resource units, demonstrations, and materials of instruction for adult, young farmer, and high school classes. (3 cred.; prereq. Agro. 31, or #; VI-VII MTWThF first 3 weeks, ar. last 2 weeks; Hr 301) Swanson
- Ag.En.130. Farm Shop Management.** (See Agricultural Engineering.)
- 154.* Rural Education and Community Leadership.** An appraisal of community educational agencies; the process of and responsibilities for community leadership; the role of the school in the rural community; co-ordination of the school with nonschool educational agencies. (3 cred.; I-II MTWThF; Hr. 301) Swanson
- 171. Procedures in Teaching Agriculture.** Emphasizes working out the problems in detail in order that results might be directly applicable to a particular farming situation. Evaluation of procedure on a basis of improved farming practices. (3 cred.; prereq. #; I-II MTWThF; Hr 302) Granger
- 180. Teaching Units in Soils.** Development of teaching units based on recent research in soil science. Construction of resource units, demonstrations, and materials of instruction for adult, young farmer, and high school classes. (3 cred.; prereq. Soil. 2 or 4, or #; III-IV MTWThF first 3 weeks, ar. last 2 weeks; Hr 301) Swanson and soils staff
- 221. Field Problems.** The development and study of special problems in the field of the individual student's choice. (3 cred.; grad.; ar.) Peterson, Kitts, Swanson
- 232.* Research in Agricultural Education.** (Designed especially for students meeting the Plan B requirement.) Investigation in problems of education for farm people. Selecting research problems, preparing bibliographies, analyzing and interpreting data, and preparing manuscripts. (3-9 cred.; grad.; ar.) Peterson, Kitts, Swanson

Second Term

- 91. Supervised Student Teaching.** Observation and participation in the learning-teaching process. Teaching experience and program analysis under

supervision of selected teachers. Organization and execution of activities necessary to successful teaching of agriculture in Minnesota high schools. (6 cred.; jr.; ar.) Kitts, Swanson

221. Field Problems. (See first term) Peterson, Kitts, Swanson

232.* Research in Agricultural Education. (See first term) Peterson, Kitts, Swanson

ART EDUCATION (Ar.Ed.)

The Department of Art Education offers professional training and guidance for teaching and supervisory positions in the field of art. Art education provides opportunities to combine a creative art career with a teaching position, a combination popular with many outstanding contemporary artists.

During summer sessions the department places a strong emphasis on nonspecialist courses for elementary and secondary teachers who plan to integrate art with other subjects. For art education majors the summer program emphasizes graduate work toward advanced degrees.

See also Department of Art, College of Science, Literature, and the Arts.

First Term

- 17. Pictorial Expression for Elementary Education.** Provides a background survey of art in life and education. Materials, techniques, and ideas important to children's art expression, relationship to adult expression, and significance in educational growth. (3 cred.; VI-VII MTWThF; TSF 259) Bratlee
- 18. Design Activities for Elementary Education.** (See Ar.Ed. 17) Relationships between art and nature. Problems in invention, arrangement and decoration, color, lettering, posters, bulletin board displays, etc. (3 cred.; I-II MTWThF; J 109) Hastie
- 19. Functional Arts and Crafts in Elementary Education.** (See Ar.Ed. 17) 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. (3 cred.; III-IV MTWThF; TSF 259) Bratlee
- 158. Art Education in Europe.** Examination of current practices, problems, and achievements in art education in countries of Western Europe with particular reference to sources for and comparisons with practices in American art education. (3 cred.; III MTWThF; J 109) Gayne
- 184. Improving Art Programs in the Elementary School.** Improving current practices through critical evaluation and utilization of research findings and introduction of new materials. Development of closer co-operation between classroom teachers and art education specialists. (3 cred.; prereq. teaching experience or #; IV MTWThF; J 109) Gayne
- 189. Application of Aesthetic Theory in Education.** Contemporary theories of art, their psychological and philosophical foundations with experimental evidence. Open to teachers, supervisors, and administrators concerned with making art function in general education at all levels. (3 cred.; VI MTWThF; J 109) Hastie
- 295. Problems in Art Education.** Individual specialization and creative projects selected. Projects may include advanced studio practice or technical solution of problems involving research or reading in a chosen field. (Cred. ar.; prereq. special permission of major adviser; ar.) Gayne, Hastie
- 296. Seminar in Art Education.** Reports, evaluation of problems, recent literature. Participation by art education staff and guest specialists from re-

lated departments and from off campus. Open to advanced students in education. (1 cred.; VII Th; J 105) Staff

Second Term

- 17. **Pictorial Expression for Elementary Education.** (See first term) (I-II MTWThF; TSF 259) Wold
- 18. **Design Activities for Elementary Education.** (See first term) (III-IV MTWThF; TSF 259) Wold
- 184. **Improving Art Programs in the Elementary School.** (See first term) (I MTWThF; J 109) Gayne
- 295. **Problems in Art Education.** (See first term) Gayne
- 296. **Seminar in Art Education.** (See first term) (VI Th; J 105) Staff

EDUCATIONAL ADMINISTRATION (Ed.Ad.)

First Term

GENERAL COURSES

- 117. **Schools in Rural Areas.** Administrative and curricular problems peculiar to rural areas, with sociological changes in small towns and farm life. Building a school program suited to the culture and needs of people in smaller towns and villages. (3 cred.; III MTWThF; JohH 106) Archer
- 124. **Public School Administration.** The organization, administration, and general support of public schools in state and local school districts. (3 cred.; sr.; prereq. 9 cred. in education; I MTWThF; NH 211) Wakefield
- 210. **Financial Aspects of Public School Business Administration.** Financial program planning, budgeting, accounting, cost finding, income and expenditure control; and the preparation and analysis of financial reports. (3 cred.; prereq. 227; II MTWThF; FolH 3) Prentis
- 225. **Pupil Personnel Administration.** Child accounting records and reports, attendance department, school census, pupil adjustment and progress, pupil health and safety, and legal aspects of pupil personnel administration. (3 cred.; prereq. 124; III MTWThF; P 110) Lane
- 226. **School Plant Planning and Management.** Plant program planning and financing, including operation and maintenance of public school buildings. (3 cred.; prereq. 227; I MTWThF; JohH 313) Prentis
- 227. **Teacher and Employee Administration.** Selection and placement of school employees, salary schedules, conditions of service, records and reports, and legal aspects of teacher and employee personnel administration. (3 cred.; prereq. 225; IV MTWThF; FolH 5) Lane
- 228.* **Special Problems in Educational Administration.** Designed primarily for superintendents and principals qualified to make intensive studies of specific problems related to the administration of a school system. (1-3 cred.; prereq. 225; VII-VIII T; FolH 203) Lane, Prentis, Wakefield
- 230. **Public Relations for Schools.** Theory and practice of educational interpretation. Principles involved; machinery and personnel; techniques of working with groups; the teacher's contacts with the community; the role of the pupil; professional and lay organization. (3 cred.; prereq. 225; II MTWThF; JohH 307) Wakefield
- 236. **Field Study in Educational Administration.** Is a part of the requirements for the certificate, Specialist in Education. The 10 credits which may be earned in this course will be given on the basis of a written report covering an approved field study. Students may register for the general plan-

ning and organization of their field study without credit. (0-10 cred.; grad.; prereq. #; VII-VIII M; JohH 306) Domian

