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College of Education

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Foreign language instruction using a language laboratory at University High school

Bulletin

f the UNIVERSITY of MINNESOTA

How to Use This Bulletin

This bulletin is divided into three major parts:

Section I, General Information—All students and prospective students should read this section carefully. It contains detailed information relating to the following topics:

- Courses of Study and Admission Requirements, page 4.
- Graduation Requirements, page 9.
- Procedures and Practices in the College of Education, page 10.
- Services Available to Students, page 14.
- College of Education Facilities and Services, page 15.
- Awards and Scholarships, page 16.
- Master of Education Degree Requirements, page 17.
- Graduate Study in Education, page 17.

Section II, Curriculum (pages 19-72)—This section contains the specific course requirements for the various fields of work offered in the College of Education. It also lists the major advisers for each field. Consult the Index on the last page of this bulletin for specific page references.

Section III, Description of Courses (pages 73-102)—This section lists the undergraduate and graduate courses offered in the College of Education.



All students and prospective students in the College of Education will need to refer to the *Bulletin of General Information*. Some students and prospective students will wish to refer also to the following bulletins:

- Bulletin of the College of Science, Literature, and the Arts*
- Bulletin of the College of Agriculture, Forestry, and Home Economics*
- Bulletin of the School of Nursing*
- Bulletin of the Graduate School*

All of these bulletins are available at the information booth in the Administration Building or may be obtained by writing to the Office of Admissions and Records, University of Minnesota, Minneapolis 14.

The days and hours when classes meet and the place of meeting are contained in the *Class Schedule* published just before the registration period each quarter.

ROTC. The attention of all new students is directed to the program of the Reserve Officers Training Corps. It is possible to earn a commission in one of the military services while completing the requirements for a degree in the College of Education. See the *Bulletin of the Army-Navy-Air Force ROTC*

UNIVERSITY OF MINNESOTA

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COLLEGE OF EDUCATION

Section I. General Information

The College of Education at the University of Minnesota was established in 1905 to prepare men and women for teaching in the schools of Minnesota and to provide preparation for other kinds of educational service. The College aims to build a strong cultural and professional foundation for teaching in elementary and secondary schools and in institutions of higher learning; to train school administrators; to attempt the solution of important educational problems by means of research; to render assistance to school officials in meeting local problems; and to develop a philosophy of education suited to the needs of American life. Toward these ends the College of Education utilizes all the resources of its own faculty and works in cooperation with other colleges of the University.

COURSES OF STUDY AND ADMISSION REQUIREMENTS

Students in certain fields enter the College of Education as freshmen. Others take 1 or 2 years of preprofessional work in another college before entering the College of Education. This bulletin contains entrance and graduation requirements for the various courses of study in the College of Education. Study these requirements carefully. Detailed information concerning general entrance requirements, as well as University admission procedures and estimated expenses, will be found in the *Bulletin of General Information*. This will be sent upon request to the dean of admissions and records, University of Minnesota. For admission procedures, as well as other procedures and practices in the College of Education, see index.

Programs Requiring Previous College Preparation—Students preparing for elementary school teaching (including nursery school, kindergarten, and primary teaching) or for teaching any academic subject in junior or senior high school register for 1 or 2 years in the College of Science, Literature, and the Arts, taking prescribed preparatory work before entering the College of Education. See Section II of this bulletin for major and minor areas of study.

Four-year Programs in the College of Education—Students preparing for teaching in the following fields may register as freshmen in the College of Education and complete the program in this College.

Art education, business and distributive education, industrial education, music education, physical education for men, physical education for women, recreation leadership and administration, and rural education.

Combined Programs with the College of Science, Literature, and the Arts—Students with majors in academic departments may plan concurrent programs leading to the bachelor of arts degree from the College of Science, Literature, and the Arts and the bachelor of science degree from the College of Education. Such students apply for admission to the Upper Division of the College of Science, Literature, and the Arts and to the College of Education during the third quarter of their sophomore year. They meet the degree requirements of each college including 3 quarters of residence in the Upper Division of the College of Science, Literature, and the Arts and 3 quarters in the College of Education. Students should expect to extend their programs 1 or more quarters beyond the usual 4-year period. To reduce the extended period to the minimum, students should

plan combined programs as early as the beginning of the sophomore year.

Special Programs in the Institute of Technology and the College of Education—Students with majors in physics, chemistry, or mathematics in the Institute of Technology may plan a program leading to a baccalaureate degree from the Institute of Technology and a master of education degree from the College of Education, qualifying for a teaching certificate and both degrees at the close of a 5-year program. Such students apply for admission to the College of Education in the third quarter of their third (junior) year and register for courses in the Institute of Technology and Education in the fourth and fifth years.

Special Programs in Agriculture and Home Economics—Students who wish to prepare for careers in the teaching of agriculture or home economics register for freshman and sophomore years in the College of Agriculture, Forestry, and Home Economics. Registration, beginning with the junior year, is a joint one—in the College of Agriculture, Forestry, and Home Economics and in the College of Education. An optional fifth year of study leading to the master of education degree is offered in each of these programs.

Program in Nursing Education—The curriculum in nursing education is offered by the College of Education jointly with the School of Nursing. For further information, see Section II.

Graduate Study in Education—(See index)

Reserve Officers Training Corps—Three reserve training programs are available to students in the College of Education as well as to students in other colleges of the University. The programs in military science, air science, and naval science lead to commissions in the reserve components of the Army, Air Force, and Navy, respectively. Credits earned in these programs may be applied as electives toward graduation. Interested stu-

dents should arrange to enter the ROTC program at the beginning of the freshman year. (See *Bulletin of the Army-Navy-Air Force ROTC.*)

General Admission Requirements in the College of Education (see index for admission procedures)—

1. Admission to the College of Education is granted on the basis of academic standards and an appraisal of other factors related to teaching fitness. Continuation in teacher education is subject to a review of qualifications before entrance to the junior year, before entrance to student teaching, and at other points in the training that may be necessary in individual cases.

2. At the time of entrance to the College, whether as a freshman or as a student with advanced standing, the student must present a certificate from the University Health Service indicating that he has no physical defects or health conditions that would prevent successful pursuit of educational work.

3. Students applying for admission to the College of Education must present a record of success in previous academic work.

a. Students entering the College as freshmen must have earned a percentile rank of 40 or higher in their high school graduating class. Such students will be admitted to the College without reference to the pattern of courses taken in high school, although graduation from high school is required. Registration for the junior year requires a grade point average of 2.0 in all work of the freshman and sophomore years, with an average of 2.5 in the teaching subject major.

b. Students entering the College with advanced standing must have earned at least a C+ (2.5) average in all college courses that will be counted toward their major in the College of Education, and at least a C aver-

age in all of their previous college work.

4. Students who intend to enter the College of Education after 1 or 2 years of preprofessional study in the College of Science, Literature, and the Arts must meet the freshman entrance requirements of the latter college. (See *Bulletin of the College of Science, Literature, and the Arts.*)

5. All students entering the College of Education after the sophomore year should have completed the required work in physical education—5 credits for women and 3 credits for men.

Admission Requirements for Specific Programs in Education—Specific admission requirements have been established for certain courses of study in the College. The student who plans to enter the College should read carefully the requirements for the course of his choice. (See Section II.)

Admission to the 4-year Curriculums—Students may be admitted to the 4-year curriculums in education directly from high school. Some college credits earned before admission to the College of Education may be accepted toward completion of the required work *if they have been in courses equivalent to those prescribed by the College*; others may be counted as elective credits. (See 3b above.)

Admission to Elementary, Nursery School - Kindergarten - Primary Curriculums—In order to be eligible for admission to the sophomore year in the elementary curriculums (IA and IB) in the College of Education, a student must have completed a minimum of 45 credits, at least 30 of which must be selected from courses listed under blocks 1, 2, 3, and 4 which follow. The student must have an over-all average of C as well as an average of C in the courses selected from blocks 1, 2, 3, and 4.

1. English (12-15)

Engl A-B-C, or Engl 1A-2A-3A, or Engl 1B-2B-3B, or Comm 1-2-3, or exemption

2. Natural Science (15)

NSci 4-5-6—The Physical World, and Biol 1A-2A—General Biology
(or) NSci 4-5—The Physical World, and Biol 1-2—General Biology
(or) NSci 1-2-3—Orientation to the Natural Sciences

3. Sociology or Social Science (6-12)

Soc 1—Introduction to Sociology (and) Soc 3—Social Problems;
(or) SSci 1-2-3—Personality, Work, Community

4. Geography (5)

Geog 1—Geography of Natural Resources
(or) Geog 4—Human Geography

Admission to Academic Secondary School Curriculums—Students who have taken 2 years of work in the College of Science, Literature, and the Arts and are preparing to teach academic subjects (other than speech pathology) in high school may be admitted to the College of Education upon satisfying the following requirements:

1. A minimum of 90 quarter credits, carried with an average of 2 grade points per credit (C average), is necessary for admission to the College.

2. A minimum of 15 credits in a major field carried with an average of 2½ grade points per credit (C+ average), and at least 10 credits in a minor field are necessary for admission. In the case of those individuals taking broad field majors, the minors may be in subdivisions of the broad field major.

3. Students must have completed Psy 1 and 2; PubH 2 or 3 and PubH 4, or both requirements may be met by taking PubH 5, or PubH 50; physical education: 3 credits for men, 5 for women, selected from the nonprofessional physical education courses.

In addition, students must fulfill the requirements of one of the following plans:

Plan I

a. *English or Communication.* Engl A-B-C (15 cr) or Engl 1A-2A-3A (12 cr) or Engl 1B-2B-3B (12 cr) or Comm 1-2-3 (12 cr) or exemption from the requirement.

b. *Foreign Language.* From 0-20 credits, according to the following schedule:**

Amount Presented from High School	Amount Required in College
4 yrs 1 lang	None
3 yrs 1 lang	5 cr same lang
2 yrs 1 lang	10 cr same lang
1 yr 1 lang	15 cr same lang
Less than 1 yr 1 lang	20 cr 1 lang

c. *Social Science.* Ten credits** in 1 of the social sciences: anthropology, economics,†† geography, history, political science, sociology; or 12 credits in SSci 1-2-3.

d. *Natural Science.* Ten credits** in 1 of the natural sciences: astronomy, botany (laboratory required), chemistry, geology (laboratory required), zoology, Biol 1-2 or NSci 4-5-6; or 15 credits in NSci 1-2-3.

Plan II

a. *English or Communication.* Engl A-B-C (composition portion, 6 cr) or Engl 1A-2A-3A (12 cr) or Engl 1B-2B-3B (12 cr) or Comm 1-2-3 (12 cr) or exemption from the requirement.

b. *Social Science.* Eighteen credits selected from at least 2 of the following social science fields, with at least a sequence of 9 or 10 credits in an area other than psychology: anthropology, economics,†† geography, history, political science, psychology, sociology, or SSci 1-2-3.

c. *Natural Science.* Eighteen credits selected from at least 2 of the following 5 fields, with at least 1 sequence of 9 or 10 credits of laboratory science other than psychology and mathematics:

- (1) Biological Science: botany, zoology, NSci 7-8-9
- (2) Mathematics

(3) Natural Science: NSci 1-2-3

(4) Physical Science: astronomy, chemistry, geology (laboratory required), physics, NSci 4-5-6

(5) Psychology

d. *Humanities.* Eighteen credits selected from at least 2 of the following 8 fields:

- (1) Art, music
- (2) Foreign language and literature: any course in Classics, German, Japanese, Linguistics, Romance languages, Russian, Scandinavian
- (3) History
- (4) Humanities: Hum 1-2-3; Hum 11-12-13; Hum 21-22-23
- (5) Literature: Engl A-B-C (literature portion, 9 cr); American literature; English literature
- (6) Mathematics: any course above Math 1
- (7) Philosophy
- (8) Speech

Three departments—history, mathematics, and psychology—are listed in 2 groups; but work in 1 of these departments can be used in satisfying only 1 group requirement.

4. Students with 2 years of college work who lack certain entrance requirements may be considered individually. If such a student is admitted, certain deficiencies may be made up after enrollment, and in other cases adjustments may be possible after consultation with the chairman of the Committee on Student Scholastic Standing.

5. Credit for courses taken in military science, naval science, and air science may be counted toward graduation. These credits are electives, however, and may not be used to fulfill major or minor requirements.

** Any year-course of 9 credits (6 semester credits) may be substituted for the corresponding 10-credit course here.

†† Acct 24-25-26, 27, OMgt 32, 33, 34, 36, 37, 38, 39, 43, and 79A-B may not be used to satisfy the social science requirement.

6. A maximum of 27 credits is elective from courses in agriculture and home economics except in the special curriculums of those fields.

Requirements which pertain to speech pathology are listed in the curricular description in Section II of this bulletin.

Students from Colleges Outside the University—Students who transfer from other colleges with advanced standing but with less than 2 years of work and who are preparing for high school teaching will be expected to complete Plan I or Plan II requirements (as given on the preceding pages) in the College of Science, Literature, and the Arts.

Students who have completed 2 full years of college work but lack the required number of credits or specific entrance requirements, such as language, science, or psychology, may register in the College of Education and make up deficiencies after admission. Such deficiencies, however, may delay graduation or necessitate extra summer work.

Students with 3 or More Years of College Work—Students may transfer a maximum of 141 credits to the College of Education. Those who have completed 3 or more years of college, including those who already hold the B.A. or B.S. degree, may enter the College of Education for work toward a degree and a teacher's certificate. In elementary education, a special 1-year program (September to June) is available for those entering with a Bachelor's degree (see Elementary Education, Curriculums IIIA and IIIB). A student entering elementary education after having completed 3 years of college work frequently can meet B.S. degree requirements if he attends summer school and the following year. Secondary education students transferring maximum credit, including those who already hold the Bachelor's degree, must check their individual requirements before determining the amount of additional time needed to complete B.S. de-

gree requirements. The time needed will be influenced by the extent and strength of the preparation in the major teaching field. Ordinarily, at least 1 or 2 summer terms preceding a September-to-June registration will be needed. Provision is also made for combining additional work needed for certification with graduate study in the major field in special cases.

Students from State Colleges—Individuals who graduated from a 2-year certificate course of the Minnesota state teachers colleges and other accredited teacher training institutions prior to March, 1952, are admitted to the College of Education with 90 "blanket credits." These credits are accepted in lieu of the Plan I or Plan II requirements listed on preceding pages but a student in a specialized field will be held for all the work of his curriculum. Individuals who have completed work for the provisional elementary certificate since March, 1952, will have their previous work evaluated course by course rather than in blanket credits.

Students who transfer from the third or fourth year in the Minnesota state colleges will receive credit for any part of their work in so far as such work is equivalent to courses offered in the College of Education (see Residence Requirement).

Students who transfer 90 blanket credits from state colleges will not be permitted to take for credit the courses in Freshman English (Comm 1-2-3, Engl 1A-2A-3A, Engl 1B-2B-3B, or Engl A-B-C), or Psy 1-2. Graduates of state colleges should not take Ed 75A-B without special permission.

Adult Special Students—Teachers of experience who are unable to meet the regular requirements for admission may be permitted to take courses in the College of Education as Adult Special students. In order to become candidates for a degree, however, they must be admitted as regular students.

GRADUATION REQUIREMENTS

Students who complete the following requirements graduate from the College of Education with the bachelor of science degree and receive the appropriate Minnesota teaching certificate.

In some specialized curriculums the number of credits required is more than 186. The student should read carefully the credit requirements of the curriculum in which he is interested. (See Section II of this bulletin.)

Amount and Quality of Work—Usually a total of 186 credits and 372 grade points (the number of grade points must equal 2 times the number of credits), including the required courses in physical education, is needed for graduation. During the junior and senior years a grade point average of 2.0 (grade average of C) for all courses except those in the major must be maintained. In the minor subjects a grade point average of 2.0 (grade average of C) is required. In the student's teaching major subjects a grade point average of 2.5 (grade average of C+) is required.

Professional Requirements for Students Graduating from the 3- and 4-Year Programs in the College of Education—The requirements for these programs are outlined in the descriptions of the specific curriculums in Section II of this bulletin.

Professional Requirements for Students Entering the College of Education in the Junior Year and Graduating from the 2-Year Programs for Teachers of Secondary School Subjects—The following requirements are for students with 2 years of college preparation who are enrolled in the 2-year College of Education curriculums for teachers of secondary school subjects.

University students who wish to qualify for the Minnesota state high school standard certificate in secondary school subjects must be graduates of the College of Education. A student wishing to teach outside Minnesota may have his program modified to meet the specific requirements of that state. To qualify for the degree and the Minnesota certificate, students should meet the following requirements:

1. One academic major. Some courses of study are outlined not for a one-subject major but for a broad field of spe-

cialization, such as language arts or natural science.

2. One or more minors in academic or special fields except in the case of individuals choosing one of the broad fields of specialization, who need not complete a minor outside of their field.

Majors and minors must be selected from the subjects commonly taught in high schools, except that a second minor may be presented in military science, naval science, or air science. Students should select majors and minors early in their college course and with regard to the demands of high schools. By careful selection of courses students may complete two or more minors, thus qualifying them to teach in several different fields. Major and minor requirements in each field are described in Section II of this bulletin.

3. Professional courses (in the College of Education) totaling not less than 29 credits.

a. Required course—Ed 55A-B (10 cr; prereq Psy 1-2).

b. Methods and student teaching. The student must complete a course in methods and teaching in his major field (prereq Ed 55A-B). This course includes general methods, special methods, and student teaching. (See index under Methods and Student Teaching.)

c. History and philosophy of education. Satisfactory completion of HEd 180 is included in the professional requirements for graduation.

d. Education electives. To complete the professional requirements of at least 29 quarter credits for the degree and the teacher's certificate the candidate will elect additional

credits in conference with a faculty adviser. The following courses count as electives in education for students preparing for high school teaching: any course listed under General Courses or Secondary Education in the Departments of Curriculum and Instruction, Educational Administration, Educational Psychology, and History and Philosophy of Education; a methods course in the minor. All of these courses are described in Section III, Description of Courses.

Health Education—All students in the College of Education except those in nursing education and speech pathology are required to take (a) personal health and (b) community health. It is suggested that students meet this requirement through registering for PubH 5 (3 cr) or PubH 50 (3 cr). Alternates for PubH 5 or PubH 50 would be PubH 2 or 3 (2 cr) and PubH 4 (2 cr); or PubH 51 (3 cr) may be taken instead of PubH 4. Note that any of the alternate plans requires more than the 3 credits for PubH 5 or 50. Certain curriculums include PubH 57.

Residence Requirements—A minimum of 45 credits must be earned while in residence in the College of Education. Of these, 30 credits must be earned in the senior year. *These are minimum residence requirements for graduation, and thus for a degree and teaching certificate.*

Correspondence courses and extension courses do not count as residence credits,

excepting only General Extension courses offered in Minneapolis, St. Paul, or Duluth.

The required courses in education are arranged in a *sequence* for the junior and senior years, and the 2-quarter introductory course must be completed before the fall quarter of the senior year. A student who does not enter the College of Education by the fall or winter quarter of his junior year may need to register for the summer quarter preceding his senior year in order to complete the professional sequence.

Degrees and Honors—Students who graduate from the College of Education receive the degree of bachelor of science. Those with outstanding grade records, at least a B average in student teaching, and a minimum of 45 credits completed in residence before the final quarter of the senior year will be considered for graduation with distinction or high distinction. These honors are not automatic, but are conferred upon favorable recommendation by the faculty. Application by the student is not necessary. Anyone entering the College of Education with a previously earned Bachelor's degree is not eligible for graduation with honors since these awards apply only to students whose first 4-year degree will be received from this College.

Students graduating from one of the 5-year curriculums in the College of Education receive the master of education degree.

PROCEDURES AND PRACTICES IN THE COLLEGE OF EDUCATION

Procedures for the most efficient use of college facilities are described generally in the following paragraphs; more detailed information and help on specific points may be secured at the information desk of the Personnel Office in 206 Burton Hall.

Admission Procedures—There is a different admission procedure for the various groups of students entering the College of Education: (1) those without previous college training, (2) those transferring from another division of the University, (3) those transferring from an-

other collegiate institution, and (4) adult special students.

1. Students without previous college training apply for admission as freshmen. They are referred to the *Bulletin of General Information* and are expected to fol-

low the same procedure as applicants for other colleges in the University. New students are expected to attend the orientation-registration period, for which the University will send full instructions. This is the official time for the registration of new students.

2. Students applying for transfer to the College of Education from other divisions of the University should apply at Window 5 of the Office of Admissions and Records, where they will receive printed instructions.

3. Students applying for transfer from other collegiate institutions should write to the Office of Admissions and Records for application materials and have a transcript of previous college credits sent to the dean of admissions and records by the former college. Students will be notified of acceptance and receive further instructions by mail.

4. Persons of adult age and experience who desire to take specific courses in the College but are not candidates for a degree should apply at the Office of Admissions and Records for admission forms in the "adult special" status. An adult special student who wishes to become a candidate for a degree must complete the regular college admission procedure. This admission procedure should be completed as soon as the student decides to work for a degree and in no case later than the beginning of the senior year.

Examinations for Advanced Standing Credit—If you believe yourself sufficiently prepared in some subjects to pass examinations in them upon entrance you may, with the approval of the Scholastic Committee, take such examinations without charge. Apply to the chairman in 206 Burton Hall within the first 6 weeks of residence.

Registration Procedures—Dates for registration in the College and the specific procedures to be followed are published each quarter in the Official Daily Bulletin contained in the *Minnesota Daily*. Students registering in the College of Education for the first time should present their admission certificates and obtain registration materials and instruc-

tions at the Office of Admissions and Records.

Change of Registration—The student who finds it necessary to change his program should obtain a change of registration form ("cancel-add slip") at the information desk in 206 Burton Hall. The student may add a course or change to a different course during the first week of the quarter. Prior to the end of the sixth week in a quarter the student may cancel registration in any course. After the sixth week, cancellation of a course in which the student is failing will result in a grade of F in the course. Cancel-add slips must be signed by the major adviser or a member of the Committee on Student Scholastic Standing.

Change of Major—The student who wishes to change his major should see a counselor in the Student Personnel Office, 206 Burton Hall.

Clearance for Admission to the Junior Year—Students who have been enrolled in the College of Education in the sophomore year obtain a clearance form at the information desk, 206 Burton Hall, during the spring quarter of the sophomore year and complete the required physical examination and psychological and speech tests according to printed instructions.

Examination for Credit—Credit for material mastered outside of class may be obtained by special examination. A student who believes that he is as well informed in a particular subject as the students successfully completing the course should apply to the Scholastic Committee for a special examination. If the request is approved, the committee will appoint a special faculty committee to administer the examination. The fee for such examination is \$5.

Application for a Degree—The student should file an application for a degree at the information window, Office of Admissions and Records, during the spring quarter of the junior year, or 1 full year before he expects to graduate.

Senior Balance Sheet—The senior balance sheet is mailed to the student by

the Office of Admissions and Records after application for a degree. It lists the required number of courses the student has completed, his total number of earned credits, his grade point average, and deficiencies that must be removed before the student may graduate. It is to be used by the student and his adviser in planning the remainder of his program.

Senior Physical Examination—It is the responsibility of the student to make an appointment at the University Health Service and take the physical examination within 1 year of the date the degree is to be granted.

Application and Registration for Student Teaching—Admission to student teaching is not automatic. Students obtain applications for student teaching and information sheets in the Student Teaching Office, 227 Burton Hall, during stated intervals throughout the year, depending upon the major and program they intend to complete. Exact dates when applications should be picked up, and when they must be submitted, are announced to students in the Official Daily Bulletin of the *Minnesota Daily*, in the lecture sessions of the junior sequences (Ed 55 and Ed 75), and by major advisers.

Secondary academic majors are required to register for their methods courses *all 3* quarters of the regular academic year. Therefore, all majors in core curriculum, economics, English, geography, history, language arts, Latin, mathematics, modern foreign languages, natural science, physical science, political science, sociology, and speech and theater arts must pick up applications for student teaching and methods (in the Student Teaching Office, 227 Burton) during the first 3 weeks of the *spring* quarter *prior* to the academic year in which they will take methods and student teaching; must present them to their advisers, who forward them with their recommendations within 1 week to the Student Teaching Office. (Core curriculum majors complete 12 credits of student teaching in a full-time, off-campus, 1-quarter assignment. Their methods course covers 2 quarters only, fall and winter.)

Majors in agricultural education, art education, business and distributive education, elementary, nursery school-kindergarten-primary, home economics education, industrial education, music education, physical education for men and for women, and in speech pathology, and minors in health education and library science file applications during the quarter preceding the one in which they expect to commence student teaching.

Minors in special education (teaching mentally retarded, crippled, hearing handicapped children) and physical education for women file applications during the quarter preceding the one in which they expect to commence student teaching.

Students not enrolled in the University during spring quarter who wish to begin student teaching in the fall should apply at the Student Teaching Office as early as possible in the summer terms.

Summer Session student teaching is available in a few fields only and to a limited number of students during the first term. Student teaching is offered only for University of Minnesota students who are regularly enrolled in a degree program. New applicants must file for this before June 1.

Scheduling and other arrangements for student teaching vary from department to department. Students should consult the appropriate section of this bulletin, their major adviser, and the Student Teaching Office.

Admission to student teaching and assignment to a classroom for student teaching are subject to the approval of the director of student teaching, and involve the following "clearances":

(1) Completion of a satisfactory pattern of courses in the major field and the recommendation of the major adviser;

(2) Completion of the junior sequence (Ed 55A-B for secondary education and Ed 75A-B for elementary education) and the recommendation of the course instructors;

(3) A C+ average (2.5 grade points per credit) in the major for all secondary and for IIIA elementary and IIIB nursery school - kindergarten - primary education

programs except for agricultural education, which has special requirements. IA elementary and IB N-K-P programs require a C average (2.0) in all work in the major and outside the major, considered separately;

(4) Completion of the College of Education psychological test battery given at the junior-year level;

(5) Satisfactory report from the University Health Service on the physical examination required of all students for entrance to the junior year and of students who enter the College with advanced standing;

(6) Satisfactory rating on the Speech and Hearing Clinic tests included in the requirements for junior standing.

A student may be required at any time to cancel his registration in student teaching if he fails to meet the requirements or if his work is unsatisfactory.

Unsatisfactory Work—Any student who is not making satisfactory progress in the curriculum in which he is registered may be placed on probation for 1 quarter by the Committee on Student Scholastic Standing. Unsatisfactory work in the College of Education is defined as follows:

1. Grades of D or F in 50 per cent of the work taken in any 1 quarter. (Grades of F, together with the number of credits represented by them, are included in the computation of the grade point average.)

2. An average less than C (2 grade points for each credit taken) for all credits earned in any 1 year, and an average of less than C+ (2.5 grade points per credit) in courses in the major subject.

Students who fail to make satisfactory grades in their work after being on probation for 1 quarter are in danger of being dropped.

Teacher Certification—At the time of registration for the final quarter in the College of Education, the senior student is expected to apply for the teacher's

certificate. He obtains the application form in 206 Burton Hall, attaches a money order for the \$3 certification fee (payable to Treasurer, State of Minnesota) and leaves the application and money order at the Education window in the Office of Admissions and Records. All other details are handled by the University and the qualified graduate receives the appropriate certificate to teach in the area of his preparation in the public schools of Minnesota. Students in nursing education do not apply for the teacher's certificate.

Placement Records—Seniors should obtain forms for placement credentials at the Bureau of Recommendations in Burton Hall, or at the placement meeting held for seniors in the fall quarter. These records should be completed and filed with the Bureau of Recommendations at least 2 quarters prior to graduation. Registration for the last quarter of the senior year will not be permitted unless the student has filed Bureau of Recommendations placement forms. For further information, go to 102 Burton Hall. Students in nursing education should file credentials with the American Nurses' Association Professional Counseling and Placement Service during the final quarter of the program. The School of Nursing will send recommendations and a transcript of the student's record as soon as all requirements for graduation are met.

Education Courses in the General Extension Division—For evening and correspondence study courses in education see the *Bulletin of Evening and Special Classes* and the *Bulletin of Correspondence Study*. Teachers and others not regularly enrolled in the College of Education who take these courses may later apply the credits earned in certain of them toward a degree if they become regular students in the College. Students regularly enrolled in the College of Education must file a petition with the Committee on Student Scholastic Standing for permission to take, for credit, courses offered by the General Extension Division.

SERVICES AVAILABLE TO STUDENTS

Preparation of teachers for professional service involves a broad range of student experiences, observation, guidance, certification, placement, and other factors. This section describes briefly the services in these areas available to students in the College of Education.

Information—The central information desk in 206 Burton Hall is a "first stop" for any student seeking direction or information.

Student Personnel Office—Students in the College who find that they need special information and experienced help in making a choice of professional goals, or in meeting more personal problems, have available to them trained counselors and special facilities of the Student Personnel Office. These services are available also to students not in the College of Education who are considering a career in teaching. Appointments may be made in 206 Burton Hall.

In addition to the personnel services available in this College, the student is invited to use the specialized services provided for all University students through the Office of the Dean of Students in Eddy Hall.

Faculty Advisers—Each student has as an adviser a member of the faculty who teaches in his major field. The adviser counsels the student concerning preparation in his major field, helps the student register each quarter, and serves as a general adviser on academic questions. At the time of admission to the College, the student should learn who his major adviser is from the counselor in the Student Personnel Office.

Committee on Student Scholastic Standing—A student who encounters difficulties in adjusting his program to his individual needs or background should seek the assistance of the Committee on Student Scholastic Standing in 206 Burton Hall.

Office of Student Teaching—Student teaching in public schools in Minneapolis, St. Paul, suburban communities

and schools out in the state, in campus laboratory schools, and in a variety of civic agencies, is co-ordinated in the Student Teaching Office, 227 Burton Hall. Administrative arrangements, admission to the program, and supervision are the responsibility of this office.

A student teaching workroom (240 Burton Hall) is available for the use of student teachers in all fields. The workroom is open from 8 a.m. to 5 p.m., Monday through Friday.

Orientation-Registration Program—An orientation program for all new freshman and sophomore students is offered by the University shortly before the opening of each quarter. Students are expected to attend to complete first registration and to explore opportunities available to University students. To find answers to preliminary questions the new student is urged to read *The Moccasin* (new students' handbook) before arriving on campus.

Student Activities Office—The several student organizations in the College of Education maintain a joint office in 242 Burton Hall. Students interested in joining any education organizations or desirous of information about them should call at this office.

Teacher Placement Service—The College of Education provides placement service for its qualified students and graduates, helping them to secure the kinds of positions they desire. All graduating seniors (except nursing education majors) register and file credentials with the Bureau of Recommendations, 102 Burton Hall, during the fall quarter of the senior year. The fee, \$7.50, entitles the student to placement service for the annual period ending October 1. (See Bureau of Recommendations below.)

COLLEGE OF EDUCATION FACILITIES AND SERVICES

The College of Education includes a number of divisions and special enterprises established to further its work in the preparation of teachers, to extend professional knowledge in education, and to render service to education throughout the state and nation.

Laboratory Schools—Three campus laboratory schools and four Minneapolis public schools, which are used for demonstration, observation, and research, are affiliated with the College of Education. Senior students do their student teaching in the campus laboratory schools, the public schools of the Minneapolis-St. Paul metropolitan area, or in other parts of the state. Many students do their student teaching in both campus laboratory and public schools.

1. University High School is a 6-year secondary school maintained on the Minneapolis Campus to provide opportunity for observation, demonstration, student teaching, experimentation, and research in secondary education.

2. The University Nursery School and University Elementary School provide similar facilities in nursery school, kindergarten, and the elementary grades.

3. Affiliated with the College for demonstration work and research in the elementary grades are Marcy, Motley, Pratt, and Tuttle Schools of Minneapolis, located conveniently near the campus.

Bureau of Recommendations—The Bureau of Recommendations provides the necessary link between graduates of the College of Education and employment opportunities in the various teaching fields. This is the only place on the campus where complete descriptions of teaching ability and personal fitness of College of Education graduates are assembled. These records, which are never destroyed, will be sent to prospective employers on request of the teacher or employer. Registration with the Bureau of Recommendations is required of all College of Education graduates except those in nursing education.

Frequent uses of the Bureau's records are: (a) for placement in teaching and other school positions; (b) for shifts of

position by experienced teachers seeking promotion; (c) for securing summer employment; (d) for appointment as exchange teachers or for overseas teaching during leaves of absence; (e) for part- or full-time employment in subsequent years by those who do not at first expect to teach; (f) for replying to inquiries of employers in fields other than teaching; and (g) for placement of graduate students in college positions in all fields.

Bureau of Educational Research—Established by the College of Education as a central agency for investigating teaching and curriculum problems, the Bureau serves five major purposes: (a) to facilitate research by members of the college faculty; (b) to contribute to the profession as a whole through study of fundamental and persistent problems in education; (c) to provide Minnesota educators a central office to which significant educational problems may be referred; (d) to provide graduate students apprentice training in techniques and execution of research; and (e) to co-operate in the study of educational problems with other recognized state and national agencies. Bureau offices are in Burton Hall.

Bureau of Field Studies and Surveys—The Bureau of Field Studies and Surveys is maintained by the College for research and service in school problems of instruction, administration, finance, and physical plant. Essentially a service division operated for the benefit of the schools of Minnesota, the technical staff of the Bureau co-operates with local school districts in solving numerous administrative and instructional problems. The offices of the director of the Bureau and of the technical staff are in Burton Hall.

Education Library and Instructional Materials Center—To facilitate research, class instruction, and curriculum develop-

ment studies, the College of Education library has been established on the second floor of the Walter Library. Instructional materials formerly included in the Curriculum Laboratory have served as the nucleus of a more extensive collection of curriculum materials, school textbooks, literature for children and adolescents, and other aids to improvement of instruction. Reference materials usable in research projects and professional books for class study are also included.

Institute of Child Development—The Institute of Child Development of the University of Minnesota has been a prominent center for research and study in child psychology since its founding in 1925. In its academic instructional program, the Institute offers both undergraduate and graduate majors in child development. The undergraduate major is administered by the College of Science, Literature, and the Arts. The graduate major is administered jointly by the Institute and the Graduate School. The Institute operates a laboratory nursery school for observation, research, and the training of nursery school teachers; and maintains a clinic for diagnostic study and treatment of a wide range of children's behavior problems. The research programs deal with personality and so-

cial development, language and cognitive development, and learning and motivation in children. The Institute director, faculty, Nursery School, and Child Development Clinic, are located in the Child Development Building.

Psycho-Educational Clinic—The Psycho-Educational Clinic, with offices and clinical quarters in Pattee Hall, serves three principal purposes: (a) to train teachers and school specialists in diagnosis and remediation of special problems of children; (b) to encourage and conduct research in child development; and (c) to provide special assistance for children who have educational problems due to academic, physical, mental, or emotional handicaps. Although the facilities of the Clinic are used regularly for observation by teachers-in-service and students in various education classes, the main work of the center is clinical diagnosis of the problems of individual children and recommendation of remedial procedures. The Clinic is in large measure a self-sustaining service center, operated for the benefit of Minnesota parents, teachers, and children. Teachers and parents concerned with obtaining diagnostic and remedial help for particular children apply to the director of the Clinic for appointments.

AWARDS AND SCHOLARSHIPS

Coffman Foundation Award—For graduate study in education, made each year to a senior or graduate student in the College of Education on the basis of scholarship, qualities of leadership, and promise of professional achievement.

Alice Pomeroy Scholarship—Awarded annually to a woman student in the College on the basis of need, character, and ability.

W. E. Peik Teacher Education Fund—In most years one or more scholarships will be available to College of Education students.

Dora V. Smith Scholarship Fund in Education—Awarded annually to a junior in the College of Education majoring in speech, English, or language arts. Se-

lection is made on the basis of academic aptitude, character, promise as a teacher, and financial need.

Bertha Weiskopf Memorial Scholarship—A scholarship of \$100 awarded to the student in the College of Education with the highest scholarship and competence in the field of intercultural education who is planning to teach or to do graduate work in that special field.

Students may secure information about these scholarships from the chairman of the College of Education Scholarship Committee, 206 Burton Hall. In addition many all-University scholarships and awards are open to students in the College of Education. Inquiry concerning them should be made at the Bureau of Student Loans and Scholarships, 201 Eddy Hall.

MASTER OF EDUCATION DEGREE REQUIREMENTS

The professional degree, master of education (M.Ed.), is granted to students who satisfactorily complete prescribed 5-year programs. Although students ordinarily register in these curriculums at the beginning of the freshman year, students who have already earned a Bachelor's degree in one of these fields may qualify for the master of education degree by completing all the requirements of the fifth year, provided that their undergraduate training in the major is equivalent to that required in the College of Education.

The general requirements for this degree include: (a) 90 quarter credits in academic fields; (b) a teaching minor in an academic field; (c) a broad major field specialization, usually about 90 quarter credits; and (d) advanced professional training, including 1 quarter of internship under a master teacher. Forty-

five credits beyond the Bachelor's degree must be earned, and the total number of credits earned in the College must include at least 45 earned in courses numbered 100 or above. In the course work of the fifth year a B average (3 grade points per credit) is required, as are final written and oral comprehensive examinations and demonstration of teaching competence. A health examination must be taken within 1 year of the date the degree is to be granted.

Because teacher-certification requirements are being raised, with many states and cities requiring a Master's degree for supervisory or special work and for high school teaching, students are urged to take advantage of the 5-year programs whenever possible.

For the requirements for the program in nursing education see index.

GRADUATE STUDY IN EDUCATION

Graduate study in education, leading to the master of arts and the doctor of philosophy degrees, may be pursued in the Graduate School. Application for admission for an M.A. or Ph.D. program must be made to the Graduate School office. Graduate courses may be taken during the regular academic year and during the Summer Session. Students holding the Bachelor's degree, attending summers only, may ordinarily complete the work for the Master's degree in 3 or 4 full Summer Sessions.

Note—The following section is a summary of the graduate program and requirements. For a complete description of graduate work in education, and for a full statement of regulations, consult the *Bulletin of the Graduate School*.

Prerequisites for Graduate Work in Education—Applicants must present a minimum of 6 quarter credits in psychology plus not less than 18 quarter credits of undergraduate work in education, including introduction to secondary or elementary school teaching. Ordinarily students entering graduate study in education should already hold a teaching certificate, and for some fields, such as school administration or counseling, teaching experience is strongly advised.

Language Requirements—Candidates for the Master's degree with a major in any field of education are exempt from

the foreign language requirement. Candidates for the Doctor's degree in education may elect to (a) demonstrate reading proficiency in 2 foreign languages related to the professional literature in their fields, or (b) demonstrate reading proficiency in 1 foreign language and substitute for the second language an approved program of study in a field outside of education that is related to their major interest. Consult the *Bulletin of the Graduate School* for specific requirements.

Candidacy for a Degree—Students who have met the requirements for ad-

mission to the Graduate School, and who satisfy the prerequisites for the courses they elect to take, may register for graduate courses in education. *They are not candidates for a degree*, however, until their formal application for candidacy has been accepted. This application is not made until the student has completed part of his program of graduate study. The student's major adviser should be consulted about candidacy for a degree.

Majors and Minors in Graduate Study—For the master of arts degree, the major (under Plan A with thesis) or the field of concentration (under Plan B without thesis) may be in any one of the following fields:

- Agricultural education
- Curriculum and instruction
- Education
- Educational administration
- Educational psychology
- History and philosophy of education
- Home economics education
- Industrial education
- Music education
- Physical education

Minor work for the Master's degree under Plan A (or related field work under Plan B) may be done in any of the above fields not included in the major, or in any other field of graduate study offered at the University of Minnesota which is obviously related to the student's major interest.

For the doctor of philosophy degree (Ph.D.) major work is offered in the following fields:

- Education
- Educational administration
- Educational psychology

Minor work for the Doctor's degree may be chosen from any of the fields listed as majors for the Master's degree, or from any other field of graduate study offered at the University which is obviously related to the candidate's major interest.

Graduate Courses and Curriculums in Education—Certain curriculums in the College of Education, such as educational administration, are offered only at the graduate level. Education courses that carry graduate credit are to be found in the general list of course descriptions in Section III. Graduate credit may be earned in courses with numbers 100 or above.

Specialist in Education Certificate—In addition to the M.A. and Ph.D. programs in the Graduate School, 2-year graduate programs, leading to the certificate, Specialist in Education, are offered for school superintendents, school psychologists, counselors, secondary school principals, and elementary school administrators and supervisors. For further information see the *Bulletin of the Graduate School* and inquire at the office of the dean, College of Education.

Section II. Curriculums

AGRICULTURAL EDUCATION

Major advisers: Professors Peterson, Kitts, Swanson; Assistant Professor Marvin;
Lecturer Nelson

This curriculum, offered jointly with the College of Agriculture, Forestry, and Home Economics, is designed for students who plan to teach agriculture in public schools and communities of Minnesota. It is appropriate to the needs of agricultural extension workers and others preparing to farm or to work in rural areas. Agricultural education provides comprehensive training in technical agriculture and permits emphasis upon such fields as dairying, agronomy, agricultural economics, horticulture, animal husbandry, soils, and mechanized farming. In addition, it offers the special training in education needed to qualify students for certification as agriculture instructors in public high schools.

During the first 2 years the students complete the required work of the agricultural education curriculum in the College of Agriculture, Forestry, and Home Economics. In the junior and senior years they complete the combined curriculum of the College of Education and the College of AFHE leading to the bachelor of science degree.

In the third quarter of their sophomore year, students should make application for the combined curriculum at the Office of Admissions and Records, Coffey Hall. They will then complete admission requirements of the College of Education, which include speech, health and psychological examinations, and interviews.

Students may complete minors in agricultural departments. Such a minor consists of 18 credits exclusive of introductory courses. Minors in high school teaching subjects are included in this section.

Students wishing to major in agricultural education must:

1. Have lived on a farm until the age of 16 or have had 2 full years of farming experience after that age.

2. Complete the student teaching requirement.

3. Earn a minimum of 204 credits for graduation including all-College requirements.

4. Complete the following requirements (students may wish to take exemption examinations or special examinations for credits in certain of the following listed required courses—see index):

FRESHMAN YEAR

Agro 1—Introduction to Agronomy (3)
AnHu 1—Introductory Animal Husbandry (4)
Biol 1-2—General Biology (10)
DyHu 1—Elements of Dairying (3)
Ent 1—Insect Life (3)
Hort 1—General Horticulture (3)
(or) Hort 6—Fruit Growing (3)
(or) Hort 32—Vegetable Growing (3)
InCh 4-5—General Inorganic Chemistry (10)
Math Y—Higher Algebra (3 or 5)
MeAg 4—Mechanical Training (4)
Orie 1—College Orientation Lectures (1)
Rhetoric—Freshman communication requirement
Soil 1—Soils and Soil Management (5)

SOPHOMORE YEAR

- a. Freshman courses not completed.
- b. The following courses may be taken any quarter offered except that proper sequence of continuation courses and prerequisites must be observed:

AgEc 1—Introduction to Economics (3)
AgEc 2—Principles of Economics (3)
AgEd 20—Rural Education and Community Leadership (3)
MicB 53—General Bacteriology (5)
Humanities requirement (9) to be selected from humanities, art, HE 120 (Art History), literature, music, philosophy, and theater arts (see index of College of AFHE bulletin)
MeAg 23—General Physics (5)
Mechanized agriculture (6) to be selected from the following:
7—Farm Building Construction (3)
12—Agricultural Machinery (3)
39—Rural Sanitation and Water Supply (3)

- 45—Engines and Tractors (3)
 106—Hydrology and Erosion Control (3)
 (cannot be taken until jr yr)
 Psy 1-2—General Psychology (6)
 Social Science requirement (see index of College of AFHE bulletin)

c. In the second or third quarter of the sophomore year, students shall apply for admission to College of Education and the joint curriculum of agricultural education.

d. At beginning of junior year and upon being admitted to College of Education, students shall have a grade point average of 2.3 in all courses taken in the following areas: agricultural economics, agronomy, animal husbandry, dairy, entomology, forestry, horticulture, mechanized agriculture, plant pathology, poultry, soils.

JUNIOR-SENIOR YEARS

The following courses if not previously taken:

- AgEd 56—Rural Education Through Extension Method (3)
 AgEd 81—Teaching Agriculture in Secondary Schools (4)
 AgEd 91—Supervised Teaching Experience (6)
 AgEd 101—Young Farmer Education in Agriculture (4)
 AgEd 103—Adult and Young Farmer Education (4)
 AgEd 104—Planning Programs (3)
 Agro 30—Principles of Genetics (3)
 Ed 55B—Introduction to Secondary School Teaching (5)
 MeAg 130—Farm Shop Management (3)
 PIPa 1—Plant Pathology (5)
 PubH 50—Personal and Community Health (3)
 (or) PubH 5—Individual and Public Health (3) (Transfer students or others who have already taken PubH 3 should take PubH 4 or 51)
 Rhet 22—Public Speaking (3)
 Rhet 51—Exposition (3) (cannot be taken earlier than jr yr)

Note—For agricultural education majors, AgEd 101, 103, and MeAg 130 may be taken concurrently with AgEd 91 or by consent of instructor.

5. Maintain a minimum grade point average of 2.5 in 15 courses selected from at least 8 of the following areas:

- AgEc 12, 80, 82
 Agro 1, 21, 27, 30
 AnHu 1, 30, 36, 37, 62, 63, 64, 65

- DyHu 1, 11, 121, 122, 123
 Ent 1, 50
 For 10
 Hort 1, 6, 10, 32
 MeAg 4, 7, 12, 39, 45, 106, 130
 PIPa 1, 3
 PoHu 1, 51, 52, 154
 Soil 1, 20, 21
 VMC 52

Minors in Agriculture and Agricultural Education

1. **Minor in Agriculture for Elementary School Teachers**—A minor in agriculture is open to students in the elementary education field. It may be taken by any student following Curriculum IA, IB, IIA, or IIB in elementary education. The following courses are recommended, but others may be chosen with the consent of the adviser.

A minimum of 18 credits selected from the following:

- AgEd 20—Rural Education and Community Leadership (3)
 AgEd 56—Rural Education Through Extension Methods (3)
 Agro 1—Introduction to Agronomy (3)
 AnHu 1—Livestock Production (4)
 Hort 1—General Horticulture (3)
 (or) Hort 6—Fruit Growing (3)
 (or) Hort 32—Vegetable Growing (3)
 DyHu 1—Elements of Dairying (3)
 For 1A—Conservation of Natural Resources (3)
 For 10—Farm Forestry (3)

2. **Minor in Agriculture for Agricultural Education Majors**—Students majoring in agricultural education may complete minors in agriculture departments. Such a minor consists of 18 credits exclusive of introductory courses. For details see *Bulletin of College of Agriculture, Forestry, and Home Economics*.

3. **Minor in Agricultural Education**—A minor in agricultural education is open particularly to students majoring in the agricultural science curriculum. Students selecting a minor in agricultural education will not obtain a pattern of courses that will permit their being recommended for a teaching certificate.

It is recommended that Psy 1 and 2 be completed before entering the minor sequence. A minimum of 18 credits may be selected from the following: AgEd 20, 56, 101, 103, 104, 121, 171.

Rural Education

A curriculum in rural education designed to prepare students for teaching in rural schools is administered by the College of Education. For information about this curriculum, see index.

Fifth Year Leading to the Master of Education Degree

The College of Education and the College of Agriculture, Forestry, and Home Economics will award the master of education degree (M.Ed.) to students who satisfactorily complete a fifth year of work in agricultural education at the graduate level and who meet all of the regulations for the professional degree. In addition to the general requirements for the M.Ed. degree, the specific requirements as applied to agricultural education are as follows:

1. A total of 249 credits or 45 credits beyond the requirements for a Bachelor's degree in agricultural education.

2. In addition to the period of observation and student teaching required for graduates in the 4-year curriculum, a period of internship will be required for which the maximum of 8 credits will be given.

3. The distribution of credits for the fifth year will include:

- a. Agricultural education: 12-15 credits, of which not more than 6 credits may be in problems courses.
- b. Education other than agricultural education: 11-15 credits.
- c. Technical agriculture and areas other than those listed above: 15-22 credits.

Note—Undergraduate students in agricultural education who expect to qualify for the M.Ed. degree should confer with their advisers by the beginning of the junior year in order that the work of the junior, senior, and fifth years may be co-ordinated to the best advantage.

ART EDUCATION

Major advisers: Professors Gayne, Hastie; Instructors Cherry, Hegg

For talented students interested in careers in art education and for those who wish to combine creative art careers with teaching, the art education curriculum offers the following:

1. A balanced general education.
2. A comprehensive basic training in art.
3. An opportunity to specialize in the area of art most interesting to the candidate. (A choice of subjects is available for meeting requirements and for electives.)
4. On the successful completion of the 4-year curriculum the bachelor of science degree is granted, and the teaching certificate is awarded by the State Department of Education for teaching art in elementary and high schools and for the variety of educational positions for which graduates are in demand.

5. On successful completion of the 5-year curriculum, the master of education degree is granted.

Emphasis of the Department—Art education is "art for all," and aims at the enrichment of lives through our educational systems. Preparation for adult needs, although important, is not enough. Schools must provide experiences of immediate interest to pupils and of significance to cultural development. Nonverbal techniques are at least as essential in education as more abstract knowledge. Our public schools, as they become more community-minded, are assuming the role of art centers for a democratic society. Art educators require training for leadership in developing art programs with roots in the community. Elementary teachers and administrators require opportunities to develop broad cultural interests and skills worthy of educators of vision because the elementary school

provides the only channel through which art may reach the majority of individuals in our society.

The Department of Art Education serves specialists and nonspecialists alike, to the end that art may function more effectively in all educational programs through courses designed specifically for that purpose. The department co-ordinates the varied facilities of the University available for art education training through program planning and advice for education majors at both undergraduate and graduate levels.

Requirements for the Major in Art Education

Important—As art education offers 4- and 5-year curriculums, candidates should consult art education advisers immediately on entering the University to avoid loss of time in meeting all requirements.

I. Art Education Courses:

- ArEd 14—Introduction to Art Education (2) (freshmen and transfers)
 ArEd 56, 57, 58—Basic Principles and Experiences in Art Education (15) (juniors)
 ArEd 86, 87, 88—Student Teaching and Supervision of Art (9) (seniors)
 ArEd 86A, 87A, 88A—The Teaching and Supervision of Art (6) (seniors)
 Total—32 credits

2. Art and Related Courses—To be selected from the following or equivalents approved by major adviser:

A. Art History and Theory (6 credits required)

- Art 1—Principles of Art (5)
 (or) Art 50—Introduction to the Visual Arts (3)
 Art 2, 3—Principles of Art (3-6)
 Art 67—Modern Art (3)

B. Design and Its Application (24-28 credits required)

- Art 10—Photography (3)
 Art 23, 24, 25—Drawing and Design I (9)
 Art 45—Ceramic Processes (3)
 Art 51—Principles of Pictorial Design (2)
 Art 73—Presentation Techniques (3)
 ArEd 53—Introduction to Weaving (3)
 ArEd 80—Contemporary Crafts (3)
 ArEd 81—Puppetry in Education (3)

- FamS 15—The Home, Its Furnishing (3)
 Spch 34—Stagecraft: Construction and Painting (3)

C. Drawing, Painting, Sculpture, and Printmaking (12-16 credits required)

- Art 40—Sculpture I (3)
 Art 52, 70—Drawing and Painting II and III (6)
 Art 90—Printmaking (3)
 Total—46 credits

3. A Teaching Minor—Must fulfill the requirements of the department involved.

4. Professional Education Courses:

- Ed 55A-B—Introduction to Secondary School Teaching (10)
 HEd 180—The School and Society (3)
 Methods in the minor (2-3)
 Education electives (2-3)
 Total—18 credits

5. General Education Courses:

- Freshman English or communication plus additional courses in languages, literature, or writing (to total 18 credits)
 Hum 1-2-3—Humanities in the Modern World (15)
 (or) Hist 1-2-3—Civilization of the Modern World (9)
 Soc 1—Introduction to Sociology (3)
 Psy 1-2—General Psychology (6) (take before jr yr)
 Physical education (3 or 5)
 PubH 5 or 50 (3)

6. Electives—To complete a total of 186 credits, selected from the sciences, languages, English, speech, general studies, social studies, etc. Recommended: continuation of a language begun in high school; speech arts for use in teaching and in play production; courses in philosophy, history, sociology, and psychology; courses in sports and the dance; courses for the appreciation of music, literary classics, and the stage. Attendance at concerts, exhibitions, and plays is urged as a part of art education. Electives may be used in art courses beyond the minimal requirement, in a minor or in an academic field.

7. Quality Standard—An average of C (grade point average of 2.0) in the minor and all courses outside the major; a C+ or grade point average of 2.5 in the major.

Requirements for the Minor in Art Education

Plan 1. For elementary school teachers, 27 credits:

- ArEd 17—Pictorial Expression for Elementary Education (3)
- ArEd 18—Design Activities for Elementary Education (3)
- ArEd 19—Functional Arts and Crafts in Elementary Education (3)
- ArEd 84—Teaching of Art in the Elementary School (3)
- Drawing and design courses (6)
- Electives (9)

Plan 2. For secondary school teachers, 28 credits:

- ArEd 14—Introduction to Art Education (2)
- ArEd 56, 57—Basic Principles and Experiences in Art Education (10)
- ArEd 87A—The Teaching and Supervision of Art (2)
- Art 1—Principles of Art (5)
- (or) Art 50—Introduction to the Visual Arts (3)
- Courses in drawing and design (6)
- Electives (3-5)

Fifth Year Leading to the Master of Education Degree

A written application for admission to the fifth-year program must be presented to the Department of Art Education on forms available in the departmental office. This should be done to establish tentative candidacy before registration in any courses which are to be counted for credit at the graduate level. After 12 credits have been completed in graduate level courses with a B average, application may be made for approval of a total program.

The student must meet all general requirements for the M.Ed. degree (see index). In addition he must meet the following special requirements:

1. Art education major, including advanced courses in art (24)
2. Education courses (9)
3. Academic electives (12)
4. Satisfactory demonstration of competency in teaching
5. Comprehensive examinations in art education and education

For Graduates of Other Institutions—The program for the fifth year leading to the M.Ed. degree is open to students from other institutions who have had an undergraduate major in art or in art education representing training equivalent to that offered at the University of Minnesota. In some cases it may be necessary for the student to take prerequisite courses at the undergraduate level. Undergraduate work in education must be equivalent to that required in the 4-year program. The special requirements are as follows:

1. Art education major, including advanced courses in art (24)
2. Education courses (12)
3. Academic electives (9)
4. Satisfactory demonstration of competency in teaching
5. Comprehensive examinations in art education and education

Graduate Work—For qualified students with majors in art education or elementary education the Art Education Department offers opportunities to work toward the M.A. and the Ph.D. See the *Bulletin of the Graduate School* and Department of Art Education advisers.

BUSINESS AND DISTRIBUTIVE EDUCATION

Major advisers: Professor Price; Associate Professor Meyer

The following curriculums are designed to prepare teachers of business subjects in secondary schools. Completion of one of these curriculums leads to the bachelor of science degree. While no minor is required, it is possible by a careful selection of electives to secure

also 1 or 2 minors in academic subjects. Students should confer with major advisers as early as possible in order to plan their programs effectively.

Students will normally spend 4 years in the College of Education; however, students in the College of Science, Lit-

erature, and the Arts and other colleges may transfer to the College of Education at any time provided that they satisfy the admission requirements as approved by the major adviser.

Students who have had high school courses or experience in bookkeeping may be exempt from Acct 24 and be admitted to Acct 25 by passing a placement test. Students who have had 1 year of high school typewriting are admitted to OMgt 33; those who have had 2 years of high school typewriting are admitted to OMgt 34. Students who have had 2 years of high school shorthand are admitted to OMgt 39.

Students preparing for vocational certification may be exempt from part of OMgt 149 if they have had practical business experience. The extent of this exemption will depend on the quality, amount, and recency of such experience.

Basic Course Requirements

The following courses constitute the basic material which must be covered by all students preparing to teach business subjects. In addition to these subjects there are required major sequences. Exemption from certain courses may be made in individual cases upon petition approved by the adviser and the Committee on Student Scholastic Standing. The total required for graduation is 186 credits.

Comm 1-2-3 (or) Engl A-B-C (or) Engl 1A, 2A, 3A (or) Engl 1B, 2B, 3B (or) exemption (12-15)

SSci 1-2-3—Personality, Work, Community (9)

Psy 1-2—General Psychology (6)

Geog 41—Primary Production (5)

PubH 5—Individual, Public Health (3)

(or) PubH 50—Personal and Community Health (3)

Econ 67—Money and Banking (3)

QA 5—Elements of Statistics (4)

(or) Soc 45—Social Statistics (5)

Econ 1-2—Principles of Economics (6)

Acct 24-25-26—Principles of Accounting (9)

OMgt 32—Beginning Typewriting (1)

Physical education (3 or men, 5 or women)

Ed 55A-B—Introduction to Secondary Education (10)

EdCI 45—Introduction to Business and Distributive Education (2)

BLaw 58 and 88—Business Law (6)

(or) BLaw 28—Business Law (3)

Mktg 57—Survey in Marketing (3)

IR 52—Manpower Economics and Labor Problems (3)

HEd 180—The School and Society (3)

Major Sequences

1. Office and Basic Business Education:

Basic course requirements (88-97)

OMgt 33—Intermediate Typewriting (1)

OMgt 34—Typewriting Procedures (2)

OMgt 36—Office Procedures (3)

OMgt 37-38-39—Shorthand (9)

OMgt 79A-B—Secretarial Procedures (6)

OMgt 43—Shorthand Theory (2)

OMgt 99—Survey of Office Management (3)

Acct 75A—Accounting Laboratory (1)

Acct 89A—Business Equipment Laboratory (1)

EdT 73—Student Teaching of Business Subjects (9)

EdT 80—Teaching Typewriting and Bookkeeping (2)

EdT 81—Teaching Shorthand (2)

EdT 82—Teaching Basic Business Subjects (2)

OMgt 119-129—Senior Topics: Office Management (6)

Electives (41-51)

For the purpose of computing the C+ average (2.5 grade points per credit) the following are considered major courses:

Acct 24-25-26, OMgt 34, 43, Mktg 57, OMgt 79A-B, Acct 89A, OMgt 99, 119, 129, and Econ 67

2. Clerical and Basic Business Education:

The same requirements as under sequence 1 with the exception of OMgt 37-38-39, 79A-B, 43, and EdT 81. In place of these courses the student will take 19 credits of approved elective courses.

The C+ average (2.5 grade points per credit) is based on the following courses:

Acct 24-25-26, OMgt 34, Mktg 57, Acct 89A, OMgt 99, 119, 129, and Econ 67

3. Distributive and Basic Business Education:

In the broad sense, distributive occupations are those that involve the marketing or merchandising of goods and services. The following sequence is planned to prepare teacher-coordinators for the teaching of distributive education and basic business subjects in the secondary schools.

Basic course requirements (85-94)

GC 18D—Salesmanship (3)

Ind 40—Analysis and Course Organization (5)
 (or) Ind 135—Industrial Course Construction (3)
 EdCI 147—Teaching Display (3)
 Mktg 107—Retail Management (3)
 Mktg 107C—Retail Management II (3)
 (or) Mktg 117—Sales Management I (3)
 (or) Mktg 97—Market Analysis, Research (3)
 (or) Mktg 77—Advertising (3)
 Mktg 67—Practice Course (9) (supervised work experience)
 Psy 156—Psychology of Advertising (3)
 EdCI 136—Organization and Administration of Distributive Education (3)
 EdCI 139—Co-ordination Techniques (3)
 EdT 72—Student Teaching of Distributive Education Subjects (9)
 EdT 90A-B-C—The Teaching of Distributive Education Subjects (6)
 Electives (39-50)

For the purpose of computing the C+ average (2.5 grade points per credit) the following are considered major courses:

Econ 2, 67; Acct 26, IR 52, Mktg 57, 107; Psy 156; GC 18D; EdCI 136, 139, Ind 40 or 135

4. Combination of Clerical and Distributive Education

Those desiring to qualify for certification in clerical and distributive education under the Federal Vocational Acts are required to take the courses in clerical and distributive programs. Eight quarter hours of student teaching are required. (See sequences 1 and 2)

For the purpose of computing the C+ average (2.5 grade points per credit) the following are considered major courses:

Acct 26, OMgt 34, Mktg 57, OMgt 99, Mktg 107, OMgt 119; GC 18D; EdCI 136, 139; Ind 40 or 135

5. Requirements for the Minor in Basic Business:

Econ 1-2—Principles of Economics (6)
 EdCI 45—Introduction to Business and Distributive Education (2)
 BLaw 58, 88—Business Law (6)
 Mktg 57—Survey in Marketing (3)
 Geog 41—Primary Production (5)
 EdT 82—Teaching Basic Business (2)
 EdT 73—Student Teaching of Business Subjects (3)
 Electives—(School of Business Administration courses) (15)

Recommended Electives

In the first 2 years the following are courses or areas especially recommended: business and the American economy, consumer education, science, speech, social science, the home and its furnishings, journalism, English, philosophy, logic, humanities.

In the Upper Division it is recommended that the following areas or courses be considered: advanced courses in the School of Business Administration, visual materials, consumer education in the schools, guidance, conference leading, psychology of adolescence, philosophy of education, advertising, textiles, and co-operative part-time work experience programs.

THE CORE CURRICULUM

Major adviser: Arranged

This curriculum prepares teachers for the "core" program in junior and senior high schools. The objectives of "core teaching" are to help pupils identify and study problems, work co-operatively, become more effective in communication, and develop basic understandings and competencies. In working toward these objectives, the teacher and the pupils draw on pertinent materials from many fields.

A student following this curriculum will work out a program from humanities, social science, science, family life, music, and art. In addition he must com-

plete a minor and 35 credits in education; 31-34 credits are elective.

Each student should plan a tentative program for the 4 years. Students who enter the curriculum as juniors will have difficulty completing the requirements in 2 years unless their Lower Division courses have been carefully selected.

Students register for the first 2 years in the College of Science, Literature, and the Arts and meet the usual group requirements for admission to the College of Education as juniors. An average grade of C+ (2.5) is required in the major field of concentration.

Requirements for a Major in the Core Curriculum

Starred courses are those particularly recommended in each of the major areas.

A. Core Major

1. Humanities Area (24)

- °Hum 1, 2, 3, 4, or 51, 52, 53, 54—Humanities in the Modern World (15-20)
- Hum 11, 12, 13 or 61, 62, 63—The European Heritage (15)
- °Hum 21, 22, 23—American Life (9)
- (or) °Hum 71, 72, 73—Humanities in the United States (9)
- Engl 21, 22, 23—Introduction to Literature (15)
- Engl 37, 38, 39—Twentieth-Century Literature (9)
- Engl 73, 74—American Literature (6)
- Spch 106—Discussion (3)
- Phil 1—Problems of Philosophy (5)

2. Social Science Area (24)

- °SSci 1, 2, 3, or 51, 52, 53—Personality, Work, Community (9-12)
- °SSci 81, 82, 83—Public Affairs Forum (9)
- °Anth 1A—Introduction to Anthropology: Prehistoric Man and Culture (5)
- °Anth 2A—Introduction to Anthropology: Cultural Anthropology (5)
- Anth 100—Principles of Anthropology (3)
- Geog 1—Geography of Natural Resources (5)
- °Geog 4—Human Geography (5)
- Hist 1, 2, 3, or 53, 54, 55—Civilization of the Modern World (9)
- Hist 20, 21, 22—American History (9)
- °Pol 25, 26, 27—World Politics (9)
- (or) Pol ABC—The State in the Modern World (9)
- Soc 1, 2, 3—Introduction to Sociology (3-9)
- Mgmt 1—Business and the American Economy (3)
- Econ B—The Scope, Methods, and Applications of Economics (3)
- Econ C—Introduction of Economic Analysis (3)
- Pol 1, 2—American Government and Politics (6)
- (or) Pol 5—American Government and Politics (5)

3. Science Area (21)

- °NSci 1, 2, 3—Orientation in the Natural Sciences (15)
- (or) °NSci 4, 5, 6—The Physical World (6-12)
- °Biol 1, 2—General Biology (10)
- Phil 81-82—Science and Civilization (6)
- (or) NSci 165—Science in World Affairs (3)

- NSci 171, 172, 173—The Development of the Sciences (3-9)
- (or) NSci 175—Survey of Science History (3)
- Ast 11—Descriptive Astronomy (5)

4. Family Life Area (9) (General College courses may not be taken by juniors and seniors)

- GC 3D—Selecting and Furnishing a Home (3)
- (or) FamS 15—The Home and Its Furnishing (3)
- HE 31—Introduction to Nutrition (3)
- GC 3C—Clothing Selection, Purchase, and Care (3)
- (or) HE 1—Choice and Care of Clothing (3)
- GC 3E—Income Management (2)
- (or) Econ 20—Consumer Economics (3)
- FamS 25—Child Development and Adjustment (3)
- FamS 1 or 1A—Dynamics of Dating, Courtship, and Marriage (3)
- (or) GC 3A—Home Life: Marriage and Family Living (5)
- (or) Soc 141—The Family (3)

5. Music and Art Appreciation (6-12)

- °Art 1 or 50—Introduction to Art (5-3)
- °Mus 1—Introduction to Music (5)
- °Phil 4—Introduction to the Philosophy of Art (4)
- Mus 31, 32, 33—Music Literature (2-6)
- Art 66, 67, 68—Modern Painting and Sculpture (9)

B. Minor Field of Concentration (18-36)

C. General Requirements

1. Education Courses (35)

- EdCI 58—Core Curriculum Foundations (1 per qtr)
- Ed 55A-B—Introduction to Teaching (10)
- HEd 180—School and Society (3)
- EdT 93—Student Teaching in the Core Curriculum (12)
- EdT 93A-B—Methods of Teaching for Core Teachers (5)
- Minor Methods (2-3)

2. Required of All Education Students (26)

- °Comm 1, 2, 3 (or) Engl A-B-C (or) 1A-2A-3A (or) 1B-2B-3B (12-15)
- Psy 1, 2—General Psychology (6)
- Physical education (3-5)
- Public health (5-6)

3. Electives (18-36)

Total hours—186

CURRICULUM AND INSTRUCTION

Major advisers: Professors Birkmaier, Boeck, Bond, Clymer, Eckert, Goossen, D. Johnson, McCune, Price; Associate Professors Curtin, Kegler, Meyer, West

Graduate students interested in curriculum and instruction may secure graduate work in the field with special emphasis on elementary, secondary, or higher education. For statement of the general program and requirements leading to the M.A. or Ph.D. degree see the *Bulletin of the Graduate School*. The following are special programs for secondary school teachers in certain fields.

For English Teachers

Major adviser: Associate Professor Kegler

Note—See also 5-year program in English education.

English teachers may secure a master of arts degree in the Graduate School with a major in education or curriculum and instruction and a supporting minor in English under Plan A or Plan B. Courses applicable to the teaching of English from which the student may profitably choose are as follows:

- EdCI 113—High School Curriculum (3)
- EdCI 122—Literature for Adolescents (3)
- EPsy 133—Basic Procedures in Student Personnel Work (3)
- EdCI 144—Teaching of Reading in Secondary Schools (3)
- EdCI 169—Extracurricular Activities (4)
- EdCI 294—Advanced Course in Curriculum and Methods in Secondary School English (2)
- HEd 141—Critical Issues in Contemporary Education (3)
- EdCI 296—Special Problems in Teaching English (Ar)
- EPsy 117—Basic Principles of Measurement (3)
- EPsy 158—Psychology of Adolescence (3)
- EPsy 293—Psychology of Learning (3)

The seminar, EdCI 222, is required with or without credit for all students with a major under Plan A or Plan B. Programs should be arranged in consultation with the major adviser.

For Teachers of Social Studies

Major advisers: Professors McCune, Morse;
Associate Professor West

Social studies teachers may secure a master of arts degree in the Graduate School with a major in education or in curriculum and instruction and a minor or related courses in history, economics, political science, geography, or sociology. Courses which are recommended as fitting into this plan are:

- EdCI 155—Materials Laboratory for Social Studies Teachers (3)
- EdCI 168—Current Developments in the Social Studies (2)
- EdCI 201—Problems in Teaching the Social Studies (3)
- EdCI 204—Social Studies Curriculum (3)

The seminar, EdCI 222, is required with or without credit for all students with a major or minor under Plan A.

Programs should be arranged in consultation with the major adviser.

For Science Teachers

Major adviser: Professor Boeck

Note—See also the 5-year program in natural science.

Science teachers may secure a master of arts degree in the Graduate School under one of two plans: following Plan A, the student elects a major in education, educational psychology, or curriculum and instruction and takes his minor work in science; under Plan B, the student elects to pursue a concentration of studies in the field of psychology or curriculum and instruction and takes, in addition, courses in one or more of the sciences and/or courses in education in areas not represented in the field of concentration.

Students interested in obtaining the master of arts degree under one of the plans described should arrange their programs in consultation with their major adviser.

ECONOMICS

Major adviser: Associate Professor Harlan Smith

A student who majors in economics registers in the College of Science, Literature, and the Arts for his first 2 years. His program during this time should include the first requirement listed below under the economics major. He should also meet the requirements of Plan I or Plan II, listed in Section I. The economics major should be proficient in typing before he reaches his senior year. Spch 5 and a course in statistics are recommended. General and professional requirements for the College of Education are listed in Section I. The student must maintain a 2.5 over-all average in the social science courses.

Economics as a Major Subject

Econ 1-2—Principles of Economics (6)
 (or) Econ B-C—Scope, Methods, and Application of Economics and Introduction to Economic Analysis (6)
 (or) Econ 50A-B—Economic Problems of the American Economy (6)
 Econ 65—Intermediate Economic Analysis: The Firm (3)
 Econ 66—Intermediate Economic Analysis: Income and Employment (3)
 Econ 68—Elements of Public Finance (3)
 (or) Econ 178A—Public Finance (3)
 IR 52—Modern Industrial Relations: Labor Marketing (3)
 (or) Econ 62—Labor Economics (3)
 Econ 69—Government Regulation of Business (3)
 Econ 104—International Economics (3)
 Elective courses in economics—at least 12 credits from 2 of the areas designated under economics courses in the *Bulletin of the College of Science, Literature, and the Arts*
 A total of 36 credits in economics

Because of the economics teacher's need for a broad social studies back-

ground and because most social studies positions require teachers to teach more than one subject within the social studies area, the economics major must complete the following spread of supporting courses in the social sciences. This requirement is in lieu of a required teaching minor.

23 credits of history, including Hist 1-2-3 or 53-54-55—World Civilization (and) Hist 20-21-22—American History
 5 credits of geography, either Geog 1 or 4 or 41
 20 credits in the other social sciences, including:
 Pol 1-2 or 5 or 80—American or National Government (and) 25—World Politics
 Soc 3—Social Problems (and) one course numbered over 100
 Anth 2A—Cultural Anthropology (or) 100—Principles

Economics majors are urged to build a teaching minor in a nonsocial science area in order to improve their chances of obtaining teaching positions.

All economics majors must include 1 course on Russia and 1 on the Far East. These courses may be taken in any one of the social sciences and will count toward meeting the credit requirements in those fields. Econ 160 or Econ 164 will satisfy the requirement for a course on Russia.

The student majoring in economics must take the following courses within the total requirement of 29 credits in education:

EdT 69—Student Teaching in the Social Studies (1 cr during jr yr and 9 cr during sr yr)
 EdT 69A-B-C—Methods of Teaching the Social Studies (5)

EDUCATIONAL ADMINISTRATION

Major advisers: *General and Secondary*—Professors Domian (chairman), Hooker, Keller; Associate Professor Popper; Assistant Professor Thompson; *Elementary*—Professors Bond, Goossen; Associate Professor Curtin

The student who wishes to become a superintendent of schools, a secondary school principal or supervisor, or an elementary school principal or supervisor must complete the requirements for the master of arts degree in the Graduate School. All such candidates should have

completed as undergraduate students one of the curriculums preparing teachers for the elementary or secondary schools.

For the M.A. program for prospective superintendents, secondary school principals, and general secondary co-ordina-

tors, the major will be educational administration, with related course work in curriculum and instruction, educational psychology, and other areas. The prospective elementary school principal majors in educational administration or in curriculum and instruction, with the program including both areas. (Supervisors and consultants for particular fields of secondary instruction and for the elementary school usually will apply for a major in curriculum and instruction.)

Advanced study beyond the M.A. de-

gree in educational administration may lead to the specialist in education certificate or to the Ph.D. degree. Included in the specialist certificate program are advanced courses, workshops, and field work. The workshops (not listed in this bulletin) are offered only in Summer Sessions.

For information concerning the general requirements for the M.A. and the Ph.D. degrees and for the specialist in education certificate, see the *Bulletin of the Graduate School*.

EDUCATIONAL PSYCHOLOGY

Major advisers: Professors Bond, Clymer, Cook, Dugan, Edson, Edwards, Hagenah, Mork, Reynolds, Stecklein, Torrance, Wrenn; Associate Professors Balow, Corcoran, Force, Glotzbach, Hoyt, Tennyson, Wilk; Assistant Professors Blocher, Duker, Hogan, Karlsen, Neale, Orlando

This department provides professional training in several specialized areas of school and college work as well as basic techniques for educational and psychological functions in closely related fields. These include counselors in school and college; specialists in related student personnel functions; counseling psychologists; school psychologists and clinicians; statistical and research workers; and specialists in educational measurement, psychology of learning, and group dynamics.

Students who plan to assume such duties in the area of educational psychol-

ogy may register in the Graduate School and elect a major or minor in educational psychology leading to the M.A. or to the Ph.D. degree. It is not the purpose of the courses for the master of arts degree to produce a person with highly specialized training, but to supply a basis for later professional growth as well as some immediate background for handling the problems involved in the several positions indicated.

Programs should be made in consultation with an adviser. For courses and requirements, see the *Bulletin of the Graduate School*.

ELEMENTARY, PRIMARY, KINDERGARTEN, AND NURSERY SCHOOL EDUCATION

Major advisers: *Elementary Education* (supervision or teaching)—Professors Bond, Clymer, Goossen; Associate Professors Chase, Curtin, Odland, Rogers; Instructors Dykstra, Stochl; *Nursery School—Kindergarten—Primary Education*—Instructor Sorensen

The basic curriculums outlined in this section prepare for all types of elementary school teaching from nursery school and kindergarten through the 8 years of the elementary school. Upon graduation the student, depending on his choice of curriculum, is eligible for 1 of 2 certificates: (a) the *general elementary* certificate for teaching in the elementary school (grades 1 through 8), or (b) the *special nursery school—kindergarten—primary* certificate for teaching in nursery school, kindergarten, and grades 1 through 3.

The following curriculums are for persons of different backgrounds of education, training, and experience. Curriculums IA and IB are for regular college students who take 4 years of work. Curriculums IIA and IIB are for teachers and others who have completed (prior to March, 1952) 2 years of training in a teachers college and already have a certificate for elementary school teaching. Curriculums IIIA and IIIB are for students who already hold a B.A. or B.S. degree. A student should identify his curriculum and consult an adviser in his

field. Information about curriculums and assistance in making a choice may be secured at the Student Personnel Office, 206 Burton Hall.

The regular 4-year student will follow Curriculum IA for elementary school teaching, grades 1-8, or Curriculum IB for nursery school-kindergarten-primary teaching.

Deficiencies due to transfer from other schools can be made up after entering the College of Education. The aim is broad functional contacts with cultural fields of knowledge essential for the general education of the teacher and as resources for teaching the common and special subjects of the elementary school.

Curriculums IA and IB— Elementary Education and Nursery School-Kindergarten- Primary Education

Freshman students who plan to follow Curriculum IA or IB will register in the College of Science, Literature, and Arts for the first year. Students will be admitted to the College of Education for Curriculums IA and IB only after completion of 1 year's college work, meeting the indicated requirements.

FRESHMAN AND SOPHOMORE YEARS

In order to be eligible for admission to the sophomore year in the elementary curriculums (IA and IB) in the College of Education, a student must have completed a minimum of 45 credits, at least 30 of which must be selected from courses listed under blocks 1, 2, 3, and 4 which follow. The student must have an over-all average of C as well as an average of C in the courses selected from blocks 1, 2, 3, and 4. *Items marked with two asterisks (**) may be taken only after completing the freshman year.*

1. English (12-15)

Engl A-B-C (or) Engl 1A-2A-3A (or) Engl 1B-2B-3B (or) Comm 1-2-3 (or) exemption

2. Natural Science (15)

NSci 4-5-6—The Physical World (and) Biol 1A-2A—General Biology

(or) NSci 4-5—The Physical World (and) Biol 1-2—General Biology
(or) NSci 1-2-3—Orientation to the Natural Sciences

3. Sociology or Social Science (6-9)

Soc 1—Introduction to Sociology (and) Soc 3—Social Problems
(or) SSci 1-2-3—Personality, Work, Community

4. Geography (5)

Geog 1—Geography of Natural Resources
(or) Geog 4—Human Geography

5. History and/or Political Science (9)

6. Mathematics (3)

Math 5—Foundations of Arithmetic

7. Health (3)

PubH 5—Individual and Public Health
(or) PubH 50—Personal and Community Health

8. Music (2-4)

Mus 4—Fundamentals (or exemption)
Mus 31 or 32 or 33—Music Literature (NKP only)

9. Physical Education (3-7)

Physical education activity courses—women (5)
Physical education activity courses—men (3)
(Elementary majors are urged to substitute PEW 45 for 2 of the required activity course credits)
PEW 25—First Aid (2) (NKP only)

10. Psychology** (6)

Psy 1 and 2—General Psychology

11. Speech** (5)

Spch 5—Fundamentals of Speech

12. Art Education** (6)

ArEd 17-18-19 (any 2)—Survey of Art in Life and Education

13. Electives

Chosen after consultation with adviser

JUNIOR AND SENIOR YEARS

Curriculums IA and IB

Academic Courses—Approximately half of the work of the junior and senior years is in courses other than education. These credits may be selected from the courses listed in the *Bulletin of the College of Science, Literature, and the Arts* in conference with the major adviser. A minimum of 18 of these credits must be

taken in Upper Division courses. Lower Division courses in mathematics, foreign languages, and natural sciences are acceptable toward these 18 credits. Any credits in science or mathematics must be in addition to the credits which are required in those areas.

1. Junior Sequence

Ed 75A-B—Introduction to Elementary School Teaching (75A, Educational Psychology; 75B, Curriculum, Measurement, and Organization) (10)

2. Physical Education

PEW 70—Teaching Health and Physical Education in the Elementary Schools (3) (elementary majors only)

PEW 91—Principles of Play (3) (NKP only)

3. Art Education

ArEd 84—Teaching Art in the Elementary School (3) (elementary only)

4. Music Education

MuEd 51—Teaching Music (2)

MuEd 52—Teaching Music (2) (elementary only)

5. Basic Methods

EdCI 60—Teaching Reading in the Elementary School (3)

EdCI 61—Teaching Social Studies in the Elementary School (3)

EdCI 62—Teaching Mathematics in the Elementary School (3)

EdCI 63—Children's Literature (2)

EdCI 64—Teaching English in the Elementary School (3)

EdCI 65—Teaching Science in the Elementary School (3)

EdCI 66—Treatment of Learning Difficulties (3) (elementary only)

6. Student Teaching

EdT 54A and B—Student Teaching in the Elementary School (12) (elementary only)

EdT 77—Student Teaching in the Nursery School (4) (NKP only)

EdT 78—Student Teaching in the Kindergarten (6) (NKP only)

EdT 79—Student Teaching in the Primary Grades (6) (NKP only)

7. History and Philosophy of Education

HEd 180—The School and Society (3)

8. Academic Minor

A minimum of 23 credits from any one of the fields listed below. The minor may include no more than 5 credits from the

required courses in the IA or IB curriculum. The fields are:

- Anthropology
- Art
- Economics
- English
- Foreign Language
- Geography
- History
- Humanities
- Mathematics
- Music
- Natural Science
- Political Science
- Sociology
- Speech
- Others by special permission

This minor may not necessarily be considered as a minor leading to a junior high school endorsement.

9. Other Courses Required in the IB (NKP) Curriculum Only

CD 80—Child Psychology (3)

EdCI 54—Literature and Storytelling for Young Children (2)

EdCI 55—Foundations of Early Childhood Education (3)

EdCI 56—Methods and Observation in the Kindergarten (3)

EdCI 57—Nursery-Kindergarten-Primary Lab in Social Studies, Sciences, Art and Music (4)

EdCI 59—Methods and Observation in Nursery School (3)

EdCI 105—Audio-Visual Education (3)

186 credits are necessary for graduation. The required major average of C (2.0) will be based on the following courses:

Elementary IA: Ed 75A-B; EdCI 60, 61, 62, 63, 64, 65, 66; HED 180; EdT 54A-B
NKP IB: Ed 75A-B; EdCI 54, 55, 56, 57, 59, 60, 61, 62, 63, 64, 65; HED 180; EdT 77, 78, 79

Admission to student teaching requires a C average in all the major courses listed above which are taken prior to student teaching.

Curriculum IIA—Elementary Education for Teachers

JUNIOR AND SENIOR YEARS

This curriculum is for teachers and other students who have completed a 2-year course of professional training and *already hold* an elementary school certificate. (Those who hold the provisional

elementary certificate based upon completion of a prescribed program since March, 1952, should follow plan IA.)

The College of Education allows a minimum of 90 credits for the 2-year diploma course in elementary education taken in an accredited teacher training institution. These credits are listed as "blanket credits" and are not assigned to particular courses. They are accepted in lieu of the general course requirements for the freshman and sophomore years and the following program represents the work of the last 2 years.

Major in Elementary Education, 30 credits:

1. Required of all—9 credits.

EPsy 60—Introduction to Measurement and Statistics (3)
EdCI 119—Elementary School Curriculum (3)
HEd 180—The School and Society (3)

2. Twelve credits in methods to be chosen from the following:

EdCI 65—Teaching Science in the Elementary School (3)
(or) EdCI 103—Teaching Science in the Elementary School (3)
EdCI 63—Children's Literature (2)
(or) EdCI 121—Children's Literature (2)
EdCI 61—Teaching Social Studies in the Elementary School (3)
(or) EdCI 102—Teaching Social Studies in the Elementary School (3)
EdCI 60—Teaching and Supervision of Reading in the Elementary School (3)
(or) EdCI 143—Teaching and Supervision of Reading in the Elementary School (3)
EdCI 145—Reading Difficulties (3)
EdCI 62—Teaching and Supervision of Mathematics in the Elementary School (3)
(or) EdCI 149—Teaching and Supervision of Mathematics in the Elementary School (3)
EdCI 151—Diagnosis and Treatment of Learning Difficulties (3)
EdCI 64—Teaching and Supervision of English in the Elementary School (3)
(or) EdCI 153—Teaching and Supervision of English in the Elementary School (3)
Other courses in methods by petition

3. Education electives—9 credits.

These credits may be chosen from any of the preceding courses or from any of the courses listed under general courses for elementary education.

Students minoring or having a concentration in an education field are not permitted to take any education elective courses for the major area.

The C+ average (2.5) is based on the 21 credits of the major field excluding any credits taken as electives.

Note—Students may be required to take EdT 54A-B (Student Teaching) unless evidence of satisfactory experience is presented. The decision is made by the major adviser or the director of student teaching. Students are urged to plan their programs early so as not to exceed the 30 credits allowed in education.

Minor and Academic Courses—60 to 66 credits. These credits are to be selected from courses *other* than education. At least 18 of the academic credits must be in the courses numbered 50 or above. Requirements are as follows:

1. Courses in public health: PubH 50—Personal and Community Health (3)

2. A *regular* minor. Requirements for minors vary from 23 to 36 credits. Minors in the various fields are described in this section of the bulletin.

3. Eighteen credits in at least one of the following or such other fields as may be approved by the adviser. In each case all 18 credits are to be taken during the third and fourth years and are as a rule to be selected from courses offered in the College of Science, Literature, and the Arts. Students must aim to supplement and not to duplicate courses taken elsewhere. Credit cannot be allowed for courses that are largely duplication. Child welfare and psychology are not areas of concentration, but general electives may be chosen from those fields. The fields are:

English
A foreign language
A social science or general social science (other than history or geography)
Speech
Language arts
Humanities
Geography
History
A science or general science
Mathematics
Art
Music
Library science
Physical education
Others by special permission

4. Academic electives—to complete the total of 186 credits. At least 18 credits in *academic courses* must be in courses numbered 50 or above. Any course listed in the *Bulletin of the College of Science, Literature, and the Arts* will count toward this requirement whether taken as a part of the minor or concentration or as an elective.

Courses in General Extension—Elementary teachers taking extension and late afternoon and Saturday morning courses should complete all the procedures for admission to the College as a regular student as soon as possible after they begin their work and in no case later than the beginning of the senior year (when they have earned 135 credits). They should follow the pattern of the curriculum to be certain that all work taken will apply toward graduation. They should consult an adviser in the College of Education early in their course with regard to transfer credits and any courses not a part of the curriculum.

Curriculum IIB—Nursery School—Kindergarten—Primary Education for Teachers

Teachers college graduates, coming with 90 blanket credits and interested in the NKP emphasis under elementary education, should consult the NKP adviser for information about the program.

Curriculum IIIA—Elementary Education

SENIOR YEAR

This curriculum is for students who already have a B.A. or B.S. degree and who wish to prepare for elementary school teaching.

Students are urged to enter the program in the fall, and complete the courses of the fall, winter, and spring quarters in sequence. They may, however, make up any deficiencies or lighten their programs by taking work in the Summer Session.