ELEMENTARY EDUCATION

115. **Administration of the Elementary School.** Problems relating to the organization for instruction and classification of pupils in elementary schools with critical examination of current practices. (3 cred.; prereq. 9 cred. in education; I MTWThF; NH 45) Curtin
118. **The Community School.** Philosophy, purposes, organization and functioning of the community school, including a study of its relationships with the area it serves. (3 cred.; sr., grad.; II MTWThF; Psy 115) Archer

SECONDARY EDUCATION

167. **The Junior High School.** Sources of the movement; purposes, functions, and limitations; types of reorganization; fundamental problems of reorganization; reorganization of subject matter. (3 cred.; sr., grad.; prereq. 9 cred. in education; I MTWThF; JohH 114) Cramer
218. **Recent Literature in Secondary Education.** (Cred. ar.; VII-VIII T; JohH 113) R. Keller, Mitchell
264. **Administration of Instructional Activities in the Secondary School.** (3 cred.; II MTWThF; FolH 301) Mitchell
265. **Administration of the Noninstructional Activities in the Secondary School.** (3 cred.; III MTWThF; PeikH 145) Anderson
- 270.* **Special Problems in Secondary Education.** (Cred. ar.; prereq. #; VII-VIII T; JohH 105) Bossing, R. Keller, Mitchell

HIGHER EDUCATION

274. **The Junior College.** Present status of the junior college, its development, functions, organization, curriculum, and probable trends. (3 cred.; IV MTWThF; JohH 115) R. Keller

Second Term

GENERAL COURSES

124. **Public School Administration.** (See first term) (I MTWThF; P 2) Wakefield
210. **Financial Aspects of Public School Business Administration.** (See first term) (II MTWThF; P 210) Prentis
225. **Pupil Personnel Administration.** (See first term) (III MTWThF; P 110) Lane
226. **School Plant Planning and Management.** (See first term) (I MTWThF; P 210) Prentis
227. **Teacher and Employee Administration.** (See first term) (IV MTWThF; P 110) Lane
- 228.* **Special Problems in Educational Administration.** (See first term) (VII-VIII T; JohH 309) Lane, Prentis, Wakefield
230. **Public Relations for Schools.** (See first term) (II MTWThF; P 2) Wakefield
236. **Field Study in Educational Administration.** (See first term) (VII-VIII M; JohH 309) Domian

ELEMENTARY EDUCATION

115. **Administration of the Elementary School.** (See first term) (I MTWThF; Pt 202) Curtin

- 200. Seminar in Elementary School Administration.** Especially for elementary school principals. Problems of administration and organization of instruction in the elementary school. (3 cred.; grad.; limited to 40 students; admission by advance application to dean's office, College of Education; prereq. grad., experience as elementary school principal; VI-VII MTWThF; PeikH 255) Archer, Goossen, Curtin, Ruddell

SECONDARY EDUCATION

- 218. Recent Literature in Secondary Education.** (See first term) (VII-VIII T; Bu 103) R. Keller, Mitchell
- 263. Organization of the Secondary School.** (3 cred.; II MTWThF; PeikH 175) F. Abel
- 264. Administration of Instructional Activities in the Secondary School.** (See first term) (III MTWThF; PeikH 145) Mitchell
- 270.* Special Problems in Secondary Education.** (See first term) (VII-VIII T; Bu 103) Bossing, R. Keller, Mitchell

CURRICULUM AND INSTRUCTION (Ed.C.I.)

First Term

GENERAL COURSES

- 101. Driver Education.** Materials and methods for driver education; building a plan for driver education for a specific school; behind-the-wheel training. Valid Minnesota driver's license required. Content planned to meet requirements of State Department of Education for driver education in the schools. (2 cred.; limited to 32 students; VI-IX MTWThF June 18 to 29; ForH 20, 30) Neal and ar.
- 105. Audio-Visual Materials in Education.** (3 cred.; sr., grad.; I MTWTh and 1 hr. ar.; WeH 206) Pearson
- 106. Co-ordinating an Audio-Visual Education Program.** (3 cred.; prereq. 105 or #; III MTWThF; WeH 206) Pearson
- 145. Reading Difficulties.** (3 cred.; prereq. course in reading or basic training in counseling or school psychological work; IV MTWThF; P 110) Bond
- 151. Diagnosis and Treatment of Learning Difficulties.** Evaluation of the results of teaching; diagnosis of pupil difficulty; development and prevention; tests as aids in teaching; following up a testing program. (3 cred.; IV MTWThF; NH 209) Clymer
- 171. Curriculum Laboratory Practice.** A practice course in the analysis and construction of units, courses of study, and curriculums according to needs, interests, level, and specialization. (3 cred.; prereq. 170A or B, #; ar.) Bossing
- 174-175-176. Clinical Methods and Practice in Speech Pathology.** (3 cred. each; prereq. Spch. 61, 67, 119, 162, and 163 or ¶Spch. 163; ar.) Bryngelson
- 178. Educational and Social Implications of Visual Impairment.** A lecture course which discusses the anatomy and physiology of the eye with emphasis on the etiological factors and their effects on the individual, some consideration of screening techniques, visual efficiency, the relationship of information concerning the eye to the educational program, information through field trips, film analysis of forms, etc. (3 cred.; I MTWThF; ForH 15) G. Abel and ar.
- 179. Principles and Methods of Teaching Braille.** The mastery of the Braille system as a means of communication and as a basic tool in the education

of blind children, development of written lessons and work-sheets which can be used by blind children, and analysis and discussion of reading readiness materials. Use of various types of Braille writing equipment, and observation of blind children using the Braille system. Use of the system in mathematics, music, and all other forms of Braille. (3 cred.)

Sec. 1, VI MTWThF, Tuttle School,
Petrucci (for beginners)

Sec. 2, VI MTWThF, Tuttle School,
Petrucci (for those with
working knowledge of the
Braille system)

180.55 Workshop: Educational Procedures and School Curriculum Adaptation with Blind Children. Workshop procedures will be applied to the exploration of the various areas of instruction important in the education of blind children. Lectures and films will form the orientation necessary in the basic areas, and opportunities to observe procedures with blind children in a resource room in the regular demonstration school will be available. Structured observation in the demonstration school and small group meetings will be planned for 2 days each week. Aside from the broad curriculum areas of the regular elementary school program, there will be special "plus" curriculum exploration in such areas as orientation and mobility, efficient living skills, guidance and counseling for children who are blind, and other topics, on the basis of requests from the students. (3 cred.; limited to 25 students; admission by advance application to director of Psycho-Educational Clinic; 9:30 to 12 MTWThF; ForH 15, June 12-15, last 4 weeks, Tuttle School) G. Abel, Kenmore

205.* Problems in Audio-Visual Education. (Cred. ar.; prereq. #; ar.) Pearson

227.* Problems in Rural Education. (Cred. ar.; prereq. Ed.Ad. 117; ar.) Archer

243. Recent Research in Reading. Critical analysis of methodology and findings of current research in the field of reading. Appraising research methods, population limitations, and educational implications. (3 cred.; prereq. #; III MTWThF; JohH 306) Bond, Clymer

271.* Problems in Curriculum Construction. (Cred. ar.; prereq. #; ar.) Archer, Bossing, Boeck, Goossen, D. Johnson, Curtin, Ruddell

273.* Problems in Reading. (Cred. ar.; prereq. 143 or 144 or #; V T; Bu 103) Bond, Clymer

ELEMENTARY EDUCATION

60. The Teaching of Reading in the Elementary School. (3 cred.; prereq. Ed. 71B or equiv.; IV MTWThF; P 210) Odland

61. The Teaching of the Social Studies in the Elementary School. (3 cred.; prereq. Ed. 71C or equiv.; III MTWThF; CW 222) Schwab

62B. The Teaching of Arithmetic in the Intermediate Grades. (3 cred; prereq. Ed. 71B or equiv.; II MTWThF; P 2) Ruddell

102. Teaching the Social Studies in the Elementary School. (3 cred.; prereq. Ed. 71C or equiv.; II MTWThF; P 110) Schwab

103. Teaching of Science in the Elementary School. Emphasis on resources and materials, and their application to the elementary grades. (3 cred.; sr., grad.; prereq. Ed. 71A-B or teaching experience; III MTWThF; P 210) Boeck

119. Elementary School Curriculum. (3 cred.; prereq. Ed. 71C or equiv.)

Sec. 1, I MTWThF, PeikH 175,
Jarolimek

Sec. 2, III MTWThF, PeikH 175,
Jarolimek

§§ Graduate students planning to register for any workshop should consult their advisers concerning the possibility of using credit for the workshop in their graduate program.

- 121. Selecting Literature for the Elementary School.** Research backgrounds in curriculum units, children's interests in reading, difficulty of reading materials, and principles of selection and use of books in the elementary school. Opportunity will be given to survey books available and to apply the principles and information learned. Recommended for majors in reading, for elementary teachers with degrees who want to go beyond mere acquaintance with the field of children's books; and for those who have already graduated without needed background in children's literature. (3 cred.; I MTWThF; JohH 115) D. V. Smith
- 123. Speech in the Elementary School.** Lectures, discussion, individual projects. Role of the elementary teacher in promotion of good speech, prevention of speech problems, and handling of speech defects. Projects related to the teacher's own teaching situation. (3 cred.; sr.; I MTWThF; FolH 2) Henrikson
- 143. Teaching and Supervision of Reading in the Elementary School.** (3 cred.; prereq. 9 cred. in education; II MTWThF; NH 211) Odland
- 149. Teaching and Supervision of Arithmetic in the Elementary School.** (3 cred., §62A or B; prereq. Ed. 71C or equiv.; III MTWThF; P 2) Ruddell
- 150. Supervision and Improvement of Instruction.** (3 cred.; prereq. Ed. 71C or equiv.)
 Sec. 1, II MTWThF, Pt 202, Sec. 2, IV MTWThF, AH 111, Goossen
 Goossen
- 153. Supervision and Teaching of English in the Elementary Schools.** (3 cred.; prereq. Ed. 71C or equiv.; IV MTWThF; JohH 122) Chase
- 162. Laboratory in Nursery School and Kindergarten Instructional Practices.** (3 cred.; open to experienced teachers; other professional workers admitted by special permission; IV MWF and hrs. ar.; CW 218) Headley
- 163. Plastic Materials, Story Telling, and Social Studies for Young Children.** (3 cred.; open to experienced teachers; other professional workers admitted by special permission; VI MWF and hrs. ar.; CW 218) Headley
- 186. Laboratory in Elementary Instructional Practices.** Daily observation of elementary classes with discussion of techniques, emphasis on activity units, visual aids, enriched materials, individual differences, and socialized situations. Students enrolling in this course must carry at least one other course in the College of Education. (2 cred.; experienced teachers only; observation 4 hrs. weekly ar. MTWThF, Tuttle School; lect. VI WTh; NH 216) Jensen
- 240. Improvement of Instruction in the Elementary School.** A graduate practicum intended for those who have a Master's degree in School Administration; study of current programs and procedures in the improvement of instruction in the elementary school; examination of current research on instructional methods in the major instructional fields, planning programs for the improvement of instruction; instructional materials. (4 cred.; grad.; limited to 35 students; III-IV MTWThF; JohH 307, 309) Curtin, Cramer
- 261.* Special Problems in the Improvement of Instruction.** (Cred. ar.; prereq. ‡; ar.) Goossen, Curtin, Ruddell

SECONDARY EDUCATION

- 113. High School Curriculum.** (3 cred.; prereq. Ed. 55A-B or equiv.; II MTWThF; Ph 170) Bossing
- 114. Development of the Core Curriculum.** Consideration will be given to the development of the core curriculum idea; its philosophical, psychological,

and educational bases; problems involved in the function and the preparation of the core teacher. (3 cred.; I MTWThF; JohH 126) Bossing

125. **Occupational Information Laboratory.** (3 cred.; limited to 25 students; prereq. #; II MTWThF; AH 111) White
131. **Advanced Course in Teaching the Technical Business Subjects.** (3 cred.; I MTWThF; Bu 103) Price
135. **Group Procedures in Guidance.** (3 cred.; limited to 35 students; prereq. 9 cred. in education, E.Psy. 133, or #; IV MTWThF and V TTh; NH 216) Borow
- 137A. **Materials and Methods in Co-operative Part-Time Classes.** (3 cred.; IV MTWThF; Bu 103) Meyer
139. **Co-ordination Techniques.** (3 cred.; II MTWThF; Bu 103) Meyer
140. **Teaching of Speech.** (3 cred.; jr., sr., grad.; prereq. Spch. 1-2-3 or 5-6 or equiv., or #; II MTWThF; FolH 307) D. K. Smith
144. **Teaching of Reading in Secondary Schools.** (3 cred.; prereq. 9 cred. in education; II MTWThF; PeikH 175) Chase
147. **Workshop in Teaching Display.** A 2-week workshop for co-ordinator-instructors of occupational part-time programs in high schools and junior colleges. Content includes interior display, window display, and showcard writing. Workshop members will have practice in using flannel board, peg board, Deca Pole, mannequins, show cases, and other display equipment. Lectures and demonstrations by display artists and trips to display departments and fixture distributors will be arranged. Class members will take home units of instruction in display for use in the classroom. (2 cred.; limited to 20 students; 1:30 to 4:00 p.m., June 18 to 29; Bu 103) E. Nelson
155. **Materials Laboratory for Social Studies Teachers.** A seminar in the study of printed and audio-visual materials, with reference to their use in social studies classes. (3 cred.; prereq. #; IV MTWThF; JohH 105) McCune
156. **Trends in Business Education.** (3 cred.; III MTWThF; Bu 103) Price
158. **Materials and Methods in Office and Clerical Practice.** (3 cred.; VII MTWThF; JohH 307) Paleen
- 187A. **The Teaching of the Analysis of the French Language.** (2 cred.; IV MTWThF; FolH 202) Falk
- 187B. **The Teaching of the Analysis of the German Language.** (2 cred.; II MTWThF; FolH 103) Menze
- 187C. **The Teaching of the Analysis of the Latin Language.** (3 cred.; III MTWThF; FolH 4) Bock
192. **Mathematics Laboratory.** A study of the sources and types of materials, laboratory projects and techniques of using mathematical devices and instruments, visual aids, and community resources. (3 cred.; limited to 25 students; prereq. grad. or experienced teacher; IV MTWThF and V TTh; PeikH 315) D. Johnson
- 199E. **Internship.** (Cred. ar.; available for M.Ed. students in recreation; ar.) Fitzgerald
- 201.* **Problems in Teaching the Social Studies.** (Cred. ar.; prereq. 168, 204, or #; ar.) McCune
- 225.* **Special Problems in Supervision of Instruction in Secondary Schools.** (Cred. ar.; prereq. #; VII-VIII T; JohH 306) R. Keller
- 238.* **Problems in Distributive Education.** (Cred. ar.; prereq. #; ar.) Meyer