A minimum of 47 credits and a C+ average (2.5) on the total is required.

- Ed 75A-B—Introduction to Elementary School Teaching (75A, Educational Psychology; 75B, Curriculum, Measurement, and Organization) (10)
- EdCI 60—Teaching Reading in the Elementary School (3)
- EdCI 61—Teaching Social Studies in the Elementary School (3)
- EdCI 62—Teaching Mathematics in the Elementary School (3)
- EdCI 63—Children's Literature (2)
- EdCI 64—Teaching English in the Elementary School (3)
- EdCI 65—Teaching Science in the Elementary School (3)
- (In exceptional cases courses in the same area numbered 100 or above may be substituted for the methods courses in the 60 sequence)
- EdCI 145—Reading Difficulties (3)
- (or) EdCI 151—Diagnosis and Treatment of Learning Difficulties (3)
- (or) EdCI 66—Treatment of Learning Difficulties (3)
- EdT 54A-B—Student Teaching in the Elementary School (12)
- (Admission to student teaching shall be based on a C+ (2.5) average in all courses in the major program completed prior to student teaching.)
- MuEd 51—Teaching Music (2)
- (or) MuEd 52—Teaching Music (2)
- ArEd 84A—Teaching Art in the Elementary School (3)

On completion of the IIIA curriculum the student will be recommended for the B.S. degree from the College of Education and for the teacher's certificate for elementary school teaching.

Admission to this program is based on the assumption that the student has an adequate background in the areas of natural science, geography, history, and health. In case of deficiencies the student shall be required to take additional courses in deficient areas in order to give him an appropriate background for elementary school teaching.

Completion of Psy 1-2 (General Psychology) is required for admission to the curriculum if it has not been included in the student's previous Bachelor's degree program. If the student has not had equivalent work in public health he must add PubH 50 (Personal, Community Health) to the above program.

Curriculum IIIB—Nursery School—Kindergarten—Primary Education

SENIOR YEAR

This curriculum is for students who already have a B.A. or B.S. degree and

who wish to receive a B.S. degree from the College of Education and the special certificate for nursery school-kindergarten-primary teaching.

Students are urged to enter this program in the fall quarter. A minimum of 45 credits is to be selected from the following courses in conference with the adviser:

Ed 75A-B—Introduction to Elementary School Teaching (75A, Educational Psychology; 75B, Curriculum, Measurement, and Organization (10)

CD 80—Child Psychology (3)

EdCI 55—Foundations of Early Childhood Education (3)

EdCI 56—Methods and Observation in the Kindergarten (3)

EdCI 57—Nursery-Kindergarten-Primary Lab in Social Studies, Sciences, Art, and Music (4)

EdCI 59—Methods and Observation in the Nursery School (3)

EdCI 60—Teaching Reading in the Elementary School (3)

EdCI 61—Teaching Social Studies in the Elementary School (3)

EdCI 62—Teaching Mathematics in the Elementary School (3)

EdCI 63—Children's Literature (2)

EdCI 64—Teaching English in the Elementary School (3)

EdCI 65—Teaching Science in the Elementary School (3)

EdT 77—Student Teaching in the Nursery School (4)

EdT 78—Student Teaching in the Kindergarten (6)

EdT 79—Student Teaching in the Primary Grades (6)

MuEd 51—Teaching of Music (2)

A grade average of C+ is required for the above major.

Completion of Psy 1-2 (General Psychology) is required for admission to the curriculum if it has not been included in the student's previous Bachelor's degree program.

Admission to this program is based on the assumption that the student has an adequate background in the areas of natural science, geography, history, and health. In case of deficiencies, the student shall be required to take additional courses in deficient areas in order to provide an appropriate background for teaching in the primary grades.

Junior High School Endorsement

Students pursuing curriculums IA, IIA, or IIIA may secure endorsement for

junior high school teaching on the certificate for the elementary school by meeting the following requirements:

1. The completion of a regular minor for teaching in the secondary schools.

2. The course EdAd 167 (Junior High School, 3 cr).

3. A special methods course covering the junior high school level in the minor.

4. Student teaching in grades 7, 8, or 9 (EdT 52, 2 or 3 cr), in addition to student teaching in the elementary school.

Five-Year Program in Early Childhood Education Leading to the Master of Education Degree

The College of Education, in co-operation with the Institute of Child Development, has outlined a 5-year program leading to the master of education degree in early childhood education for students who satisfactorily complete a fifth year of work in education and child development courses at the graduate level and who meet all the regulations for the professional degree. Undergraduate students in the nursery school-kindergarten-primary school curriculum who expect to qualify for the M.Ed degree should confer with their advisers by the beginning of the junior year in order that the work of the junior, senior, and fifth years may be co-ordinated to the best advantage.

In addition to the general requirements for the M.Ed. degree the specific requirements in early childhood education are as follows: (a) a total of 45 credits beyond the requirements for the Bachelor's degree in the nursery school-kindergarten-primary education curriculum; (b) a period of internship for which a maximum of 8 credits will be given; (c) a distribution of credits for the fifth year in accordance with an approved pattern, including the internship and courses in child development and in curriculum and instruction, with other courses to be selected from educational psychology, psychology, or sociology, and

from educational administration or the history and philosophy of education. For further information consult the major adviser.

Five-Year Program in Elementary Education Leading to the Master of Education Degree

The College of Education has outlined a 5-year program leading to the master of education degree in elementary education upon the satisfactory completion of a fifth year of work at the graduate level. The work of the fifth year is based on the 4-year curriculum in elementary education (Curriculum IA) and conforms to the general requirements set up for the M.Ed. degree. For information in regard to the program consult the major adviser or the dean of the college.

Graduate Programs

Programs leading to the M.A. and Ph.D. degrees are offered in the Graduate School emphasizing various areas of study in elementary education. Applicants should have completed one of the undergraduate curriculums leading to certification for elementary school teaching. In general, the graduate programs either prepare the teacher at an advanced level for his classroom work or lead toward

one of the several specialties in public school work. For example, there are graduate programs for prospective school psychologists, supervisors and consultants, principals, specialists in teacher training, child psychologists, teachers of special classes, and reading specialists.

Classroom teachers, supervisors, and consultants ordinarily will major in the Graduate School in curriculum and instruction. Prospective elementary school principals may major in educational administration or in curriculum and instruction, but their programs will include work in both areas with special emphasis on the improvement of instruction. Graduate programs in childhood education are offered by the Institute of Child Development with majors in child development; for school psychological work, the programs combine graduate study in educational psychology, child development, psychology, and curriculum and instruction. Special class teachers should refer to the listing of courses under curriculum and instruction and under educational psychology which cover their particular area of teaching.

The general plan of graduate work and requirements for the M.A. and Ph.D. degrees are described in the *Bulletin of the Graduate School*. In applying for admission to the Graduate School, the applicant should be sure to indicate the area which he wishes to emphasize in his program.

ENGLISH

Major advisers: Professor Allen, Associate Professor Kegler

Students who major in English register in the College of Science, Literature, and the Arts for the first 2 years, and their programs during this time should include the Lower Division courses in the major, listed below. General and professional requirements of the College of Education are described in Section I. All English majors must complete Spch 5 in addition to other general requirements. Those who wish to combine the major in English with related work in speech, journalism, and library science instead of completing a minor in a sec-

ond teaching field should refer to the language arts curriculum.

English as a Major Subject:

Engl 21-22-23—Introduction to Literature (15)
 Engl 55-56—Shakespeare (6)
 Engl 72-73-74—American Literature (9)
 Engl 165—Introduction to Modern English (3)
 Comp 27-28—Advanced Writing (6)
 Electives in courses numbered 100 or above (9)
 (or) a minimum of 3 credits in courses numbered 100 or above and remainder from Upper Division humanities courses

Students with a major in English are required to take EdCI 122 (Literature

for Adolescents, 3 cr), which is counted in the professional requirement. For student teaching and special methods in English they register in EdT 75 (Student Teaching in the Language Arts), and EdT 75A-B-C or D (The Teaching of the Language Arts).

English as a Minor Subject: Engl 22-23, 55-56, and 73-74; and Comp 27-28.

Five-Year Program Leading to the Master of Education Degree

The College of Education has outlined a 5-year curriculum leading to the professional degree of master of education

for teachers of English. The curriculum includes specific recommendations for Lower Division work. Students should confer with an adviser early in their college course. The work of the fifth year, representing 45 credits beyond the requirements for the Bachelor's degree with a major in English or language arts, conforms to the general requirements of the M.Ed. degree, and is made up of graduate courses in English and in education, including the internship and courses in curriculum and instruction, educational psychology, and the history and philosophy of education. For further information consult one of the major advisers. See also Graduate Study in Education, Section I.

GEOGRAPHY

Major adviser: Assistant Professor Barrett

A student who majors in geography registers in the College of Science, Literature, and the Arts for the first 2 years. His program during this time should include the first three courses listed under the major. He should also meet the requirements of Plan I or Plan II, listed in Section I. The geography major is urged to take geology as part of his natural science requirement. He should also be proficient in typing before he reaches his senior year. Completion of Spch 5 is advisable. General and professional requirements for the College of Education are described in Section I. The student must maintain an over-all 2.5 grade point average in the social science courses.

Geography as a Major Subject:

Geog 1—Geography of Natural Resources (5)
 Geog 4—Human Geography (5)
 Geog 41—Geography of Primary Production (5)
 Elective courses in geography—At least 24 credits, including 1 course in each of the following areas: (a) Anglo-America, (b) Europe, (c) Soviet Union, (d) Southeast Asia, (e) Africa and the Middle East, (f) Latin America
 A total of 39 credits in geography

Because of the geography teacher's need for a broad social studies background and because most social studies positions require teachers to teach more

than one subject within the social studies area, all geography majors must complete the following spread of supporting courses in other social science fields. This requirement is in lieu of a required teaching minor.

27 credits in history, including Hist 1-2-3 or 53-54-55—Civilization of the Modern World (and) Hist 20-21-22—American History (plus) 9 additional credits in courses numbered 65 or above
 18 credits in the other social sciences, including:
 Pol 1-2 or 5 or 80—American or National government
 Econ 1-2—Principles of Economics (or) B-C—Scope, Methods, and Application of Economics and Introduction to Economic Analysis (or) 50A-B—Economic Problems of the American Economy
 Soc 3—Social Problems
 Anth 2A—Cultural Anthropology (or) 100—Principles of Anthropology

Geography majors are urged to build a teaching minor in a non-social science area in order to improve their chances of obtaining teaching positions.

The student majoring in geography must take the following courses within the total requirement of 29 credits in education:

EdT 69—Student Teaching in the Social Studies (1 cr during jr yr and 9 cr during sr yr)
 EdT 69A-B-C—Methods of Teaching the Social Studies (5)

Geography as a Minor Subject: 28 credits of geography, including Geog 1, 4, and 41 plus 1 course in each of 3 of the 6 areas listed for geography major.

GERMAN

Major adviser: Professor Menze

A student wishing to obtain a major or a minor in German registers for the first 2 years of work in the College of Science, Literature, and the Arts and there meets the requirements of Plan I or II in Section I of this bulletin as well as all prerequisites for Upper Division courses in German.

The 2 years of work remaining will be taken in the College of Education. General and professional requirements of the College of Education are stated in Section I. It is recommended that the College of Education student majoring in German include in his program Ger 80 or Clas 56.

German as a Major Subject for High School Teaching:

Ger 80—History of the German Language (3)
 (or) Clas 56—Elementary Linguistics (3)
 Ger 57-58-59—Composition (6)
 Ger 61-62-63—Conversation (6)
 Ger 68—German Pronunciation (2)
 Any 2 quarters (6 cr) of:
 Ger 91-92-93—Civilization and Culture
 (or) Ger 95-96—Survey of German Literature
 (or) Ger 64-65-66—Advanced Conversation and Essay Writing
 12 credits in courses numbered 56 or above (at least 9 cr should be in literary courses)

German as a Minor Subject: 23 credits including Ger 57-58-59, 61-62-63, 68 and 7 additional credits in courses numbered 56 or above.

HIGHER EDUCATION

Major advisers: Professors Eckert, R. J. Keller, Mork, Morse, Wrenn

Qualified graduate students may select courses preparing them for service in colleges and universities. These courses and seminars are designed both for students majoring in education and for those specializing in other academic and professional disciplines. Unusual facilities

are provided for laboratory work in higher education through the co-operation of the University's instructional, research, and service departments. See the *Bulletin of the Graduate School* for a statement of courses and requirements.

HISTORY

Major advisers: Associate Professors Loehr, Wright

A student who majors in history registers in the College of Science, Literature, and the Arts for his first 2 years. His program during this time should include the first two requirements listed under the history major. He should also meet the requirements of Plan I or Plan II, listed in Section I. The history major is urged to take geology as part of his natural science requirement. He should be proficient in typing before he reaches his senior year. Completion of Spch 5 is advisable. General and professional requirements for the College of Education are described in Section I. The student must

maintain an over-all 2.5 average in social science courses.

History as a Major Subject:

Hist 1-2-3 or 53-54-55—Civilization of the Modern World (9)
 Hist 20-21-22—American History (9)
 Hist 127—Russia (3)
 Elective courses in history—at least 27 additional credits in courses numbered 65 or above (with completion of satisfactory paper, as required for SLA majors)
 A course taken in history or in one of the other social science areas in each of the following cultural areas: (a) Latin America, (b) Asia, (c) Africa and the Middle East. These courses can be counted toward the required number of credits in these fields.
 A total of 48 credits in history

Because of the history teacher's need for a broad social studies background and because most social studies positions require teachers to teach more than one subject within the social studies area, all history majors must complete the following supporting courses in other social science fields. This requirement is in lieu of a required teaching minor.

23 credits in geography, including Geog 1 and Geog 4 and 1 course in each of 4 of the 6 areas listed for the geography major

15 credits in the other social sciences, including:
Pol 1-2 or 5 or 80—American or National Government

Econ 1-2—Principles of Economics (or) B-C—Scope, Methods, and Application of Economics, and Introduction to Economic Analysis (or) 50A-B—Economic Problems of the American Economy

Soc 3—Social Problems

Anth 2A—Cultural Anthropology (or) 100—Principles of Anthropology

History majors are urged to build a teaching minor in a non-social science area in order to improve their chances of obtaining teaching positions.

The major in history must take the following courses within the total requirement of 29 credits in education:

EdT 69—Student Teaching in the Social Studies (1 cr during jr yr and 9 cr during sr yr)

EdT 69A-B-C—Methods of Teaching the Social Studies (5)

History as a Minor Subject: 30 credits in history, including Hist 1-2-3 or 53-54-55; and Hist 20-21-22; and 12 credits in courses numbered 65 or above.

HISTORY AND PHILOSOPHY OF EDUCATION

Major advisers: Professor Beck; Associate Professor T. Smith

Work in the history and philosophy of education is available at the graduate level leading to the M.A. and Ph.D. degrees. Students should arrange a pro-

gram in consultation with an adviser in accordance with their special fields of interest. For courses and requirements see the *Bulletin of the Graduate School*.

HOME ECONOMICS EDUCATION

Major advisers: Professors Ford, Brown; Associate Professor Holmblade; Assistant Professors Christensen, Kafka; Instructor Wantoch

The College of Agriculture, Forestry, and Home Economics and the College of Education co-operate in the preparation of teachers of home economics. Satisfactory completion of the following curriculums will lead to the B.S. degree and will provide the necessary training for qualification for a certificate for teaching home economics in secondary schools in Minnesota. Completion of this curriculum qualifies for teaching in federally aided home economics departments.

During the first 2 years the student is registered in the College of AFHE and carries the required work of the home economics education curriculum. In the junior and senior years she completes the combined curriculum of the College of Education and the College of AFHE leading to the bachelor of science degree.

When the student has earned a minimum of 90 credits and at least 2 grade points per credit (junior classification)

and has indicated her specialization as the teachers' or the extension curriculum, she becomes a registrant also in the College of Education. In the third quarter of the sophomore year, the student should make application for the combined curriculum at the Home Economics Office, 212 McNeal Hall, St. Paul Campus. She will then complete admission requirements of the College of Education, which include speech, health, and psychological examinations and interviews.

Prior to registration for supervised teaching, the student must have completed the following requirements:

1. The College of Education examinations.

2. Certain home economics courses with a grade of at least C. For the general home economics teaching specialization a grade of at least C is required for

the following courses: HE 3, 4, 21, 40, 41, 76.

3. Home economics courses required in the teaching curriculum with a grade point average of 2.5.

In order to be recommended for graduation from the teaching specialization, the student must have (a) 2.5 grade points per credit in 40 credits of home economics work in the curriculum for general home economics teaching, (b) an average of 2 grade points per credit in all other courses pursued during the junior and senior years.

Four-Year Curriculum in Home Economics Education Leading to the B.S. Degree

Teaching Home Economics—Students must meet the all-College requirements for graduation from the College of Agriculture, Forestry, and Home Economics. The following courses are required for those preparing for teaching general home economics.

FRESHMAN COURSES

Orie 1—College Orientation Lectures (1)
 HE 1—Choice and Care of Clothing (3)
 HE 3—Clothing Construction A (3)
 HE 10—Introduction to Home Economics (1)
 HE 17—Personal and Family Living (3)
 HE 20—Introduction to Related Art (4)
 HE 21—Color and Design I (3)
 HE 31—Introduction to Nutrition (3)
 HE 40—Food Preparation (5)
 Rhct 1-2-3—Communication (9)
 Biol 1A, 2A—General Biology (7)
 (and) Phsl 4—Human Physiology (4)
 (or) GC 10A-B—Human Biology (6)
 DI 20—Household Microbiology (4)
 (or) MicB 53—General Bacteriology (5)
 InCh 4-5—General Inorganic Chemistry (10)
 (or) GC 7C—Physical Science: Elements of Chemistry (5)
 PubH 5—Individual and Public Health (3)
 (or) PubH 50—Personal and Community Health (3)
 GC 7A—Physical Science: Elements of Physics (5)
 (or) AgEn 35—Household Physics (5)
 Humanities (9) (may be taken from humanities, art, HE 120, literature, music, philosophy or theater arts; nonstudio music and art courses may be taken on Mpls or STP Campus)
 Physical education (3)

The physical education requirement may be completed any time during the 4 years of residence. Courses for home economics extension students are to be chosen from country, folk, modern, or social dance and recreational games.

SOPHOMORE COURSES

HE 4—Clothing Construction B (3)
 HE 24—Home Planning and Furnishing (5) (preferably as 3rd qtr soph or jr)
 HE 41—Food Management and Marketing (5)
 HE 49—Household Equipment (3)
 Psy 1-2—General Psychology (6)
 Rhct 22—Public Speaking (3)
 MicB 53—General Bacteriology (5)
 (or) DI 20—Household Microbiology (4)
 AgBi 1A—Introduction to Organic Chemistry (5)
 AgEc 1-2—Introduction and Principles of Economics (6)
 (or) Econ 1-2—Principles of Economics (10)
 One elective course in related art

JUNIOR AND SENIOR COURSES

HE 50—Textiles (4)
 HE 76—Nutrition (4)
 (or) HE 170, 171—Nutrition of Family, Child Nutrition (6)
 HE 85—Home Management: Principles (3)
 HE 86—Home Management: Laboratory (4)
 HEED 90—Child Development (3)
 PubH 52—Health Care of the Family (1)
 HE 185—Family Relationships (3)
 Rhct 51—Exposition (exemption by exam) (3)
 Ed 55A-B—Introduction to Secondary School Teaching (10)
 HED 180—The School and Society (3)
 HEED 91—Observation, Materials, Teaching in Home Economics (5) (HEED 93)
 HEED 92—Teaching Problems in Home Economics (2) (HEED 94, 192, 194A)
 HEED 93, 94—Supervised Teaching in Home Economics (9)
 HEED 192—Evaluation in Home Economics (2)
 HEED 194A—Adult Education in Home Economics (3)

Nine elective credits shall be taken in at least 2 of these home economics areas:

Foods—HE 70, 139, 140, 141
Clothing—HE 53, 115, 116
Related Art—HE 120, 127, 131, 180, 186

Those whose interests lead them into further specialization in the teaching field may choose one of the following groups. The student should plan her program early in her college course to be certain that she has the necessary prerequisites.

Teaching Textiles and Clothing—To the requirements in general teaching *add*:

- HE 102—Advanced Textiles (3)
 HE 115—Economic and Social Aspects of Clothing (3)
 HE 120—Art History (3)

Teaching Foods—To the requirements in general teaching *add*:

- HE 63—Quantity Cookery (6)
 HE 70—Advanced Food Preparation (3)
 HE 142—Experimental Cookery (3)
 AgBi 2—Quantitative Methods (5)

Teaching Nutrition—*Omit* from the requirements in general teaching the following courses:

- HE 3, 4, 21, GC 10A-B, 7A-C

To the requirements in general teaching *add*:

- HE 142—Experimental Cookery (3)
 HE 173—Nutrition in Disease (4)
 HE 179—Readings in Nutrition (2)

Teaching Related Art—Those interested in teaching related art should:

1. Select the minimum credit requirement in science when there is an option.

2. *Add* the following:

- HE 23—Advanced Design (3)
 HE 25—Design Applied to Crafts (3)
 HE 120—Art History (3)
 HE 122A—Rendering Techniques for Interiors (3)
 (and) HE 122B—Advanced Interior Design (3)
 (or) HE 125—Advanced Costume Design (3)
 HEEd 197—Organization and Methods of Related Art Teaching (1-3)
 Art 1—Principles of Art (5)
 Art 20—Elements of Drawing (2)

Home Economics Extension—A combined curriculum with the College of Agriculture, Forestry, and Home Economics. See All-College Requirements for students in the *Bulletin of the College of Agriculture, Forestry, and Home Economics*.

Some students will be interested in preparation for home economics positions in the Agricultural Extension Service, such as home agent, 4-H Club agent, or homemaking specialist.

This curriculum is planned to give the future extension worker understandings

and skills in homemaking activities, an understanding of physical and social science as it relates to rural areas, use of oral, visual, and written materials, ability to organize and administer adult and youth programs, and an understanding of educational principles and techniques suitable for rural groups.

Students following this curriculum will receive guidance from a committee of the Home Economics Extension Service and the home economics education faculty. Qualified students will be recommended for a period of supervised pre-extension field experience to be arranged following the junior year. Approval for this field service must be secured from the director of the Agricultural Extension Service.

Those in this curriculum should:

Omit from the requirements in general home economics teaching the following courses:

- AgBi 1; Rhed 51; HEEd 92, 94

Add to the requirements in general home economics teaching:

- AgJo 53—Publicity (3)
 Pol 1, 2—American Government and Politics (6)
 Sociology—3 credits to be selected from Soc 1, 2, 3, 14 or 14A, 91, 95, 140
 AgEc 126—Economics of Consumption (3)
 HEEd 95—Field Experience for Home Agents (6) (prereq ¶HEEd 190, 192, 194A)
 HEEd 190—Readings in Home Economics Education (1-3) (prereq ¶HEEd 95, 192, 194A)
 AgEd 56—Rural Education Thorough Extension Methods (3)

The required 3 credits in physical education are to be chosen from the dance (country, folk, modern, or social) and recreational games.

Professional Five-Year Curriculum

This is a joint curriculum between the College of Education and the College of AFHE leading to the degree of master of education (M.Ed.).

Special Requirements

1. A total of 230 credits including at least 45 (in courses numbered 100 or above) in the fifth year.

2. An average of B in courses in the fifth year.
3. A satisfactory report on a health examination within 1 year prior to obtaining the M.Ed. degree.
4. Satisfactory performance in requirements prescribed by the College of Education for professional degrees:
 - a. 90 credits in academic fields
 - b. A teaching minor or concentration in an academic field (18 cr)
 - c. Broad major field specialization (approximately 90 cr)
 - d. 35 credits in education including 1 quarter internship (optional—8 cr allowed for 1 qtr)

The best results may be anticipated when plans for the extended training are made during the student's junior year so that the fifth year may be integrated with the 4-year program. The student should plan her program under the direction of a member of the graduate faculty in home economics education.

Satisfaction of part of the education requirement may be made through in-

ternship in a home economics department in a secondary school. The internship will include full-time work for 1 quarter in school off the campus. The intern will work under the supervision of her adviser at the University and will return to the campus regularly for Saturday morning conferences which will deal with classroom, extracurricular, and community problems met during the internship.

In addition to the general requirements for the M.Ed. degree, the students must meet the specific requirements for the degree in this field, as follows:

Additional academic courses (8-24)

Home economics (17-25)

General education (4-9)

Home economics education (5-9)

Certification of competence in teaching in the major field

Students with a Bachelor's degree with a major in home economics education from other accredited institutions, upon fulfilling the requirements or their equivalents of the 5-year curriculum will receive the master of education degree with a major in home economics education.

INDUSTRIAL EDUCATION

Major advisers: Professor Nelson; Associate Professor Kavanaugh

The following curriculum has been designed for persons who desire to prepare for teaching positions in the fields of industrial education and to gain background for later courses of an administrative and supervisory nature. The satisfactory completion of the 4 years of work here specified entitles the student to the bachelor of science degree and provides the training necessary for the Minnesota high school standard special certificate.

Certain departmental courses of professional or classroom type are acceptable for vocational certification under the Smith-Hughes and George-Barden federal acts, leading to service in trade schools and programs—day, evening, and part-time. The state supervisor of trade and industrial education assures himself of the vocational competence of such

candidates. Those given his approval take certain professional courses to complete the requirements for teaching. Special certificates are issued by the State Department of Education. Industrial arts certificates and vocational industrial certificates are based upon wholly different preparations and should not be confused.

The Department of Industrial Education offers many courses not shown in the following curriculum. For descriptions of all departmental offerings see index.

In addition to the campus schedules, the Department conducts off-campus courses in centers scattered throughout the state; offerings are made through cooperation of officials in the State Department of Education and local school authorities. Such courses may be had with fee and credit, or without fee and credit, according to demand, but a given

class or group must be of one or the other type rather than mixed as to status. Services of the Department are available to industrial groups, such as foremen and other personnel who have instructional responsibilities, and to the public school authorities. The Department provides courses for other divisions of the College and the University.

Industrial Education Courses (64 credits)

Ind 6—Introduction to Industrial Arts Teaching (5)
 Ind 35—Fundamentals of Vocational Education (3)
 Ind 40—Analysis and Course Construction (5)
 Ind 50—Industrial Practices and Processes (3)
 Ind 90—Independent Study I (3)
 Ind 110—Vocational Guidance (3)
 Blocks A, B, C, D (30)
 Electives—Blocks A, B, C, D, Ind 91, 92, 103, EdCI 105 (12)

Professional Education (30 credits)

Ed 55A-B—Introduction to Secondary School Teaching (10)
 HEd 180—School and Society (3)
 Ind 55—Teaching Industrial Arts (5)
 Ind 101—Tests in Industrial Subjects (3)
 Ind 60A, B, C—Student Teaching (9)

General Education (92 credits)

Comm 1, 2, 3 (or) Engl A, B, C (or) Engl 1A, 2A, 3A (or) Engl 1B, 2B, 3B (or) exemption (12-15)
 Math T—Trigonometry (3)
 Math 10—College Algebra (5)
 SSci 1-2-3; anthropology, economics, geography, political science, sociology (9)
 NSci 1-2-3; 4-5-6; astronomy, chemistry, geology, physics, biology, botany, zoology (15)
 Hum 1, 2, 3; 21, 22, 23; 51, 52, 53; GC 45B, foreign language, history of architecture, literature (15)
 Psy 1-2—General Psychology (6)
 PubH 5 or 50—Individual Public Health (3)
 PEW 25—First Aid (3)
 PEM 1, 2—Sports Education (3)
 Academic electives—to complete a total of 92 credits. To be selected from: mathematics, science, language, English, speech, general studies, social science, philosophy, history, sociology, and psychology

Notes—All General College courses must be taken during freshman or sophomore years.

Prerequisites to student teaching are advanced-junior or full-senior status, taking of psychological examinations, courses Ind 6 and 55 or 6 and 100, and a C+ average (2.5 grade points per credit) in the major. The C+ average is based on all courses in industrial educa-

tion, laboratory courses included. It is assumed that 30 of the 42 laboratory credits will have been completed.

Requirements above are classified as follows: 92 credits in academic subjects, 30 in education, 22 in industrial education, 42 in industrial shopwork and drawing. Total credit requirement, 186.

Course Blocks and Requirements

Block A (12 credits required)

Ind 2—Wood Processing I (3)
 Ind 3—Wood Processing II (3)
 Ind 4—Wood Processing III (3)
 Ind 12—Craftwork (3)
 Ind 15—Graphic Arts I (3)
 Ind 16—Graphic Arts II (3)
 Ind 30—Small Gas Engines (3)

Block B (6 credits required)

Ind 7—Drafting (3)
 Ind 8—Design I (3)
 Ind 9—Building Construction Drafting (3)

Block C (6 credits required)

Ind 20—Electricity and Electronics (3)
 Ind 21—Communication Electronics (3)
 Ind 22—Industrial Electronics (3)
 Ind 23—Applied Electronics I (3)
 Ind 24—Applied Electronics II (3)

Block D (6 credits required)

Ind 25—Metal Processing I (3)
 Ind 26—Metal Processing II (3)
 Ind 27—Metal Processing III (3)
 Ind 28—Metal Processing IV (3)
 Ind 29—Metal Processing V (3)

Industrial Education Electives (12 credits required)

Ind 91—Independent Study II (3)
 Ind 92—Independent Study III (3)
 Ind 103—Instructional Aids (3)
 EdCI 105—Audio-Visual Materials Education (3)
 Blocks A, B, C, D

Manual Arts Therapy

Selected students working toward the B.S. degree, with a major in industrial education, or those who already possess this degree can become qualified as manual arts therapists by attending a 3-month clinical training program at the Minneapolis Veterans Administration Hospital. Persons desiring to learn more of this co-operative clinical training program are invited to confer or to correspond with major advisers.

JOURNALISM

Minor adviser: Professor Kildow

Journalism is a desirable minor for teachers who are called upon to supervise the school paper and to teach subjects related to the field. It is recommended as a minor for students in the language arts and social studies curriculums and as a second minor for those with an English major.

Journalism as a Minor Subject:

Jour 11—Introduction to Reporting (3)
 Jour 41—Publications Editing (3)
 Jour 71—Newspaper and Magazine Articles (3)
 Jour 82—Supervision of School Publications (3)
 EdT 74—The Teaching of Journalism (3)

Nine additional credits chosen from Jour 57, 90 or 121, 103, 109, 120, 124, and 130.

THE LANGUAGE ARTS

Major advisers: *English*—Professor Allen; Associate Professor Kegler;
Speech—Professors Graham, D. K. Smith

The new course of study in the language arts for the secondary schools of Minnesota requires a teacher proficient in the broad area of the language arts, including both speech and English. It assumes ability to teach the principles of effective speech and writing and intelligent understanding of currently acceptable levels of usage. It necessitates knowledge of current books as well as the literary heritage. It demands acquaintance with and intelligent use of the mass media of communication, such as radio, newspaper and magazine, motion picture, and television.

In the small school, also, the teacher of the language arts must be able to direct plays, to supervise the school paper, and sometimes to assist with the library.

The following program permits the prospective teacher to prepare for such diversified assignment.

It is important that teachers of language arts support this major with a strong background in general culture and social studies. A minor in some area outside the language arts is not required but would be a valuable addition to the teacher's preparation.

The student registers in the College of Science, Literature, and the Arts for the first 2 years and should include in his program the required Lower Division courses of the curriculum. Comm 1-2-3 is recommended in place of Engl A-B-C or Engl 1-2-3 but not required. The student will be held for all the general re-

quirements of the College of Education including public health, and for the required professional courses for secondary school teaching. In addition he must take EdCI 122 (3 cr) which will count in the professional requirement. Participation in extracurricular speech activities is important.

A Major in the Language Arts

The requirements of the curriculum are as follows:

1. The student selects 1 of the 2 fields, English or speech, and completes the course requirements listed for his *core subject*. A student may not offer more than 42 credits in this field.

2. The students must also complete 23 or 24 credits in the second field. Not more than 30 credits will be accepted in this field.

3. In addition 12 or 13 credits are required in journalism or library science. This requirement is listed under Journalism and Library Science, below.

English

English as the Core Subject, 48 credits:

Engl 21-22-23—Introduction to Literature (15)
 Engl 55-56—Shakespeare (6)
 Engl 72-73-74—American Literature (9)
 Engl 165—Introduction to Modern English (3)
 Comp 27-28—Advanced Writing (6)

Electives in courses numbered 100 or above (9) (or) a minimum of 3 credits in courses numbered 100 or above and remainder from Upper Division humanities courses

English as the Second Field with Speech as the Core Subject, 23 credits: Engl 23, 73-74, and 165; Comp 27-28; and Engl 55 or 56.

Speech

Speech as the Core Subject, 35 credits:

Spch 5—Fundamentals of Speech (5)
 Spch 31—Introduction to the Theater (3)
 Spch 67—Phonetics (3)
 (or) Spch 119—Introduction to Speech Correction (3)
 Electives (24)

Electives may be selected from the following courses with not less than 9 credits in each of the 2 speech areas. For descriptions of these courses and the ones listed under Journalism and Library Science, consult the *Bulletin of the College of Science, Literature, and the Arts*.

1. Public Address and Speech Science: Spch 51, 55, 56, 57, 61, 65, 67, 97, 101, 102, 103, 106, 143, 161, 169.

2. Theater and Interpretation: Spch 32, 33, 66, 71, 72, 73, 81, 82, 131.

Speech as the Second Field with English as the Core Subject: Spch 5 and 31; and 15 credits of electives with not less than 6 credits in each of the 2 speech areas.

Journalism and Library Science

All language arts majors will take Jour 90 (3 cr). In addition they will take 8 to 12 credits in library science chosen from the following courses: Lib 50, 62, 70, or 74; or 9 credits in journalism selected from Jour 11, 41, 82, 103, 109-110, 111, 120, 121, and 130-131.

A Minor in the Language Arts

Students wishing a minor in the language arts should select the following courses: Engl 23, 27, and 74 (11 cr); Spch 5 and 31 and 3 more credits chosen from Spch 101, 106, and 161 (11 cr). In addition they should take 9 credits in journalism or 8 to 12 credits in library science. Required courses in journalism are Jour 11 and 90 plus 3 credits chosen from Jour 82, 103, 110 or 130. The credits in library science should be selected from the following: Lib 50, 60, 70, or 74. Total—30-31 credits.

LATIN

Major adviser: Professor DeWitt

Latin as a Major Subject for High School Teaching:

Lat 73—Prose Composition (3)
 Lat 51-52-53—Survey of Latin Literature (9)
 Courses from Lat 171-172-173—Advanced Readings (6)
 Clas 56—Elementary Linguistics (3)
 (and) 9 credits in classics courses or in the area of classical civilization offered by the Departments of Art, History, Philosophy

Latin as a Minor Subject—A total of 23 credits required, including the following 21 credits of Upper Division work:

Classics courses or courses in the area of classical civilization offered by the Departments of Art, History, Philosophy (6)
 Lat 73—Prose Composition (3)
 Lat 51-52-53—Survey of Latin Literature (9)
 Clas 56—Elementary Linguistics (3)

Sequence of Courses in Latin—Students who have had no Latin in high school will take Lat 1, 2, 3 leading to the Lat 51-52-53 sequence. Students entering the University with 1 year of high school Latin may, with the permission of the department, take Lat 1 and 2 for credit, or they may enter Lat 3. Students entering with 2 years of Latin may, with permission of the department, take Lat 3 for credit, or they may enter Lat 10 followed by Lat 51-52-53. Students entering with 3 years or 4 years of Latin may enter Lat 51-52-53 directly.

The first 2 years are taken in the College of Science, Literature, and the Arts and students meet the requirements of Plan I or II found in Section I of this

bulletin. They should include in their programs the Lower Division courses in Latin prerequisite to registration in Lat

51-52-53. The general and professional requirements of the College of Education are described in Section I.

LIBRARY SCIENCE

Minor adviser: Assistant Professor Pond

Anyone intending to do library work in elementary or secondary schools should consult an adviser in the Library School, if possible, before beginning the junior year. To fully qualify for professional librarianship, a librarian is expected to earn a 4-year Bachelor's degree and a Master's degree in library science. The Library School offers two programs for school librarians:

1. A minimum certification program of 24 credits in library science.

2. A fifth-year program leading to the Master's degree.

(a) For the education graduate who holds a valid teaching certificate. For this program 15 prerequisite undergraduate credits in library science are required for admission. For further information on courses

and requirements see the *Bulletin of the Library School*.

(b) For the liberal arts graduate who lacks a teaching certificate, a special 66-credit M.A. program.

Courses Advised—For a minor in library science and recommendation to the Minnesota State Department of Education for certification the student must be admitted to the 24-credit certification program by the Library School and the College of Education and have successfully completed the following courses:

Lib 53, 62, 70, 74, 83, 171, 172 and either 50 or 55. EdCI 105 is also recommended

Students who cannot take the whole 24 credits are encouraged to take Lib 53, 74, 83, 171, and 172 as useful preparation for assignment in school libraries.

MATHEMATICS

Major advisers: Professors Kalisch, Loud; Associate Professors Carlson, Storvick

Students take the first 2 years in the College of Science, Literature, and the Arts and meet the Lower Division requirements of that college. They should include in their programs the courses prerequisite to Math 49, and as much as possible of the sequence Math 53-54-55, listed under the major. The general and professional requirements of the College of Education are described in Section I. Solid geometry (entrance credit or its equivalent) and higher algebra taken either in high school or college are prerequisites for both majors and minors in mathematics. Students who do not present solid geometry for entrance may meet this requirement by taking a course in the subject offered (a) by the General Extension Division, (b) in daytime classes directed by the Department of Mathe-

matics in the Institute of Technology, (c) in the Correspondence Study Department, or (d) by the Public School System of Minneapolis in individualized instruction for adults at West High School.

Mathematics as a Major Subject:

- Math T—Trigonometry (3)
(or) Trigonometry taken in high school
- Math 15—College Algebra (5)
- Math 49-53-54—Analytic Geometry and Calculus I, II, III (15)
- Math 60—Synthetic Metric Geometry (3)
- Additional credits in courses numbered 55 and above (12)
- Recommended electives:
 - Math 20—Mathematics of Investment (5)
 - Phil 2—Logic (5)

Students in general are urged to take more than the specified courses. More than a minimum of mathematics is de-

sirable for effective secondary school teaching. Also, a prospective graduate student with either a major or a minor in mathematics will need more than the minimum major.

Mathematics as a Minor Subject:

Math T—Trigonometry (3)
 (or) Trigonometry taken in high school
 Math 15—College Algebra (5)
 Math 49-53-54—Analytic Geometry and Calculus I, II, III (15)
 Math 60—Synthetic Metric Geometry (3)

Programs Leading to the Master of Education Degree

Fifth-Year Program—The College of Education offers a fifth-year program leading to the master of education degree for students who hold a Bachelor's degree and teaching certificate with a major in mathematics. The program is open only to persons holding a regular teaching certificate for public school teaching in mathematics, currently valid. Recent teaching experience is required, with a minimum of 1-year of full-time successful public school teaching; except that the program may be open to students wishing to complete work for the M.Ed. immediately following their Bachelor's degree studies, provided that a year's successful full-time teaching experience is completed before the awarding of the M.Ed. degree.

Prerequisite to admission is an undergraduate major in mathematics equivalent to the mathematics major required for the bachelor of science degree in the College of Education, University of Minnesota. In some cases, where the requirements are nearly satisfied, a student may be admitted with certain prerequisite courses to be completed.

Approval of admission is unlikely if the course work in mathematics at the Upper Division level is below a B average.

Admission procedure requires clearance by the College of Education and the Mathematics Department of the College of Science, Literature, and the Arts. Students apply through the Office of Admissions and Records for admission to the M.Ed. program in the College of Education with a major in mathematics.

A. Program Planning:

After 12 credits have been completed in mathematics courses numbered 100 or higher, with a B average (at least 2.75 grade point average), application may be made for approval of a total program. During the first quarter in residence, the student will take the test battery required of all M.Ed. students in the College of Education (the Education Graduate Test Battery), and the results will be used in an advisory way.

B. Required Program:

1. A total of 45 credits in courses numbered 100 or higher with an average of B for the 45 credits, including the following:
 - (a) Mathematics: A minimum of 24 credits with at least a B average (2.75 grade point average), including 6 credits in analysis, such as Advanced Calculus, Critical Reasoning in Mathematical Analysis, Methods of Applied Mathematics, etc.
 - (b) An expository paper on some mathematical topic of particular suitability for a high school teacher.
2. Related academic field or fields: 9 to 12 credits.
3. Education courses: 9 to 12 credits, including at least 1 course in the area of mathematics teaching.

C. Final Examinations:

1. Major field examination, either written or oral or both.
2. Professional education examination required of M.Ed. students in all fields (a written comprehensive objective examination in learning, measurement, adolescence, curriculum, supervision, administration, and guidance). The M.Ed. examination in education presupposes review of the student's basic undergraduate professional preparation, as well

as successful work in the education courses of the M.Ed. program.

Five-Year Program—For students interested in a 5-year program the Institute

of Technology and the College of Education offer a combined curriculum leading to the bachelor of science and the master of education degrees with a major in mathematics. For other information see index for Special Programs.

MUSIC EDUCATION

Major advisers: Professor Oberg; Associate Professors Caswell, Ivory

The 4-year curriculum in music education leads to the bachelor of science degree. Theoretical and practical courses in music are combined with a general education and professional training for music teaching.

For graduation, students must earn 186 credits with an over-all average of C. They must earn 24 credits in applied music (Mus 11-27), including a minimum of 18 in the major subject and 6 in a second field other than the major. Students not majoring in piano must take 1 year of piano (Mus 11 or 11A-11B-11C), 2 credits per quarter. Students not majoring in voice must take 1 year of voice (Mus 12 or 12C), 2 credits per quarter. It is recommended that the applied music requirements be met by the end of the junior year.

A teaching minor in one academic secondary school subject is required of all music education students.

In addition to the practical and theoretical studies in music, this curriculum includes courses in English, psychology, sociology, history, as well as professional courses prescribed by the College of Education. The music studies are distributed between the instrumental and vocal courses so that the graduate is prepared to be an instrumental music instructor, vocal music instructor, or general supervisor of school music. Each student, however, chooses one of the two concentrations offered in instrumental or vocal-choral music.

Observation and student teaching are arranged in the Minneapolis, St. Paul, suburban, and University Elementary and High Schools.

A major average of C+ is required, based on the following courses:

MuEd 4-5-6-7-8-9-10, 50A, 50B, 53, 59, 67, 68
Mus 1T through 6T, 34-35-36

Applied Music Major: Mus 11-27, up to 18 credits
Applied Music Minor: Mus 11-27, up to 6 credits

Admission to student teaching requires a C+ average in all of these courses taken prior to the senior year and the successful completion of MuEd 50A, 50B, 53, and Ed 55A-B.