- 239.* **Problems in Business Education.** (Cred. ar.; prereq. #; ar.) Price
266. **Supervision of High School Instruction.** (3 cred.; prereq. E.Psy. 293 or #: IV MTWThF; FoIH 209) Ringo
- 287.* **Advanced Course in the Teaching of Science.** (3 cred.; grad.; IV MTWThF; PeikH 375) Boeck
- 294.* **Advanced Course in Curriculum and Methods in Secondary School English.** (3 cred.; prereq. Ed.T. 75A-B-C or equiv.; II MTWThF; JohH 106) D. V. Smith
- 296.* **Special Problems in Teaching English.** (Cred. ar.: ar.) D. V. Smith

HIGHER EDUCATION

- 228.*§§ **Workshop: Problems of Higher Education and Teacher Education.** (6 cred.; grad.; ar. MTWThF, June 11 to July 6; ar.) Cooper, Eckert, Corcoran, McKeefery, and consultants
250. **Higher Education in the United States.** (3 cred.; prereq. year of graduate study in any field or 18 cred. in education; I MTWThF; JohH 105) Eckert
252. **Effective College Teaching.** (3 cred.; prereq. year of graduate study in any field or 18 cred. in education; III MTWThF; JohH 105) McCune

Second Term

GENERAL COURSES

101. **Driver Education.** (See first term) (Limited to 32 students; VI-IX July 30 to August 10; ForH 20, 30) Neal and ar.
105. **Audio-Visual Materials in Education.** (See first term) (I MTWTh and 1 hr. ar.; WeH 206) Pearson
109. **Audio-Visual Materials and Equipment Laboratory.** (3 cred.; limited to 30 students; prereq. 105 or #105, or #; III and IV MTWThF; WeH 206) Pearson
133. **Consumer Education in the Schools.** (3 cred.; II MTWThF; Bu 103) Price
145. **Reading Difficulties.** (See first term) (IV MTWThF; NH 207) Tinker
171. **Curriculum Laboratory Practice.** (See first term) Bossing
- 174-175-176. **Clinical Methods and Practice in Speech Pathology.** (See first term) Bryngelson
- 205.* **Problems in Audio-Visual Education.** (See first term) Pearson
- 227.* **Problems in Rural Education.** (See first term) Archer
- 271.* **Problems in Curriculum Construction.** (See first term) Archer, Bossing, Boeck, Goossen, D. Johnson, Curtin, Ruddell
- 273.* **Problems in Reading.** (See first term) (V T; Bu 103) Tinker, Reynolds, Clymer

ELEMENTARY EDUCATION

102. **Teaching the Social Studies in the Elementary School.** (See first term) (III MTWThF; AH 111) Jarolimek

§§ Graduate students planning to register for any workshop should consult their advisers concerning the possibility of using credit for the workshop in their graduate program.

103. **Teaching of Science in the Elementary School.** (See first term) (I MTWThF; PeikH 375) Boeck
119. **Elementary School Curriculum.** (See first term) (II MTWThF; AH 111) Jarolimek
121. **Selecting Literature for the Elementary School.** (See first term) (IV MTWThF; AH 111) Odland
143. **Teaching and Supervision of Reading in the Elementary School.** (See first term) (III MTWThF; P 210) Clymer
146. **Current Developments in Language Expression in the Elementary School.** (3 cred.; prereq. Ed. 71C or equiv.; II MTWThF; JohH 313) Archer
149. **Teaching and Supervision of Arithmetic in the Elementary School.** (See first term) (II MTWThF; Ph 133) Ruddell
150. **Supervision and Improvement of Instruction.** (See first term) (IV MTWThF; Bu 111) Goossen
- 261.* **Special Problems in the Improvement of Instruction.** (See first term) Goossen, Curtin, Ruddell

SECONDARY EDUCATION

113. **High School Curriculum.** (See first term) (II MTWThF; AH 108) Bossing
122. **Literature for Adolescents.** (3 cred.; prereq. Ed. 55B or junior-senior high school teaching experience; I MTWThF; PeikH 175) Kegler
125. **Occupational Information Laboratory.** (See first term) (Limited to 25 students; III MTWThF; Bu 111) White
135. **Group Procedures in Guidance.** (See first term) (Limited to 35 students; IV MTWThF and V TTh; NH 216) Borow
136. **Organization and Administration of Distributive Education.** (3 cred.; III MTWThF; Bu 103) Meyer
141. **Co-operative Part-Time Work Experience Programs.** (3 cred.; I MTWThF; Bu 103) Meyer
144. **Teaching of Reading in Secondary Schools.** (See first term) (II MTWThF; Ph 166) Tinker
161. **Curriculum Construction in Business Education.** (3 cred.; prereq. 113; IV MTWThF; Bu 103) Price
168. **Current Developments in the Social Studies.** (3 cred.; grad.; IV MTWThF; CW 206) McCune
- 170B. **Curriculum and Course of Study Construction.** (3 cred.; prereq. 113 or 119, or #; I MTWThF; AH 108) Bossing
- 199E. **Internship.** (See first term) Fitzgerald
- 201.* **Problems in Teaching the Social Studies.** (See first term) McCune
- 225.* **Special Problems in Supervision of Instruction in Secondary Schools.** (See first term) (VII-VIII T; Bu 103) R. Keller
- 238.* **Problems in Distributive Education.** (See first term) Meyer
- 239.* **Problems in Business Education.** (See first term) Price
266. **Supervision of High School Instruction.** (See first term) (IV MTWThF; PeikH 175) F. Abel

HIGHER EDUCATION

- 228.*§§ **Workshop: Problems of Higher Education and Teacher Education.** (See first term) (Ar. MTWThF, July 23 to August 17; CCS) Grim, Boeck, Mork, Allen, and consultants

EDUCATIONAL PSYCHOLOGY (E.Psy.)

First Term

GENERAL COURSES

60. **Introduction to Measurement and Statistics.** (3 cred.; prereq. 6 cred. in psychology; VI MTWThF; NH 213) Collier
110. **Educational Measurement in the Classroom.** Principles and methods for construction, evaluation, and improvement of educational measurement in classroom instruction. (3 cred.; VII MTWThF; NH 213) D. Johnson
116. **Introduction to Statistical Methods in Education.** (Not equivalent to 216, 216a) Simpler statistical techniques in educational work. Comprehension of literature using elementary statistical concepts and methods. (3 cred.; not open to Master's or Ph.D. degree candidates who will take more than 1 quarter of statistics; prereq. 116a or #; III MTWThF; NH 213) Collier
- 116a. **Introduction to Statistical Methods in Education—Laboratory.** (2 cred.; limited to 16 students; prereq. 116; V-VI MWF; Bu 221) MacEachern
125. **Group Dynamics in Education.** Survey of selected literature on group dynamics; practical application of social-psychological concepts to the analysis of group behavior. (3 cred.; limited to 30 students; VI-VII MTWThF; VH 210) Flanders
140. **Instruments and Techniques of Measurement.** (3 cred.; sr., grad.; prereq. 110 or 117 or equiv.; IV MTWThF and V ThF; Bu 111) Edson
150. **Clinical Practice in Remedial Teaching.** Practice in remedial tutoring of individual children who have experienced difficulty in school learning. (3 cred.; prereq. Ed.C.I. 145 or 151 and #; II-III MTWThF and 1 hr. ar.; Pt 108) Reynolds, Clymer
151. **Clinical Practice in Educational Diagnosis.** Practice in diagnosis of school learning problems. Includes measurement, interview technique, preparation of case reports, etc. Work with children referred to the Psycho-Educational Clinic. (3 cred.; prereq. 142 or Ed.C.I. 145 and #; VI-VIII MTWThF; Pt 108) Reynolds, Balow
159. **Personality Development and Mental Hygiene.** (3 cred.; IV MTWThF; AH 108) Swan
184. **Education of the Slow-Learning Child.** (3 cred.; prereq. 182; IV MTWThF; Pt 202) Reynolds
193. **Psychology of Human Learning.** (3 cred.; sr., grad.; VI MTWThF; NH 209) Mork
- 208.* **Methods in Educational Research.** Methods and techniques employed in the investigation and report of educational problems. Suggested for all candidates for graduate degrees. (3 cred.; grad.; II MTWThF; Bu 111) P. O. Johnson

§§ Graduate students planning to register for any workshop should consult their advisers concerning the possibility of using credit for the workshop in their graduate program.