Courses in Applied Music

A student may not register for a course in applied music (Mus 11-27, 100, 204) *for credit* until he has passed the required entrance examination. Students may not take special examinations in applied music for work done elsewhere while in residence at the University.

Courses numbered from 11 through 27 carry either 2 credits (minimum of 10 private half-hour lessons) or 4 credits (minimum of 10 private hour lessons) per quarter.

All students taking applied music *for credit* are required to attend Music Hour, held weekly in Scott Hall Auditorium.

Applied Music Entrance Requirements

Music and Music Education Majors and Minors:

Piano: A student should be able to play (1) major and minor scales in a moderate tempo; (2) three pieces in different styles, such as (a) a Bach invention or dance from one of the suites, (b) one of the less difficult sonatas by Haydn, Mozart, or Beethoven, and (c) one of the shorter pieces by a 19th- or 20th-century composer.

Organ: Same as for piano; sight reading of hymns.

Voice: Sing on pitch, with correct phrasing and musical intelligence, standard songs in good English (the simpler classics recommended). Demonstrate ability to read a simple song at sight and have a knowledge of the rudiments of music. A knowledge of piano is also recommended.

Violin: Major and minor scales, arpeggios; the simpler Kreutzer Etudes; a sonata by Handel, Haydn, Mozart, Schubert; a more modern work displaying special technique peculiar to the violin. A knowledge of piano is also recommended.

Other Orchestral Instruments: A student should be able to play, with good tone, phrasing, and style, two solo numbers of good musical quality. He will be examined in sight reading as well as in the playing of scales. A knowledge of piano is also recommended.

Four-Year Curriculum in Music Education

Instrumental Concentration

FRESHMAN YEAR

MuEd 4, 7—Instrumental Technique, Strings (4)
 (or) MuEd 5, 8, 6—Instrumental Technique (6)
 Mus 40, 41, 42—Orchestra (3)
 (or) Mus 46, 47, 48—Band (3)
 Mus 1T, 2T, 3T—Music Theory (9)
 Mus 11-27—Applied Music (6)
 Freshman English, Composition, Communications, Preparatory English as assigned (12-15)
 Hist 11-12-13—Medieval and Renaissance (9)
 (or) Hist 1-2-3—Civilization of the Modern World (9)
 (or) SSCI 1-2-3—Personality, Work, Community (9)
 Mus 12C—Class Voice (6)

SOPHOMORE YEAR

Mus 34, 35, 36—History of Music (9)
 Mus 40, 41, 42—Orchestra (3)
 (or) Mus 46, 47, 48—Band (3)
 MuEd 5, 8, 6—Instrumental Technique (6)
 (or) MuEd 4, 7—Instrumental Technique (4)
 (or) MuEd 9, 10—Instrumental Technique (4)
 Mus 4T, 5T, 6T—Music Theory (12)
 MuEd 69—Instrumental Literature and Conducting (1)
 Mus 11-27—Applied Music (6)
 Soc 1—Introduction to Sociology (3)
 Psy 1-2—General Psychology (6)

PubH 5 (preferable for MuEd majors) or 50 or both 3-4 (3)
 MuEd 20—Music Educators' Chorus (2)

JUNIOR YEAR

MuEd 9, 10—Instrumental Technique (4)
 MuEd 65—Instrumentation (3)
 Mus 76—Form, Analysis (3)
 MuEd 69—Instrumental Literature and Conducting (1)
 Mus 11-27—Applied Music (6)
 Ed 55A-B—Introduction to Secondary School Teaching (10)
 MuEd 20—Music Educators' Chorus (1)
 Mus 11C—Class Piano (6)

SENIOR YEAR

MuEd 53—Teaching Music in Secondary School (3)
 MuEd 68—Teaching Instrumental Music in Secondary School (3)
 MuEd 69—Instrumental Literature and Conducting (2)
 MuEd 60, 61, 62—Student Teaching (9)
 MuEd 59—Choral Literature and Conducting (1)
 Mus 60 or 61 or 62—Instrumental Ensemble (2)
 HED 180—School and Society (3)
 Elective in education (3)
 Methods in the minor (3)

Note—A minimum of 12 credits is required in MuEd 4-10. MuEd 20 is to be taken before MuEd 53 and 59.

Voice-Choral Concentration

FRESHMAN YEAR

Mus 11C—Class Piano (6) (if vocal major)
 Mus 12C—Class Voice (6) (if piano or organ major)
 Mus 43—University Chorus (3)
 Mus 1T, 2T, 3T—Music Theory (9)
 Mus 11-27—Applied Music (6)
 Freshman English, composition, communications, preparatory English as assigned (12-15)
 Hist 11-12-13—Medieval and Renaissance (9)
 (or) Hist 1-2-3—Civilization of the Modern World (9)
 (or) SSCI 1-2-3—Personality, Work, Community (9)
 MuEd 69—Instrumental Conducting (1)

SOPHOMORE YEAR

Mus 34-35-36—Music History (9)
 MuEd 20—Music Educators' Chorus (2)
 Mus 43—University Chorus (3)
 MuEd 59—Choral Literature and Conducting (1)
 Mus 4T, 5T, 6T—Music Theory (12)
 Mus 11-27—Applied Music (6)
 Soc 1—Introduction to Sociology (3)

- Psy 1-2—General Psychology (6)
- PubH 5 (preferable for MuEd majors) or 50 or both 3-4 (3)
- MuEd 4, 7—Applied Instrumental Technique: Strings (4)

JUNIOR YEAR

- Mus 76—Form, Analysis (3)
- MuEd 20—Music Educators' Chorus (2)
- MuEd 59—Choral Literature and Conducting (1)
- MuEd 53—Teaching Music in Secondary School (3)
- MuEd 50A—Teaching Music in Primary Grades (2)
- MuEd 50B—Teaching Music in Intermediate Grades (2)
- Mus 11-27—Applied Music (3)
- Ed 55A-B—Introduction to Secondary School Teaching (10)

SENIOR YEAR

- MuEd 20—Music Educators' Chorus (2)
- MuEd 59—Choral Literature and Conducting (2)
- Mus 112-117—Vocal Literature or Vocal Art (2)
- MuEd 60, 61, 62—Student Teaching (9)
- MuEd 65—Instrumentation (3)
- HEd 180—School and Society (3)
- Elective in education (3)
- Methods in the minor (3)

Note—A minimum of 4 credits is required in MuEd 4, 7. MuEd 20 is to be taken before MuEd 53 and 59.

Minor in Music Education

Examination in applied music and approval of the department is required before the student begins course work in the minor.

A minimum of 25 credits in music and music education to include:

- Mus 1T-2T—Music Theory (6)
- Mus 11-27—Applied Music (2-6)
- Mus 31 or 32 or 33—Music Literature (2) (or) Mus 35—History of Music (2)
- (or) Mus 1—Introduction to Music (5)

Music education methods (2-4) selected from:

- MuEd 50B—Teaching Music in Intermediate Grades (2)
- MuEd 51—Teaching Music (kindergarten-primary grades) (2)
- MuEd 52—Teaching Music (intermediate grades) (2)
- MuEd 53—Teaching Music in Secondary School (3)

The remaining credits to be selected from:

- MuEd 4-5-6-7-8-9-10—Applied Instrumental Technique (2-4)
- Mus 39—Women's Glee Club (3)
- Mus 40-41-42—Orchestra (3-6)
- Mus 43—University Chorus (3-6)
- Mus 46-47-48—Concert Band (3-6)
- Mus 49—Men's Glee Club (3)
- MuEd 59—Choral Literature and Conducting (2)
- Mus 60-61-62—Instrumental Ensemble (2)
- Mus 66-67-68—Chamber Singers (6)
- Mus 115-116-117—Vocal Literature (2-4)

Five-Year Curriculum Leading to the M.Ed. Degree

The 5-year curriculum in music education leading to the master of education degree is designed to give a higher standard of professional competence in music as well as a larger scope of general education than does the 4-year curriculum. It includes about 2 years of general education, a minor in a teaching field other than music, extensive training in applied music, advanced phases of musical theory or musicology at the graduate level, work in music education covering both vocal and instrumental music, basic courses in psychology, educational psychology, and education, and, usually, 1 quarter of internship.

The work of the fifth year is integrated with that of the first 4 years described above. The fifth year will provide opportunity for concentration, if desired, in either vocal or instrumental music.

Students with a Bachelor's degree with a major in music education from other accredited institutions, upon fulfilling the requirements of the 5-year curriculum or their equivalent, will receive the master of education degree with a major in music education.

In addition to the grade point requirements for the 4-year curriculum, a grade point average of 3.00 (B average) must be attained in all fifth-year work. The work of the fifth year is described below.

Electives in Academic Major or Minor (or closely related field), 9-17 credits in courses numbered 100 or over.

Music, 12 credits in courses numbered 100 or over.

Music Education, 10 credits in courses numbered 100 or over.

Education, 6 credits selected from:

EPsy 193—Psychology of Human Learning (3)
EdCI 113—High School Curriculum (3)
(or) EdCI 119—Elementary School Curriculum (3)

EdCI 150—Supervision and Improvement of Instruction (3)
(or) EdCI 266—High School Supervision (3)

Other education courses from the various departments may be substituted with the permission of the adviser; recommended are courses in elementary school supervision, adolescent psychology, measurement, public school administration, and guidance.

NATURAL SCIENCE

Advisers: *Education*—Professor Boeck; *Botany*—Associate Professor T. Morley; *Physics*—Associate Professor Freier; *Zoology*—Professor M. Olson. Department representative: *Chemistry*—Professor O'Connor

For registration, students with a botany, physics, or zoology core should consult the appropriate subject adviser; those with a chemistry core should consult the education adviser.

Students preparing to teach science in Minnesota high schools must qualify to give instruction in two or more sciences. This may involve teaching 2 or more sciences in the senior high school or teaching junior high school science and 1 or more senior high school subjects. The teacher must, therefore, have a background in the biological, physical, and earth sciences. The following special curriculum in natural science is for persons preparing for the teaching of junior and senior high school science.

Students register for the first 2 years in the College of Science, Literature, and the Arts and complete the group requirements for admission to the College of Education. They should include in their program for these 2 years all Lower Division Courses in this curriculum. For the general and professional requirements of the College of Education see Section I.

Requirements for the Major in Natural Science

1. Completion of the courses and credits in one of the groups: A1, Botany; B1, zoology; C1, chemistry; or D1, physics. This is referred to as the core subject. C+ is required in the core subject and a C average in all science outside of the core.

2. Completion of at least 15 hours in another science (excepting the one chosen under requirement 1) selected from the following: physics, geology, botany, zoology, chemistry.

3. Completion of at least 10 credits in each of the fields of physics, chemistry, botany, and zoology, when these subjects are not used to satisfy requirements in 1 and 2. Botany and/or zoology requirements will be met with Biol 1-2 (General Biology) and 5 credits elected from each field with consent of adviser.

4. Completion of a minimum of 5 credits in geology and 5 credits in astronomy.

The requirements under 1 and 2 for the several sciences are:

Group A—Botany:

1. Biol 1-2—General Biology (10)
Bot 12—Plants Useful to Man (3)
Bot 50—General Plant Ecology (3)
Bot 51—General Plant Physiology (4)
Bot 52—Elementary Taxonomy (3)
Bot 53—Plant Anatomy (5)
Bot 54—Survey of the Plant Kingdom (5)
5 additional credits chosen with consent of adviser
2. Biol 1-2—General Biology (10)
10 additional credits chosen with consent of adviser

Group B—Zoology

1. Biol 1-2—General Biology (10)
Zool 52—Introductory Entomology (5)
Zool 53—Fauna of the Central United States (5)
Zool 83—Introduction to Genetics and Eugenics (3)
Phsl 60—Human Physiology (6)

8 additional credits chosen with consent of adviser

2. Biol 1-2—General Biology (10)
10 additional credits chosen with consent of adviser

Group C—Chemistry

1. InCh 4-5—General Inorganic Chemistry (10)
InCh 11—Semimicro Qualitative Analysis (4)
(or) InCh 24-25-26—Chemical Principles (15) (with consent of adviser)
OrCh 16—Carbon Compounds (4)
AnCh 57—Quantitative Analysis (4)
PCh 107-108—Physical Chemistry (6)
2. InCh 4-5—General Inorganic Chemistry (10)
OrCh 16—Carbon Compounds (4)

Group D—Physics

1. Phys 7-8-9—General Physics (15)
Phys 50-51—Intermediate Physics (8)
Phys 50A or 51A—Intermediate Physics Laboratory (1)
6 additional credits chosen with consent of adviser
2. Phys 7-8-9—General Physics (15)

Group E—Geology (15-credit requirement only):

- Geol 1-2, A-B—General Geology and Laboratory (10)
5 credits chosen from Geol 23, 24, 25, 107, 114, 118, 120, 155

Requirements for the Minor in Natural Science

1. Completion of at least 15 quarter hours selected from courses under 2 of Group A, Group B, Group C, Group D, or Group E as listed under the major.

2. Completion of at least 10 quarter hours in each of the sciences (botany, chemistry, physics, zoology) other than that science selected to meet requirement 1 for the minor. In addition, 5 credits in geology and 5 credits in astronomy are required.

3. Completion of EdT 68M (The Teaching of Secondary School Science), 3 credits.

Five-Year Program Leading to the Master of Education Degree

The College of Education offers a 5-year program leading to the professional degree of master of education for teachers of natural sciences in high schools. For specific information confer or correspond with the major adviser.

NURSING EDUCATION

Major advisers: Professor Fritz; Lecturer Harris; Assistant Professors Dunning, Weise

Bachelor of Science Program in Nursing Education

Only those applicants who meet all admission requirements and who have sufficient advanced standing to insure completion of degree requirements by spring 1964 will be admitted. This program will then be discontinued.

The program is designed to prepare professional nurses for teaching positions in hospitals and schools of nursing. In addition to meeting the entrance requirements of the College of Education, applicants must submit evidence of graduation from an approved school of nursing. Application blanks for admission with advanced standing may be obtained from the Office of Admissions and Records of the University of Minnesota. If the applicant has attended an accredited college

or university, an official transcript of work taken must be submitted.

Advanced standing credits for a diploma program in nursing are granted as blanket credits—i.e., specific courses within the diploma nursing program are not recognized. Granting of blanket credit and evaluation of college courses taken elsewhere is done by the Office of Admissions and Records and the Admissions Committee of the School of Nursing. Students who have been granted blanket credit that includes college or university courses comparable to those required in the program may be exempted from the specific courses. This exemption does not reduce the total number of credits required for graduation.

Students are required to take the National League for Nursing Graduate Nurse Examination as soon as possible after enrolling. Applications for this test

may be obtained from the student's adviser. The testing fee is \$8.

Students whose scores show inadequate knowledge in the clinical area they have chosen (e.g., medical nursing, pediatric nursing, etc.) may be asked to do supplementary work in that area.

Students register in the College of Education and conform to the College of Education regulation relative to total credits and grade points. Candidates must also meet the graduation requirements of the College of Education (see Section I). They are, however, exempt from the health education requirement.

Students must meet the following general education course requirements and the nursing education major course requirements. Substitutions, when needed, may be made by petition upon the recommendation of the major adviser.

Completion of requirements for the baccalaureate program in nursing education usually requires 9 academic quarters for the nurse who has received a diploma in nursing. Courses in general education and courses prerequisite to Upper Division offerings should be taken in the sophomore and junior years. Clinical nursing courses should be taken in the junior year, and the major sequence in nursing education, including student teaching, in the senior year.

General Course Requirements

Comm 1-2-3 (or) Engl A-B-C (or) Engl 1A-2A-3A (or) Engl 1B-2B-3B (or) exemption (12-15)

CD 80—Child Psychology (3)

Psy 1-2—General Psychology (6)

Sociology or social science (6-8)

Physical education (5)

Human physiology (4-6)

Total (36-43)

Requirements for the Nursing Education Major

Ed 55N—Introduction to Teaching Nursing (5)

EdT 51A-B—Teaching Nursing (10)

NuEd 69—Survey of Conditions and Trends in Nursing (3)

NuEd 171—Curriculum of the School of Nursing (3)

NuAd 170—Foundations of Nursing Administration (3)

NuAd 160—Ward Administration (3)

PubH 53—Introduction to Public Health (5)

HEd 180—The School and Society (3)

Clinical nursing (12)

Elective in nursing, nursing education, nursing administration, or public health (3)

Total (50)

Electives—The student has about 50 elective credits available in the nursing education program. It is recommended that all students, and especially those anticipating further study at the graduate level plan to include courses that are foundational to a liberal education. The total credit requirement, including electives in general or professional courses, is 186 quarter credits. Desirably half of this requirement should be in general or liberal education courses.

Requirements for registration in student teaching (EdT 51A, B) are (a) senior standing, (b) a passing grade in Ed 55N, (c) taking College of Education Test Battery, (d) attainment of a grade point average of 2.5 in completed courses in the nursing education major, including clinical nursing courses (a major portion of the clinical requirement should be completed), (e) a satisfactory rating on the required speech test, and (f) completion of the required clinical experience.

Master of Education Program in Nursing Education

Major advisers: Professor Fritz; Lecturer Harris; Assistant Professors Dunning, Weise

The purpose of the program is to prepare professional nurses for positions in educational programs in nursing. In accord with this purpose the program has been developed to provide opportunity for students to grow toward achievement of the following objectives:

1. Increased understanding of the health needs of society and skill in assessing and meeting the nursing needs of individuals and groups.
2. Knowledge and competence in teaching.
3. An appreciation of resources for continuing growth.
4. Increased appreciation of research and research methodology.

5. Increased understanding of and a feeling of responsibility for assuming a leadership role in nursing.

6. Enthusiasm for the potential of the nursing profession, and its interdependent relationship to other professional disciplines.

Scholastic achievement considered minimal for admission to this program includes a rank in the upper one-third of the class in the nursing program from which an applicant graduated, and a grade point average of 3.00 (B average) in prior undergraduate college work. Postbaccalaureate credits earned in other universities will generally not be granted transfer credit toward meeting the requirements for this degree.

The course of study is so organized as to provide a central group of courses in nursing education with an opportunity for study in related fields. Emphasis is placed on the development of increased understanding of human behavior, skill in guidance of learning, and effective functioning as a faculty member of a school of nursing. Candidates must meet the general requirements for the master of education degree with the exception of a teaching minor in an academic field. Final comprehensive examinations in education are required.

The program requires a minimum of 45 credits distributed as follows:

Nursing (6)
 Nursing education (12)
 Education (9)
 Field experience in teaching (9)
 Electives (9)
 Total (45)

Variation in distribution of credits requires approval of the major adviser and the College of Education Committee on Student Scholastic Standing.

The following courses are required of all candidates, and are arranged in a 3-quarter sequence:

Nurs 190—Foundations of Nursing (3)
 EdCI 199E—Internship (9)
 NuEd 197E, 198E—Advanced Teaching of Nursing (9)

Other courses are to be selected by the student in consultation with a major adviser from course offerings numbered 100 and above. At least 6 of the elective credits must be selected from fields other than nursing and education.

Candidates who did not have the equivalent of Ed 55N or B, EdT 51A-B, and at least 3 credits in other education courses in an accredited college or university before admission will be required to include them in the master of education program. These courses do not constitute a part of the 45 required credits.

Students in this program must be prepared to accept, if necessary, assignment to field experience outside of the Twin Cities during the internship quarter.

PHYSICAL EDUCATION FOR MEN

Major advisers: Professors Donnelly, Piper; Associate Professors Osell, Ostrander; Assistant Professors Lewis, Mueller, Stish; Instructor Anderson

The following curriculums have been designed for men who desire to prepare for teaching, coaching, and administrative positions in the field of physical education. Completion of the undergraduate major curriculum entitles a student to a B.S. degree and to a Minnesota high school standard special certificate.

Four-Year Curriculum in Physical Education for Men

PEM 1A-B-C, sports education courses, are required of all freshmen in the Col-

lege of Education except physical education majors and minors. PEM 2A-B-C are elective courses. See *Class Schedule* for activities and hours.

FRESHMAN YEAR

Comm 1-2-3—Communication (or) Engl 1A-2A-3A (or) Engl 1B-2B-3B—Freshman English (12)
 Soc 1—Introduction to Sociology (3) (or) SSci 1-2-3—Personality, Work, Community (9)
 Biol 1-2—General Biology (10)
 PEM 4A-B-C—Fundamentals of Sports (3)
 PEM 5A-B-C—Physical Education Activities (3)

PEM 32—Introduction to Physical Education (3)
 PEW 25—First Aid (2)
 (or) PEM 59—Instructor's Course in First Aid (2)
 General electives (10)

SOPHOMORE YEAR

InCh 4-5—General Inorganic Chemistry (10)
 Spch 5—Fundamentals of Speech (5)
 (or) GC 32A-B—Oral Communication (6)
 Psy 1-2—General Psychology (6)
 PEM 6A-B-C—Intramural Sports (3)
 PEM 7A-B-C—Recreational Games and Sports (3)
 Anat 57—Human Anatomy (4)
 (or) PEM 50—Human Anatomy (3)
 PEM 8—Tennis and Golf (1)
 PubH 5—Individual and Public Health (3)
 (or) PubH 50—Personal and Community Health (3)
 General electives (11)

JUNIOR YEAR

PEM 9A-B—Folk, Ballroom, and Square Dancing (2)
 PEM 51—Mechanics of Movement (3)
 PEM 55—Methods and Materials in Physical Education (4)
 PEM 60A—Prevention and Care of Injuries (3)
 PEM 69—Track Coaching (2)
 PEM 72††—Baseball Coaching (2)
 PEM 96—Administration of Intramural Sports (2)
 Ed 55A-B—Introduction to Secondary School Teaching (10)
 General electives (19)

SENIOR YEAR

PEM 60B—Athletic Training Laboratory (1)
 PEM 63—Organization and Administration of Physical Education (3)
 PEM 65—Adapted Physical Education (3)
 PEM 66—Officiating Football and Basketball (3)
 PEM 67—Football Coaching
 PEM 68††—Basketball Coaching (2)
 PEM 73-74-75—Student Teaching (9)
 (or) PEM 76—Student Teaching (block plan) (9)
 PEW 83—Methods and Materials in School Health Education (3)
 PEM 97—Testing in Physical Education (2)
 PEM 101—Principles of Physical Education (3)
 HED 180—The School and Society (3)
 PubH 91, 92—Principles of Human Function (8)
 General electives and methods in the minor to complete total of 186 credits

The C+ average is based on the following courses:

PEM 4A-B-C, 5A-B-C, 6A-B-C, 7A-B-C, 8, 9A-B, 25, 32, 51, 55, 60A-B, 63, 65, 66, 67, 68, 69, 72, 96, 97, and 101

Students who plan to complete the work for the bachelor of science degree and the special teacher's certificate must meet the following requirements: (a) the required courses in physical education as listed above; (b) a total of 29 credits in education including student teaching in physical education, methods in the minor, Ed 55A-B, and HED 180; (c) at least one teaching minor which may be partially fulfilled in the required curriculum; (d) a total of 186 credits, at least 90 of which must be in academic courses; (e) an average of C+ (2.5 grade points per credit) in all courses counted toward the major, and a C average in the minor and in all other courses taken outside the major during the junior and senior years.

Minor in Physical Education for Men

A total of 31 credits is required as follows:

Group A—all required:

PEM 5C—Physical Education Activities (1)
 PEM 7A-B-C—Recreational Games and Sports (3)
 PEM 55—Methods and Materials in Physical Education (4)
 Anat 57—Human Anatomy (4)
 PEM 60A—Prevention and Care of Injuries (3)
 PEM 63—Organization and Administration of Physical Education (3)
 PEM 101—Principles of Physical Education (3)

Group B—4 credits required:

PEM 67—Football Coaching (2)
 PEM 68—Basketball Coaching (2)
 PEM 69—Track Coaching (2)
 PEM 72—Baseball Coaching (2)
 PEM 81—Hockey Coaching (2)

Group C—6 credits required:

PEM 5A-B—Physical Education Activities (2)
 PEM 6A-B-C—Intramural Sports (3)
 PEM 8—Tennis and Golf (1)
 PEM 9A—Fundamental Rhythms (1)
 PEM 9B—Square and Ballroom Dancing (1)

†† Elective for men with varsity squad experience in these sports.

Graduate Study in Physical Education

Advanced work in physical education is offered in both the College of Education and the Graduate School. Students desirous of obtaining the M.Ed. degree should make application to the Office of Admissions and Records for admission to the College of Education. Those desiring to work toward the M.A. or Ph.D. degree should apply for admission to the dean of the Graduate School. An official transcript in duplicate should accompany the application in either case.

The M.Ed. is designed primarily as a 5-year degree program which a student completes uninterruptedly after receiving the B.S. degree with a major in physical education. This applies both to graduates of the University of Minnesota as well as to graduates of other accredited institutions that have the same undergraduate requirements for physical education as does the University of Minnesota. In addition to being a program designed for the physical educator without teaching experience, the M.Ed. is also well-suited for teachers who have a Bachelor's degree but do not have an undergraduate major in physical education. Finally, the M.Ed. provides a teaching or a nonresearch program for experienced physical education teachers who are not interested in or qualified to do the research required in the M.A. program.

The M.A. program is explained in full in the *Bulletin of the Graduate School*. This is a program that should be elected by students who plan to pursue work beyond the Master's level leading to a Doctor's degree. It should also be elected by those students who as a result of their previous training or interest prefer to do the research that is required of all M.A. candidates instead of the internship required in the M.Ed. sequence.

Five-Year Curriculum Leading to the Master of Education Degree

A. Students with a B.S. degree from the University of Minnesota with a major

in physical education who plan to obtain the master of education degree must fulfill the following requirements:

1. Twenty-one additional credits in courses numbered above 100 in physical education.
2. Additional courses to complete 231 credits, 90 of which must be in academic (other than education or physical education) courses. A maximum of 41 credits is allowed in education, excluding *all* courses in physical education.
3. During the last 2 years a minimum of 45 credits with an average grade of B in courses numbered 100 and above.
4. Each candidate is required to pass:
 - a. A written comprehensive examination covering the major in physical education.
 - b. A written comprehensive examination in education.
 - c. A health examination within 1 year prior to graduation.
5. A candidate may be required to pass an oral examination unless exempted on the basis of the results of his written examinations.
6. Internship experience for inexperienced teachers to include:
 - a. Teaching under the supervision of a master teacher.
 - b. Supervision by the principal and/or superintendent as well as by the master teacher.
 - c. Participation in school and community activities other than teaching.
 - d. Conferences with the major adviser of the M.Ed. program.
 - e. Group conferences of all interns and all advisers in charge of the M.Ed. program.
7. Substitute internship or equivalent of a practicum nature for experienced teachers when exempted from the internship requirement by the major adviser. The substitution or equivalent consists of one or more of the following:
 - a. A concentrated experience.
 - b. A combination of experiences to add more meaning to theoretical courses.
 - c. A systematic service or field study.
 - d. Observation of teaching, supervision, facilities, etc.

B. Students with a Bachelor's degree with a major in physical education from other accredited institutions may receive the master of education degree with a major in physical education when the following requirements have been fulfilled

(students with a Bachelor's degree from institutions other than the University of Minnesota will not be held for the academic minor):

1. PE 101—Principles of Physical Education (3).
2. Twenty-four additional credits in physical education courses numbered above 100.
3. Ed 55A-B—Introduction to Secondary School Teaching (or equivalent).
4. Forty-five credits in courses numbered 100 and above with an average grade of B.
5. Items 4, 5, 6, and 7 listed under section A.

The transfer credits and University of Minnesota credits should (a) include at least 90 credits in academic (other than education) courses, and (b) not exceed a total of 41 credits in education (other than physical education) courses.

C. Students with a Bachelor's degree without a major in physical education, but with previous work or experience in physical education, may receive the master of education degree when they have

satisfied the requirements listed under B and the following *undergraduate* work.

Personal and community hygiene (3-6)
 Human anatomy, physiology, applied anatomy (Mechanics of Movement, Kinesiology) (9)
 Physical education activities (12)
 Professional physical education courses other than activities (18-21)
 Minimum total—45 credits

Advanced Work in the Graduate School

Graduate courses are offered leading to the following degrees:

1. The master of arts degree with a major in physical education granted by the Graduate School.
2. The degree of doctor of philosophy with a major in education, emphasizing physical education, granted by the Graduate School.

For complete statement of the M.A. requirements under Plan A and Plan B and the Ph.D. requirements see the *Bulletin of the Graduate School*.

PHYSICAL EDUCATION FOR WOMEN

Major advisers: Professor Jaeger; Associate Professors Slocum, Wilson

The Department of Physical Education for Women offers the following curriculums in physical education:

1. Four-year curriculum leading to the bachelor of science degree with a major in physical education.
2. Advanced offerings leading to:
 - a. M.Ed. degree based upon either a 5-year or fifth-year curriculum in the College of Education.
 - b. M.A. degree with a major in physical education in the Graduate School.
 - c. Ph.D. degree with a major in education and an emphasis on physical education in the Graduate School.
3. Curriculum for a teaching minor in physical education.
4. Curriculum for a teaching minor in school health education.

The curriculums offered by the Department of Physical Education for Women are designed to prepare graduates for the responsible direction of physical education at the elementary, secondary, and college levels and to provide the training necessary to meet the certification standards of the state of Minnesota for teaching physical education in the elementary and secondary schools.

Students desiring to register for the professional curriculum or any of the preceding curriculums should consult with the major advisers. Inquire at 101 Norris Gymnasium for assignment to a particular adviser.

Four-Year Curriculum in Physical Education for Women

Students who plan to complete the work for the bachelor of science degree and the special teacher's certificate must

meet the following requirements: (a) the required courses in physical education as listed below; (b) a total of 29 credits in education including student teaching in physical education, methods in the minor, Ed 55A-B, and HEd 180; (c) at least 1 teaching minor which may be partially fulfilled in the required curriculum; (d) a total of 186 credits, at least 90 of which must be in academic courses; (e) an average of C+ (2.5 grade points per credit) in all courses counted toward the major, and a C average in the minor and in all other courses taken outside the major during the junior and senior years.

FRESHMAN YEAR

Hist 1-2—Civilization of the Modern World (6) (or) Hum 1 (5)
 Comm 1-2-3—Communication (or) Engl A-B-C—Literature, Composition (or) Engl 1A-2A-3A or 1B-2B-3B—Freshman English (or) exemption (9-15)
 Biol 1-2 or 1A-2A—General Biology (7-10)
 Soc 1—Introduction to Sociology (3)
 PEW 20A-B-C, 21A, 22B-C, 41A, 42A—Physical Education Activities (7½)
 PubH 5—Individual, Public Health (3)
 General electives (4-6)

SOPHOMORE YEAR

InCh 4-5—General Inorganic Chemistry (10)
 Spch 5—Fundamentals of Speech (5)
 Psy 1-2—General Psychology (6)
 PEW 21B, 21D, 22A, 40A-B-C-D, 41B—Physical Education Activities (7½)
 Anat 57—Elementary Anatomy (4)
 PEW 49—Teaching Team Sports (2)
 PEW 77—Teaching Aquatics (2)
 General electives (4-8)

JUNIOR YEAR

PEW 25—Standard and Advanced First Aid (2)
 PEW 47, 48—Teaching Dance, Individual and Dual Sports (6)
 PEW 51—Mechanics of Movement (3)
 Ed 55A-B—Introduction to Secondary School Teaching (10)
 PEW 53—The Role of Physical Education in Recreation (3)
 PEW 86—Advanced Fundamentals (1)
 PEM 61—History of Physical Education (3)
 PEW 83—Methods and Materials of School Health Education (3)
 PEW 85—Teaching of Posture and Self-Testing Activities (3)
 PEW 90A—Student Teaching in Physical Education (3)
 General electives (8)

SENIOR YEAR

Phys 51—Physiology (6)
 PEW 82—Principles of Physical Education (3)
 PEW 102—The Physical Education Program for the Elementary and Secondary School (3)
 PEW 95—Administration of Physical Education (3)
 PEW 90A-B-C—Student Teaching in Physical Education (9)
 PE 135—Tests and Measurements in Physical Education (3)
 HED 180—The School and Society (3)
 Education electives (4)
 General electives to complete total of 186 credits

Minor in Physical Education for Women

I. Elementary and Intermediate Physical Education Skill courses, 7 credits:

Note—Recognition of up to 3 credits will be given for credits earned in fulfilling the regular physical education requirement in college classes. The remaining 4 credits must be earned in professional courses, PEW 20, 21, 22, 40, 41, or 42. Choice of courses should lead to a distribution of experience in the following areas: team sports, individual sports, body building, rhythm, and aquatics.

II. Required Health and Physical Education Theory courses, 12 credits:

PEW 62—Teaching Physical Education Activities (3)
 PEW 82—Principles of Physical Education (3)
 PEW 83—Methods and Materials of School Health Education (3)
 PEW 102—Physical Education Program for the Elementary and Secondary Schools (3)

III. Student Teaching (required)

PEW 93—Student Teaching (2)

IV. Electives selected from the following list, 6 credits:

PEW 25—Standard and Advanced First Aid (2)
 PEW 53—The Role of the Physical Educator in Recreation (3)
 PEW 54—Camp Leadership (3)
 PEW 70—Introduction to Physical Education in the Elementary School (3)
 PEW 85—The Teaching of Posture and Self-Testing Activities (3)
 PEW 95—Administration of Physical Education (3)
 PEW 113—Physical Education in the Elementary School (3)
 PEW 114—The School Health Program (3)

Dance Concentration

The following sequence of advanced courses in dance is open to all students in the College of Education who are particularly interested in dance and who wish to concentrate in this field.

Consultation should be held with the rhythm activity adviser as early as possible in order to plan for individual needs.

I. Required Courses:

- PEW 76—Advanced Folk Dance (2)
 PEW 80—History and Trends in Dance (3)
 PEW 87—Advanced Dance Composition (2)
 PEW 88—Problems in Dance Composition (2)

II. Electives to be chosen from the following: (6 to 7 credits)

- PEW 47—The Teaching of Rhythmic Activities and Dance (3)
 PEW 89—Dance Production (3)
 Mus 10—Introduction to Music (5)
 Spch 31—Introduction to the Theater Arts (4)
 Spch 32—Beginning Acting (3)

Fifth Year Leading to the Master of Education Degree

Five-Year Program—Students who plan to obtain the master of education degree with a major in physical education should make this decision upon the completion of their second year as majors in physical education in order that the work of their next 3 years may be properly integrated and directed.

Fifth-Year Program—Students who already hold a degree and wish to qualify as candidates for the master of education degree may do so by (a) having a completed major in physical education from an accredited teacher education institution; or (b) meeting the equivalent of a physical education major while completing the fifth-year degree requirements. Candidates are expected to demonstrate average or above-average motor skill in basic activities as attested by Motor Ability Tests and demonstration of performance level.

The programs for candidates for the M.Ed. degree are arranged in conference with the departmental adviser according to the interests and background of the students. Application should be made to the Office of Admissions and Records for admission to the College of Education. An official transcript in duplicate should accompany each application.

Candidates for the master of education degree must meet the following requirements:

1. A total of 45 credits in graduate courses, distributed as follows: general academic fields, 12; education, 9; physical education, 24. Courses in physical education numbered 100 and above may be taken either in the Department of Physical Education for Women or in the Department of Physical Education for Men.

2. Average performance skill in at least 3 activity areas (sports, aquatics, rhythms, etc.) or outstanding skill in any 1 area.

3. A written comprehensive examination administered by the Department of Physical Education for Women.

4. The general requirements and standards of the College of Education for the completion of the work for the master of education degree (see Section I).

Advanced Work Leading to the M.A. and Ph.D. Degrees

The department offers courses in the Graduate School leading to the master of arts degree with a major in physical education, and to the doctor of philosophy degree in education with an emphasis on physical education. For requirements and course offerings for these degrees consult the *Bulletin of the Graduate School*. Application for admission should be made to the dean of the Graduate School.

PHYSICAL SCIENCE

Advisers: *Education*—Professor Boeck; *Physics*—Associate Professor Freier; *Mathematics*—Professor Loud. Department representative: *Chemistry*—Professor O'Connor

For registration, students with major concentration in physics or mathematics should consult the subject adviser; those with a chemistry concentration the education adviser.

The programs for majors or minors in physical science are designed for students who wish to prepare to teach physical science and mathematics in high school. Preparation to teach in the physical sciences involves preparation in mathematics, in that mathematics is required for courses in physics and chemistry. In this way preparation for teaching physical science involves preparation for teaching mathematics as well. Hence the following outline of the programs lists a required minor in mathematics in the case of a major in physical science, and also specifies that any minor in physical science must have a major in mathematics. An average of C+ is required in the major concentration and a C average in the areas outside the major concentration. Thus, a student who satisfies the requirements for a major or minor in physical science is qualified to teach any of the courses in mathematics taught in grades 7 through 12, general physical science, and courses in chemistry and physics.

General Requirements for a Major in Physical Science

Option A. Major concentration in chemistry: 32 credits in chemistry, 20 credits in physics.

Option B. Major concentration in physics: 33 credits in physics, 20 credits in chemistry.

Minor requirement in mathematics under either options A or B: 23 credits in mathematics beyond Math T. Students are encouraged to study a *substantial* course in trigonometry in high school, and then take a placement test at college given by the Department of Mathematics in order to obtain permission to omit Math T.

General Requirements for a Minor in Physical Science

The student must offer a major in mathematics (which consists of 35 credits beyond Math T).

Option A: 24 credits in chemistry and 20 credits in physics.

Option B: 25 credits in physics and 20 credits in chemistry.

Specific Course Requirements

Chemistry

Major Concentration, 32 credits

InCh 4-5—General Inorganic Chemistry (10)
InCh 11—Semimicro Qualitative Analysis (4)
(or) InCh 24, 25, 26—Chemical Principles (with consent of adviser) (15)
AnCh 57—Quantitative Analysis (4)
OrCh 61, 62—Organic Chemistry (8)
PCh 107-108—Physical Chemistry (6)

Minor Concentration (Option of 24 credits)

InCh 4-5—General Inorganic Chemistry (10)
InCh 11—Semimicro Qualitative Analysis (4)
OrCh 16—Carbon Compounds (4)
PCh 107-108—Physical Chemistry (6)

(Option of 20 credits)

InCh 4-5—General Inorganic Chemistry (10)
OrCh 16—Carbon Compounds (4)
PCh 107-108—Physical Chemistry (6)

Physics

Major Concentration, 33 credits

Phys 7-8-9—General Physics (15)
Phys 50—Intermediate General Physics (4)
Phys 50A—Intermediate General Physics Laboratory (1)
Phys 51—Intermediate General Physics (4)
Phys 51A—Intermediate General Physics Laboratory (1)
Phys 133—Physical Optics (3)
Electives selected with consent of adviser (5)

Minor Concentration (Option of 25 credits)

Phys 7-8-9—General Physics (15)
Phys 50-51—Intermediate General Physics (8)
Electives (2)

(Option of 20 credits)

Phys 7-8-9—General Physics (15)
Electives (5)

Requirements for a Major in Mathematics with a Minor in Physical Science

Major Requirements (35 credits beyond Math T):

Courses through Math 54
Math 60—Synthetic Metric Geometry (3)
Electives from courses numbered 55 and above (12)

Requirements for Special Methods and Student Teaching

For Majors in Physical Science, with
Minor in Mathematics

EdT 68A-B-C—Teaching Secondary School
Science (5)

EdT 67M—Teaching Secondary School Mathematics (3)

For Majors in Mathematics, with Minor
in Physical Science

EdT 67A-B-C—Teaching Secondary School
Mathematics (5)
EdT 68M—Teaching Secondary School Science
(3)

Student Teaching:

6 credits in major, 3 credits in minor

Five-Year Program Leading to the Master of Education Degree

Students interested in a 5-year program leading to a certificate to teach physics or chemistry see index listing of Special Programs for information about the combined curriculums offered by the Institute of Technology and the College of Education.

POLITICAL SCIENCE

Major adviser: Professor Warp

A student who majors in political science registers in the College of Science, Literature, and the Arts for the first 2 years. His program during this time should include the first three requirements outlined below under the political science major. He should also meet the requirements of Plan I or Plan II, listed in Section I. Completion of Spch 5 is advisable. The student should be proficient in typing before he reaches his senior year. He must maintain an over-all 2.5 grade point average in the social science courses.

Political Science as a Major Subject:

Pol 1-2-3—American Government and Politics (9)
(or) Pol 5 and 3—American Government and Politics (8)
(or) Pol 80—National Government in the United States (3) and Pol 3—American Government and Politics (3)
Pol A-B—State in the Modern World (6)
Pol 25—World Politics (3)

Elective courses in political science—At least 18 additional credits in courses numbered 100 and above. Six of these credits must be taken in the field of American government

(in courses numbered between 100 and 139) and 6 credits must be taken in the field of international relations (in courses numbered between 170 and 199)

The political science major must take 1 course on Russia and 1 on the Far East. These courses may be taken in any of the social sciences, and the credits count toward meeting the total required credits in that field. Total—36 credits in political science

Because of the political science teacher's need for a broad social studies background and because most social studies positions require teachers to teach more than one subject within the social studies area, all political science majors must complete the following spread of supporting courses in the other social science fields. This requirement is in lieu of a required teaching minor.

23 credits of history, including Hist 1-2-3 or 53-54-55 (9) and Hist 20-21-22 (9)
Geog 1 or 4 (5)

20 credits of economics, sociology, and anthropology, including:

Econ 1-2 or B-C or 50A-B (6)

Soc 3 (3)

Sociology course numbered 100 or above (3)

Anth 2A (5) or 100 (3)

Political science majors are urged to build a teaching minor in a non-social science area in order to improve their chances of obtaining teaching positions.

The major in political science must take the following courses within the

total requirements of 29 credits in education:

EdT 69—Student Teaching in the Social Studies (1 cr during jr yr and 9 cr during sr yr)
EdT 69A-B-C—Methods of Teaching the Social Studies (5)

RECREATION LEADERSHIP

Major advisers: Professor Donnelly; Lecturer Fitzgerald; Associate Professors Giles, Chapman; Instructor Schultz

Two types of training, represented by two different programs, are offered in recreation leadership. These programs are listed as Plan I and Plan II. Both involve 4 years of work, lead to the B.S. degree, and are open to men and women.

Plan I. Recreation Leadership and Administration

Plan I is the professional curriculum offering preparation for administrative and supervisory positions in connection with public and private institutions. All the general requirements for graduation from the College of Education apply to this curriculum and students satisfactorily completing the program are eligible for the fifth year's work leading to the M.Ed. degree.

FRESHMAN AND SOPHOMORE YEARS

Students register in the College of Education. Lower Division courses are selected from offerings in the College of Science, Literature, and the Arts, the General College, and from the 4-year curriculums in physical education, music education, art education, industrial education, home economics education, and agricultural education.