- 216. Statistical Methods in Education.** Designed to lay the foundations of statistical theory and to give practice in applying the theories in the solution of educational and psychological problems. (3 cred.; grad.; I MTWThF; Bu 111) P. O. Johnson
- 216a. Statistical Methods in Education—Laboratory.** (2 cred.; limited to 16 students; VII-VIII MWF; Bu 221) MacEachern
- 233.* Problems in Guidance and Personnel Work.** (Cred. ar.; ar.) Dugan, Borow, Edson
- 253.* Research Problems.** (Cred. ar.; prereq. #; ar.) Dugan, P. O. Johnson, Edson, Flanders, Mork, Reynolds
- 290. Individual Differences.** (3 cred.; III MTWThF; ForH 120) Flanders
- 293.* Psychology of Learning.** (3 cred.; prereq. 12 cred. in psychology and educational psychology; II MTWThF; Ph. 133) Mork

SECONDARY EDUCATION

- 133. Basic Procedures in Student Personnel Work.** (3 cred.; prereq. 9 cred. in education; I MTWThF)
- Sec. 1, AH 111, White
- Sec. 2, NH 213, Borow
- 134. School Counseling Procedures.** (3 cred.; limited to 30 students; prereq. 110 or 117 or equiv., 133 and #; I MTWThF; JohH 122) Dugan
- 282. Practice in High School Personnel Work.** (3 cred.; prereq. #; III MTWThF; AH 108) Swan

Second Term

GENERAL COURSES

- 110. Educational Measurement in the Classroom.** (See first term)
- Sec. 1, III MTWThF, CW 218, D. Johnson
- Sec. 2, IV MTWThF, CW 218, D. Johnson
- 116. Introduction to Statistical Methods in Education.** (See first term) (IV MTWThF; P 210) Stecklein
- 116a. Introduction to Statistical Methods in Education—Laboratory.** (See first term) (Limited to 16 students; V-VI MWF; Bu 221) MacEachern
- 117. Basic Principles of Measurement.** (3 cred.; prereq. 116 or 216 or Psy. 70 or equiv.; III MTWThF; PeikH 175) Collier
- 150. Clinical Practice in Remedial Teaching.** (See first term) (II-III MTWThF and 1 hr. ar.; Pt 108) Reynolds, Clymer
- 151. Clinical Practice in Educational Diagnosis.** (See first term) (VI-VIII MTWThF; Pt 108) Reynolds, Balow
- 152. Introduction to School Psychological Services.** Psychological services to children in public schools. Problems of relationship of the psychologist to teachers, administrators, parents, and the community, and as a specialist dealing with problems of normal children including diagnosis and treatment of educational and psychological disabilities. Lectures and discussions. (3 cred.; prereq. #; III MTWThF; P 2) Gray
- 153.§§ Seminar and Laboratory in School Psychological Services.** Practical problems confronting the school psychologist. Seminar research reports,

§§ Graduate students should consult their advisers concerning the advisability of registering for this workshop under E.Psy. 153 or C.W. 200.

field visits, clinic observation, and supervised experience in case study. (3 cred.; prereq. ‡; admission by advance application to Institute of Child Welfare; VI-VII MTWThF; CW 218) Gray

159. **Personality Development and Mental Hygiene.** (See first term) (I MTWThF; WuH 201) Jones
182. **Education of Exceptional Children.** Overview of the field of special education. Especially for classroom teachers, counselors, supervisors, and administrators; also the initial course for students working for special class certificates. Reports on individual work equivalent to 1 credit. (3 cred.; prereq. Ed. 55B or 71C or equiv.; IV MTWThF; Pt 202) Reynolds
185. **Education of the Auditorially Handicapped Child.** Workshop techniques, including observation of laboratory class for hearing handicapped children, and individual and small group conferences. (3 cred.; III-IV MTWThF; Pt 108 and ar.) Ar.
193. **Psychology of Human Learning.** (See first term) (VI MTWThF; NH 209) Mork
217. **Statistical Methods in Education.** (3 cred.; grad.; I MTWThF; Bu 111) Collier
- 217a. **Statistical Methods in Education—Laboratory.** (2 cred.; limited to 16 students; VII-VIII MWF; Bu 221) MacEachern
- 233.* **Problems in Guidance and Personnel Work.** (See first term) Dugan, Borow
- 253.* **Research Problems.** (See first term) Dugan, Mork, Reynolds

SECONDARY EDUCATION

133. **Basic Procedures in Student Personnel Work.** (See first term) (II MTWThF; Bu 111) White
134. **School Counseling Procedures.** (See first term) (Limited to 30 students; II MTWThF; NH 107) Dugan

GENERAL EDUCATION (Ed.)

First Term

- 75A. **Introduction to Elementary School Teaching.** (5 cred.; prereq. Psy. 2; I-II MTWThF; CW 218) Balow

Second Term

- 75B. **Introduction to Elementary School Teaching.** (5 cred.; prereq. 75A; I-II MTWThF; CW 218) Balow

HISTORY AND PHILOSOPHY OF EDUCATION (H.Ed.)

First Term

110. **Intercultural Education.** A study of racial, religious, and nationality problems with special reference to their importance for the schools. (3 cred.; IV MTWThF; JohH 310) Kosaki
141. **Critical Issues in Contemporary Education.** (3 cred.; II MTWThF; Ph 166) Clopton

156. History of Ideas in American Education. Selected readings in American political, economic, and social development with reference to the emerging system of public education. (3 cred.; I MTWThF; JohH 310) Clopton

180. The School and Society. (3 cred.; sr.; limited to 60 students in each section; prereq. Ed. 55A-B or 71A-B)

Sec. 1, III MTWThF, NH 209,
Dupuis

Sec. 2, VI MTWThF, JohH 122,
Dupuis

241.* Problems in the History and Philosophy of Education. (Cred. ar.; prereq. #; ar.) Clopton, Dupuis

Second Term

131. Comparative Education. Compares European, Asiatic, and American systems and philosophies of education. Emphasis on exploring the possibilities of international education. (3 cred.; II MTWThF; EE 237) Beck

180. The School and Society. (See first term) (Limited to 60 students in each section)

Sec. 1, III MTWThF, EE 237,
Beck

Sec. 2, IV MTWThF, AH 108,
Atherton

241.* Problems in the History and Philosophy of Education. (See first term) Beck

HOME ECONOMICS EDUCATION (H.E.Ed.)