Group A: Natural Science, 15 credits:

NSci 1-2-3—Orientation in the Natural Sciences (15)

Group B: Psychology and Health, 8 credits:

Psy 1-2—General Psychology (6)
PubH 3—Personal Health (2)

Group C: Social Science, 21 to 24 credits:

SSci 1-2-3—Personality, Work, Community (9)

Hist 20-21-22—American History (9)
(or) a total of 21-24 credits in the following fields: sociology, political science, economics, history, geography, and social science

Group D: English Composition, Literature, and Speech, 14 credits:

Comm 1-2-3—Communication (or) Engl 1A-2A-3A (or) Engl A-B-C (or) GC 31A-B-C (9-15)
Spch 5—Fundamentals of Speech (5)

Group E: Skill Techniques, 24 credits:

Music, 5 credits

Mus 4—Fundamentals of Music (2)
GC 24A-B-C—Music Today (3)

Arts and Crafts, 9 credits

ArEd 18—Design Activities for Elementary Education (3)
ArEd 81—Puppetry (3)
Art 10—Photography (3)
PEM 45—Camp Craft (2)

Dramatics, 4 credits

Spch 31—Theater Arts (4)

Games, Rhythms, and Sports (men), 6 credits

PEM 4A-B-C—Fundamentals of Athletic Sports (2)
PEM 6A-B-C—Intramural Sports (2)
PEM 8—Tennis and Golf (1)
PEM 9A-B—Rhythms (2)
PEW 25—First Aid (2)
PEM 43—Camp Aquatics (2)

Games, Rhythms, and Sports (women), 6 credits

PEW A-B-C—College Program in Physical Education—selected from Aquatics, Individual Sports, and Rhythms (4)
PEW 25—First Aid (2)

Group F: Recreation, 9 credits:

PEM 11—Survey of Recreation Activities (3)
PEM 23—Introduction to Recreation Leadership (3)
PEM 49—Social Aspects of Leisure (3)
(or) GC 4—Leisure Today (3)

Group G: General electives to total 96 credits

Students transferring from other institutions who desire to major in recreation will be permitted some deviation from the Lower Division pattern as listed, but must meet specific course requirements in Groups B, E, and F, unless exempted by the major adviser in recreation and the Committee on Student Scholastic Standing.

All students desiring to enter or to continue in the recreation leadership major, which begins with the junior year, must have in addition to the course requirements the following: (a) a passing mark in the special entrance examination in recreation, and (b) experience for at least 1 summer as a play leader or camp counselor.

Students who transfer from other institutions desiring to major in recreation may register in that curriculum in the fall quarter, but with the provision that this is a tentative registration only. Application should be made only when the student has some assurance of meeting the entrance requirements (a) and (b) in the preceding paragraph.

A student may graduate with or without a teaching certificate. No teaching certificate is used for the recreation major, and may be obtained only by including preparation for teaching in one or more academic or special subjects. In order to qualify for a teaching certificate in the minor, special methods and student teaching must be taken. Selection of a teaching major, or two teaching minors, is recommended for students desiring a teaching certificate. No minor is required in this curriculum, although students who plan to teach must meet the previously listed requirements.

JUNIOR AND SENIOR YEARS

Education, 18 credits required:

- Ed 55A-B—Introduction to Secondary School Teaching (10)
- EdCI 104—Adult Education (3)
- EdCI 105—Audio-Visual Materials in Education (3)
- (or) PE 155—Instructional Aids in Health, Physical Education, and Recreation (3)
- HEd 180—The School and Society (3)

Recreation, 27 credits required, to be chosen from the following courses:

- Soc 3—Social Problems (3)
- PEM 52—Leadership of Social Activities (3)
- PEW 54 or PEM 46—Camp Leadership (2)
- PEM 57—The Organization and Conduct of Recreation Centers (3)
- PEM 58—Leadership in Community Recreation (3)
- PEM 78—Scout Leadership (2)
- PE 105—Conservation of Natural Resources (2)
- PE 107—Camp Administration (3)
- PE 110—Recreation Surveys (3)
- PE 111—Recreation Areas and Facilities (3)
- PE 112—Programming in Recreation (3)
- PE 116—Community Recreation Resources and Organization (3)
- PE 121—Principles of Recreation Method (3)
- PE 141—Introduction to Hospital Recreation (3)
- PE 142—Leadership in Hospital Recreation (3)
- PE 143—Programming in Hospital Recreation (3)

Skill Techniques, 20 credits required, to be chosen from the following courses:

Music, 2 credits

- MuEd 51—Teaching Music (2)

Art, 3 credits

- Ind 1—Elementary Handcrafts (3)
- Art 45—Ceramic Processes (3)

Dramatics, 6 credits

- Spch 32—Beginning Acting (3)
- Spch 106—Discussion (3)
- Spch 131—Creative Dramatics (3)
- Spch 132—Children's Theater (3)

Nature, 4 credits

- PEM 64A-B—Leadership in Nature Recreation (4)

Games, Rhythms, and Sports (men), 4 credits

- PEM 5A-B-C—Physical Education Activities (3)
- PEM 7A-B-C—Recreational Games and Sports (3)

Games, Rhythms, and Sports (women), 4 credits

- PEW 20C—Physical Education Activities (1)
- PEW 62—Teaching Physical Education Activities (3)
- PEM 9A—Fundamental Rhythms (1)
- PEM 9B—Square and Ballroom Dancing (1)

Practice and Field Work, 12 credits required, to be chosen from the following courses:

- EdT 84A-B-C—Practice and Field Work in Recreation (6)
- EdT 85A-B-C—Practice and Field Work in Recreation (6)
- Special methods and directed teaching in minor (if teaching certificate is desired) (11)
- PubH 51—Community Hygiene (3)
- General electives to be selected from Upper Division courses in consultation with major adviser

The C+ average is based on the following courses: PEW 54 or PEM 46, PEM 57, 58, 78, PE 110, 111, 112, 116, 121; and 16 credits in skill techniques spread over at least 3 different fields using no more than 6 credits in any 1 skill.

Minor in Recreation Leadership

- PEW 25—First Aid (2)
- EdT 85A-B-C—Practice and Field Work in Recreation (3)
- Recreation leadership (12) (courses to be chosen in consultation with recreation leadership adviser)
- Skill techniques (12) (to be chosen in consultation with major adviser)
- Elective—one course to be selected from the following:
 - Psy 140—Social Psychology (3)
 - EdCI 104—Adult Education (3)
 - EdCI 169—Extracurricular Activities (4)
 - EPsy 158—Psychology of Adolescence (3)

Note—For secondary school teachers the minor in recreation cannot take the place of the regular teaching minor but may be taken as a second minor.

Fifth Year Leading to the Master of Education Degree

Recreation Leadership and Administration—The College of Education will award the master of education degree with a major in recreation to students who satisfactorily complete a fifth year of work in recreation leadership and administration at the graduate level and who meet all regulations for the professional degree. Specific requirements are:

1. A total of 231 credits, including 45 credits in courses numbered above 100 beyond the requirements for the Bachelor's degree in recreation leadership and administration.

2. In addition to the practice and field work required for graduation in the undergraduate curriculum, a period of satisfactory internship will be required for which a maximum of 8 credits will be given, if the student does not have qualifying experience in the recreation field.

3. Students with Bachelor's degrees with majors in physical education, recreation, social work, or other allied fields from other accredited institutions, may receive the master of education degree with a major in recreation when the following requirements *other than herein listed* have been fulfilled at the undergraduate level:

- a. Ed 55A-B, Introduction to Secondary School Teaching, or equivalent.
- b. Twenty-six quarter hours of skill techniques spread over the fields of music, art, dramatics, nature recreation, games, sports, and rhythms. Demonstrated proficiency may be substituted for the requirement on advice and consent of the major adviser.
- c. Qualifying interest and experience in the field of recreation.
4. Satisfactory completion of final written and oral examinations.
5. A satisfactory report on health examination within 1 year prior to obtaining the M.Ed. degree.
6. Distribution of credits for the fifth year as follows: education, 6-9; recreation, 24-28; electives, 8-15.

Courses are selected in consultation with major adviser. For graduate courses in recreation see Section III.

Hospital Recreation—The College of Education will award the master of education degree with a major in hospital recreation to those who qualify for and successfully complete the program herein described.

The curriculum is intended as a specialized professional program with internship. A grade average of B is required for 45 credits in courses numbered 100 and above. The examination

regularly required for the M.Ed. degree will apply for this curriculum with the comprehensive written examination covering the three areas of the curriculum—professional specialization in hospital recreation, related professional fields, and medical information. A satisfactory health examination is required on admission to the University and also within 1 year prior to date of receiving degree.

Admission to the curriculum is based on:

1. A Bachelor's degree from an accredited institution in recreation, music, art, speech, physical education, psychology, or sociology, with a level of academic performance indicating probable success in the professional program.

2. Completion of undergraduate introductory courses in psychology, sociology, and science.

3. Twenty-six quarter hours of skill techniques spread over the fields of music, art, dramatics, nature recreation, physical education, and social recreation. Demonstrated proficiency may be substituted for this requirement or for parts of it on advice and consent of the major adviser. Those who do not meet this requirement will be held for undergraduate skill courses on advice of the major adviser.

4. Qualifying interest and experience in the field of recreation.

5. Ninety academic credits included in the undergraduate course work. This total must be reached before the degree will be granted if the student is admitted with less than this amount.

Course requirements: Internship is required in the amount of 6 to 9 credits and extends from 3 to 6 months depending on the previous experience of the individual student. The assignment may or may not be carried on a paid basis.

Distribution of credits is as follows: internship, 6-9; professional specialization in hospital recreation, 12-18; related professional fields and medical information, 11-19; electives, 6-9.

Plan II. Recreation Activity Leaders Training Course

The recreation activity leaders training course is a 4-year program set up by the College of Education to prepare qualified individuals for recreation activity positions in recreation and other agencies as distinct from preparation for teaching and from Plan I, which is directed toward positions of recreation leadership and administration. Satisfactory completion of the program leads to the B.S. degree but does *not* qualify for a teaching certificate. Enrollment in the curriculum is limited and the first 2 years are taken in the General College.

The program is set up for students who have special abilities in various fields of recreational activities, such as games and sports, music, handicrafts, drama, etc., which will be valuable to them as activity leaders. In addition, selection for the program is based on such attributes as personality, leadership ability, past experience in recreation, and possibility of success in recreation activity leadership. However, to be eligible for continuance in the curriculum, the student must maintain a C average in all work completed at the University of Minnesota.

FRESHMAN AND SOPHOMORE YEARS

Courses taken while enrolled in the General College:

Group A: Natural Science, 18 credits required:

GC 7A-B-C-D—Physical Sciences (15)
(or) NSci 1-2-3—Orientation in Natural Sciences (15)
GC 10A-B—Human Biology (6)
GC 10C—Human Biology (3)
(or) PubH 3—Personal Health (2)

Group B: Composition, Literature, Speech, 18 credits required (9 must be in some form of writing):

GC 31A-B-C-D—Writing Laboratory (9)
(or) Comm 1-2-3—Communication (12)
(or) Engl 1A-2A-3A—Freshman English (12)
GC 32A-B-C-D—Oral Communication Speech Laboratory (6)
(or) Spch 5—Fundamentals of Speech (5)
GC 29A-B-C-D-E—Literature (3)

Group C: Social Sciences, 24 credits to be selected from the following courses:

- GC 37—Social Trends and Problems (5)
- GC 38A—General Geography (5)
- GC 39—General Anthropology (3)
- GC 43A—Background of the Modern World (5)
- GC 43B—Historical Biography (3)
- GC 44B—Current History (2)
- GC 45A—The Growth of American Democracy (5)
- GC 45C—Minnesota History (5)
- GC 45D—Community Problems (3)
- GC 46A-B—Problems of Government (3-6)
- Pol 1-2—American Government and Politics (6)
- SSci 1-2-3—Personality, Work, Community (3-9)
- Hist 1-2-3—Civilization of the Modern World (3-9)
- Hist 20-21-22—American History (3-9)

Group D: Psychology, 5 credits required:

- GC 2A—Psychology in Modern Society (5)

Group E: Recreation Theory, 9 credits required:

- PEM 11—Survey of Recreation Activities (3)
- PEM 23—Introduction to Recreation Leadership (3)
- PEM 49—Social Aspects of Leisure (3)
- (or) GC 4—Leisure Today (3)

Group F: Recreation Skills, 19 credits required:

- GC 22A, B—Art Today (3-6)
- GC 23A—Art Laboratory (3)
- GC 24A, B, C—Music Today (3-9)
- (or) Mus 1—Fundamentals of Music (2)
- GC 25A—Music Laboratory (2)
- PEM 4A, B, C—Fundamentals of Sports (1-3)
- (or) PEW A-B-C—College Program in Physical Education (1-3)
- PEW 25—First Aid (2)
- PEM 6C—Aquatics (1)
- PEM 45—Camp Craft (2)
- PEM 43—Camp Aquatics (2)

JUNIOR AND SENIOR YEARS

Courses taken while enrolled in the College of Education:

Group A: Recreation Theory, 35 credits required:

- PEM 57—Organization and Conduct of Recreation Centers (3)
- PEM 58—Leadership in Community Recreation (3)
- PEM 52—Leadership in Social Activities (3)
- PEM 78—Scout Leadership (2)
- PEW 54 or PEM 46—Camp Leadership (2)
- PE 105—Conservation of Natural Resources (2)
- PE 107—Camp Administration (3)
- PE 110—Recreation Surveys (3)

- PE 111—Recreation Areas and Facilities (3)
- PE 112—Programming in Recreation (3)
- PE 116—Community Recreation Resources and Organization (3)
- EdT 84A-B-C—Field Practice in Recreation, Junior Year (6)
- EdT 85A-B-C—Field Practice in Recreation, Senior Year (6)
- PE 121—Principles of Recreation Methods (3)
- PE 141—Introduction to Hospital Recreation (3)
- PE 142—Leadership in Hospital Recreation (3)
- PE 143—Programming in Hospital Recreation (3)

Group B: Recreational Skills, 22 credits required:

- Ind 1—Elementary Handcrafts (3)
- Ind 12—Craft Work (3)
- PEM 64A-B—Leadership in Nature Recreation (4)
- Spch 31—Introduction to the Theater Arts (4)
- Spch 131—Creative Dramatics (3)
- Spch 132—Children's Theater (3)
- MuEd 51—Teaching of Music (2)

Physical Education (men), 10 credits required from the following:

- PEM 5C—Stunts, Contests, Softball, Baseball (1)
- PEM 7A—Games and Relays (1)
- PEM 7C—Recreational Games (1)
- PEM 8—Tennis and Golf (1)
- PE 9A-B—Rhythms (2)
- PEM 66—Officiating Football and Basketball (3)
- PEM 68—Basketball Coaching (2)
- PEM 69—Track Coaching (2)

Physical Education (women), 10 credits required from the following:

- PEW 62—Teaching of Physical Education Activities (3)
- PEW 20C—Physical Education Activities (1)
- PEM 9A—Fundamental Rhythms (1)
- PEW A-B-C—College Program in Physical Education (4)
- PEM 9B—Square and Ballroom Dancing (1)

Group C: General Courses, 5 or 6 credits required:

- PE 155—Instructional Aids in Health, Physical Education, and Recreation (3)
- PubH 4—Health Problems of the Community (2)
- (or) PubH 51—Community Hygiene (3)

Group D: General Electives, 20 or 21 credits selected from Upper Division courses in consultation with a major adviser, to complete total of 186 credits.

Recreation leaders in Plan II are required to present a C average in the following recreation courses: PEM 52,

PEW 54 or PEM 46, PEM 58, PEM 110 and PEM 121.

Minor in Camping and Outdoor Education

The Recreation Division also offers a minor in camping and outdoor education based on the following requirements. Thirty-five credits are required. This minor is open to majors in elementary education and may be taken as an additional minor by students in secondary education. It does not constitute a teaching minor and cannot be substituted for any

minor requirement listed in any curriculum.

- PEM 46—Camp Leadership (2)
- PEM 45—Camp Craft (2)
- PE 107—Camp Administration (3)
- PE 105—Conservation of Natural Resources (2)
- PEM 43—Camp Aquatics (2)
- EPsy 158—Psychology of Adolescence (3)
- PEM 64A-B—Leadership in Nature Recreation (4)
- PEM 52—Leadership in Social Activities (3)
- PE 121—Principles of Recreation Methods (3)
- Recreational music (3)
- Recreational dramatics (3)
- Handcrafts (3)
- Recreational games and sports (3)
- PEM 43 or 6C—Aquatics (1)
- PEW 25—First Aid (2)
- Field work in camping (1 summer's experience)

ROMANCE LANGUAGES

Major advisers: *French*—Professor Falk; Assistant Professor Burks;
Spanish—Associate Professor Floripe

Students wishing to major in French or Spanish take the first 2 years in the College of Science, Literature, and the Arts and meet the Lower Division requirements of that college. Their programs should include the prerequisite courses and the following Upper Division requirements of the College of Education, see Section I.

French as a Major Subject: Fren 20, and 36 Upper Division credits including:

- Fren 54—French Conversation (3)
- Fren 56—History of Language (3)
- Fren 60-61-62—Civilization, Culture (12)
- Fren 65-66-67—Survey of Literature (9)
- Fren 100—Advanced Phonetics (3)
- Fren 103-104-105—Syntax, Composition (6)
- In addition, Clas 56 is recommended (3)

French as a Minor Subject: 23 college credits of which 18 credits will be in courses numbered above 4, including:

- Fren 54—French Conversation (3)
- Fren 56—History of Language (3)
- Fren 60-61-62—Civilization, Culture (12)

Spanish as a Major Subject: 36 Upper Division credits in Spanish including:

- Span 53—Spanish Composition (3)
- Span 54-55—Spanish Conversation (6)
- Span 56—Spanish Phonetics and Diction (3)
- Span 65-66-67—Survey of Spanish Literature (9)
- (or) Span 68-69—Survey of Spanish Literature (10)
- (or) Span 74-75-76—Survey of the Literature of Spanish America (9)
- Span 70-71-72—Latin-American Civilization and Culture (9)
- (or) Span 90-91-92—Spanish Civilization and Culture (9)
- Span 107—The Structure of Modern Spanish (3)
- Span 171-172-173—History of the Spanish Language (3)

In addition, Clas 56 is recommended (3)

Spanish as a Minor Subject: 23 college credits of which 17 credits will be courses numbered above 20, including:

- Span 65-66-67—Literature of Spain (9)
- (or) Span 68-69—Literature of Spain (10)
- (or) Span 74-75-76—Literature of Spanish America (9)

RURAL EDUCATION

Major adviser: Arranged

The College of Education offers a 4-year and a 5-year program for students who wish to teach or specialize in the administration and supervision of schools

in rural areas. One program is especially designed for county or intermediate unit school administrators and general supervisors. It combines a series of courses

on rural life with courses in elementary education and preparation for services furnished by intermediate school units. Consult the office of the dean of the

College of Education for a special announcement giving the details of work. Other programs are available in the Graduate School.

RUSSIAN

Major advisers: Professors Birkmaier, Mather

The College of Education and the Department of Slavic and Oriental Languages of the College of Science, Literature, and the Arts offer a program of study for a teaching major and minor in Russian.

A student wishing to obtain a major or minor in Russian registers for the first 2 years of work in the College of Science, Literature, and the Arts and there meets the Lower Division group requirements for the College of Education as well as all prerequisites for Upper Division courses in Russian. These prerequisites are Russ 1, 2, and 3 (15 cr); 4, 5, and 6 (9 cr)—a total of 24 credits. The 2 years of work remaining will be taken in the College of Education. For

the general and professional requirements for the College of Education, see Section I.

Russian as a Major Subject: 36 Upper Division credits, including:

Russ 56, 57, 58—Russian Conversation (9)
 Russ 61, 62, 63—Russian Composition (6)
 Russ 75, 76, 77—Russian Civilization and Culture (9)
 Russ 71, 72, 73—Readings in Russian Literature (9)
 Clas 56—Elementary Linguistics (3)

Russian as a Minor Subject: 27 Upper Division credits, including:

Russ 56, 57, 58, 61, 62, 63
 Clas 56
 Russ 75, 76, 77
 (or) Russ 71, 72, 73

SCHOOL HEALTH EDUCATION

Minor adviser: Associate Professor Slocum

The minor in school health education requires 23-26 credits in addition to the basic background courses.

Basic Background Courses, 12-18 credits required:

Biol 1-2—General Biology (10)
 (or) Biol 1A-2A—General Biology (7)
 (or) GC 10A-B—Human Biology (6)
 (or) NSci 1-2—Orientation in Natural Sciences (10)
 PubH 5—Individual, Public Health (3)
 (or) PubH 50—Personal and Community Health (3)
 PEW 25—Standard and Advanced First Aid (2)

Minor in School Health Education, 23-26 credits required:

PubH 133—Mental Hygiene (3)
 (or) EPsy 159—Personality Development and Mental Hygiene (3)

PEM 59—Instructor's Course in First Aid (3)
 PubH 75—Environmental Sanitation (3)
 HE 30—Nutrition (2)
 (or) HE 31—Nutrition (3)
 (or) HE 72—Nutrition (2)
 (or) PubH 95—Human Nutrition (3)
 PEW 83—Methods and Materials of School Health Education (3)
 (or) PE 117B—Advanced Instruction in School Health for Secondary Schools (3)
 PE 103—Role of School Health Educator in Health Appraisal (3)
 PE 114—Administration of the School Health Education Program (3)
 FamS 1—Dynamics of Dating, Courtship, and Marriage (3)
 (or) FamS 1A—Dynamics of Dating, Courtship, and Marriage (3)
 PEW 94—Student Teaching in School Health Education (2)
 (or) Equivalent included in PEW 90A-B-C or PEM 73, 74, 75

SCHOOL SOCIAL WORK

Training to be a school social worker (or visiting teacher) is offered at the

graduate level in the School of Social Work. The trend is to require the M.A.

degree in social work for this field of service. Students interested in this field

should consult an adviser in the School of Social Work, Ford Hall.

SOCIAL STUDIES

Minor adviser: Associate Professor Edith West

Those interested in social studies majors should see individual social sciences (history, geography, economics, sociology, and political science).

Those interested in social studies minors should decide whether they wish to minor in geography, history, or the broader social studies minor listed below. The minor below may be taken only by those not majoring in one of the social sciences.

Social Studies as a Minor Field:

27 credits of history, including: Hist 1-2-3 or 53-54-55; Hist 20-21-22; and 9 additional credits in courses numbered 65 and above

8 credits of geography, including: Geog 1 or 4; and 3 credits in courses numbered 100 and above

6 credits of economics, including Econ 1-2 or B-C or 50A-B

6 credits of sociology, including Soc 3 and a course numbered 50 or above

6 credits of political science, including Pol 1-2 or 5 or 80

Total—53 credits in social science

Those minoring in social studies must include 1 course on Russia and 1 on the Far East. These courses may be taken in any of the social sciences.

SOCIOLOGY

Major advisers: Associate Professor Arthur Johnson; Professor Reuben Hill

A student who majors in sociology registers in the College of Science, Literature, and the Arts for his first 2 years. His program during this time should include the first three requirements listed below under the sociology major. He should also meet the requirements of Plan I or Plan II, listed in Section I. He should be proficient in typing before he reaches his senior year. Completion of Spch 5 is advisable. General and professional requirements for the College of Education are described in Section I. The student must maintain an over-all 2.5 grade point average in the social science courses.

Sociology as a Major Subject:

Soc 1—Introduction to Sociology (3)
 Soc 3—Social Problems (3)
 Soc 45—Social Statistics (5)
 Soc 53—Elements of Criminology (3)
 Soc 180—Methods of Social Research (3)
 Elective courses in sociology—at least 13 additional credits in courses numbered 50 or above
 Total—30 credits in sociology

Because of the sociology teacher's need for a broad social studies background and because most social studies positions re-

quire teachers to teach more than one subject within the social studies area, all sociology majors must complete the following supporting courses in other social science fields. This requirement is in lieu of a required teaching minor.

23 credits in history, including Hist 1-2-3 or 53-54-55 (9); and Hist 20-21-22 (9)

5 credits in geography—Geog 1 or 4

26 credits in the other social sciences, including:

Pol 1-2 (6) or 5 (5) or 80 (3)

Econ 1-2 (6) or B-C (6) or 50A-B (6)

Anth 2A (5) or 100 (3)

Sociology majors are urged to build a teaching minor in a non-social science area in order to improve their chances of obtaining teaching positions.

All sociology majors must take 1 course on Russia and 1 on the Far East. These courses may be taken in any of the social sciences and will count toward credit requirements in those fields. The major in sociology must take the following courses within the total requirement of 29 credits in education:

EdT 69—Student Teaching in the Social Studies (1 cr during jr yr and 9 cr during sr yr)
 EdT 69A-B-C—Methods of Teaching the Social Studies (5)

SPECIAL EDUCATION

Major advisers: Professor Reynolds; Associate Professors Balow, Force, Lassman; Assistant Professors Houchins, Karlsen, Orlando; Instructor Kenmore

The State Department of Education requires special certificates for teachers of the various classes for exceptional children, such as classes for the hearing handicapped, the crippled, the mentally retarded, the visually handicapped, and those with speech defects. The speech pathology curriculum (see index) trains specialists in speech correction.

Students wishing endorsement for a special certificate to teach the mentally retarded, the crippled, or the hearing handicapped complete a regular curriculum leading to certification for kindergarten—primary, elementary, or secondary school teaching. In addition, they take a minor in the special field. Students can often complete their education major and the special work within a 4-year program. Students planning to register in one of these undergraduate programs (mentally retarded, crippled, hearing handicapped) should consult advisers as early as possible, preferably before the beginning of the junior year.

Students who already hold regular teaching certificates and have teaching experience do not usually take the minors outlined below. They should consult an adviser to make up a special program to meet certification requirements of the State Department of Education. EdT 53A may be (a) substituted for the second quarter of student teaching (EdT 54B) by students enrolled in the IA elementary curriculum, or (b) substituted for EdT 78 or 79 by K-P majors.

Teaching Blind and Partially Sighted Children

Adviser: Kenmore

Students wishing endorsement for a special certificate to teach the blind and partially seeing complete a regular curriculum leading to certification for kindergarten—primary, elementary, or secondary school teaching. They may take three courses in special education during the junior or senior year: EdT 50, EPsy 182, and EdCI 115. After graduation

they take the remaining courses listed for the graduate program in teaching blind and partially seeing children. Most students will wish to use course work completed in this program in meeting requirements for the M.A. degree.

The following courses are required to qualify for teaching blind and partially seeing children. Most of this specialized work is offered at graduate level. (See above)

- EPsy 182—Education of Exceptional Children (3)
- EdCI 115—Introduction to the Education of Visually Handicapped Children (3)
- EdCI 116—Braille I (3)
- EdCI 117—Braille II (3)
- EdCI 118—Education of Blind Children in the Elementary Grades (3)
- EdCI 120—Education of Blind Children in Secondary Schools (3)
- EdCI 182—Education of Partially Seeing Children (3)
- EdCI 178—Structure and Function of the Eye—Educational Implications (3)
- EPsy 288—Practicum in Special Education (6)
- (or) EdT 53A—Teaching Handicapped Children (Visually Handicapped) (6)

Other courses dealing with the visually handicapped are frequently offered. See current *Class Schedule* or special announcements.

Teaching Mentally Retarded Children

Advisers: Force, Karlsen

A minimum of 23 credits is required for a minor in the field of teaching mentally retarded children. Required in this curriculum are three basic courses (EPsy 182, EPsy 184 or 191, and CD 143) plus EdT 53A. The latter course may sometimes be substituted for part of the student teaching requirement in certain other curriculums.

- EPsy 182—Education of Exceptional Children (3)
- EPsy 184—Education of Mentally Retarded Children in the Elementary School (3)
- (or) EPsy 191—Education of Mentally Retarded in the Secondary School (3)
- CD 143—Problems of Mental Deficiency (3)

EdT 53A—Teaching Handicapped Children (Mentally Retarded) (6)

Other courses may be selected from the following in consultation with the adviser:

EdT 50—Junior Practicum in Special Education (3)
 EdCI 145—Reading Difficulties (3)
 CD 80—Child Psychology (3)
 CD 81—Adolescent Psychology (3)
 CD 85—Psychological Appraisal of Child Behavior (3)
 CD 89—Psychology of Parent-Child Relationships (2)
 EPsy 110—Educational Measurement in the Classroom
 Spch 161—Speech Correction
 Ind 1 or 12—Handcrafts or Craftwork
 (or) ArEd 19—Functional Arts, Crafts in Elementary Education (3)

Teaching Crippled Children

Adviser: Force

Students wishing to minor in teaching crippled children take a minimum of 23 credits from among the courses listed below, selected in consultation with the adviser. EdT 53A is required in this curriculum. It should be noted that EdT 53A may sometimes be substituted for part of the student teaching requirements in other curriculums.

EPsy 182—Education of Exceptional Children (3)
 EPsy 187—Education of Crippled Children (3)
 EPsy 190—Educational Problems of Cerebral Palsy (3)
 EdT 53A—Teaching Handicapped Children (Crippled Children) (6)

Other courses may be selected from the following in consultation with adviser:

EdT 50—Junior Practicum in Special Education (3)
 Anat 57—Anatomy for Physical Education Students (4)
 Spch 161—Speech Correction (3)
 CD 143—Problems of Mental Deficiency (3)

PEV or PEM 51—Mechanics of Movement (kinesiology) (3)

PEM 65—Adapted Physical Education (3)

PE 104—Teaching Physical Education for the Handicapped Child (3)

CD 142—Psychology of Handicapped Children (3)

Teaching Hearing Handicapped Children

Adviser: Houchins

The following courses are required for the minor in the field of teaching hearing handicapped children. It should be noted that student teaching in a special class (EdT 53A and B) may sometimes be substituted for other student teaching requirements.

EPsy 185—Education of the Auditorially Handicapped Child (3)

Spch 67—Phonetics (3)

Spch 161—Introduction to Speech Correction (3)

Spch 152—Hearing Disorders (3)

Spch 153—Audiometry and Hearing Aids (3)

Spch 155—Lipreading and Lipreading Methods (3)

Spch 127—Language Training for the Deaf (3)

Spch 157—Clinical Practice in Audiology (3)

(and/or) Spch 156—Auditory Training (3)

EdT 53A-B—Teaching Handicapped Children (in a class for the hearing handicapped) (12)

Teaching Emotionally Disturbed and Socially Maladjusted Children

Adviser: Balow

Course work leading to certification in this field is available at the graduate level only. However, undergraduates who are interested in teaching disturbed children should consider taking EdT 50, and are invited to discuss the selection of undergraduate elective courses with the adviser.

SPEECH AND THEATER ARTS

Major advisers: Professors Graham, D. K. Smith, Whiting; Associate Professor Ballet

Students interested in speech should consider the language arts curriculum. For curriculum in speech pathology, see index.

Students majoring in speech register for

the first 2 years in the College of Science, Literature, and the Arts and meet the Lower Division requirements. For general and professional requirements of the College of Education, see Section I.

Speech and Theater Arts as a Major Subject

1. All students must complete the following core of 18 credits:

- Spch 5—Fundamentals of Speech (5)
- Spch 31—Introduction to the Theater Arts (4)
- Spch 32—Beginning Acting (3)
- Spch 67—Phonetics (3)
- Spch 81—Interpretative Reading (3)

2. Students select one of the following curriculums with the aid of a major adviser:

Curriculum I—27 credits

- Spch 51—Advanced Public Speaking (3)
- Spch 106—Discussion (3)
- Spch 161—Introduction to Speech Correction (3)

Plus 9 credits selected from the following:

- Spch 74, 75, 76—Play Production (9)
- Spch 66—Radio and Television Drama (3)
- Spch 82, 83—Interpretative Reading (6)

Plus 9 credits selected from the following:

- Spch 55, 56—Speech Writing and Platform Speaking (6)
- Spch 65—Radio and Television Speech (3)
- Spch 97—Intercollegiate Debate and Oratory (1-3)
- Spch 101, 102, 103—Argumentation and Persuasion (9)
- Spch 126—History and Criticism of Public Address (3)
- Spch 169—Speech and Language in Human Behavior (3)

Curriculum II—27 credits

- Spch 34—Stagecraft (3)
- Spch 65—Radio and Television Speech (3)
- (or) Spch 66—Radio and Television Drama (3)
- Spch 76—Play Production (3)
- Spch 78—Advanced Acting (3)
- (or) Spch 83—Oral Interpretation (3)
- Spch 91—Stage Design (3)
- (or) Spch 90—Stage Costuming (3)

- Spch 92—Stage Lighting (3)
- Spch 111, 112—Stage Direction (6)
- Spch 131—Creative Dramatics (3)
- (or) Spch 132—Children's Theater (3)

Students electing curriculum II must pass a comprehensive theater examination prior to graduation.

Speech as a Minor Subject

Students minoring in speech must complete 26 credits in speech courses, including Spch 5. The courses selected must be approved by a speech adviser. Speech minors must also complete a "methods" course in the minor field (see below).

Additional Requirements

Because of the close relation between English and speech in Minnesota high schools, students majoring in speech must have a minor in English. Modification of the minor requirement may be made on recommendation of the departmental adviser with the approval of the Committee on Student Scholastic Standing.

All students majoring or minoring in speech are expected to participate in one or more co-curricular activities such as debating, dramatics, radio, public reading, and public speaking.

Students majoring in speech will register in their senior year in EdT 75A-B-D, Teaching of Language Arts, and in EdT 75, Student Teaching in the Language Arts. Students minoring in speech with an English major will register in EdT 75A-B-C, and in EdT 75. Students minoring in speech with a major other than English will register for EdT 76G.

SPEECH PATHOLOGY

Adviser: Associate Professor Starr

This program of study has been arranged for those students who are interested in persons with speech disorders. The training in this specialized field is designed to qualify students for professional work in speech correction in schools and clinics.

The program is arranged for 4 or more years of study. At the end of 4 years a certificate in special education and a B.S. degree are granted. Advanced study for the M.S. and Ph.D. degrees is possible. (See *Bulletin of the Graduate School.*) The required courses are listed below.

Students interested in this field should consult the major adviser before registering. All electives selected to complete the work for a degree should have the approval of the adviser.

Students register for the first 2 years in the College of Science, Literature, and the Arts and complete the Lower Division courses listed below.

FRESHMAN AND SOPHOMORE YEARS

Comm 1-2-3—Communication (or) Engl 1A-2A-3A (or) 1B-2B-3B (or) Engl A-B-C (or) exemption (12-15)
 Biol 1A-2A—General Biology (7)
 Psy 1-2—General Psychology (6)
 Spch 5—Fundamentals of Speech (5)
 Psy 4-5—Introductory Laboratory Psychology (4)
 Anat 3 or 4—Elementary Anatomy (4-5)
 Physical education (3-5)
 Electives to complete total of 96 credits

JUNIOR YEAR

Spch 67—Phonetics (3)
 Spch 161—Introduction to Speech Correction (3)
 Spch 162-163—Speech Pathology (6)
 Psy 144-145—Abnormal Psychology (6)
 Ed 75A-B—Introduction to Elementary School Teaching (10)
 (or) Ed 55A-B—Introduction to Secondary School Teaching (10)
 CD 80—Child Psychology (3)
 CD 81—Adolescent Development (3)

EPsy 110—Educational Measurement in the Classroom (3)
 (or) Psy 70—Principles of Psychological Measurement (3)

SENIOR YEAR

Spch 141—Anatomy and Physiology of the Voice Mechanism (3)
 Spch 152—Hearing Disorders (3)
 Spch 153—Audiometry and Hearing Aids (3)
 Spch 155—Lipreading and Lipreading Methods (3)
 EPsy 142—Individual Mental Testing (3)
 EPsy 159—Personality Development, Mental Hygiene (3)
 EdCI 174-175-176—Clinical Methods and Practice in Speech Pathology (9)
 HED 180—The School and Society (3)
 Electives to complete total of 186 credits

Suggested electives are:

Spch 149—Habilitation for Persons with Neuro-muscular Disorders (2)
 Spch 150—Organic Speech Disorders: Aphasia (2)
 Spch 151—Organic Speech Disorders: Cleft Palate (2)
 Psy 118—Verbal Behavior (3)
 CD 183—Language and Thoughts in Children (3)
 EPsy 184—Education of Mentally Retarded Children in the Elementary School (3)
 EdCI 143—Teaching and Supervision of Reading in the Elementary School (3)
 EdCI 145—Reading Difficulties (3)

The C+ average is based on the following courses: Spch 67, 152-153, 155, 161, 162-163; EdCI 174-175-176.

STUDENT PERSONNEL WORK

Major advisers: Professors Dugan, Edson, Hagenah, Wrenn; Associate Professor Tennyson; Assistant Professors Blocher, Hogan

Work leading to the M.A., Specialist Certificate (2-year program), or Ph.D. degrees can be taken with a concentration in this field. Preparation is possible for technical or administrative positions at either the secondary school or college level. A major in educational psychology is most frequently advised with a minor in psychology, education, or sociology. Preparation of counseling psychologists is closely related to this field with a heavier concentration in various aspects of psychology.

Stress is laid upon training that leads to an adequate understanding of the individual student and group behavior. Emphasis is also placed upon clinical practice or supervised experience in ac-

tive school, university, or social agency guidance programs, provided for under EPsy 281 and 282, or under internship in counseling psychology.

Some basic courses most frequently included in the preparation for various fields of personnel work are: EdCI 124, 125, and 135, EPsy 116, 117, 125, 126, 133, 134, 140, 159, 216-218, 225-226, 233, 250, 251, 290, and 293. In addition, students are advised to become familiar with curriculum and administrative problems at either the public school or higher education level, to take certain courses in psychology and sociology, and, if doctoral candidates, to take advanced courses in statistics and measurement, and to probe research problems.

Section III. Description of Courses

This section contains descriptions of the courses offered in the College of Education and in certain schools and departments in which some students take a major portion of their work. Courses in agriculture and home economics are described in the *Bulletin of the College of Agriculture, Forestry, and Home Economics*. Other courses representing general requirements, majors and minors in high school subjects, and general electives are described in the *Bulletin of the College of Science, Literature, and the Arts*.

The descriptions on the following pages include the number of the course, the number of credits, and the prerequisite courses. The days and hours when classes meet, the place of meeting, quarter offered, and the name of the instructor are contained in the *Class Schedule* published just before the registration period each quarter. Since there are many changes from year to year and from quarter to quarter, students will need to check carefully with the *Class Schedule* for the exact course offerings for each quarter.

Courses are numbered as follows: 1-49 for freshmen and sophomores; 50-99 for juniors and seniors; 100-199 for juniors, seniors, and graduate students; 200 and over for graduate students only. The prerequisite will indicate minimum class standing when there is an exception to this. Courses designated with a capital "E" are at a graduate level and carry credit toward the master of education degree, but do not carry credit in the Graduate School.

When no departmental prefix precedes the number of a course listed as a prerequisite, this prerequisite course is in the same department as the course being described. A prerequisite reading "5 cr" means 5 credits received in courses offered by the same department as that offering the course being described.

Symbols—The following symbols are used throughout the course descriptions and will not carry page footnotes:

- Courses through which it is possible for graduate students to prepare Plan B papers.
- † To receive credit, all courses listed before dagger must be completed.
- ‡ Students may enter any quarter preceding the double dagger.
- § No credit is given if credit has been received for equivalent course listed after section mark.
- ¶ Means "concurrent registration in" (i.e., course must be taken simultaneously).
- ‡ Means "consent of instructor."
- △ Means "consent of department offering course."

AGRICULTURAL EDUCATION (AgEd)

20. **Rural Education and Community Leadership.** Appraisal of community educational agencies; process of and responsibilities for community leadership; role of the school in the rural community; co-ordination of the school with nonschool educational agencies. (3 cr)
56. **Rural Education Through Extension Methods.** Role of the Extension Service in rural education; methods and techniques of instruction in nonschool educational programs. (3 cr; prereq soph)
81. **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; Future Farmers of America, Vo-Ag Planning and Summary Book; building and utilizing teaching units. (4 cr; prereq Ed 55B or ¶55B)
91. **Supervised Teaching Experience.** Instruction in development of individual farming programs, contacting parents, program analysis of community needs, conducting

- classes, community activities, Future Farmers, and case studies. (6 cr; prereq sr, 81, Ed 55B and #)
- 101. Young Farmer Education in Agriculture.** Developing and organizing a continuing program of educational activities for farm youth not in school and not established in an occupation. Co-ordinating community resources, determining needs, deriving goals and individual plans of procedure for establishment in farming and related occupations. Observation of young farmer programs. (4 cr; prereq sr)
- 103. Adult Education in Agriculture.** Systematic instruction for established farmers. Analysis of the agricultural situation with special emphasis on adoption of appropriate management practices. Determining needs in production, marketing, credit, conservation, etc. Developing a continuing program. Observation of adult education programs. (4 cr; prereq sr)
- 104. Planning Programs.** Agricultural education program development in a community school; integration with total school program; administrative relationships and professional improvement. (3 cr; prereq #)
- 120.* Rural Education and Community Leadership.** Same as AgEd 20 with additional reading and special problem required. (3 cr; prereq grad, or #)
- 121. Enterprise Analysis.** Analyzing the farm business as a basis for identifying problems. Planning learning experiences to improve farm management at the high school, young farmer, and adult levels. (3 cr; prereq sr, or #)
- 141. Supervised Farm Practice in Vocational Agriculture.** Selection, planning, supervising, and summarizing of individual farming programs. Adaptation to meet needs of high school F.F.A. students, young farmers, and adults. (3 cr per qtr [total 9 cr]; prereq 10 cr in education or #)
- 145. High School Curriculum in Vocational Agriculture.** Philosophy, organization, and administration of instruction in agriculture departments in secondary schools. (3 cr; prereq sr, 10 cr in education)
- 156.* Rural Education Through Extension Methods.** Same as AgEd 56 with additional reading and special problem required. (3 cr; prereq grad, or #)
- 166. Techniques of Instruction in Rural Electrification.** Developing a program of instruction in electricity and rural electrification. Teaching aids, units of instruction, job sheets, demonstration facilities and materials for adult, young farmer, and high school classes. (3 cr; prereq MeAg 130 or equiv)
- 171. Procedures in Teaching Agriculture.** New developments in methodology of teaching agriculture. To assess innovations and procedures. Includes consideration of various levels of instruction. (3 cr; prereq #)
- 199E. Internship.** (Cr ar)

FOR GRADUATE STUDENTS ONLY

(Descriptions in the *Bulletin of the Graduate School*)

- 221. Field Problems.** (3 cr)
- 232.* Research in Agricultural Education.** (Cr ar)
- 250. Supervision of Vocational Agriculture.** (1-3 cr)
- 283. Organization and Administration of Educational Programs in Agriculture.** (3 cr per qtr [maximum 9])
- 286. Current Issues in Agricultural Education.** (Cr ar)
- 291. Seminar: Agricultural Education.** (Cr ar)

ART EDUCATION (ArEd)

- 14. Introduction to Art Education.** For art education majors previewing career opportunities, basic problems of teachers, professional qualifications, and guidance in making efficient use of University educational resources. (2 cr)

17. **Pictorial Expression for Elementary Education.** 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 cr)
18. **Design Activities for Elementary Education.** (See ArEd 17) Relationships between art and nature. Problems in invention, arrangement and decoration, color, lettering, posters, bulletin board displays, etc. (3 cr)
19. **Functional Arts and Crafts in Elementary Education.** (See ArEd 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 cr)
53. **Introduction to Weaving.** Equipment, design, setting up and operation of table and floor looms. (3 cr)
54. **Advanced Weaving.** Multiharness floor looms, warp beams, draft studies, design, finishes. (3 cr)
- 56, 57, 58. **Basic Principles and Experiences in Art Education.** Sequence for art education majors. Basic types of art expression as a foundation for teaching methods adjusted to age and ability groups. Experiences in planning group activities in art. (5 cr per qtr; prereq 14)
80. **Contemporary Crafts.** Basic materials, equipment, design criteria and techniques for textile, wood, metal, and ceramics. Contemporary emphasis for application to educational programs in elementary and secondary schools, adult education, special education, recreation, and occupational therapy. (3 cr)
81. **Puppetry in Education.** Use of simple puppetry as a teaching technique and problems of motivation and correlation with school subjects. Construction, manipulation, and stage techniques related to typical school situations. (3 cr)
84. **Teaching Art in the Elementary School.** Place and content of art in elementary school curriculum. (3 cr; prereq 6 cr from 17, 18, and 19)
- 84A. **Teaching Art in the Elementary School.** Combination of materials, workshop, and methods for students without previous background in art. (3 cr; enrollment limited to IIIA registrants)
85. **Art for Integration in Secondary Education.** Prepares teachers with no previous training in art to appreciate and use art for furthering the objectives of their own fields. (3 cr)
- 86, 87, 88.† **Student Teaching and Supervision of Art.** Observations, participation, student teaching, and supervisory experiences with various types and levels of art classes. (3 cr per qtr [9 cr required]; prereq sr art education, 56-57, Ed 55A-B, ¶86A or ¶87A or ¶88A)
- 86A, 87A, 88A.† **Teaching and Supervision of Art.** Assignments, class work, discussions, and evaluation of specific experiences and problems illustrating art education as it is and as it might become. (2 cr per qtr [6 cr required]; prereq sr art education, 56-57, Ed 55A-B, ¶86 or ¶87 or ¶88)
- 151-152-153. **Curriculum Building in Art Education.** Functions of art in society. Selection, evaluation, and organization of material for teaching units and projects. (3 cr per qtr)
156. **Intercultural Education Through Art.** Approaches to international understanding and co-operation through recognition of aesthetic contributions of diverse peoples to American life. (3 cr)
158. **Art Education in Europe.** Current practices, problems, and achievements in art education in western Europe as compared with practices in American art education. (3 cr)
184. **Improving Art Programs in the Elementary School.** Evaluation and utilization of research findings and introduction of new materials. Development of closer co-operation between classroom teachers and art education specialists. (3 cr; prereq tchg exper or #)

185. **Improving Art Programs in the Secondary School.** For experienced teachers of art and advanced students; general research and critical examination of art programs. (3 cr; prereq tchg exper or #)
189. **Application of Aesthetic Theory in Education.** Contemporary theories of art, their psychological and philosophical foundations. Open to teachers, supervisors, and administrators concerned with art in general education at all levels. (3 cr)

FOR GRADUATE STUDENTS ONLY

(Descriptions in the *Bulletin of the Graduate School*)

284. **Research in Art Education.** (3 cr)
295. **Problems: Art Education.** (Cr ar)
296. **Seminar: Art Education.** (1 cr)

CHILD DEVELOPMENT (CD)

80. **Child Psychology.** Introduction to the science of child behavior. Emphasis is placed upon a critical review of theories and research in child psychology. (3 cr; prereq Psy 2)
81. **Adolescent Psychology.** Social, physical, mental, emotional, and personality development during adolescence. (3 cr; prereq Psy 2)
83. **Guidance of Children's Activities.** Techniques of guiding children's interests and activities with emphasis on creative materials and group activities. (3 cr; prereq 80)
85. **Psychological Appraisal of Child Behavior.** Observation, interview, testing, and other means of appraising children's behavior. (3 cr; prereq 80)
89. **Psychology of Parent-Child Relationships.** Discussion of parent-child relationships and family situations. Evaluation of relevant research literature. (2 cr; prereq 80)
125. **Experimental Research with Children.** Supervised research experience. Design and conduct of experiments on child behavior in controlled laboratory situations. (3 cr; prereq 80, #)
126. **Case Study of Children.** Supervised intensive study of the intellectual, personality, and social development and functioning of individual normal children. (3 cr; prereq 85, #)
127. **Social Behavior of Nursery School Children.** Social ecology of young children; supervised observation and experience in the nursery school. (3 cr; prereq 80, #)
132. **Adolescent Development.** (Primarily for students in the College of Education) Physical, personal, and social changes occurring during the adolescent years. (3 cr; prereq sr, 12 cr in psychology, educational psychology, sociology, or home economics)
140. **Behavior Problems.** Types, origin, development, and treatment of behavior difficulties in normal children. (3 cr; prereq 80 or equiv)
142. **Psychology of Handicapped Children.** Research related to sensory, speech, language, physical disabilities of children. (3 cr; prereq 80 or equiv)
143. **Problems of Mental Deficiency.** Diagnosis, care, training; social and vocational problems. (3 cr; prereq 80 or equiv)
144. **Psychology of the Gifted Child.** Psychology and development of high intellectual ability and of special talents. (3 cr; prereq 80 or equiv)
170. **Parent Education.** Programs, materials, methods, organization, and administration. Comprehensive survey of related research. (3 cr; prereq 80 or equiv)
179. **Clinical Procedures with Children.** Survey of methods of clinical psychology emphasizing basic concepts and research problems in clinical work with children. Primarily for students not majoring in clinical psychology. (3 cr; prereq 12 cr in psychology, educational psychology, sociology, or child development)

180. **Personality Development in Children.** Origins of personality in personal and interpersonal behavior. Theories of personality and adjustment. (3 cr; prereq 80)
181. **Social Development of Children.** Group formation and organization; social interaction and social relations; developmental changes. (3 cr; prereq 80)
182. **Learning in Young Children.** Theories of learning; discussion of experimental literature on theoretically critical issues in thinking, problem solving, and learning in children. (3 cr; prereq 80)
183. **Language Development in Children.** Development of structure and function of language, methodological problems; speech and language development; language scales; theories of language development. (3 cr; prereq 80)
184. **Sensory and Motor Development.** Development of sensory and perceptual processes; simple and complex motor skills. (3 cr; prereq 80)
185. **Children in Society.** Historical, socio-economic, cross-cultural influences, and social changes on child development. (3 cr; prereq 80 or equiv)
186. **Cognitive Development of Children.** Development of thinking in children; theories of cognition and cognitive development; concept formation, problem solving, and reasoning; symbolic, abstract, and inferential behavior. (3 cr; prereq 80)
190. **Topics in Child Development.** Independent reading or research. (Cr ar; prereq 18 cr with B avg incl 80, Psy 70, QA 5 or Soc 45)

Note—For child development courses at the 200 level consult the *Bulletin of the Graduate School*.

CURRICULUM AND INSTRUCTION (EdCI)

General Courses

104. **Adult Education.** Agencies, programs, philosophies, history, and trends. Each student will devote some time to a field of special interest. (3 cr)
105. **Audio-Visual Materials in Education.** Characteristics, advantages, limitations, and practical classroom use of audio-visual materials of nonprojected and projected types. Practice in operation of audio-visual equipment. (3 cr; prereq sr)
106. **Co-ordinating an Audio-Visual Education Program.** For persons having part-time or full-time responsibility for an audio-visual program. Criteria for equipment, facilities, and materials; in-service training of teachers; problems in schools or industry. (3 cr; prereq 105 or #)
107. **Radio and Television in Education.** Production, techniques of classroom use, selection of equipment, teaching appreciation, and the administration of radio and television in the schools. (3 cr; prereq 9 cr in education)
108. **Nonprojected Audio-Visual Materials and Equipment Laboratory.** Planning and making nonprojected materials for audio-visual education; use of materials and equipment. (3 cr; prereq 105 or ¶105)
109. **Projected Audio-Visual Materials and Equipment Laboratory.** Planning and making projected materials for audio-visual education; use of machines and equipment. (3 cr; prereq 105 or ¶105 or #)
115. **Introduction to the Education of Visually Handicapped Children.** Educational programs, services, and resources for blind and partially seeing children; historical background; philosophy; sociological and psychological problems. (3 cr; prereq #)
116. **Braille I.** Mastery of literary Braille code and introduction to use of mathematics and music codes; analysis of specialized equipment with emphasis on use of Braille writers and slates. (3 cr; prereq 115 or #)
117. **Braille II.** Development of classroom materials involving literary Braille code; mastery of Nemeth Code of Mathematics; opportunity for mastery of music code; consideration of newer approaches in setting up text and reference materials. (3 cr; prereq 116)

133. **Economic and Consumer Education in the Schools.** Objectives, content, and curriculum organization at elementary and secondary levels. (3 cr)
145. **Reading Difficulties.** Causes, prevention, and correction. Remedial practices useful to the classroom teacher, school counselor, and reading specialist. (3 cr; prereq 143 or 144 or equiv)
151. **Diagnosis and Treatment of Learning Difficulties.** Evaluation of results of teaching; diagnosis of pupil difficulty; development and prevention; tests as aids to teaching; following up a testing program. (3 cr)
171. **Curriculum Laboratory Practice.** Analysis and construction of units, courses of study, and curriculums according to needs, interests, level, and specialization. (0-3 cr per qtr; prereq 170A or B, #)
- 174-175-176. **Clinical Methods and Practice in Speech Pathology.** Case history and analysis; testing and diagnosis of speech defects; techniques and work programs for treatment; practical clinical work. (3 cr per qtr; prereq Spch 61, 67, 161, 162, and 163)
178. **Structure and Function of the Eye; Educational Implications.** An ophthalmologist discusses anatomy and physiology of the eye. An educator presents the educational implications. Consideration of vision screening, visual efficiency, aids. Field trips, films, observations. (3 cr; prereq #)
182. **Education of Partially Seeing Children.** Principles of preparation, selection, and effective use of instructional materials for the partially seeing child; adaptation of school environment. (3 cr; prereq 115, 118, and #)

FOR GRADUATE STUDENTS ONLY(Descriptions in the *Bulletin of the Graduate School*)

- 201.* **Problems: Teaching Social Studies.** (3 cr per qtr)
203. **Supervision and Administration of Special Education.** (3 cr; prereq #)
- 205.* **Problems: Audio-Visual Education.** (Cr ar)
- 207.* **Problems: Radio-Television Education.** (1-3 cr per qtr)
- 215.* **Problems: School Health Education Program.** (Cr ar)
217. **Seminar: School Health Education Program.** (Cr ar)
- 227.* **Problems: Rural Education.** (Cr ar; prereq EdAd 117)
240. **Workshop: Improvement of Instruction.** (1-4 cr)
243. **Recent Research in Reading.** (3 cr)
271. * **Problems: Curriculum Construction.** (Cr ar)
- 273.* **Problems: Reading.** (Cr ar)
- 296.* **Problems: Teaching English.** (Cr ar)

Elementary Education

54. **Literature and Story Telling for Young Children.** (2 cr)
55. **Foundations of Early Childhood Education.** Development, tools, aims of early childhood education. (3 cr; prereq CD 80 or ¶CD 80)
56. **Methods and Observations in Kindergarten.** Directed observations of kindergarten children and procedures. (3 cr; prereq 55 or ¶55)
57. **Nursery-Kindergarten-Primary Lab in Social Studies, Sciences, Art, and Music.** Lectures and laboratory work on methods and materials for children of ages 2 to 6 in relation to nursery school, kindergarten, and home. (4 cr; prereq 55 or ¶55)
59. **Methods and Observation in Nursery School.** Directed observations of nursery school children and procedures. (3 cr)

60. **Teaching Reading in the Elementary School.** Emphasis on intermediate and upper elementary grades. Reading readiness, word recognition techniques, development of basic study skills, development of word meanings, comprehension abilities, and interests and tastes in reading. (3 cr; prereq Ed 75A)
61. **Teaching Social Studies in the Elementary School.** Content and philosophy of the social studies program. Methods of instruction and problems. (3 cr; prereq Ed 75B)
62. **Teaching Mathematics in the Elementary School.** Principles of learning pertinent to the modern program of mathematics in primary and elementary grades. Objectives, content, philosophy, instructional materials, methods of instruction and evaluation. (3 cr; prereq Ed 75A, Math 5)
63. **Children's Literature.** Materials for children's reading in the elementary school program. (2 cr)
64. **Teaching English in the Elementary School.** Development of language power in the elementary school in relation to all activities of the school day. (3 cr; prereq Ed 75A)
65. **Teaching Science in the Elementary School.** Objectives, content, materials, philosophy, and methods of instruction and evaluation; practical applications. (3 cr; prereq Ed 75A, 10 cr in natural science)
66. **Treatment of Learning Difficulties.** Classroom procedures in diagnosis and treatment of learning difficulties at the elementary school level. Emphasis on arithmetic, reading, and other language arts. Requires application of procedures of diagnosis in the elementary school. (3 cr; prereq 60, 62, ¶ student tchg)
102. **Teaching and Supervision of the Social Studies in the Elementary School.** Content and organization of social studies programs. Programs of understanding, improving the learning situation, and effective use of materials. (3 cr; prereq Ed 75B or equiv)
103. **Teaching Science in the Elementary School.** Resources, materials, and their application in the elementary grades. (3 cr; prereq sr, Ed 75A-B or tchg exper)
110. **Practicum: Laboratory School Teaching (K-6).** Experience in teaching and/or research with a class in the University Elementary School. (Cr ar; prereq elem student tchg or elem school tchg, permission of director of the elem school and co-ordinator of elem student tchg)
118. **Education of Blind Children in the Elementary Grades.** Adaptation of broad curriculum areas for blind children in elementary grades; procedures in teaching specialized curriculum, i.e., Braille reading, typing, orientation, and mobility; utilization of family, school, and community resources. (3 cr; prereq 115, 116, and #)
119. **Elementary School Curriculum.** Selection and organization of subject matter for courses; methods, problems, and findings of research by subjects. (3 cr; prereq Ed 75B or equiv)
121. **Literature for the Elementary School.** Evaluative survey of books for children; research related to children's reading interests; selection of literature for elementary schools. (3 cr)
143. **Teaching and Supervision of Reading in the Elementary School.** Objectives, materials, and teaching procedures in lower and intermediate grades; current practices and curriculums; class and individual projects; observation of reading techniques and materials in the demonstration school. (3 cr; prereq 9 cr in education)
149. **Teaching and Supervision of Mathematics in the Elementary School.** Present practices and trends in methods, materials, and curriculum development; review of curriculum studies; evaluation and diagnosis; literature on current issues and problems. (3 cr; prereq 9 cr in education)
150. **Supervision and Improvement of Instruction.** Functions and duties of a supervisor in the improvement of instruction; specific supervisory technique; objective analysis of classroom activity; applications to present-day problems. (3 cr; prereq 9 cr in education)
153. **Teaching and Supervision of English in Elementary Schools.** Improvement of instruction in language, spelling, and handwriting. (3 cr; prereq Ed 75B or equiv)

- 165A-B. Arithmetic for Gifted Children.** Psychology of giftedness in general mathematics; social aspects. Development of creative thinking in children: discovery, generalization, analogy, and abstraction; laws of arithmetic, elementary theory of numbers, geometric intuition, combinatorics, and probability. Source materials for teachers; illustration of procedures. (3 cr per qtr [2 qtrs]; prereq none for 165A, 165A for 165B)
- 166. Current Trends in Kindergarten Education.** Continuing needs of children in our changing culture; current kindergarten practices and recent research. (3 cr; prereq tchg exper in NKP, #)
- 170A. Curriculum and Course of Study Construction.** Principles and methods for selection and organization of units, courses of study, and curriculums at the elementary school level. (3 cr; prereq 119 or #)
- 173A. Organizing Units of Instruction in the Elementary School.** Principles and procedures involved in organizing units; utilizing natural science and social studies in the development of skills in reading and study, oral and written composition, arithmetic, and the arts. (3 cr; prereq 119 or tchg exper)
- 181. Foundations of Elementary School Methods.** Psychology and philosophy related to improvement of elementary school instruction. Utilization of research findings. (3 cr; prereq 9 cr in education)

FOR GRADUATE STUDENTS ONLY

(Descriptions in the *Bulletin of the Graduate School*)

- 226. Seminar: Elementary School Problems.** (No cr)
- 257. Research in Language Instruction in the Elementary Schools.** (3 cr)
- 261.* Problems: Improvement of Instruction.** (Cr ar)
- 263. Research in Mathematics Instruction in the Elementary School.** (3 cr)
- 264. Research in Educational Diagnosis.** (3 cr)

Secondary Education

- 45. Introduction to Business and Distributive Education.** Survey of the field of business and distributive education at the secondary, junior college, and adult levels. (2 cr)
- 58. Core Curriculum Foundations.** Philosophy, nature, scope, organization, and problems of the core curriculum. (1 cr; prereq #)
- 101. Driver Education.** Materials and methods of 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. (Limited to 32) (3 cr; prereq Δ)
- 113. High School Curriculum.** Viewpoints and curriculum issues, reorganization trends, typical research findings by subjects, and analysis of state and local curriculums. (3 cr; prereq Ed 55A-B or equiv)
- 114. Development of the Core Curriculum.** Planning and administering the core curriculum; its philosophical, psychological, and educational bases; preparation of the core teacher. (3 cr)
- 120. Education of Blind Students in Secondary Schools.** Adaptation of curriculum of junior-senior high school for blind students. Preparation of educational materials. Reader service, orientation and mobility, specialized equipment; utilization of guidance and counseling services; local, state, and national resources. (3 cr; prereq 115, 116, 118, and #)
- 122. Literature for Adolescents.** Background for pupil guidance in extensive reading in junior and senior high schools. (3 cr; prereq Ed 55B or jr-sr high school tchg exper)

124. **Foundations of Career Development.** Evaluation of vocational theory and career development research; occupational analysis and industrial structure; critical examination of various methods of classifying the world of work; analysis of labor force and employment trends; basic concepts and principles for effective work in educational and vocational planning and development. (3 cr)
125. **Occupational Information Laboratory.** Using, reviewing, and evaluating occupational information. Sources and types of material, occupational filing plans, and practical techniques at the secondary school level. (3 cr; prereq #)
131. **Advanced Teaching of Technical Business Subjects.** Recent research and trends. (3 cr)
132. **Teaching the Basic Business Subjects.** Recent trends and developments in teaching general business, economic geography, marketing, business law, and consumer education. (3 cr)
134. **Materials and Methods in Economic and Consumer Education.** Development of teaching units; teaching methods; recent aids and materials. (3 cr)
135. **Group Procedures in Guidance.** Content and materials for home room groups, occupations units, and other guidance courses in junior and senior high school. (3 cr; prereq 9 cr in education, EPsy 133 or #)
136. **Organization and Administration of Distributive Education.** Principles, practices, and legislation followed in developing co-operative part-time and adult programs under federal vocational acts. Basic course for teacher co-ordinators and vocational administrators. (3 cr)
- 137A. **Materials and Methods in Co-operative Part-Time Classes.** For co-operative part-time distributive, office, miscellaneous trades, and diversified occupations classes. (3 cr)
- 137B. **Advanced Materials and Methods in Co-operative Part-time Classes.** Individual and group work on related vocational materials. New methods of teaching co-operative part-time, distributive, office, miscellaneous trades, and diversified occupations classes. (3 cr; prereq #)
138. **Training Store and Office Supervisors.** Conducting short unit courses for store and office supervisors and improving on-the-job training in co-operative part-time programs. (3 cr)
139. **Co-ordination Techniques.** Problems of co-ordinators in the co-operative part-time program. Guidance and selection; placing students in work stations; assisting job adjustments; developing the training program. (3 cr)
141. **Co-operative Part-time Work Experience Programs.** Planning, organizing, curriculum building, plant and equipment, promoting and evaluating co-operative part-time distributive, office, miscellaneous trades, and diversified occupations programs. (3 cr)
142. **Business and Distributive Programs for Adults.** Selection and training of evening school instructors; planning and promoting evening school distributive and business education classes. (3 cr)
144. **Teaching Reading in Secondary Schools.** Procedure, objectives, and materials for teaching reading in subject-matter fields. (3 cr; prereq 9 cr in education)
155. **Materials Laboratory for Social Studies Teachers.** Printed and audio-visual materials useful in social studies classes. (3 cr; prereq #)
156. **Trends in Business Education.** Historical development of business education; trends in philosophy, curriculum, and teaching procedures. (3 cr)
159. **Materials Laboratory, Secondary School Distributive Education.** Development of specific related vocational materials for distributive occupations co-operative part-time classes. (3 cr; prereq 137A or EdT 90A-B-C or #)
160. **Materials Laboratory, Occupational Relations.** Development of general related vocational materials for all types of co-operative part-time classes. (3 cr; prereq 137A, EdT 90A-B-C or #)

161. **Curriculum Construction in Business Education.** Curriculum problems; organization and preparation of teaching units. (3 cr; prereq 113)
168. **Current Developments in the Social Studies.** Contemporary literature, curricular trends, and developments in methods. (3 cr; prereq grad or #)
169. **Extracurricular Activities.** Aims and values; practices in organizing, administering, and supervising; methods of evaluation. (3 cr; prereq Ed 55B or equiv)
- 170B. **Curriculum and Course of Study Construction.** Principles and methods for selection and organization of units, courses of study, and curriculums. (3 cr; prereq 113 or 119 or #)
- 173B. **Organizing Units of Instruction in the Secondary School.** Development of principles and procedures for constructing units of instruction. (3 cr; prereq 113 or #)
191. **Advanced Course in the Teaching and Supervision of Secondary Mathematics.** Present practices in methods, materials, and curriculum development; principles of learning applied to mathematics; review of research; preparation and evaluation of units, tests, and materials of instruction. (3 cr)
192. **Mathematics Laboratory.** Sources and types of materials, laboratory projects and techniques of using mathematical devices and instruments, visual aids, and community resources. (3 cr; prereq grad or experienced teacher)
- 199E. **Internship.** Advanced supervised teaching and practice work for candidates for the master of education degree. (Cr ar)

FOR GRADUATE STUDENTS ONLY

(Descriptions in the *Bulletin of the Graduate School*)

200. **Organization and Supervision of Business Education.** (3 cr)
204. **Social Studies Curriculum.** (3 cr)
222. **Seminar: Current Problems in the Techniques of High School Instruction.** (Cr ar)
- 225.* **Problems: Secondary School Supervision.** (Cr ar)
237. **Seminar: Business and Distributive Education.** (No cr)
- 238.* **Problems: Distributive Education.** (Cr ar)
- 239.* **Problems: Business Education.** (Cr ar)
266. **Supervision of High School Instruction.** (3 cr)
280. **Supervision of Counseling.** (3 cr; prereq #)
- 287.* **Advanced Course in the Teaching of Science.** (3 cr)
- 294.* **Advanced Course in Materials and Methods of Secondary School English.** (2 cr per qtr)

Higher Education

184. **Supervision of Student Teaching.** For persons planning to supervise or administer student teaching and other professional laboratory experiences in elementary and secondary education. (3 cr; prereq 15 cr in education or #)

FOR GRADUATE STUDENTS ONLY

(Descriptions in the *Bulletin of the Graduate School*)

- 228.* **Problems: Higher Education and Teacher Education.** (Cr ar)
250. **Higher Education in the United States.** (3 cr)
251. **Curriculum Trends in American Colleges.** (3 cr)
252. **Effective College Teaching.** (3 cr)
253. **Seminar: Improvement of College Instruction.** (Cr ar)

- 253A. Seminar: Materials and Methods in Marriage Education. (4 cr)
- 254. Directed Experience in College Instruction. (Cr ar)
- 284.* Problems: Student Teaching. (3-9 cr)
- 285-286. Professional Education of Teachers. (3 cr per qtr)

EDUCATION (Ed)

General Courses

- 55A. Introduction to Secondary School Teaching. Secondary education: purposes, history, organization, curriculum, pupils; organization of instructional units; teaching profession. Includes lecture, discussion section, and individual youth leadership project. (5 cr; prereq Psy 2)
- 55B. Introduction to Secondary School Teaching. Individual differences and educational measurement: statistics, standardized tests, teacher-made tests, marking and promotion, educational research; psychology of learning and human development. Includes lecture, discussion section, and individual youth leadership project. (5 cr; prereq 55A)
- 55N. Introduction to Teaching Nursing. Basic educational psychology for nursing education majors. Principles of measurement and test usage, psychology of learning, group processes. (5 cr; prereq Psy 2)
- 75A-B. Introduction to Elementary School Teaching. Students should enter the course in the fall, but in special cases students who have not had 75A may be admitted to 75B on recommendation of adviser.
 - 75A. Educational psychology. Child growth and development during elementary school years; principles of learning; adjustment. (5 cr; prereq Psy 2)
 - 75B. Curriculum, measurement, and organization. Individual and trait differences in relationship to educational practices; principles of measurement, descriptive statistics, curriculum and school organization. (5 cr; prereq 75A)
- 81. Introduction to Education for Public Health Nurses. Principles, methods, and materials in education as applied to public health nursing situations. Group work emphasized. (3 cr; not open to candidates for degree in College of Education; prereq PubH 62, 100, and 133)

EDUCATIONAL ADMINISTRATION (EdAd)

General Administration

- 101. Public School Administration. Organization, administration, and general support of public schools in state and local school districts. (3 cr; prereq sr, non-educational administration majors, 9 cr in education)
- 117. Schools in Rural Areas. Administrative and curricular problems peculiar to rural areas; sociological changes in small towns and farm life. Building a school program suited to the culture and needs of people in small towns and villages. (3 cr)
- 118. The Community School. Philosophy, purposes, organization, and functioning of the community school; its relationships with the area it serves. (3 cr; prereq sr, grad)

FOR GRADUATE STUDENTS ONLY

(Descriptions in the *Bulletin of the Graduate School*)

- 201, 202. Foundations in Educational Administration. (3 cr each)
- 210. Public School Finance. (3 cr)
- 211. School Business Management. (3 cr)
- 224. Legal Aspects of Public School Administration. (3 cr)

226. School Plant Planning and Management. (3 cr)
 227. Teacher and Employee Administration. (3 cr)
 228.° Problems: Educational Administration. (1-3 cr per qtr)
 230. School Community Relations. (3 cr)
 231. Workshop: School Community Relations Technique. (1-4 cr)
 232. Workshop: School Business Management. (1-4 cr)
 235. Seminar: Educational Administration. (1-3 cr)
 236. Field Study. Required for the certificate Specialist in Education. (0-10 cr)
 237. Seminar: Educational Law. (1-3 cr)
 238. Seminar: Research and Theory in Educational Administration. (1-3 cr)

Elementary Administration

FOR GRADUATE STUDENTS ONLY

(Descriptions in the *Bulletin of the Graduate School*)

200. Seminar: Elementary School Administration. (3 cr per qtr)
 215. The Elementary School Principalship. (3 cr)
 270A. Problems: Elementary Education. (Cr ar)

Secondary Administration

167. Junior High School. Sources of the movement; purposes, functions, and limitations; fundamental problems, types, and curricular implications of reorganization. (3 cr; prereq sr, 9 cr in education)

FOR GRADUATE STUDENTS ONLY

(Descriptions in the *Bulletin of the Graduate School*)

218. Seminar: Secondary Education. (Cr ar)
 264. The Secondary School Principalship. (3 cr)
 265. The High School Program. (3 cr)
 270B.° Problems: Secondary Education. (Cr ar)

Higher Education Administration

FOR GRADUATE STUDENTS ONLY

(Descriptions in the *Bulletin of the Graduate School*)

253. Administration in Higher Education. (3 cr)
 274. The Junior College. (3 cr)
 290. Financing Higher Education. (3 cr)
 291. Public Relations for Colleges and Universities. (3 cr)

EDUCATIONAL PSYCHOLOGY (EPsy)

General Courses

60. Introduction to Measurement and Statistics. Measures of central tendency, variability, and correlation; principles of test construction. (2 or 3 cr; prereq 6 cr in psychology; offered when feasible)

- 100. Individual Appraisal for Counseling.** Analysis of appraisal techniques; use in guidance and counseling. (3 cr; prereq 9 cr in education)
- 110. Educational Measurement in the Classroom.** Principles and methods for construction, evaluation, and improvement of educational measurements in classroom instruction. (3 cr)
- 116. Introduction to Statistical Methods.** (Not equivalent to EPsy 216, 216A) Basic statistical techniques in educational work. Comprehension of literature using elementary statistical concepts and methods. (3 cr; not open to Master's or Ph.D. degree candidates who will take more than 1 qtr of statistics; prereq ¶116A or #)
- 116A. Introduction to Statistical Methods—Laboratory.** (See EPsy 116) (2 cr)
- 117. Basic Principles of Measurement.** Role of measurement in educational work; principles underlying construction of achievement examinations; developments in educational and psychological measurement; measurement theory and practice as related to appropriate statistical methods; types and uses of derived scores, and factors influencing reliability and validity of educational measurements. (3 cr; prereq 116 or 216 or Psy 70 or equiv)
- 133. Basic Procedures in Student Personnel Work.** Principles and current practices in development and operation of a student personnel program; guidance services and related techniques. (3 cr; prereq 9 cr in education)
- 140. Instruments and Techniques of Measurement.** Measuring intelligence, achievement, interests, attitudes, and personality traits; using measurement in educational guidance, personnel work, administration, and supervision. (3 cr; prereq sr, 110 or 117)
- 142. Individual Mental Testing.** Revised Stanford-Binet and Wechsler Adult Intelligence Scale or Wechsler Intelligence Scale for Children. Student supplies materials for at least one test. Full day or 2 mornings per week required for practice administration of tests. (3 cr; prereq sr, 110 or 117 or ¶117 with #)
- 143. Advanced Individual Mental Testing.** Develops proficiency in administering and interpreting 3 or 4 selected individual mental tests. Limited practicum involved. (3 cr; prereq 142 and #)
- 148. Clinical Diagnosis of Reading Difficulties.** Their relationship to psychological factors, and their clinical remedial correction. (3 cr; prereq EdCI 145)
- 150. Clinical Practice in Remedial Teaching.** Remedial tutoring of individual children who have difficulty in school learning. (3 cr; prereq EdCI 145 or 151, and #)
- 151. Clinical Practice in Educational Diagnosis.** Evaluation, interview technique, preparation of case reports. Work with children referred to the Psycho-Educational Clinic. (3 cr; prereq 142 or EdCI 145, and #)
- 152. Introduction to School Psychological Services.** Relationship of the psychologist to teachers, administrators, parents, and the community. Problems of normal children, including diagnosis and treatment of educational and psychological disabilities. (3 cr)
- 159. Personality Development and Mental Hygiene.** Fall quarter (for seniors and first-year graduate students only): elementary and secondary classroom conditions. Spring quarter (for graduate students only): basic theory, group and individual procedures in treatment. (3 cr)
- 182. Education of Exceptional Children.** Overview of the field of special education. For classroom teachers, counselors, supervisors, and administrators; also the initial course for students working for special class certificates. (3 cr; prereq Ed 55B or 75B or equiv)
- 183. Education of Gifted Children.** Abilities, characteristics, and education of intellectually gifted children and adults. (3 cr; prereq Ed 55B or 75B or equiv)
- 184. Education of Mentally Retarded Children in the Elementary Schools.** Curriculum, materials, and methods of instruction in special classes for educable mentally retarded children in the elementary schools. Problems of administration, diagnosis, parent counseling. Field trips when possible. (3 cr; prereq 182 or #)

185. **Education of the Auditorially Handicapped Child.** Summer workshop. See the *Bulletin of the Summer Session* for description. (3 cr)
186. **Seminar: Education of Emotionally Disturbed and Socially Maladjusted Children.** Discussion and critical evaluation of curriculum, materials, and methods for instruction of disturbed and delinquent children in hospital, training school, and public school settings. (1 cr per qtr; prereq #)
187. **Education of Crippled Children.** Characteristics and abilities of crippled children; discussion of methods and materials for their training; observation of teaching situations involving these groups. Personal consultation will be scheduled in addition to regular class hours. (3 cr; prereq 182 or #)
190. **Educational Problems of Cerebral Palsy.** Unique problems in development, learning, and adjustment produced by cerebral palsy. Study and development of materials to meet the special educational needs. Observations of teaching the cerebral palsied; personal conferences. (3 cr; prereq 182 or #)
191. **Education of the Mentally Retarded in Secondary Schools.** Curriculum, materials, and methods of instruction for educable mentally retarded students in secondary schools. Philosophy, administration, vocational and personal guidance, parent consultation, and work programs. Field trips when possible. (3 cr; prereq 182 or #)
193. **Psychology of Human Learning.** Application to school situations; motivation; rate of learning and forgetting; teaching of skills, meanings, attitudes; reasoning and problem solving; transfer of learning. (3 cr; prereq sr)

FOR GRADUATE STUDENTS ONLY

(Descriptions in the *Bulletin of the Graduate School*)

200. **Seminar: Institute in Guidance.** Participants selected in advance. (3 cr per qtr)
201. **Seminar: Counseling Needs of Able Students.** (3 cr)
- 208.* **Methods in Educational Research.** Suggested for all candidates for graduate degrees. (3 cr)
- 216-217-218. **Statistical Methods in Education.** (3 cr per qtr)
- 216A-217A-218A. **Statistical Methods in Education—Laboratory.** (2 cr per qtr)
219. **Design and Analysis of Statistical Investigations.** (3 cr)
- 219A. **Design and Analysis of Statistical Investigations—Laboratory.** (2 cr)
- 220-221. **Advanced Theory of Measurement.** (2 cr per qtr)
225. **Counseling Theory and Procedure I.** (3 cr)
- 226.* **Counseling Theory and Procedure II.** (3 cr)
- 233.* **Problems: Guidance and Personnel Work.** (1-9 cr)
234. **Seminar: Counseling Theory and Research.** (3 cr)
- 240.* **Problems: Measurement.** (3 cr per qtr)
- 243.* **Problems: Statistics for Students in Education and Psychology.** (3 cr per qtr)
244. **Research in Special Education.** (3 cr)
- 253.* **Research Problems.** (Cr ar)
259. **Personality Theory and Mental Hygiene.** (3 cr)
260. **Educational Psychology Seminar.** (No cr)
261. **Survey of Theory and Research in Education of the Mentally Retarded.** (3 cr)
262. **Functional Analysis of Behavior in Mental Retardates.** (3 cr)
263. **Education of the Retarded: Research Design and Interpretation.** (3 cr)
264. **Assessment of the Handicapped.** (3 cr)
287. **Practicum in School Psychological Services.** (1-3 cr)

- 288. Practicum in Special Education. (3-9 cr)
- 289. Survey of Special Education Problems. (3 cr)
- 290. Advanced Counseling Practicum. (3 cr)
- 292. Recent Literature in Educational Psychology. (3 cr)
- 293.* Psychology of Learning. (3 cr)
- 294.* Recent Theory and Research in Human Learning. (3 cr)

Secondary Education

- 134. School Counseling Procedures. Basic principles and practices related to the work of counselors in the public schools. Lectures, discussion, audio-visual aids, practice in case study analysis and interviewing. (3 cr; prereq 110 or 117, 133, and #)

FOR GRADUATE STUDENTS ONLY

(Descriptions in the *Bulletin of the Graduate School*)

- 282A. Field Practice in Guidance. (1-3 cr)
- 282B. Supervised Practicum in Counseling. (3 cr)

Higher Education

FOR GRADUATE STUDENTS ONLY

(Descriptions in the *Bulletin of the Graduate School*)

- 250. College Student Personnel Work—Development and Administration. (3 cr)
- 251. College Student Personnel Work. (1-3 cr per qtr)
- 254.* Measurement and Evaluation in Higher Education. (3 cr)
- 281. Practice in Personnel Work. (3 cr per qtr)

HISTORY AND PHILOSOPHY OF EDUCATION (HED)

“Philosophy of education” is a deliberate effort to think as critically and adequately as possible regarding the work and purposes of the schools. “History of education” deals with the effect of social forces on the development of education at succeeding epochs in the history of the Western world and with the role of education in shaping the course of events.

- 101. Historical Foundations of Modern Education. Analysis and interpretation of important elements in modern education derived from the Greeks, Romans, Middle Ages, and Renaissance. Provides background useful for the study of all other courses in the history and philosophy of education. (3 cr)
- 110. Intercultural Education. Racial, religious, and nationality problems; their importance for schools. (3 cr)
- 131. Comparative Education. European, Asiatic, and American systems and philosophies of education. Explores possibilities of international education. (3 cr)
- 141. Critical Issues in Contemporary Education. Introduces graduate students to ideas involved in current theory and practice. (3 cr)
- 149-150-151. Social History of American Education. The impact of education on social and institutional developments in America from the colonial period to the present. Although schools both private and public will receive continuous attention, education will be defined broadly to include the work of the family, the religious congregation, the popular press, clubs, and other private associations. (3 cr per qtr)

155. **History of Western Educational Thought.** Examination of the major educational classics of Western civilization. Readings from Plato, Cicero, Locke, Rousseau, Dewey, and others. (3 cr)
156. **History of Ideas in American Education.** Readings in American political, economic, and social development, reference to the emerging system of public education. (3 cr; recommended as background for 170 but is not a prerequisite for 170)
170. **American Pragmatism and Education.** Analysis and interpretation of the educational philosophy of pragmatism (experimentalism). Readings from Dewey, Kilpatrick, Bode, Counts, Childs, and others. (3 cr)
180. **The School and Society.** Readings in social science and philosophy give the student an opportunity to integrate points of view in thinking about the role of the school in present-day society. (3 cr; prereq sr)
182. **Comparative Philosophies of Education.** Examination of competing philosophies of education. (3 cr)

FOR GRADUATE STUDENTS ONLY

(Descriptions in the *Bulletin of the Graduate School*)

- 241.^o **Problems: History and Philosophy of Education.** (3 cr)
242. **Seminar: Educational Philosophy.** (3 cr)
- 296-297-298. **Seminar: American Social and Educational History.** (3 cr per qtr)

HOME ECONOMICS EDUCATION (HEED)

90. **Child Development.** Growth and development of children and problems in training. Emphasis on the preschool child. Observations of children. (3 cr; prereq soph, Psy 2)
91. **Observation, Materials, Teaching in Home Economics.** Philosophy of the home economics program; students' needs and interests; teaching materials; curriculum guides and unit construction; development of home economics in the school program. (5 cr; prereq HE 4, 21, 41, Ed 55A-B, and ¶93)
92. **Teaching Problems in Home Economics.** Teaching procedures; management of home-making department, space and equipment, relationship of teacher to school, community, and profession. (2 cr; prereq sr, 91, 93, and ¶94, ¶192, and ¶194A)
- 93-94. **Supervised Teaching in Home Economics.** Observation, participation, and teaching experience under supervision in different home economics situations and on different age levels. In the second quarter the student spends 6 weeks in a selected school in the state. (3 cr for 93, 6 cr for 94; prereq HE 4, 21, 41, Ed 55A-B)
95. **Field Experience for Home Agents.** Observation, participation, and actual experience under supervision in the Agricultural Extension program. Study of the program on the St. Paul Campus and participation in a selected county program with a home agent. A written report summarizing the experience required. (6 cr; prereq 91, 93, and consent of head of Home Economics Education and director of Agricultural Extension)
190. **Readings in Home Economics Education.** Independent study under tutorial guidance. (1-3 cr; prereq #)
192. **Evaluation in Home Economics.** Measuring progress toward important goals in different areas of home economics; available tests and evaluation materials; construction and refinement of various evaluation instruments. Elementary statistical techniques useful to home economics teachers. (2 or 3 cr; prereq sr, 91, 93, Ed 55A-B)
- 193A. **Home Economics Curriculum.** (Secondary level) Contributions of home economics at elementary and secondary levels; techniques employed in curriculum planning and reconstruction. (3 cr; prereq 94 or #)
- 193B. **Home Economics Curriculum.** (College level) Place and problems of home economics in higher education; curriculum offerings; teaching schedules and load. (3 cr; prereq #)

- 194A. Adult Education in Home Economics.** Objectives; problems affecting community and family life; methods of helping adults and out-of-school youth to solve problems in home living. (3 cr; prereq 91, 93 or equiv)
- 194B. Adult Education in Home Economics.** Planning a community program; teaching procedures; special problems. For teachers and supervisors of adult education. (3 cr; prereq sr, #)
- 195. Space, Equipment, Furnishings, and Materials for Home Economics Departments.** Remodeling old and planning new departments; equipping and furnishing them. Review of research; investigation of problems. (3 cr; prereq 91, 93, HE 49; offered when demand warrants)
- 196. Home Experiences and the Extended Program.** Place of home experiences in the high school program; procedures in directing home experiences; effective use of the period of extended employment of homemaking teachers in the vocational program. (3 cr; prereq sr; offered when demand warrants)
- 197. Organization and Methods of Related Art Teaching.** Development of a working philosophy of related art. Relates art and home economics subject matter in various aspects of home and community life. (1-3 cr; prereq sr, 91, HE 24 or equiv)
- 199E. Internship.** Directed teaching and practice work at the graduate level for candidates for the master of education degree. (Cr ar; prereq #)

FOR GRADUATE STUDENTS ONLY

(Descriptions in the *Bulletin of the Graduate School*)

- 243. Trends in Home Economics.** (3 cr)
- 292.* Problems: Evaluation.** (3 cr)
- 293.* Problems: Home Economics Education.** (1-9 cr)
- 294.* Research Methods.** (3-6 cr)
- 295.* Seminar: Home Economics Education.** (1 cr per qtr)

INDUSTRIAL EDUCATION (Ind)

The manipulative and classroom courses here listed are offered under requirement or election as indicated in the 4-year curriculum. Other courses of laboratory nature, in great number and variety, are offered in other colleges, departments, and divisions of the University. Students may also arrange to take shopwork, drawing, and related courses at the William Hood Dunwoody Industrial Institute, without fees other than those paid at the University.

A letter in parentheses (A, B, C, or D) following the course title designates blocks of courses from which students elect; 12 credits are required from Block A, 6 from B, 6 from C, and 6 from D.