First Term

191. Advanced Course in the Teaching of Home Economics. Materials, equipment, and teaching procedures based on newer concepts of learning and changing social and economic needs of families. The course offers the teacher an opportunity to study problems related to her own situation at the secondary or higher educational level. (3 cred.; sr., grad.; prereq. 91, 93, or #; V MTWThF; HE 103) Clewell

193A. Home Economics Curriculum (Secondary Level). Contributions of home economics at elementary and secondary levels; techniques employed in curriculum planning and reconstruction. (3 cred.; prereq. 94 or #; I MTWThF; HE 103) Clewell

243. Trends in Home Economics. The place of home economics in the educational program today; the ways in which content and procedures are being modified to meet changing conditions. (3 cred.; prereq. #; IV MTWThF; HE 129) Rose

293.* Problems in Home Economics Education. Designed to meet the needs of advanced students for independent study of current educational problems. (1-9 cred.; prereq. 294 recommended, #; ar.; HE 117) Rose

Second Term

192. Evaluation in Home Economics. Measuring progress toward important goals in different areas of home economics; available tests and other evaluation materials; construction and refinement of various evaluation instruments. Elementary statistical techniques useful to home economics teachers. (3 cred.; sr., grad.; prereq. 91, 93, Ed. 55A-B; VI MTWThF; HE 103) Ford

293.* Problems in Home Economics Education. (See first term) (Ar.; HE 107) Ford

INDUSTRIAL EDUCATION (Ind.)

First Term

- 101. Tests in Industrial Subjects.** Study and application of principles of evaluation with emphasis on shop and drawing subjects. (3 cred.; jr., sr., grad.; prereq. Ed. 55B; IV MTWThF; TNCW 113) Kavanaugh
- 106. Industrial Education Workshop—Industrial Arts in the Junior High School.** (Curriculum, projects, teaching materials, etc.) A laboratory course for experienced teachers who wish to upgrade themselves through contact with current thinking and practices concerning industrial arts in the junior high school. Workshop members will work on individual problems and will also pool their efforts in producing a kit of curriculum and instructional materials for each participant. (3-6 cred.; prereq. teaching experience or #; III-IV and VI-VII MTWThF; TNCW 1) H. Nelson, Kavanaugh
- 107. Co-ordination.** Province and duties of co-ordinators in trade schools, part-time programs, and cosmopolitan high schools. Information, guidance, and training for those having interest in this new type of school work. (3 cred.; prereq. 60 and 61, or 125 or #; I MTWThF; TNCW 116) Widdowson
- 109. Conference Leading for Industry.** Purposes, advantages, and limitations of conference method. Instruction in techniques of conference procedure. Experience in planning, leading, and evaluating conferences and in writing summaries. (3 cred.; prereq. #; III MTWThF; TNCW 116) Widdowson
- 200.* Research Problems.** (3-6-9 cred.; prereq. approval of candidacy for Master's degree; individual conferences with advisers) Micheels, H. Nelson, Kavanaugh
- 251. Research in Industrial Education.** Survey of research techniques, methods, and studies; critical analysis; selection of research problems; formulation of design and work plans; reports of progress; organization and presentation. (3 cred.; prereq. #; II MTWThF; TNCW 113) Micheels

Second Term

- 103. Instructional Aids.** Consideration of various instructional aids, including audio-visual materials and individual instruction sheets; planning, constructing, using. (3 cred.; prereq. 70 or equiv.; III MTWThF; TNCW 113) Kavanaugh
- 110. Vocational Guidance.** History of the educational and vocational guidance movement; typical public school means and methods; types and uses of occupational information; duties of the counselor; organization and relationships. (3 cred.; prereq. Ed. 55B or #; II MTWThF; TNCW 113) H. Nelson
- 200.* Research Problems.** (See first term) (IV MTWThF; TNCW 103) H. Nelson, Kavanaugh

METHODS AND STUDENT TEACHING (Ed.T.)

First Term

NURSING EDUCATION

- 51A. The Teaching of Nursing.** (2 cred.; open only to students who will also be registered for 2 cred. in this course in the second term; see instructor; prereq. Ed. 55B or 55N; VI MWF; ForH 345) Norris, Dunning

ELEMENTARY EDUCATION

- 77.†† Student Teaching in the Nursery School.** Five half-days each week spent in classroom participation under supervision. (3 cred.; sr.; prereq. 55, 56, 57, and 58 plus #; ar.) Helgerson
- 78.†† Student Teaching in the Kindergarten.** Five half-days each week spent in classroom participation under supervision. (3 cred.; sr.; prereq. 55, 57, 58, and 59 plus #; ar.) Helgerson

SECONDARY EDUCATION

- 52.†† Student Teaching.** Open only to students who need a limited number of credits in student teaching to graduate at the end of the first summer term or to students who wish to qualify for the junior high school endorsement. (Cred. ar.; limited to 40 students; ar.; PeikH) Grim
- 84A-B-C. Practice and Field Work in Recreation Leadership.** (2 cred.; prereq. recreation major; ar.) Fitzgerald
- 85A-B-C. Practice and Field Work in Recreation.** (2 cred. for majors, 1 cred. for minors; prereq. recreation majors or minors; ar.) Fitzgerald

Second Term

NURSING EDUCATION

- 51A. The Teaching of Nursing.** (See first term) (VI MWF; ForH 345) Norris, Dunning

SECONDARY EDUCATION

- 84A-B-C. Practice and Field Work in Recreation Leadership.** (See first term) Fitzgerald
- 85A-B-C. Practice and Field Work in Recreation.** (See first term) Fitzgerald

MUSIC EDUCATION (Mu.Ed.)

See also Department of Music, College of Science, Literature, and the Arts

First Term

- 51. Teaching of Music.** For nonmusic majors. Appreciation, music history, methods, materials. (3 cred.; prereq. Mu. 1; I MTWThF; ScH 4) C. Nelson
- 52. Teaching of Music.** For nonmusic majors. Appreciation, music history, methods, materials. (3 cred.; prereq. 51; II MTWThF; ScH 4) C. Nelson
- 60††-61-62. Supervision and Teaching of Music.** (3 cred. each.; sr.; prereq. 50B, 53, Ed. 55B, #; VIII W; ScH 4) Ivory
- 104. Advanced Topics in Vocal Music Education.** Survey of objective and empirical research and literature on voice development in individual, class, and choral work. Individual surveys of performance practices and organization of vocal groups in public schools; compilation of lists of vocal music in accordance with sets of objective criteria. (3 cred.; sr.; prereq. #; III MTWThF; ScH 4) Caswell
- 105. Advanced Topics in Instrumental Music Education.** Individual selection of topics in instrumental music education for intensive study. Biblio-

†† Students registering for this course must make out the application required for methods courses and student teaching. Forms are available in the office of the director of student teaching, 210C Burton Hall.

graphical methods, use of library resources. (3 cred.; sr.; prereq. #; III MTWThF; ScH 3) Ivory

- 160. Organization and Supervision of Vocal-Instrumental Music in Secondary Schools.** Practical problems in school music; individual projects, group activities, general discussions; classroom management, techniques of supervision, scheduling, unit construction, instruments, repertory. (3 cred.; sr.; prereq. 6 cred. in music education, 9 cred. in music, and 6 cred. in general education; II MTWThF; ScH 104) Ivory, Caswell
- 224.* Research Problems.** (3-9 cred.; grad.; prereq. knowledge of elementary statistics; VIII T; ScH 4) Ivory, Caswell
- 225E.** Advanced Applied Music.** (2-4 cred.; prereq. entrance exam.; ar.; ScH 107) Ar.