- 1. Elementary Handcrafts.** For students in elementary, art, special, and recreation education. (3 cr)
- 2. Wood Processing I (A).** Use of common hand and machine tools, materials and finishing principles. (3 cr)
- 3. Wood Processing II (A).** Use and maintenance of power equipment; laboratory production experiences. (3 cr; prereq 2 or #)
- 4. Wood Processing III (A).** Building construction practices. Requirement may be satisfied by taking Dunwoody Carpentry or AgEn 7, Farm Building Construction. (3 cr; prereq Δ)
- 6. Introduction to Industrial Arts Teaching.** Objectives, programs, and experiences involving tools, materials, design, and processes of industrial arts teaching. (5 cr; for freshmen and others contemplating the major)

7. **Drafting (B).** Sketching, lettering, use of instruments, orthographic projection, pictorial representation and blueprint reading. (3 cr)
8. **Design I (B).** Laboratory. Introduces the student to creative design as a process of solving problems with tools and materials. (3 cr; prereq 7 or #)
9. **Building Construction Drafting (B).** Principles of orthographic and pictorial representation applied to building construction. (3 cr; prereq 7)
12. **Craftwork (A).** Manipulative experiences in craft mediums suitable for industrial arts, such as plastics, art metal, lapidary, and leatherwork. (3 cr)
15. **Graphic Arts I (A).** Typesetting and presswork, photography, silk screen printing, and general duplicating. (3 cr)
16. **Graphic Arts II (A).** Letterpress, dry point etching, bookbinding, photography, and offset printing. (3 cr)
20. **Electricity and Electronics (C).** Introduction to electricity as an area of industrial arts; basic principles, fundamental skills, projects, processes, and teaching ideas particularized for junior high school. (3 cr)
21. **Communication Electronics (C).** Continuation of Ind 20 into basic principles of radio and audio equipment for industrial arts teaching. Construction practice and principles of vacuum tubes and transistor circuitry. (3 cr; prereq 20)
22. **Industrial Electronics (C).** Principles of television, oscillator circuits, computer circuits, telemetering and control and test equipment circuits; appropriate laboratory activities. (3 cr; prereq 21)
23. **Applied Electronics I (C).** (3 cr; prereq Δ)
24. **Applied Electronics II (C).** (3 cr; prereq Δ)
25. **Metal Processing I (D).** General metalwork, machine practices. (3 cr; prereq Δ)
26. **Metal Processing II (D).** General metalwork, machine practices. (3 cr; prereq Δ)
27. **Metal Processing III (D).** General metalwork, welding. (3 cr; prereq Δ)
28. **Metal Processing IV (D).** General metalwork, sheet metal fabrication. (3 cr; prereq Δ)
29. **Metal Processing V (D).** Advanced metalwork. (3 cr; prereq Δ)
30. **Small Gas Engines (A).** Operating principles, maintenance and adjustment of 2- and 4-cycle gas engines. May be satisfied by Dunwoody Institute course of same title. (3 cr; prereq Δ)
35. **Fundamentals of Vocational Education.** Development and characteristics of vocational training; conservation of human and material resources; social and economic significance; current theories and practices; programs of organization and control; types of programs, support; selection, training, and certification of teachers. (3 cr)
40. **Analysis and Course Organization.** Need for and types of instructional analysis; study of objectives; development of instructional course organizations in selected fields. (5 cr)
50. **Industrial Practices and Processes.** An organized series of field trips to be selected; representative industrial plants; visitation preceded by classroom study and investigation. (3 cr; prereq 35)
55. **Teaching Industrial Arts.** Laboratory in study and practice of teaching industrial arts. (5 cr; prereq 55A or 55A)
- 60A-B-C. **Student Teaching.** (3 cr each, [9 cr required]; prereq 6 and 55 or 6 and 100, Δ)
- 60D. **Student Teaching.** Elective course. (3 cr; prereq Δ)
- 90-91-92. **Independent Study.** Self-directed study; preceded by classroom instruction in basic research procedures. (3 cr per qtr; prereq jr or #)
100. **Industrial Instruction.** Concepts and techniques of instruction in industrial arts, trade and industrial schools and classes, and training-within-industry programs. (3 cr; prereq 40, Ed 55B, #)

101. **Tests in Industrial Subjects.** Application of principles of evaluation to shop and drawing subjects. (3 cr; prereq Ed 55B)
102. **The General Shop.** Lectures only. Purpose of general shop organization; types of shops, equipment, instructional materials and procedures, pupil personnel plans. (3 cr)
103. **Instructional Aids.** Planning, construction, use. (3 cr; prereq 55 or 100 or equiv)
105. **Administration of Industrial Education.** General and vocational phases; objectives, programs, and practices; laws, rulings, and standards for aid; significant literature. (3 cr; prereq 35 or equiv)
106. **Industrial Education Workshop.** Areas of concentration vary with each successive offering. (3 or 6 cr; prereq tchg exper, #)
107. **Co-ordination.** Duties and responsibilities of co-ordinators in trade schools, part-time programs, and comprehensive high schools. (3 cr; prereq 35 or 125, or #)
109. **Conference Leading for Industry.** Purposes, advantages, and limitations of conference method. Techniques of conference procedure. Experience in planning, leading, and evaluating conferences and in writing summaries. (3 cr; prereq #)
110. **Vocational Guidance.** History of 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 cr; prereq Ed 55B)
111. **Instructional Materials Laboratory for Nonmajors.** For experienced elementary teachers, recreation leaders, and others needing manipulative skills and craftwork activities in their teaching; individual and group projects. (3 cr; prereq tchg exper or #)
115. **Supervision of Industrial Education.** Principles of creative supervision; duties, organization for supervision. (3 cr; prereq 35 or 105)
125. **Philosophy and Practice of Industrial Education.** History, objectives, development, and current practices of the field. (3 cr, §35)
135. **Industrial Course Construction.** Principles and techniques. Experience in planning, organizing, and building a teaching guide. (3 cr, §40)
136. **Instructional Materials Laboratory.** Laboratory and shop experiences with new materials, processes, and equipment; development of complementary instructional materials. 3-6-9 cr; prereq major, tchg exper or #)
150. **Vocational Education Surveys.** Practices and techniques in the study of communities or areas for the establishment or improvement of vocational courses and facilities. (3 cr; prereq 105 or 125 or equiv)

FOR GRADUATE STUDENTS ONLY

(Descriptions in the *Bulletin of the Graduate School*)

- 200.* **Research Problems.** (3-6-9 cr per qtr)
205. **Seminar: Industrial Education.** (No cr)
250. **Literature of Industrial Education.** (3 cr)
251. **Research in Industrial Education.** (3 cr)

Off-Campus Courses. Services in conference leader training and instructor training; with or without credit and fee; consultation on industrial training programs.

METHODS AND STUDENT TEACHING (EdT)

For description of the requirements and procedures for admission to student teaching, see Section I. Student teaching courses listed in other sections of this bulletin are as follows (see entries for the departments concerned): AgEd 91; ArEd 86-87-88; HEEd 93-94; Ind 60A-B-C-D; MuEd 60-61-62; PEM 73-74-75-76; PEW 90A-B-C-D-E.

For the practicum in laboratory school teaching in special education, see EdCI 110; for clinical methods and practice in speech pathology, see EdCI 174-175-176; for practice in personnel work, see EPsy 281-282; for graduate practicum in special education, see EPsy 288; and for internship, see EdCI 199E.

Nursing Education

51A-B. Teaching Nursing. Observation, principles of teaching applied to clinical and classroom teaching in schools of nursing. Planning and evaluation of instruction. Supervised student teaching of nursing subjects. (10 cr; prereq Ed 55N)

Recreation Leadership

84A-B-C. Practice and Field Work in Recreation Leadership. Students are assigned to selected agencies. (2 cr; to be taken during jr yr; prereq recreation majors)

85A-B-C. Practice and Field Work in Recreation. Students are assigned to selected agencies. (1-2 cr; to be taken during sr yr; prereq recreation majors or minors)

Elementary Education

50. Junior Practicum in Special Education. Supervised observation and participation in classrooms and related school activities for exceptional children; a pre-student teaching exploratory experience. (3 cr; prereq #)

52. Student Teaching.** Primarily for students wishing to elect credits in student teaching in addition to regular requirements. (Cr ar)

53A-B. Teaching Handicapped Children.** Observing work with special classes; teaching under direction. Conducted in co-operation with the public schools of Minneapolis and St. Paul. (6 cr per qtr; prereq #)

54A-B. Student Teaching in the Elementary School.** Five half-days a week in classroom participation and teaching under supervision. (6 cr per qtr)

77. Student Teaching in the Nursery School.** Twelve hours each week in supervised classroom participation. (4 cr)

78. Student Teaching in the Kindergarten.** Five half-days each week in supervised classroom participation in schools. (6 cr)

79. Student Teaching in the Primary Grades.** Five half-days each week in supervised classroom participation in schools. (6 cr)

Secondary Education

52. Student Teaching.** Supervised teaching primarily for students wishing to elect credits in student teaching in addition to regular requirements. (Cr ar)

60. Student Teaching in Library Science.** For both liberal arts college graduates and College of Education undergraduates intending to become school librarians. (3 cr; prereq Lib 53, 62, 70, 74, 171, 172 [or permission of college supervisory prof], sr)

67.† Student Teaching in Mathematics.** (3 cr U High, 6 cr off-campus, total 9 cr; prereq sr, Math 60 or ¶60, and 67A-B-C during same yr; satisfactory completion of each qtr's work necessary for continuation)

67A-B-C.† Teaching Secondary School Mathematics.** Methods, materials, curriculums, and principles of learning pertinent to secondary school mathematics. (3 cr [f], 1 cr [w], 1 cr [s], total 5 cr; prereq sr, 67 during same yr)

67M. Teaching Secondary School Mathematics. (3 cr; prereq minors only)

** Admission only by application to the director of student teaching.

- 68.†** **Student Teaching in Science.** (3 cr U High, 6 cr off-campus, total 9 cr; prereq sr, and 68A-B-C during same yr; satisfactory completion of each qtr's work necessary for continuation)
- 68A-B-C.†** **Teaching Secondary School Science.** Procedures in selecting and organizing materials and in teaching secondary school science. (3 cr [f], 1 cr [w], 1 cr [s], total 5 cr; prereq sr, 68 during same yr)
- 68M. **Teaching Secondary School Science.** (3 cr; prereq minors only)
- 69.†** **Student Teaching in the Social Studies.** (1 cr U High [jr yr], 3 cr U high and 6 cr off-campus [sr yr]; prereq ¶Ed 55A for jr...69A-B-C during same yr for sr; satisfactory completion of each qtr's work necessary for continuation)
- 69A-B-C.†** **Teaching Social Studies in the Secondary School.** (3 cr [f], 1 cr [w], 1 cr [s], total 5 cr; prereq sr, 69 during same yr)
- 69M. **Teaching Social Studies in the Secondary School.** (3 cr; prereq minors only)
- 70.†** **Student Teaching in Modern Languages.** (3 cr U High, 6 cr off-campus, total 9 cr; prereq sr, and 70A-B-C during same yr; satisfactory completion of each qtr's work necessary for continuation)
- 70A-B-C.†** **Teaching Modern Languages.** Procedures in selecting and organizing materials and in teaching the modern languages. (3 cr [f], 1 cr [w], 1 cr [s], total 5 cr; prereq sr, 70 during same yr)
- 70M. **Teaching Modern Languages.** (3 cr; prereq minors only)
- 71.†** **Student Teaching in Latin.** (3-9 cr total [all off-campus]; prereq sr, and 71A-B-C during same yr; satisfactory completion of each qtr's work necessary for continuation)
- 71A-B-C.†** **Teaching Latin.** Procedures in selecting and organizing materials and in teaching Latin. (3 cr [f], 1 cr [w], 1 cr [s], total 5 cr; prereq sr, 71 during same yr)
- 71M. **Teaching Latin.** (3 cr; prereq minors only)
- 72.** **Student Teaching in Distributive Education Subjects.** Required of all students majoring in distributive education. (9 cr total; prereq Ed 55B, #)
- 73.** **Student Teaching in Business Subjects.** Required of all students majoring in business education. (9 cr total; prereq Ed 55B, #)
74. **Teaching Journalism.** Methods and techniques of presenting journalism to students of less than college level. Required of all students with a minor in journalism. (3 cr; prereq Jour 41 or 51)
- 75.†** **Student Teaching in Language Arts.** (3 cr U High, 6 cr off-campus, total 9 cr; prereq sr, and 75A-B and C or D during same yr; satisfactory completion of each qtr's work necessary for continuation)
- 75A-B-C-D.** **Teaching Language Arts in Secondary School.**
- 75A. Required of all majors in speech, English, language arts. Content and method in teaching reading and literature, writing and related problems of grammar, usage, spelling, speaking, and listening. (3 cr; prereq sr, 75 during same yr)
- 75B. Required of all majors in speech, English, language arts. Special emphasis on recent trends in teaching language arts, especially writing and grammar. Stress on variant systems of grammatical analysis. (1 cr; prereq sr, 75 and 75A during same yr)
- 75C. Required of all English and language arts (English core) majors. Emphasizes speech, dramatics, debate, discussion, and related co-curricular activities. (1 cr; prereq sr, 75 during same yr)
- 75D. Required of all speech and language arts (speech core) majors. Content and methods in teaching speaking, listening, and dramatic activities. Specifically for those who will teach a course in speech in secondary schools. (1 cr; prereq sr, 75 during same yr)

** Admission only by application to the director of student teaching.

- 75G. **Teaching Language Arts in Secondary School.** Overview of method and content in secondary school English. (3 cr; prereq minor in English or language arts with major in fields other than speech)
- 76G. **Teaching Language Arts in Secondary School.** Overview of method and content in secondary school speech and related co-curricular activities. (3 cr; prereq minor in speech with major in fields other than English)
80. **Teaching Typewriting and Bookkeeping.** General methods and techniques in teaching typewriting and bookkeeping. (2 cr; prereq Ed 55B or ¶Ed 55B)
81. **Teaching Shorthand.** Examination and evaluation of various methods of teaching shorthand. Application of psychological principles to teaching. (2 cr; prereq Ed 55B or ¶Ed 55B)
82. **Teaching Basic Business Subjects.** Developments in content and method in teaching nonvocational business subjects. (2 cr; prereq Ed 55B or ¶Ed 55B)
- 90A-B-C.† **Teaching Distributive Education Subjects.** Methods of teaching distributive education subjects in high schools and junior colleges. (2 cr per qtr; prereq #)
- 93.†** **Student Teaching in the Core Curriculum.** (12 cr total [all off-campus]; prereq sr, and 93A-B, or ¶93B)
- 93A-B.†** **Methods of Teaching for Core Majors.** (3 cr for A, 2 cr for B, total 5 cr; prereq sr)

MUSIC EDUCATION (MuEd)

Note—For courses in music see *Bulletin of the College of Science, Literature, and the Arts.*

- 4-5-6-7. **Applied Instrumental Technique.** Divided into 4 quarters: 2 strings, 1 brass and percussion, 1 woodwind. Theory and technical development of instruments, elementary instruction in instrument playing, special attention to routine of class instruction. (2 cr per qtr; prereq music education major)
8. **Instrumental Technique.** Theory and technical development of the percussion instruments. Elementary instruction and accomplishment on percussion instruments with the main emphases being snare drum, timpani, and other percussion instruments. (2 cr; prereq music education major or #)
9. **Instrumental Technique.** Elementary instruction and accomplishment on two of the following instruments as selected by the instructor: oboe, flute, bassoon, French horn, cornet, tuba. (2 cr; prereq 5 and 6)
10. **Instrumental Technique.** Elementary instruction and accomplishment on three of the following instruments as selected by the instructor: oboe, flute, bassoon, French horn, cornet, tuba. (2 cr; prereq 5, 6, and 9)
20. **Music Educators' Chorus.** Performance of music suitable for secondary schools at concerts in conjunction with all-day student teaching visits to public schools in Minnesota. Other music performed in rehearsal until stylistically correct. Additional music sight reading for repertory purposes. Sings for and with visiting high school choruses on campus. Sings a cappella and accompanied music for mixed chorus, men's chorus, women's chorus, and small ensembles. Serves as a demonstration group for materials and methods taught in music education course work. (1 cr; prereq full acceptance in College of Education undergraduate music education major sequence)
- 50A. **Teaching Music in Primary Grades.** Practical methods for teaching music in nursery school, kindergarten, and grades 1, 2, 3. The child's voice, rote singing, note reading, new practices, materials. (2 cr; prereq #)
- 50B. **Teaching Music in Intermediate Grades.** Music methods in grades 4, 5, 6; rhythmic and melodic problems; voice testing, 2- and 3-part singing; integration. (2 cr; prereq #)
51. **Teaching Music.** (Kindergarten-Primary grades) For nonmusic majors. Appreciation, methods. (2 cr; prereq Mus 4)

** Admission only by application to the director of student teaching.

52. **Teaching Music.** (Intermediate grades) For nonmusic majors. Appreciation, methods, materials. (2 cr; prereq 51, Mus 4 or #)
53. **Teaching Music in Secondary Schools.** Organization and methods of teaching chorus, glee clubs, voice classes. Attention to changing voice, voice combinations, procedures; materials for public appearances. (3 cr; prereq Mus 2T, #)
59. **Choral Literature and Conducting.** Intimate contact with vocal materials and actual practice in conducting. (2 cr for sr, 1 cr others)
- 60-61-62. **Student Teaching and Supervision of Music.** Experience in carrying forward, under supervision, the music activities of elementary, junior and senior high school teachers. (9-12 cr; prereq sr, 53, Ed 55B, #)
63. **Conducting I.** Basic elements of baton technique; styles of beats, types of arcs, preparatory beats, patterns. (2 cr; prereq 6 or #)
64. **Band Organization.** Organization, promotion, curriculum, administration, equipment, problems of school band. (3 cr; prereq 6, #)
65. **Instrumentation.** Theoretical study of orchestral and band instruments, in combination. Revision of materials suitable for school use; capacity and capability of school performance on various instruments. (3 cr; prereq sr, Mus 6T)
68. **Teaching Instrumental Music.** Teaching and directing of school instrumentalists, band and orchestra ensembles, survey of school music materials. (3 cr; prereq #)
69. **Instrumental Literature and Conducting.** Intimate contact with instrumental materials and actual practice in conducting. (2 cr for final quarter, 1 cr other quarters)
100. **Principles.** Philosophy, objectives, trends, content, evaluation of school music programs. (3 cr)
103. **Psychological Foundations.** Implications of developmental and objective psychological data in music theory and acoustics. (3 cr; prereq sr, #)
104. **Advanced Topics: Vocal Music.** Empirical research and literature on voice development in individual, class, and choral work. Individual surveys of performance practices and organization of school vocal groups; selection of vocal music. (3 cr; prereq sr, #)
105. **Advanced Topics: Instrumental Music.** Individual selection of topics for intensive study. Bibliographical methods, library resources. (3 cr; prereq sr, #)
124. **Selection, Conducting of Choral Materials.** Student conducting with class as performing ensemble; criteria for selecting choral and combined choral and instrumental materials; rehearsal techniques. (3 cr; prereq sr; offered when feasible)
125. **Selection, Instrumental Music Materials.** Sources and criteria; orchestra, band, ensemble music, and choral accompaniments; class teaching methods, books; individual projects, group activities. (3 cr; prereq sr; offered when feasible)
150. **Organization, Supervision of Vocal-Instrumental Music in Elementary Schools.** Trends reflected in teaching materials and syllabi. Implications of supervision practices in other educational fields. (3 cr; prereq 6 cr in music education, 9 cr in music, and 6 cr in education; offered when feasible)
160. **Organization, Supervision of Vocal-Instrumental Music in Secondary Schools.** Practical problems in school music; individual projects, group activities; classroom management, supervisory techniques, scheduling, unit construction, instruments, repertory. (3 cr; prereq 6 cr in music education, 9 cr in music, and 6 cr in education; offered when feasible)
170. **Recent Research and Literature.** Current research; evaluation of teaching materials; appraisal of research techniques. (3 cr; offered when feasible)
194. **Advanced Selection, Conducting of Choral Materials.** Criteria for selecting choral music for school groups. Analysis of selections of varying degrees of difficulty; application of advanced rehearsal and conducting techniques with the class as a performing choral group for student directors. (3 cr; prereq 124)

FOR GRADUATE STUDENTS ONLY(Descriptions in the *Bulletin of the Graduate School*)224.* **Research Problems.** (3-9 cr)**NURSING EDUCATION (NuEd)***Note*—For description of courses in nursing and nursing administration see *Bulletin of the School of Nursing*.

69. **Survey of Conditions and Trends in Nursing.** Exploration of nursing problems in contemporary society; historical development; factors in the social structure affecting nursing; evolving professional nursing obligations. (3 cr)
162. **Personnel Work in Nursing.** Principles and techniques of personnel work applied to problems in nursing; recruitment, selection, orientation, motivation, communications, evaluation, and morale maintenance. (3 cr)
168. **Evaluation of Achievement.** Principles, techniques, and summarization methods of evaluation applied to nursing. (3 cr; prereq sr, Ed 55N or NuAd 173 or #)
171. **The Curriculum of the School of Nursing.** Principles of curriculum development applied to education programs in nursing. (3 cr; prereq 69, EdT 51A-B or #)
175. **Educational Administration in Nursing.** General orientation to the functions involved in administering educational programs in nursing; responsibilities of faculty members. (3 cr; prereq sr or #)
190. **The Survey in Nursing Education.** Survey techniques in evaluating an educational field. (3 cr; prereq #)
195. **Problems in Nursing Education.** Individual study of a problem in the field of nursing education. (1-9 cr; prereq regis in grad program and Δ)
- 197E. **Advanced Teaching of Nursing.** Investigation of research in learning and teaching; implications for nursing. (3 cr; prereq regis in M.Ed. program or #)
- 198E. **Advanced Teaching of Nursing.** Identification of problems of learning. Individual and group methods of problem solving. (6 cr; prereq 197E and ¶EdCI 199E)

PHYSICAL EDUCATION FOR MEN (PEM)*Nonprofessional Courses*

- 1A-B-C, 2A-B-C. **Sports Education.** Elective specialized courses in physical education including instruction in swimming, diving, lifesaving, bowling, wrestling, weight lifting, badminton, basketball, golf, softball, handball, paddleball, squash rackets, skating, dancing, archery, gymnastics, volleyball, tennis, trampoline, and adapted activities for the handicapped. (1 cr per qtr)

Professional Courses

- 4A. **Football Fundamentals.** Demonstrations and practice in football fundamentals for all positions on a football team. (1 cr)
- 4B. **Basketball Fundamentals.** Demonstrations and practice, individual and team offensive and defensive tactics. (1 cr)
- 4C. **Track Fundamentals.** Demonstrations and practice in all track and field events. (1 cr)
- 5A. **Touch Football, Calisthenics, Tactics.** Touch football, six-man football, calisthenic nomenclature, conditioning drills, posture exercises, mimetics, story plays, reconditioning exercises, grass drills, marching tactics. (1 cr)
- 5B. **Gymnastics.** Stunts on the buck, side horse, long horse, parallel bars, low bar, high bar, rings, trampoline, springboard, and mats; stall bar exercises; rope climbing; and pyramid building. (1 cr)

- 5C. **Stunts, Contests, Softball, Baseball.** Individual double and triple stunts; combative stunts; mass contests; weight lifting; softball; baseball fundamentals. (1 cr)
- 6A. **Intramural Sports.** Fundamentals and team play in soccer, speedball, and volleyball. (1 cr)
- 6B. **Intramural Sports.** Ice hockey, handball, paddleball, and squash rackets. (1 cr)
- 6C. **Aquatics.** Advanced swimming, diving, lifesaving. (1 cr)
- 7A. **Games and Relays.** Low organized games for gymnasiums, playgrounds, camps, etc.; social games for recreation; progressive game parties; relays. (1 cr)
- 7B. **Boxing and Wrestling.** (1 cr)
- 7C. **Recreational Games.** Badminton, aerial darts, deck tennis, paddle tennis, table tennis, bowling, horseshoes, and archery. (1 cr)
8. **Tennis and Golf.** (1 cr)
- 9A. **Fundamental Rhythms.** Basic steps and folk dances. (1 cr)
- 9B. **Square and Ballroom Dancing.** Instruction in circle, line, square, mixer, couple dances; square dance calling. (1 cr)
11. **Survey of Recreation Activities.** Requires the student to search out, analyze, and classify recreation opportunities on the campus and in the Twin Cities area. (3 cr)
23. **Introduction to Recreation Leadership.** Study of and participation in group recreation programs in Coffman Memorial Union. (3 cr)
32. **Introduction to Physical Education.** Orientation course covering briefly the history, vocational aspects, and fundamental principles of physical education. (3 cr)
43. **Camp Aquatics.** Administration of waterfront program and practice in the basic skills in handling small craft. (2 cr)
45. **Camp Craft.** Practical experience in various phases of camping and outdoor education. (2 cr)
46. **Camp Leadership.** Introduction to field of camping and outdoor education for prospective counselors. (2 cr)
49. **Social Aspects in Leisure.** Sociological consideration of leisure and recreation as parts of our total socio-economic structure. (3 cr)
50. **Human Anatomy.** Emphasizes bones, nerves, and muscles and their significance in physical education. (3 cr)
51. **Mechanics of Movement.** Structure of the body, principles and mechanics of bodily movements. (3 cr; prereq 50 or Anat 57)
52. **Leadership in Social Activities.** Technique of leadership in social games, parties, dances, outings, etc. (3 cr)
55. **Methods and Materials in Physical Education.** Application of principles of methodology in the teaching of physical education class activities and in coaching. Includes 3 hours per week in observation and practice in leadership in activities classes. (4 cr; prereq 5A-B-C, 6A-B-C, 7A-B-C, Ed 55A or ¶Ed 55A)
56. **The Nature and Function of Play.** The biological play drives and the theory and philosophy of play and recreation. (3 cr; prereq soph)
57. **The Organization and Conduct of Recreation Centers.** Operation, management, facilities, equipment, and programs of recreation centers. (3 cr; prereq 23)
58. **Leadership in Community Recreation.** Breadth and scope of leadership in recreation. (3 cr; prereq 57)
59. **Instructor's Course in First Aid.** Preparation to teach the standard course in first aid. (3 cr; prereq PEW 25 or Standard Certificate, age 20)
- 60A. **Prevention and Care of Injuries.** Policies for conditioning of athletes in interscholastic and intercollegiate sports, safety controls, and care and prevention of injuries in physical education activities. (3 cr; prereq 50 or Anat 57)

- 60B. Athletic Training Laboratory.** Thirty hours of practical experience in the training room under supervision. (1 cr; prereq 60A)
- 61. History of Physical Education.** The influence of social, economic, political, and religious factors in the development of physical education from ancient times to the present. Origin and development of games and sports. (3 cr)
- 63. Organization and Administration of Physical Education.** Problems of organization, administration, and supervision in required and elective courses, recreation and inter-school athletics. (3 cr; prereq 32 or 101, 55)
- 64A-B. Leadership in Nature Recreation.** Identity and scope of nature recreation field; classwork and field trips. (2 cr per qtr; prereq 15 cr in natural science)
- 65. Adapted Physical Education.** Philosophy, principles, and techniques of adapting the physical education program to meet the needs of handicapped pupils. (3 cr; prereq 51, Anat 57)
- 66. Officiating Football and Basketball.** Qualifications of officials, officiating ethics, discussion of rules, and officiating techniques. Four hours per week in theory and practice under supervision. (3 cr; prereq 4A, B)
- 67. Football Coaching.** Theory, strategy, generalship, styles of offense and defense, methods of organizing practices, and handling of players. (2 cr; prereq 4A or 1 yr experience on squad)
- 68. Basketball Coaching.** Theory, styles of offense and defense, the conditioning and handling of players. (2 cr; prereq 4B)
- 69. Track Coaching.** Techniques of performance in all of the standard track and field events; methods of coaching; organization of track meets; study of rules; officiating methods and practice. (2 cr; prereq 4C)
- 72. Baseball Coaching.** The theory of playing each position, batting, coaching runners, and team play; study of the rules; officiating methods and practice; organization of practices. (2 cr)
- 73, 74, 75. Student Teaching.** Six hours per week. One quarter devoted to coaching, 2 quarters to teaching physical education classes, including experience at 2 of the 3 school levels. (3 cr per qtr; prereq 55, Ed 55B)
- 76. Student Teaching—Block Plan.** Full time teaching for one-half term. (9 cr; not open to students who have taken 73, 74, 75; prereq 55, Ed 55B)
- 78. Scout Leadership.** Orientation course for students who are interested in the Boy Scout program. (2 cr)
- 81. Coaching of Ice Hockey.** Orientation of the prospective coach and physical education teacher to the fundamentals and advanced knowledge of hockey. (2 cr; prereq 6B or #)
- 96. Administration of Intramural Sports.** Principles, policies, procedures, personnel, and planning involved in administration of intramural sports programs with emphasis on secondary school level. (2 cr; prereq jr)
- 97. Testing in Physical Education.** Selection, evaluation, construction, and administration of tests. Emphasis on physique, motor, and sports skill testing at secondary school level. (2 cr; prereq Ed 55B)

PHYSICAL EDUCATION FOR WOMEN (PEW)

Nonprofessional Courses for Undergraduate Students

The following activity courses in physical education for women are open to students in the College of Education. After the 5-credit requirement has been met, students may elect additional courses listed below. Students should register for activity classes in 210 Johnston Hall during the regular college registration period. A physical education fee of \$3.25 per quarter (maximum \$6.50) is charged for all activity courses. Students should check the *Class Schedule* to be sure their Activity

Rating (which is required) is acceptable for the class in which they register. Those who have not received an Activity Permit Card may secure one at 101 Norris Gymnasium. For special permission to take two courses in physical education, see Miss Tenney, 106 Norris Gymnasium. All classes meet in Norris Gymnasium for the first meeting. A student forfeits her place in class if she is absent the first day the class meets unless she notifies 101 Norris Gymnasium (373-3403) that she is unable to attend. If a class is closed when a student registers, she should report to the first class meeting for possible cancellations.

Aquatics

Swimming: beginning, advanced beginning, intermediate, advanced, and synchronized
 Lifesaving: American Red Cross senior course
 Water safety: American Red Cross water safety instructors' course
 Diving: beginning springboard diving

Rhythms

Ballroom dance, beginning
 Folk and square dance
 Modern dance: beginning, intermediate, advanced

Individual and Dual Sports

Archery: beginning and intermediate
 Badminton: beginning

Bowling: beginning

Fencing: beginning
 Golf: beginning, intermediate, advanced
 Horseback riding: beginning
 Riflemarksmanship: beginning
 Skating: plain and figure
 Social games and mixers
 Tennis: beginning, intermediate, advanced

Team Sports

Basketball
 Softball
 Volleyball

Posture and Individualized Activities

Posture and individual exercise
 Tumbling and trampolines
 Conditioning exercises

Professional Courses for Undergraduate Majors

20ABC-21ABD-22ABC. Physical Education Activities.

Fall: 20A—Badminton (1 cr); 20B—Skills and officiating of fall team sports (1 cr); 20C—Archery and bowling (1 cr); 21D—Posture and functional exercise (1 cr)

Winter: 21A—Advanced basketball ($\frac{1}{2}$ cr); 21B—Rhythmic fundamentals and elementary folk dance (1 cr)

Spring: 22A—Folk and ballroom dance (1 cr); 22B—Golf (1 cr); 22C—Tennis (1 cr)

25. **ARC: Standard Advanced First Aid.** Lectures, demonstration, and practice in emergencies and first aid treatment. American Red Cross Standard Advanced Certificate in First Aid received upon successful completion of course. (2 cr)

40ABCD-41AB-42A. Physical Education Activities.

Fall: 40A—Elementary modern dance ($\frac{1}{2}$ cr); 40B—Skills and officiating of softball and volleyball (1 cr)

Winter: 40D—Intermediate modern dance (1 cr); 41A—Advanced aquatics (1 cr); 41B—Officiating basketball ($\frac{1}{2}$ cr; prereq 21A)

Spring: 42A—Senior life saving (1 cr; prereq 41A); 40C—Stunts, tumbling, and apparatus (1 $\frac{1}{2}$ cr)

45. **Physical Education Activities for the Elementary School.** Laboratory course for PEW 70. Experience with graded activities for the elementary school child. Problems of organization and teaching progressions considered. (2 cr; prereq elementary education majors only)

47. **Teaching Dance and Rhythmic Activities.** Methods in the teaching of creative rhythmic activities, singing games, folk and ballroom dance. Former includes an approach to children's rhythm and modern dance. (3 cr; prereq 22A, 21B, 40A, 40D)

48. **Teaching Individual and Dual Sports.** Special techniques and methods of teaching archery, badminton, bowling, golf, and tennis. Student teaching within the group. Organization of competitive and recreational programs. (3 cr; prereq #)

49. **Teaching Team Sports.** Special techniques for each sport and methods of teaching. Organization of extracurricular activities. Practice in skills and student teaching within group. (2 cr)
51. **Mechanics of Movement.** Principles of mechanics of movement with laboratory studies involving the kinesiological analysis of sport techniques. (3 cr; prereq Anat 57)
53. **The Role of the Physical Educator in Recreation.** Function in school and community recreation; philosophy of recreation in daily living; relationship of recreation and physical education; leadership. (3 cr; prereq physical education majors)
54. **Camp Leadership.** Current trends and standards in camping; organization and administration of the camp program; responsibilities and duties of a counselor; committee projects; practical work in camp craft. (3 cr)
62. **Teaching Physical Education Activities.** Methods in team and individual sports, rhythms and self-testing in the junior-senior high school program. (3 cr; prereq physical education minors and *recreation* majors)
70. **Teaching Health and Physical Education in the Elementary School.** Methods of instruction in health and physical education for the elementary education major. (3 cr; prereq PEW 45, 3rd qtr soph, elementary education majors)
71. **Applied Physiology.** Lectures and laboratory problems demonstrating the physiological bases for objectives and content of the physical education program. (3 cr; offered when demand warrants)
76. **Advanced Folk Dance.** Theory and practice of folk dance with emphasis on national and racial origins and the relationship of dance to other folk arts. (2 cr; prereq #)
77. **Teaching Aquatics.** Methods and procedures related to organization, content and teaching of swimming and life saving; opportunity to qualify for the American Red Cross Water Safety Instructor's Certificate. Pool control and sanitation. (2 cr; prereq 41A, 42A)
79. **Massage and Therapeutic Exercises.** Principles of massage, conditions especially applicable to physical education, athletic injuries, foot disorders, paralysis, and certain functional and nervous disorders. Visits to Twin Cities physiotherapy departments. (2 cr; offered when demand warrants)
80. **History and Trends in Dance.** History and philosophy of dance; also relation to allied arts. (3 cr; prereq #)
82. **Principles of Physical Education.** Philosophy of physical education and principles underlying curriculum building, methods of teaching, measurement, and outcomes. (3 cr; prereq sr)
83. **Methods and Materials of School Health Education.** Methods, materials, problems, and evaluation of health education in preparation for health teaching. Allocation and gradation of health subject matter. (3 cr)
85. **Teaching Posture and Self-testing Activities.** Methods of teaching posture, functional exercise, stunts, tumbling, and apparatus. Practical procedures relating to appraisal and correction of posture problems. Principles of good movement applied through student teaching within the group. (3 cr)
86. **Advanced Physical Education.** Fundamentals in physical education as applied in the elementary school. (1 cr)
87. **Dance Composition.** Advanced modern dance theory and practice. Principles of composition with practical application. (2 cr; prereq #)
88. **Advanced Problems in Dance Composition.** Various approaches to dance composition will be studied. (2 cr; prereq #)
89. **Dance Production.** Various phases of dance production in schools and colleges. Dance recital and demonstration. Elements of stage craft and costuming. (3 cr; prereq #)
- 90ABC. **Student Teaching in Physical Education.** (3 cr [f], 3 cr [w], 3 cr [s]; prereq Ed 55A-B, major in physical education)

- 90D. **Orientation to Student Teaching.** Program and problems of organization and management in physical education; begins with fall semester opening of public schools. (2-3 cr; prereq #)
- 90E. **Advanced Student Teaching.** Optional for those who have done superior work in 90ABC. (3 cr; prereq #)
- 91. **Principles of Play.** Nature and function of play; historical background and theoretical explanations of play; factors influencing play interests; principles of play leadership; practical skills and techniques in low organized games, rhythms, stunts, and self-testing activities. (3 cr; prereq NKP majors, 3rd qtr soph)
- 93. **Student Teaching in Physical Education for Minors.** (2 cr; prereq Ed 55A-B, minor in physical education)
- 94. **Student Teaching in School Health Education.** (2 cr; prereq sr, 83, #)
- 95. **Administration of Physical Education.** Professional responsibilities; organization of instructional and extracurricular program in the school and community; appraisal of activities; protection and classification of students; standards for operation of physical education plant. (3 cr; prereq sr)

PHYSICAL EDUCATION FOR MEN AND WOMEN (PE)

- 101. **Principles of Physical Education.** Aims and scope of physical education; its place in education. (3 cr; prereq PEM 55)
- 102. **The Physical Education Program in the Elementary and Secondary School.** Philosophy, objectives, trends, content, and evaluation in relation to the physical education curriculum. (3 cr; prereq sr)
- 103. **Role of the School Health Educator in Health Appraisal.** Role of the school medical and dental advisers, nurse, teachers, health educator and other school personnel in the health protection and maintenance phases of school health education. (3 cr; prereq sr, #)
- 104. **Teaching Physical Education for the Handicapped Child.** Selection and organization of appropriate activities for students with physical disabilities. Program planning at all levels. Observation, demonstrations, special lectures. (3 cr; prereq sr, #)
- 105. **Conservation of Natural Resources.** Their importance and relation to recreation and outdoor education. (2 cr; prereq sr, PEM 64A-B)
- 107. **Camp Administration.** Prepares qualified personnel for responsibilities of camp administration. (3 cr; prereq PEM 46, and #)
- 110. **Recreation Surveys.** Techniques and practice. (3 cr; prereq PEM 57, 58)
- 111. **Recreation Areas and Facilities.** Orientation, design, planning, and standards for recreation buildings and areas. (3 cr; prereq PEM 57, 58)
- 112. **Programming in Recreation.** Principles of program planning for an organized offering of recreation opportunities. (3 cr; prereq PEM 57, 58)
- 113. **Physical Education in the Elementary School.** Curriculum instructional procedures, classification, evaluation. (3 cr; prereq experience with elem school age level, or #)
- 114. **Administration of the School Health Education Program.** Co-ordination of total program; health supervision and guidance; relationships between public schools and governmental health organizations and agencies; evaluation. Guidance in the solution of individual professional problems. (3 cr; prereq sr, PEW 83, PubH 50, or equiv, or #)
- 115. **Advanced Kinesiology.** Techniques of mechanics and kinesiology of movement; skills; evaluation of pertinent research methods and devices; application to individual projects. (3 cr; prereq undergrad course in kinesiology, or #)
- 116. **Community Recreation Resources and Organization.** Agencies and their interrelationships in the field of recreation. (3 cr; prereq 110-111-112)

- 117B. **Advanced Instruction in School Health for Secondary Schools.** Instructional problems at secondary level. Individual problems discussed. (3 cr; prereq PEW 83, or #)
- 118E. **Problems in Teacher Education in Health, Physical Education, and Recreation.** Individual problems course for M.Ed. students who are interested in the conduct and development of professional teacher education programs or problems pertinent to these interests. (Cr ar; prereq #)
121. **Principles of Recreation Methods.** Leadership methodology in all aspects of recreation. (3 cr; prereq EdT 84A-B-C)
123. **Advanced Course in Methods of Teaching Physical Education.** Teaching procedures and method problems at all levels; research results. (3 cr; prereq #)
124. **Supervision of Physical Education.** Functions; adaptations of accepted procedures for observation, guidance, and training of teachers; face-to-face techniques. (3 cr; prereq #)
125. **Curriculum Trends in the Professional Preparation of Teachers of Physical Education.** Current needs and issues, philosophy and objectives, present trends, characteristic curricular patterns and standards. (3 cr; prereq sr, tchg exper or #)
130. **Contributions of Basic Sciences to Physical Education.** Recent research in basic sciences and applications in selected areas. (3 cr; prereq grad or #)
131. **Industrial Recreation.** History, scope, place, and relationship of management-employee recreation. (3 cr; prereq #)
135. **Tests and Measurements in Physical Education.** Analysis of tests and testing methods at all levels. Emphasis in winter quarter on needs of women's physical education and elementary education. Use of tests in physical activity programs. Application of principles of test construction to specific problems. (3 cr; prereq sr, EPsy 60 or equiv)
141. **Introduction to Hospital Recreation.** General field of recreation in hospitals as background for the recreation leader, hospital administrator, and other personnel. (3 cr; prereq #)
142. **Leadership in Hospital Recreation.** Application of leadership methodology. (3 cr; prereq 141)
143. **Programming in Hospital Recreation.** Planning recreation programs for various types of hospital patients. (3 cr; prereq 141)
155. **Instructional Aids in Health, Physical Education, and Recreation.** Evaluation, construction, and use, stressing audio-visual aids. (3 cr)

FOR GRADUATE STUDENTS ONLY

(Descriptions in the *Bulletin of the Graduate School*)

221. **Seminar: Physical Education.** (No cr)
- 224.° **Research Problems in School Health Education, Physical Education, and Recreation.** (Cr ar)
233. **Administration of the Physical Education Program in Secondary Schools.** (3 cr)
234. **The Curriculum in Physical Education.** (3 cr)
236. **Introduction to Research in Physical Education and Recreation.** (3 cr)
238. **Administration of Physical Education in Colleges and Universities.** (3 cr)
240. **Legal and Financial Aspects of Recreation.** (3 cr)
241. **Administration of Public Recreation.** (3 cr)
242. **Community Organization for Recreation.** (3 cr)
- 261A. **Seminar: Contemporary Problems in Physical Education.** (3 cr)
- 261B. **Seminar: Contemporary Problems in Recreation.** (Cr ar)

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Delivery 8-31-62

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Late Afternoon and Saturday Morning Classes

1962-1963



Science in the
Elementary School

Bulletin

of the UNIVERSITY of MINNESOTA

UNIVERSITY OF MINNESOTA

Board of Regents

The Board of Regents is composed of The Honorable Charles W. Mayo, M.D., Rochester, First Vice President and Chairman; The Honorable Marjorie J. Howard (Mrs. C. Edward), Excelsior, Second Vice President; The Honorable Daniel C. Gainey, Owatonna; The Honorable Richard L. Griggs, Duluth; The Honorable Bjarne E. Grottum, Jackson; The Honorable Robert E. Hess, White Bear Lake; The Honorable Fred J. Hughes, St. Cloud; The Honorable A. I. Johnson, Benson; The Honorable Lester A. Malkerson, Minneapolis; The Honorable A. J. Olson, Renville; The Honorable Otto A. Silha, Minneapolis; and The Honorable Herman F. Skyberg, Fisher.

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College of Education Administration

	<i>Office</i>	<i>Telephone</i>
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Marcia Edwards, Associate Dean of the College of Education	204 Burton	373-2241
William H. Edson, Director of Student Personnel	206 Burton	373-2257
Charles J. Glotzbach, Assistant Director of Student Personnel and Chairman, Student Scholastic Standing Committee	206 Burton	373-2257
Gordon M. A. Mork, Director of Student Teaching	229 Burton	373-2244
Arnold Woestehoff, Director, Bureau of Recommendations	102 Burton	373-2266

See list of graduate advisers on pages 18 and 19

Volume LXV

Number 18

September 15, 1962

BULLETIN OF THE UNIVERSITY OF MINNESOTA

Published semimonthly January 1 to December 15 inclusive. Second-class postage paid at Minneapolis, Minnesota. Send change of address notices and other communications to Office of Admissions and Records, University of Minnesota, Minneapolis 14, Minn.

General Information

The following program of late afternoon and Saturday classes is arranged by the College of Education for teachers in service. Many of the offerings are subjects required in the regular curriculums for high school and elementary teachers, or in the specialized curriculums. All courses numbered 100 or above may apply toward advanced degrees if approved by advisers as part of the graduate program. Any student registering for courses to be applied toward a degree program should read carefully the section on Admission to Degree Program, and should consult a major adviser as early as possible. Failure to apply for admission or to consult an adviser may delay graduation and make extra work necessary.

The fee for part-time registration in the College of Education is \$6.75 per credit for residents of the state and \$18.50 per credit for nonresidents. If 6 or more credits are taken, an incidental fee of \$20 is also required.

The fee in the Graduate School for 6 credits or less or thesis only is \$43 for residents and \$112.50 for nonresidents. Graduate students taking more than 6 credits pay \$86 (resident) and \$225 (nonresident). The incidental fee of \$20 is required of all students in the Graduate School except teachers in service taking less than 6 credits.

Other fees include a \$1 record service fee required of all new students. Auditors pay the same fees as students registered for credit.

Telephone requests for information about College of Education matters should be made to 373-2234.

Registration

Teachers in service may register from Monday through Friday of the first week of the quarter only if it is *impossible* for them to come during the regular registration period. (See the University Calendar on page 17 for registration dates.)

Students who have been admitted to the Graduate School may secure registration materials in 316 Johnston Hall. College of Education students, including those registering as adult special students, should secure registration materials as follows: (a) those registered in the *preceding regular quarter* (excluding summer terms) should report to 206 Burton Hall; and (b) those not so registered should report to the Office of Admissions and Records, window 9, in the Administration Building.

Special arrangements will be made for registering students taking *only* Saturday classes. These students, graduate and undergraduate, should report for registration in 206 Burton Hall on Saturday morning of the first week of classes (fall quarter, September 29). Veterans registering under Public Laws 550, 16, and 894 cannot be registered under this special arrangement for Saturday students, and they should therefore report during the first week of the quarter or during the regular registration periods.

Admission as Adult Special Student

Teachers in service may be admitted as adult special students in the College of Education. The adult special application form should be requested from the Office of Admissions and Records and then should be presented to that office before registration. Only those credits earned *in the first quarter* of adult special registration may be transferred to a Graduate School record.

Admission to Degree Program

Anyone planning to pursue a program of study leading to an undergraduate or graduate degree should file an application for regular admission with transcripts of previous academic work. Those who have been admitted as adult special students and wish to proceed with a degree program should file transcripts *during the first quarter of registration*.

For bachelor of science or master of education programs:

Application for admission to the College of Education should be made through the Office of Admissions and Records, Administration Building. See the *Bulletin of the College of Education* for these programs. Procedures for undergraduate admission include satisfactory completion of certain psychological tests, a health examination, and a speech examination. These tests are offered at the beginning of each quarter. Special arrangements to complete these admissions requirements can be made in the Student Personnel Office, 206 Burton Hall, by applicants who are unable to attend during the regular class week.

For master of arts and doctor of philosophy programs:

Application for admission to the Graduate School should be made in the Graduate School office, 316 Johnston Hall. All application papers for admission for any quarter must be filed *at least 4 weeks* before the opening of the quarter. If the application is not completed by that date, or if the Graduate School has not acted on it by the opening of the quarter, the applicant may register as an adult special student, transferring the credits earned *in that 1 quarter* to his graduate record if he is later admitted.

Evening and Correspondence Offerings

Additional courses are available through evening and special classes and correspondence courses. Offerings include work in education and also in the various academic departments of the University. Announcements of these courses may be secured without charge by writing to the General Extension Division, Nicholson Hall, University of Minnesota, Minneapolis 14.

Research Problems

In all major areas, research problems courses (with credits and hours arranged) are available for students who have been approved as candidates for

the M.A. degree, Plan B. These courses are listed in the *Bulletin of the Graduate School* and in each quarter's *Class Schedule*. The candidate should consult his graduate adviser concerning registration for research problems.

Bureau of Recommendations

The Bureau of Recommendations provides placement service for persons who seek teaching, administrative, and other types of positions in schools and colleges. *Registration is compulsory for persons receiving a degree from the College of Education.* Alumni and other students who have completed 30 quarter hours of work in residence in any division of the University are eligible for registration. The fee is \$7.50 for each placement season during which service is desired. The Bureau receives a great many requests for teachers, both experienced and inexperienced. The office is in 102 Burton Hall.

Summary of Class Schedules

At the back of this bulletin is a summary of class schedules by quarters, days, and hours of offerings. This will help in planning programs for the year and quarter.

Symbols

The following symbols and explanations are used throughout the course description section of this bulletin and will not carry page footnotes:

◦ Graduate students may prepare Plan B papers.

† To receive credit, all courses listed after dagger must be completed.

‡ (Double dagger) Students may enter any quarter preceding the symbol.

§ (Section mark) No credit if credit received for equivalent course after symbol.

¶ Means "concurrent registration in."

(Sharp) Means "consent of instructor."

△ Means "consent of department."

E Signifies that the course is of graduate level in the College of Education but does not carry credit for Plans A and B in the Graduate School.

Please check the fall quarter *Class Schedule* for building abbreviations. A *Class Schedule* will be given to each student with his registration material.

Program of Courses

FALL QUARTER, 1962

See page 5 for explanation of symbols.

Agricultural Education (AgEd)

Persons interested in courses in agricultural education should write directly to Department of Agricultural Education, University of Minnesota, St. Paul 1.

Art Education (ArEd)

- 152 Curriculum Building in Art Education. (3 cr; prereq 151) I-II S, WuH 130, Gayne
- 153 Curriculum Building in Art Education. (3 cr; prereq 152) III-IV S, WuH 120, Hastie
- 296 Seminar: Art Education. (1 cr) IX-X T, WuH 130, Cayne, others

Child Development (CD)

- 179 Clinical Procedures with Children. (3 cr; prereq 12 cr in educational psychology or psychology or sociology or child development) III-IV S, Psy 115, Duker

Curriculum and Instruction (EdCI)

- 62 Teaching Mathematics in the Elementary School. (3 cr; prereq Ed 75A; Math 5) Sec 3, 4:30-5:45 MW, CD 226, Jackson
- 66 Treatment of Learning Difficulties. (3 cr; prereq 60, 62, [stu tchg] Sec 1, IX-X T, Psy 115, ar; Sec 2, IX-X Th, JohH 114, ar
- 102 Teaching and Supervision of the Social Studies in the Elementary School. (3 cr; prereq Ed 75B or equiv) IX-X M, JohH 106, Rogers
- 103 Teaching Science in the Elementary School. (3 cr; prereq sr, Ed 75A-B or tchg exper) IX-X T, Bu 211, Goossen
- 105 Audio-Visual Materials in Education. (3 cr; prereq sr) I-II S, NH 211, 1 hr ar, Pearson
- 106 Co-ordinating an Audio-Visual Education Program. (3 cr; prereq 105 or #) IX-X M, WeH 206, Pearson
- 107 Radio and Television in Education. (3 cr; prereq 9 cr in education) IX-X T, WeH 206, Pearson
- 110 Practicum: Laboratory School Teaching (K-6). (Cr ar; prereq tchg exper, #) Curtin, Adams
- 113 High School Curriculum. (3 cr; prereq Ed 55B or equiv) I-II S, Pt 202, Woods

- 115 Introduction to the Education of Visually Handicapped Children. (3 cr; prereq #) IX-X W, JohH 105, Kenmore
- 116 Braille I. (3 cr; prereq 115 or #) IX-X TTh, Pt 204, Kenmore
- 119 Elementary School Curriculum. (3 cr; prereq Ed 75B or equiv) IX-X W, JohH 106, Goossen
- 121 Literature for the Elementary School. (3 cr) IX-X W, Bu 120, Odland
- 124 Foundations of Career Development. (3 cr) Sec 2, IX-X W, Bu 125, Tennyson
- 125 Occupational Information Laboratory. (3 cr; prereq #) Sec 2, IX-X Th, JohH 122, Hogan
- 133 Economic and Consumer Education in the Schools. (3 cr) IX-X T, Bu 103, Price
- 135 Group Procedures in Guidance. (3 cr; prereq EPsy 133 or #) I-II S, Bu 103, Hogan
- 136 Organization and Administration of Distributive Education. (3 cr) 4:00-6:20 W, Bu 103, Meyer
- 143 Teaching and Supervision of Reading in the Elementary School. (3 cr; prereq 9 cr in education) I-II S, Bu 123, 1 hr ar, Clymer
- 144 Teaching Reading in Secondary Schools. (3 cr; prereq 9 cr in education) IX-X T, Bu 123, 1 hr ar, Chase
- 145 Reading Difficulties. (3 cr; prereq 143 or 144 or equiv) IX-X T, Bu 120, 1 hr ar, Bond
- 149 Teaching and Supervision of Mathematics in the Elementary School. (3 cr; prereq 9 cr in education) 4:30-6:20 MW, Pt 202, Stochl
- 151 Diagnosis and Treatment of Learning Difficulties. (3 cr) IX-X T, JohH 105, Clymer
- 153 Teaching and Supervision of English in Elementary Schools. (3 cr; prereq Ed 75B or equiv) IX-X W, Bu 123, 1 hr ar, Chase
- 158 Materials and Methods in Office and Clerical Practice. (3 cr) IX-X Th, Bu 103, Price
- 160 Materials Laboratory, Occupational Relations. (3 cr; prereq 137A, EdT 90C or #) IX-X M, Bu 103, 1 hr ar, Meyer
- 170B Curriculum and Course of Study Construction. (3 cr; prereq 113 or 119 or #) IX-X Th, Bu 120, Woods
- 171 Curriculum Laboratory Practice. (0-3 cr; prereq 170A or B, #) Birkmaier, Woods
- 184 Supervision of Student Teaching. (3 cr; prereq 15 cr in education, #) III-IV S, PeikH 175, Mork
- 199E Internship. (Ar cr) Mork, others
- 204 Social Studies Curriculum. (3 cr) III-IV S, PeikH 145, Gardner
- 222 Seminar: Current Problems in the Techniques of High School Instruction. (Cr ar; prereq Ed 55B, sr methods) IX-X W, PeikH 265, Keller, Gardner, Woods
- 226 Seminar: Elementary School Problems. (No cr) IX-X Th, PeikH 165
- 251 Curriculum Trends in American Colleges. (3 cr; prereq yr of grad study in any field or 18 cr in education) I-II S, JohH 105, Eckert
- 280 Supervision of Counseling. (3 cr; prereq #) Tennyson, Burks

294* Advanced Course in Materials and Methods of Secondary School English. (2 cr; prereq EdT 75C or equiv) I-II S, PeikH 245, Kessler

Educational Administration (EdAd)

- 101 Public School Administration. (3 cr; not open to majors in educational administration; prereq sr, 9 cr in education) IX-X Th, JohH 105, Popper
- 167 Junior High School. (3 cr; prereq sr, 9 cr in education) IX-X M, Bu 123, Popper
- 201 Foundations in Educational Administration. (3 cr) IX-X TTh, JohH 205, Cunningham
- 210 Public School Finance. (3 cr) I-II S, Bu 211, 1 hr ar, Domian
- 215 The Elementary School Principalship. (3 cr) III-IV S, Bu 123, Curtin
- 224 Legal Aspects of Public School Administration. (3 cr) III-IV S, 1 hr ar, Hooker
- 274 The Junior College. (3 cr) I-II S, PeikH 145, Keller

Educational Psychology (EPsy)

- 110 Educational Measurement in the Classroom. (3 cr) IX-X W, Bu 211, 1 hr ar, Kellogg
- 133 Basic Procedures in Student Personnel Work. (3 cr; prereq 9 cr in education) III-IV S, Bu 211, Dugan, R Johnson
- 134 School Counseling Procedures. (3 cr; prereq 110 or 117, 133, #) IX-X T, Bu 125, Hogan
- 182 Education of Exceptional Children. (3 cr; prereq Ed 55B or 75B) III-IV S, CD 218, Karlsen
- 184 Education of Mentally Retarded Children in the Elementary Schools. (3 cr; prereq 182 or #) IX-X T, CD 226, Force
- 186 Seminar: Education of Emotionally Disturbed and Socially Maladjusted Children. (1 cr; prereq #) IX-X T, CD 218, Balow
- 187 Education of Crippled Children. (3 cr; prereq 182 or #) IX-X Th, Pt 202, Force
- 193 Psychology of Human Learning. (3 cr; prereq sr) III-IV S, Bu 120, Neale
- 200 Seminar: Institute in Guidance. (1 cr; prereq #) Sec 2, IX-X M, Bu 125, Dugan, Tennyson
- 244 Research in Special Education. (1 cr; prereq 116, 117 or equiv, #) IX-X M, Psy 109, Karlsen
- 282A Field Practice in Guidance. (1-3 cr; prereq counselors in service, #) Sec 2, I-IV S, Bu 125, Burks, staff
- 287 Practicum in School Psychological Services. (1-3 cr; prereq #) Duker
- 288 Practicum in Special Education. (3-9 cr; prereq #) Force, Houchins, Karlsen, Kenmore

History and Philosophy of Education (HEd)

- 141 Critical Issues in Contemporary Education. (3 cr) IX-X M, Bu 120, Beck
- 155 History of Western Educational Thought. (3 cr) IX-X Th, Bu 123, Bagley

296 Seminar: American Social and Educational History. (3 cr; §Hist 296A) IX-X W, JohH 307, T Smith

Home Economics Education (HEEd)

Persons interested in courses in home economics education should write directly to the School of Home Economics, University of Minnesota, St. Paul 1.

Industrial Education (Ind)

- 35 Fundamentals of Vocational Education. (3 cr) IX-X M, TNCD 113, Widdowson
- 40 Analysis and Course Organization. (5 cr) IX-X Th, TNCD 113, Kavanaugh
- 100 Industrial Instruction. (3 cr; prereq 40, Ed 55B, #) IX-X Th, TNCD 116, Moss
- 107 Co-ordination. (3 cr; prereq 35 or 125 or #) IX-X T, TNCD 116, Widdowson
- 250 Literature of Industrial Education. (3 cr; prereq #) IX-X W, TNCD 113, Nelson

Music Education (MuEd)

- 100 Principles. (3 cr) IX-X T, ScH 104, Ivory
- 104 Advanced Topics: Vocal Music. (3 cr; prereq #) IX-X M, ScH 4, Caswell

Physical Education (PE)

- 118E Problems in Teacher Education in Health, Physical Education, and Recreation. (Cr ar; prereq #) Jaeger, Slocum, Wilson
- 125 Curriculum Trends in the Professional Preparation of Teachers of Physical Education. (3 cr; prereq sr, tchg exper or #) Ar
- 135 Tests and Measurements in Physical Education. (3 cr; prereq EPsy 60 or equiv) 4:30-6:00 MW, 3 NGW, Wilson
- 221 Seminar: Physical Education. (No cr) Jaeger, Slocum, Wilson

WINTER QUARTER, 1963

See page 5 for explanation of symbols.

Agricultural Education (AgEd)

Persons interested in courses in agricultural education should write directly to Department of Agricultural Education, University of Minnesota, St. Paul 1.

Art Education (ArEd)

- 189 Application of Aesthetic Theory in Education. (3 cr) I-II S, Hastie
- 284 Research in Art Education. (3 cr) III-IV S, Gayne
- 296 Seminar: Art Education. (1 cr) IX-X T, Gayne, staff

Child Development (CD)

- 248 Clinical Child Psychology. (3 cr; prereq #) IX-X MF, Wirt

Curriculum and Instruction (EdCI)

- 63 Children's Literature. (2 cr) Sec 3, IX-X W, Odland
- 66 Treatment of Learning Difficulties. (3 cr; prereq 60, 62, ¶stu tchg) Sec 1, IX-X T; Sec 2, IX-X Th, ar
- 105 Audio-Visual Materials in Education. (3 cr; prereq sr) IX-X T, 1 hr ar, Pearson
- 108 Nonprojected Audio-Visual Materials and Equipment Laboratory. (3 cr; prereq 105 or ¶105) Lect, IX-X M; Lab, Sec 2, IX-X Th, Pearson
- 110 Practicum: Laboratory School Teaching (K-6). (Cr ar; prereq tchg exper, #) Curtin, Adams
- 117 Braille II. (3 cr; prereq 116) IX-X TTh, Kenmore
- 118 Education of Blind Children in the Elementary Grades. (3 cr; prereq 115, 116, #) IX-X W, Kenmore
- 119 Elementary School Curriculum. (3 cr; prereq Ed 75B or equiv) III-IV S, Goossen
- 121 Literature for the Elementary School. (3 cr) I-II S, Odland
- 125 Occupational Information Laboratory. (3 cr; prereq #) IX-X W, Tennyson
- 134 Materials and Methods in Economic and Consumer Education. (3 cr) IX-X Th, Price
- 135 Group Procedures in Guidance. (3 cr; prereq 9 cr in education, EPsy 133 or #) III-IV S, R Johnson
- 139 Co-ordination Techniques. (3 cr) 4:00-6:20 W, Meyer
- 143 Teaching and Supervision of Reading in the Elementary School. (3 cr; prereq 9 cr in education) IX-X T, 1 hr ar, Bond
- 151 Diagnosis and Treatment of Learning Difficulties. (3 cr) IX-X M, Clymer

- 165A Arithmetic for Gifted Children. (3 cr) 4:30-6:20 MW, Stochl
- 168 Current Developments in the Social Studies. (3 cr; prereq grad or #) I-II S, McCune
- 169 Extracurricular Activities. (3 cr; prereq Ed 55B or equiv) III-IV S, Popper
- 171 Curriculum Laboratory Practice. (0-3 cr; prereq 170A or B, #) Birkmaier, Woods
- 178 Structure and Function of the Eye; Educational Implications. (3 cr; prereq #) III-IV S, Kantar, Kenmore
- 191 Advanced Course in the Teaching and Supervision of Secondary Mathematics. (3 cr) IX-X M, D Johnson
- 199E Internship. (Cr ar) Mork, others
- 222 Seminar: Current Problems in the Techniques of High School Instruction. (Cr ar; prereq Ed 55B, sr methods) IX-X W, Keller, Gardner, Woods
- 226 Seminar: Elementary School Problems. (No cr) IX-X Th, Staff
- 257 Research in Language Instruction in the Elementary Schools. (3 cr; prereq 153 or equiv) III-IV S, Chase
- 280 Supervision of Counseling. (3 cr; prereq #) Tennyson, Burks
- 285 Professional Education of Teachers. (3 cr; prereq 15 cr in education including 184, 250 or HEd 182 or EPsy 250 or #) III-IV S, Mork, Woestehoff
- 287* Advanced Course in the Teaching of Science. (3 cr) I-II S, Boeck
- 294* Advanced Course in Materials and Methods of Secondary School English. (2 cr; prereq EdT 75C or equiv) I-II S, Kegler

Educational Administration (EdAd)

- 200 Seminar: Elementary School Administration. (3 cr) IX-X M, Curtin
- 202 Foundations in Educational Administration. (3 cr) IX-X TTh, Cunningham
- 218 Seminar: Secondary Education. (Cr ar) IX-X M, Keller, Popper
- 226 School Plant Planning and Management. (3 cr) III-IV S, Hooker
- 227 Teacher and Employee Administration. (3 cr) I-II S, 1 hr ar, Cunningham
- 235 Seminar: Educational Administration. (1-3 cr; prereq MA in EdAd or #) IX-X M, Domian
- 264 The Secondary School Principalship. (3 cr) I-II S, 1 hr ar, ar

Educational Psychology (EPsy)

- 133 Basic Procedures in Student Personnel Work. (3 cr; prereq 9 cr in education) IX-X Th, Hogan
- 134 School Counseling Procedures. (3 cr; prereq 110 or 117, 133, #) Sec 2, IX-X T, Hogan
- 152 Introduction to School Psychological Services. (3 cr) III-IV S, Duker
- 159 Personality Development and Mental Hygiene. (3 cr) I-II S, Bentley
- 183 Education of Gifted Children. (3 cr) IX-X T, Reynolds
- 186 Seminar: Education of Emotionally Disturbed and Socially Maladjusted Children. (1 cr; prereq #) Balow

- 190 Educational Problems of Cerebral Palsy. (3 cr; prereq 182 or #) IX-X Th, Force
- 191 Education of the Mentally Retarded in Secondary Schools. (3 cr; prereq 182 or #) IX-X W, Karlsen
- 200 Seminar: Institute in Guidance. (1 cr; prereq #) Sec 2, IX-X M, Dugan, Tennyson
- 208^o Methods in Educational Research. (3 cr; prereq MA Students) Sec 2, III-IV S, Hoyt
- 244 Research in Special Education. (1 cr; prereq 116, 117 or equiv, #) IX-X M, Karlsen
- 253 Research Problems. (Cr ar; prereq #) Sec 1, IX-X T, Hoyt
- 287 Practicum in School Psychological Services. (1-3 cr; prereq #) Duker
- 288 Practicum in Special Education. (3-9 cr; prereq #) Force, Houchins, Karlsen, Kenmore
- 292 Recent Literature in Educational Psychology. (3 cr; prereq #) Hoyt
- 293 Psychology of Learning. (3 cr; prereq 12 cr in psychology and educational psychology) I-II S, Neale

History and Philosophy of Education (HEd)

- 131 Comparative Education. (3 cr) IX-X M, Beck
- 156 History of Ideas in American Education. (3 cr) IX-X Th, Bagley
- 297 Seminar: American Social and Educational History. (3 cr, §Hist 297A; prereq 296) IX-X W, T Smith

Home Economics Education (HEEd)

Persons interested in courses in home economics education should write directly to the School of Home Economics, University of Minnesota, St. Paul 1.

Industrial Education (Ind)

- 101 Tests in Industrial Subjects. (3 cr; prereq Ed 55B) IX-X Th, Kavanaugh
- 109 Conference Leading for Industry. (3 cr; prereq #) IX-X M, Widdowson
- 251 Research in Industrial Education. (3 cr; prereq #) IX-X W, Nelson

Physical Education (PE)

- 107 Camp Administration. (3 cr; prereq PEM 46, #) IX-X W, Chapman, Ostrander, Osell
- 115. Advanced Kinesiology. (3 cr; prereq undergrad kinesiology or #) 4:00-5:30 MW, Wilson
- 117B Advanced Instruction in School Health for Secondary Schools. (3 cr; prereq PEW 83 or #) III-IV S, 1 hr ar, Slocum
- 118E Problems in Teacher Education in Health, Physical Education, and Recreation. (Cr ar; prereq #) Jaeger, Slocum, Wilson
- 221 Seminar: Physical Education. (No cr) Jaeger, Slocum, Wilson

SPRING QUARTER, 1963

See page 5 for explanation of symbols.

Agricultural Education (AgEd)

Persons interested in courses in agricultural education should write directly to Department of Agricultural Education, University of Minnesota, St. Paul 1.

Art Education (ArEd)

- 84A Teaching Art in the Elementary School. (3 cr; prereq IIIA program) I-IV S, Hegg
296 Seminar: Art Education. (1 cr) IX-X T, Gayne, staff

Child Development (CD)

- 179 Clinical Procedures with Children. (3 cr; prereq 12 cr in educational psychology or psychology or sociology or child development) IX-X MF, Duker

Curriculum and Instruction (EdCI)

- 62 Teaching Mathematics in the Elementary School. (3 cr; prereq Ed 75A, Math 5) Sec 3, 4:30-6:00 MW, Jackson
63 Children's Literature. (2 cr) Sec 3, IX-X T, Odland
66 Treatment of Learning Difficulties. (3 cr; prereq 60, 62, ¶stu tchg) Sec 1, IX-X T, Dykstra; Sec 2, IX-X Th, ar
101 Driver Education. (3 cr; prereq Δ) I-IV S, Gebhard
102 Teaching and Supervision of the Social Studies in the Elementary School. (3 cr; prereq Ed 75B or equiv) III-IV S, Rogers
103 Teaching Science in the Elementary School. (3 cr; prereq sr, Ed 75A-B or tchg exper) III-IV S, Goossen
109 Projected Audio-Visual Materials and Equipment Laboratory. (3 cr; prereq 105 or ¶105) Lect, IX-X M; Sec 2, IX-X Th, Pearson
110 Practicum: Laboratory School Teaching (K-6). (Cr ar; prereq tchg exper, #) Curtin, Adams
113 High School Curriculum. (3 cr; prereq Ed 55B or equiv) III-IV S, 1 hr ar, Woods
114 Development of the Core Curriculum. (3 cr) IX-X Th, Woods
120 Education of Blind Students in Secondary Schools. (3 cr; prereq 115, 116, 118 and #) IX-X T, Kenmore
122 Literature for Adolescents. (3 cr; prereq Ed 55B or jr-sr high school tchg exper) I-II S, Kegler
125 Occupational Information Laboratory. (3 cr; prereq #) IX-X Th, Hogan
131 Advanced Teaching of Technical Business Subjects. (3 cr) IX-X Th, Price

- 137B Advanced Materials and Methods in Co-operative Part-Time Classes. (3 cr; prereq #) 4:00-6:20 M, Meyer
- 141 Co-operative Part-Time Work Experience Programs. (3 cr) 4:00-6:20 W, Meyer
- 143 Teaching and Supervision of Reading in the Elementary School. (3 cr; prereq 9 cr in education) IX-X M, 1 hr ar, Clymer
- 144 Teaching Reading in Secondary Schools. (3 cr; prereq 9 cr in education) IX-X W, 1 hr ar, Chase
- 145 Reading Difficulties. (3 cr; prereq 143 or 144 or equiv) IX-X T, 1 hr ar, Bond
- 150 Supervision and Improvement of Instruction. (3 cr; prereq 9 cr in education) I-II S, Curtin
- 153 Teaching and Supervision of English in Elementary Schools. (3 cr; prereq Ed 75B or equiv) I-II S, Dykstra
- 155 Materials Laboratory for Social Studies Teachers. (3 cr; prereq #) IX-X M, West
- 165B Arithmetic for Gifted Children. (3 cr; prereq 165A) 4:30-6:20 MW, Stochl
- 171 Curriculum Laboratory Practice. (0-3 cr; prereq 170A or B, #) Birkmaier, Woods
- 182 Education of Partially Seeing Children. (3 cr; prereq 115 and 118, #) IX-X W, Kenmore
- 192 Mathematics Laboratory. (3 cr; prereq grad or experienced teacher) IX-X M, D Johnson
- 199E Internship. (Cr ar) Mork, others
- 203 Supervision and Administration of Special Education. (3 cr; prereq #) IX-X T, Force
- 222 Seminar: Current Problems in the Techniques of High School Instruction. (Cr ar; prereq Ed 55B, sr methods) IX-X W, Keller, Gardner, Woods
- 226 Seminar: Elementary School Problems. (No cr) IX-X Th, staff
- 250 Higher Education in the United States. (3 cr; prereq yr of grad study in any field or 18 cr in education) I-II S, Eckert
- 264 Research in Educational Diagnosis. (3 cr) IX-X W, Clymer
- 266 Supervision of High School Instruction. (3 cr; prereq EPsy 193, 293, or #) III-IV S, Keller
- 280 Supervision of Counseling. (3 cr; prereq #) Tennyson, Burks
- 286 Professional Education of Teachers. (3 cr; prereq 285 or #) Mork, Woestehoff

Educational Administration (EdAd)

- 118 The Community School. (3 cr; prereq grad) IX-X W, Cunningham
- 211 School Business Management. (3 cr; prereq 210 or #) I-II S, Domian
- 230 School Community Relations. (3 cr) IX-X M, Popper
- 233 Workshop: The Junior High School. (3 cr) III-IV S, Popper
- 237 Seminar: Educational Law. (3 cr; prereq 224 or #) IX-X T, Hooker
- 265 Administering the High School Program. (3 cr) I-II S, 1 hr ar, ar

Educational Psychology (EPsy)

- 133 Basic Procedures in Student Personnel Work. (3 cr; prereq 9 cr in education) I-II S, R Johnson
- 134 School Counseling Procedures. (3 cr; prereq 110 or 117, 133, #) IX-X W, Hogan
- 159 Personality Development and Mental Hygiene. (3 cr) I-II S, Bentley
- 182 Education of Exceptional Children. (3 cr; prereq Ed 55B or 75B) IX-X W, Karlsen
- 184 Education of Mentally Retarded Children in the Elementary Schools. (3 cr; prereq 182 or #) III-IV S, Force
- 186 Seminar: Education of Emotionally Disturbed and Socially Maladjusted Children. (1 cr; prereq #) IX-X T, Balow
- 200 Seminar: Institute in Guidance. (1 cr; prereq #) Sec 2, IX-X M, Dugan, Tennyson
- 210 Individual Mental Testing. (3 cr; prereq 110 or 117 or §117 and #) IX-X Th, 1 hr ar, Duker
- 244 Research in Special Education. (1 cr; prereq 116, 117 or equiv, #) IX-X M, Karlsen
- 259 Personality Theory and Mental Hygiene. (3 cr) I-II S, Torrance
- 287 Practicum in School Psychological Services. (1-3 cr; prereq #) Duker
- 288 Practicum in Special Education. (3-9 cr; prereq #) Force, Houchins, Karlsen, Kenmore
- 289 Survey of Special Education Problems. (3 cr; prereq 182 or tchg exper, #) IX-X Th, Reynolds

History and Philosophy of Education (HEd)

- 170 American Pragmatism and Education. (3 cr) IX-X Th, Bagley
- 182 Comparative Philosophies of Education. (3 cr) IX-X M, Beck
- 298 Seminar: American Social and Educational History. (3 cr, §Hist 298A; prereq 297) IX-X Th, T Smith

Home Economics Education (HEEd)

Persons interested in courses in home economics education should write directly to the School of Home Economics, University of Minnesota, St. Paul 1.

Industrial Education (Ind)

- 105 Administration of Industrial Education. (3 cr; prereq 35 or equiv) IX-X W, Nelson
- 110 Vocational Guidance. (3 cr; prereq Ed 55B) IX-X Th, Nelson
- 115 Supervision of Industrial Education. (3 cr; prereq 35 or 105) IX-X M, Wid-dowson
- 135 Industrial Course Construction. (3 cr, §40) IX-X T, Kavanaugh

Physical Education (PE)

- 104 Teaching Physical Education for the Handicapped Child. (3 cr; prereq sr, #) III-IV S, 1 hr ar, Wilson
- 113 Physical Education in the Elementary School. (3 cr; prereq elementary school experience or #) 4:00-5:30 MW, Hanson
- 114 Administration of the School Health Education Program. (3 cr; prereq sr, PEW 83, PubH 50 or #) 4:00-5:30 TTh, Slocum
- 118E Problems in Teacher Education in Health, Physical Education, and Recreation. (Cr ar; prereq #) Jaeger, Slocum, Wilson
- 221 Seminar: Physical Education. (No cr) Jaeger, Slocum, Wilson

Calendar 1962-63

FALL QUARTER

September

- 21 Fall Registration
- 3 Holiday (Labor Day)
- 13 Fall quarter fees due for students registered through September 7
- 21 Last day for registration and payment of fees for the undergraduate colleges
- 24 Fall quarter classes begin
- 27 Opening convocation, 11:30 a.m.; IV hour classes excused
- 28 Last day for registration and payment of fees for the Graduate School and for teachers in service

October

- 12 Holiday (Columbus Day)
- 20 Homecoming Day

November

- 1 Senate meeting, 3:30 p.m.
- 22 Holiday (Thanksgiving)
- 23-24 Classes excused (except Medical School and College of Veterinary Medicine)

December

- 6 Senate meeting, 3:30 p.m.
- 7 Study day
- 8-14 Final examination period
- 15 Fall quarter closes
Commencement, 8 p.m.

WINTER QUARTER

December

- 25 Holiday (Christmas Day)
- 26 Winter quarter fees due
- 31 Registration resumes; winter quarter fees due for new students in all undergraduate colleges

January

- 1 Holiday (New Year's Day)
- 3 Winter quarter classes begin

- 4 Last day for registration and payment of fees for the Graduate School and teachers in service

February

- 7 Senate meeting, 3:30 p.m.
- 12 Holiday (Lincoln's Birthday)
- 22 Holiday (Washington's Birthday)
- 24-Mar 2 University of Minnesota Week
- 28 Charter Day Convocation, 11:30 a.m.; IV hour classes excused

March

- 14 Senate meeting, 3:30 p.m.
- 15 Study day
- 16-22 Final examination period
- 21 Spring quarter fees due for students in residence winter quarter in undergraduate colleges
- 23 Winter quarter closes
Commencement, 8:30 p.m.

SPRING QUARTER

April

- 1 Spring quarter classes begin
- 5 Last day for registration and payment of fees for the Graduate School and for teachers in service
- 12 Holiday (Good Friday)

May

- 2 Senate meeting, 3:30 p.m.
- 23 Cap and Gown Day Convocation, 11:30 a.m.; IV hour classes excused
- 30 Holiday (Memorial Day)

June

- 6 Senate meeting, 3:30 p.m.
- 7 Last class day
- 8 Study day
- 9 Baccalaureate service, 3 p.m.
- 10-15 Final examination period
- 15 Spring quarter closes
Commencement, 8 p.m.

Graduate Advisers**

EDUCATION FIELDS

Agricultural Education

R. Paul Marvin—211 Horticulture (StP)
Keith N. McFarland—207 Coffey (StP)
Milo J. Peterson—205 Horticulture (StP)
Gordon Swanson—205 Horticulture (StP)

Art Education

Clifton Gayne—135 Wulling
W. Reid Hastie—135 Wulling

Business Education

Ray G. Price—117 Burton

Child Psychology

Inquire in 102 Child Development

Curriculum and Instruction

Emma M. Birkmaier (Lang.)—224 Peik
Clarence H. Boeck (Sci.)—370 Peik
Guy L. Bond (Elem.)—214 Burton
Naomi C. Chase (Elem.)—136B Burton
Theodore W. Clymer (Elem.)—238 Burton
James R. Curtin (Elem.)—101 Pattee
William E. Gardner (Soc. St.)—101C Burton
Carl V. Goossen (Elem.)—136 Burton
Donovan A. Johnson (Math.)—330 Peik
George H. McCune (Soc. St.)—103 Westbrook
Warren G. Meyer (Dist. Ed.)—115 Burton
Norine Odland (Elem.)—136 Burton
Neville P. Pearson (Audio-Vis.)—206 Westbrook
Ray G. Price (Bus. Ed.)—117 Burton
Vincent R. Rogers (Elem.)—144 Burton
Edith West (Soc. St.)—166 Peik
Bob G. Woods (Sec.)—246 Burton

Distributive Education

Warren G. Meyer—115 Burton

Educational Administration

Guy L. Bond (Elem.)—214 Burton
Theodore W. Clymer (Elem.)—238 Burton
Luvern L. Cunningham (Gen.)—201 Burton
James R. Curtin (Elem.)—101 Pattee
Otto E. Domian (Gen.)—209 Burton
Carl V. Goossen (Elem.)—136 Burton
Clifford P. Hooker (Gen.)—205 Burton
Robert J. Keller (Sec.)—130 Peik
Samuel H. Popper (Gen.)—203 Burton
Bob G. Woods (Sec.)—246 Burton

Educational Psychology

Bruce E. Balow—106 Pattee
Donald Blocher—139A Burton
Guy L. Bond—214 Burton
Theodore W. Clymer—238 Burton
Mary E. Corcoran—330 Burton
Raymond Collier—226 Burton
Willis E. Dugan—139 Burton
Jan D. Duker—210 Pattee
William H. Edson—206 Burton

Charles L. Glotzbach—206 Burton
Theda Hagenah—101 Eddy
Joe Hogan—139 Burton
Cyril J. Hoyt—254 Burton
Theodore Kellogg—105 Morrill Hall (Administration Bldg.)
Jack C. Merwin—101 Eddy
Daniel C. Neale—101 Burton
Alton L. Raygor—101 Eddy
Maynard Reynolds—14 Pattee
Martin L. Snoke—200 Eddy
John E. Stecklein—330 Burton
Wesley Tennyson—139 Burton
E. Paul Torrance—330 Burton
Roger E. Wilk—206 Burton
Frank B. Wilderson—108 Pattee
C. Gilbert Wrenn—139 Burton

Elementary Education

See Curriculum and Instruction and Educational Administration

Health Education

Ruth E. Groust—1325 Mayo
Helen M. Slorum—202 Norris Gymnasium

Higher Education

Ruth E. Eckert—255 Burton
Horace T. Morse—106 Nicholson
C. Gilbert Wrenn—139C Burton

History and Philosophy of Education

Ayers L. Bagley—239 Burton
Robert H. Beck—233 Burton
Timothy Smith—239 Burton

Home Economics Education

Roxana R. Ford—117 McNeal (StP)
Marjorie M. Brown—121 McNeal (StP)
Amy Jean Holmblade—107 McNeal (StP)
Louise A. Stedman—200 McNeal (StP)

Industrial Education

William Kavanaugh—108 TNCD
Jerome Moss, Jr.—103 TNCD
Howard Nelson—103 TNCD

Library Science

Patricia Pond—3 Walter Library

Music Education

Paul Ivory—214 Scott
Paul M. Oberg—106 Scott

Nursing Education

Edna L. Fritz—125 Owre

Physical Education for Men

Richard J. Donnelly—220 Cooke
Ralph A. Piper—220 Cooke

** Undergraduate students may consult the graduate adviser appropriate for the major, or inquire in 206 Burton Hall.

Physical Education for Women

Eloise Jaeger—104 Norris Gymnasium
Helen M. Slocum—202 Norris Gymnasium
Marjorie U. Wilson—108 Norris Gymnasium

Recreation Leadership

Frederick M. Chapman—204 Cooke
Gerald B. Fitzgerald—204 Cooke

Secondary Education

See Curriculum and Instruction (Teaching of
English, Languages, Mathematics, Science,

Social Studies) and Educational Adminis-
tration

Special Education

Dewey C. Force, Jr.—14 Pattee
Rollie R. Houchins—12 Pattee
Bjorn Karlsen—13 Pattee
Robert Orlando—103 Pattee
Maynard C. Reynolds—14 Pattee

Teacher Education

Gordon M. A. Mork—229 Burton
Arnold S. Woestehoff—108 Burton

Summary of Class Schedules, 1962-63

Saturday (I-II)	Saturday (III-IV)	Monday (IX-X)	Tuesday (IX-X)	Wednesday (IX-X)	Thursday (IX-X)	Friday (IX-X)
FALL QUARTER						
ArEd 152 EdCI 105 EdCI 113 EdCI 135 EdCI 143 EdCI 251 EdCI 294 EdAd 210 EdAd 274 EPsy 282A (I-IV)	ArEd 153 CD 179 EdCI 184 EdCI 204 EdAd 215 EdAd 224 EPsy 133 EPsy 182 EPsy 193	EdCI 62## EdCI 102 EdCI 106 EdCI 149¶¶ EdCI 160 EdAd 167 EPsy 200 EPsy 244 HEd 141 Ind 35 MuEd 104 PE 135°°	ArEd 296 EdCI 66 EdCI 103 EdCI 107 EdCI 116 EdCI 133 EdCI 144 EdCI 145 EdCI 151 EdAd 201 EPsy 134 EPsy 184 EPsy 186 Ind 40 Ind 107 MuEd 100	EdCI 62## EdCI 115 EdCI 119 EdCI 121 EdCI 124 EdCI 136§§ EdCI 149¶¶ EdCI 222 EdCI 222 EPsy 110 HEd 296 Ind 250 PE 135°°	EdCI 66 EdCI 116 EdCI 125 EdCI 158 EdCI 170B EdCI 226 EdAd 101 EdAd 201 EPsy 187 HEd 155 Ind 40 Ind 100	
WINTER QUARTER						
ArEd 189 EdCI 121 EdCI 168 EdCI 287 EdCI 294 EdAd 227 EdAd 264 EPsy 159 EPsy 293	ArEd 284 EdCI 119 EdCI 135 EdCI 169 EdCI 178 EdCI 257 EdCI 285 EdAd 236 EPsy 152 EPsy 208 PE 117B	CD 248 EdCI 108 EdCI 151 EdCI 165A¶¶ EdCI 191 EdAd 200 EdAd 218 EdAd 235 EPsy 200 EPsy 244 HEd 131 Ind 109 PE 115††	ArEd 296 EdCI 66 EdCI 105 EdCI 117 EdCI 143 EdAd 202 EPsy 134 EPsy 183 EPsy 253	EdCI 63 EdCI 118 EdCI 125 EdCI 139§§ EdCI 165A¶¶ EdCI 222 EPsy 191 HEd 297 Ind 251 PE 107 PE 115††	EdCI 66 EdCI 108 EdCI 117 EdCI 134 EdCI 226 EdAd 202 EPsy 133 EPsy 190 HEd 156 Ind 101	CD 248
SPRING QUARTER						
ArEd 84A (I-IV) EdCI 101 (I-IV) EdCI 122 EdCI 150 EdCI 153 EdCI 250 EdAd 211 EdAd 265 EPsy 133 EPsy 159 EPsy 259	EdCI 102 EdCI 103 EdCI 113 EdCI 266 EdAd 233 EPsy 184 PE 104	CD 179 EdCI 62°° EdCI 109 EdCI 137B§§ EdCI 143 EdCI 155 EdCI 165B¶¶ EdCI 192 EdAd 230 EPsy 200 EPsy 244 HEd 182 Ind 115 PE 113††	ArEd 296 EdCI 63 EdCI 66 EdCI 120 EdCI 145 EdCI 203 EdAd 237 EPsy 186 Ind 135 PE 114††	EdCI 62°° EdCI 141§§ EdCI 144 EdCI 165B¶¶ EdCI 182 EdCI 222 EdCI 264 EdAd 118 EPsy 134 EPsy 182 Ind 105 PE 113††	EdCI 66 EdCI 109 EdCI 114 EdCI 125 EdCI 131 EdCI 226 EPsy 210 EPsy 289 HEd 170 HEd 298 Ind 110 PE 114††	CD 179

KEY

†† 4-5:30
 §§ 4-6:20
 