Second Term

- 51. Teaching of Music.** (See first term) (II MTWThF; ScH 4) Caswell
- 52. Teaching of Music.** (See first term) (IV MTWThF; ScH 4) Ivory
- 170. Recent Research and Literature.** Analysis of current research findings and evaluation of newly published teaching materials in light of the findings. Appraisal of research techniques in music education. (3 cred.; sr.; III MTWThF; ScH 4) Ivory, Caswell
- 224.* Research Problems.** (See first term) (VIII T; ScH 4) Ivory, Caswell
- 225E.** Advanced Applied Music.** (See first term) Ar.

PHYSICAL EDUCATION FOR MEN (P.E.M.)

First Term

- 1A. Beginning Golf.** (1 cred.; no prereq.; V-VI MWF; Golf Course) Bolstad
- 1B. Intermediate Golf.** (1 cred.; no prereq.; V-VI TThF; Golf Course) Bolstad
- 1C. Beginning Swimming.** (1 cred.; no prereq.; VI MTWThF; CH) Mueller
- 5A. Touch Football, Calisthenics, Tactics.** (1 cred.; no prereq.; I MTWThF; CH) Shawbold
- 5B. Gymnastics—Apparatus and Tumbling.** (1 cred.; no prereq.; II MTWThF; CH) Shawbold
- 5C. Stunts, Contests, Softball.** (1 cred.; no prereq.; III MTWThF; CH) Shawbold
- 9A. Fundamental Rhythms, Folk Dance.** (1 cred.; no prereq.; V MTWThF; NGW) Ar.
- 9B. Square and Ballroom Dance.** (1 cred.; no prereq.; VII MTWTh; NGW) Ar.
- 50. Human Anatomy.** A study of the structure of the body and the principles and mechanics of bodily movements. (3 cred.; IV MTWThF; CH) Osell
- 73†-74-75. Directed Teaching.** Actual practice in teaching physical education activities. (2 cred. each; prereq. 55, Ed. 55B; 10-12 hours a week ar.; CH) Mueller

†† Students registering for this course must make out the application required for methods courses and student teaching. Forms are available in the office of the director of student teaching, 210C Burton Hall.

- 101. Principles of Physical Education.** Aims, scope, and biological aspects of physical education with special consideration of the place of physical activity in education. (3 cred.; jr., sr., grad.; prereq. 32, 55, and 9 cred. in activity courses; I MTWThF; CH) Keller
- 135. Tests and Measurements in Physical Education.** Critical analysis of existing tests and testing methods in physical education including all curricular levels. Use of tests in physical activity programs. Application of principles of test construction to specific problems. (3 cred.; sr., grad.; III MTWThF; CH) Keller
- 224.* Research Problems in School Health Education, Physical Education, and Recreation.** Independent study on problems selected by students and approved by instructor. Conferences of individual students with instructor. (Cred. ar.; prereq. ‡; CH) Keller, Donnelly, Fitzgerald
- 233. The Administration of Physical Education in Schools.** Staff, organization, and supervision required in programs of physical education; intramural and interscholastic athletic problems; legal aspects; professional and public relations. (3 cred.; prereq. 63, 101 or equiv.; II MTWThF; CH) Donnelly
- 236. Recent Literature and Research in Physical Education and Recreation.** Research methods applied to physical education and recreation; preparation of designs for research problems. (3 cred.; grad.; IV MTWThF; CH) Donnelly
- 241. The Administration and Supervision of Public Recreation.** The organization for recreation; policies and procedures relating to finance, program, facilities, office management, legislation, and public relations. (3 cred.; grad.; I MTWThF; CH) Fitzgerald

Second Term

- 2A. Intermediate Golf.** (1 cred.; prereq. playing experience; III-IV MWF; Golf Course) Bolstad
- 2B. Beginning and Intermediate Swimming.** (1 cred.; no prereq.; V MTWThF; CH) Mueller
- 8. Tennis and Golf.** (1 cred.; no prereq.; VI-VII TWTh; CH) Bolstad, Mueller
- 65. Adapted Physical Education.** Philosophy, principles, and techniques of adapting the physical education program to meet the needs of handicapped pupils. (3 cred.; prereq. Anat. 51; III MTWThF; CH) Osell
- 67. Football Coaching.** Theory, strategy, generalship, styles of offense and defense, methods of organizing practices, and handling of men. (2 cred.; prereq. 4A or 1 year's experience on squad; IV MTWThF; CH) Warmath, staff
- 73††-74-75. Directed Teaching.** (See first term) Mueller
- 110. Recreation Surveys.** Methods and techniques of conducting recreation surveys. (3 cred.; sr., grad.; II MTWThF; CH) Fitzgerald
- 155. Instructional Aids in Health, Physical Education, and Recreation.** Evaluation, construction, and use of instructional materials stressing audio-visual aids. (3 cred.; no prereq.; III-IV MTWThF first 4 weeks; CH) Mueller
- 224.* Research Problems in School Health Education, Physical Education, and Recreation.** (See first term) Piper, Donnelly, Fitzgerald

†† Students registering for this course must make out the application required for methods courses and student teaching. Forms are available in the office of the director of student teaching, 210C Burton Hall.

- 234. The Curriculum in Physical Education.** Theory and principles of curriculum construction applied to physical education; practical application in construction of a curriculum. (3 cred.; grad.; II MTWThF; CH) Donnelly
- 261A. Seminar in Contemporary Problems in Physical Education.** Presentation of problems by class members; readings, discussions, problems selected for individual study. (3 cred.; grad.; I MTWThF; CH) Donnelly

PHYSICAL EDUCATION FOR WOMEN (P.E.W.)

Physical Examination

It is recommended that every woman student avail herself of the opportunity offered by the Students' Health Service for a physical examination. Everyone, but especially a teacher, should know her health status. The Department of Physical Education for Women strongly urges every person to make an appointment for a physical examination at the Health Service. Health Service approval must be secured for participation in activity courses designated by ††.

Facilities for Recreation

The swimming pool is open for recreational use from 2 to 3:30 p.m. during the first term and from 1 to 2:30 p.m. during the second term. At these times also the facilities of Norris Gymnasium for Women are open to women for individual practice; inquire in the main office concerning the procedure. The rental fee for suits and towels for open swimming is 20 cents. Towels for shower baths may be procured from the matron for 10 cents apiece. Health Service approval must be secured for participation in recreational swimming.

The University tennis courts and golf course are open to students at a nominal fee.

Institute on Dynamics of Posture and Poise

See section on Special Programs

Teaching Qualifications

Those interested in teaching physical education in the state of Minnesota must qualify in one of the following professional programs:

1. Courses applying this summer to the minor in physical education are: P.E.W. 18, 32, 37, 84, 117.
2. Courses applying this summer to the undergraduate major in physical education are: P.E.W. 18, 37, 81, 84, 117, 135.
3. Courses applying to advanced and graduate degrees with a major in physical education are: P.E.W. 117, 118, 124, 130, 224.

Required Physical Education

Those interested in meeting a college requirement in physical education may register for P.E.W. 7, 8, 12, 32.

First Term

- 7.†† Tennis for Beginners.** Open to those with little or no experience in tennis. Instruction will include the service, forehand drive, backhand drive, rules and etiquette of the game. Individual coaching will be stressed. Students are required to furnish own rackets and balls. (1 cred.)
- Sec. 1, IV MTWTh, NGW 151, Eibner Sec. 2, V MTWTh, NGW 151, Eibner
- 8. Golf for Beginners.** Open to those with little or no experience in golf. Fundamental strokes and individual analysis of the player's game are stressed along with the rules and etiquette of the game. (1 cred.)
- Sec. 1, 7 a.m. MTWThF, NGW 60, Reiter Sec. 2, 8 a.m. MTWTh, NGW 60, Reiter
- 10. Advanced Fundamentals of Movement.** Deals with the concept of the term fundamentals as applied to physical education at the elementary and secondary level. Special emphasis will be placed on the application of skill and knowledge fundamentals along with illustrative units in physical education. (1 cred.; III MTWTh; NGW 153) Jaeger
- 12. Social Recreation.** Ballroom and American country dance. Ballroom dance skills and country dances selected for use in high school teaching. Simple mixers for social groups will be included. (1 cred.; VII MTWTh; NGW 151) Lampe
- 18. Elementary Folk Dancing, Games, and Methods.** Graded folk dances and games usable at the elementary and secondary levels; teaching methods suited to the different age levels and the content will be discussed and experienced. (2 cred.; practical work V MWF, lect. V TTh; NGW 151) Lampe
- 32.†† Elementary Swimming.** For those who are unable to swim in deep water. Instruction includes orientation activities, water safety skills, crawl, side stroke, backstroke, and diving. (1 cred.; VI MTWTh; NGW 58) Eibner
- 37. Individual and Dual Games and Methods.** Deals with various methods and techniques for the teaching of individual sports at the junior and senior high school levels. Activities emphasized: badminton, golf, and tennis. (2 cred.; IV MTWThF; NGW 153) Jaeger
- 81. Methods in Posture Education and Functional Exercise.** Application of principles of body mechanics and energy conservation to everyday activities; values of the many kinds of exercise and practice in their correct use. Attention is called to a special 2-day Institute held in conjunction with this course. The Institute is free of charge to those registered in the course. In 1956, this course may be substituted for a requirement in P.E. 85, Remedial Activities. (2 cred.; practical work I MWF, lect. I TTh; NGW 153) Wilson
- 84. The Physical Education Program in the Elementary and Secondary School.** Deals with philosophy, objectives, trends, content, and evaluation in relation to the physical education curriculum at the elementary and secondary level. (3 cred.; prereq. ‡; VI MTWThF; NGW 201) Jaeger
- 118E.§§ Problems in Teacher Education in Health, Physical Education, and Recreation.** For M.Ed. students who are interested in participating in the conduct and development of professional teacher education programs in the field of school health education, physical education, and the recreational function of physical education. Individual projects and conferences. (3 cred.; prereq. consent of-graduate advisers) Staff

†† Health Service approval must be secured for participation in this course.

§§ Courses marked "E" carry credit toward the degree of master of education.

- 124. Supervision of Physical Education.** Presents a consideration of the function, organization, and administration of supervision in physical education; adaptations of accepted procedures for observation, guidance, and training of teachers in the field; standards for qualifications of supervisors; problems peculiar to the supervision of physical education. (3 cred.; III MTWThF; NGW 3) Baker
- 130. Contributions of Basic Sciences to Physical Education.** Provides stimulation and assistance to the student in the understanding of recent research in basic sciences pertinent to physical education and in the interpretation, integration, and wider application of the scientific principles derived from these sciences. Intensive exploration of at least one topic and its relationship to physical education by each student. (3 cred.; II MTWThF; NGW 3) Wilson
- 224.* Research Problems in School Health Education, Physical Education, and Recreation.** Individual problems and conferences. (Cred. ar.; prereq. consent of graduate advisers)

Second Term

- 5.†† Methods of Coaching and Conducting Organized Games for Junior and Senior High Schools.** Special techniques for team games such as speed ball, soccer, volleyball, basketball, and softball. Organization of tournaments suited to various games, play days, methods of teaching. (2 cred.; I MTWThF; NGW 151) Hauptfuehrer
- 7.†† Tennis for Beginners.** (See first term) (1 cred.; II MTWTh; NGW 151) Hauptfuehrer
- 117. Advanced Course in School Health Instruction.** Instructional problems in school health education at all levels. Application of course to individual problems. (3 cred.; prereq. 83, or #; IV MTWThF; NGW 201) Slocum
- 118E.§§ Problems in Teacher Education in Health, Physical Education, and Recreation.** (See first term) Staff
- 224.* Research Problems in School Health Education, Physical Education, and Recreation.** (See first term)

†† Health Service approval must be secured for participation in this course.

§§ Courses marked "E" carry credit toward the degree of master of education.

- 82. Supervision of School Publications.** Practical consideration of teaching, editorial, business management, and production problems facing supervisors of high school, junior college, and teachers college newspapers, magazines, yearbooks. (3 cred.; prereq. #; I MTWThF; MurH 311) Wilson
- 106.* Critical Writing.** Theory and practice of writing book, theater, and motion picture reviews. Analysis of the work of leading critics and critical periodicals. Practical reviewing assignments. (3 cred.; prereq. a Senior College writing course and #; III MTWThF; MurH 311) Hage
- 121.* The Press in a Dynamic Society.** Economic, political, and social determinants of the character and content of mass communications. Patterns of operations, their effect on content, and their relative social utility. Government and mass communications. (3 cred.; prereq. 15 or 18 for journalism majors, # for others; II MTWThF; MurH 311) Gerald
- 140. Interpretation of Contemporary Affairs.** Analysis of major political, economic, and social developments and their interpretation in the editorial, interpretative article, and commentary. (3 cred.; sr., grad.; prereq. 51 and 15 cred. in the social sciences; IV MTWThF; MurH 308) Gerald
- 290.* Special Problems in Mass Communications.** Individual problems course for graduate students with major or minor programs in journalism. (3 cred.; prereq. #; ar.) Ar.

Second Term

- 86. Advertising Copy Writing.** Advertising media; advertising appeals; techniques of writing advertising copy for newspapers, magazines, direct mail, posters, brochures; planning advertising campaigns. (3 cred.; prereq. 51 or 41, and 55 and 65; I MTWThF; MurH 308) Perry
- 110.* History of Journalism.** Journalism beginning with the post-Civil War period; the emergence of the modern newspaper in America. Major social influences that have shaped the pattern of the press, including magazines, broadcasting, and press associations. Contributions of leading publishers and editors. (3 cred.; II MTWThF; MurH 311) Emery
- 113.* Mass Communications.** Principles and theory based upon research into the problems of communicating information and ideas to group and mass audiences by newspaper, radio, television, film, books, and other media. Comparative studies of content, comprehension, and influence. (3 cred.; sr., grad.; prereq. #; III MTWThF; MurH 311) Jones
- 290.* Special Problems in Mass Communications.** (See first term) (3 cred.; prereq. #; ar.; MurH 206) Jones

LIBRARY SCHOOL (Lib.)

The Library School, in co-operation with the Graduate School, offers a program leading to the Master's degree with a major in library science. This is the only program preparing students for full-time professional library work. In addition, the School offers, through the College of Education, a program of 23 credits in library science to prepare students for part-time library work in connection with teaching. For requirements write to the Library School, 7 Library, University of Minnesota, Minneapolis 14.

Students who expect to enroll in the fall of 1956 for the Master's program with a major in library science and who do not meet the library science course requirements for admission are urged to register for Lib. 50, 55, 62, 70, and 83 this summer.

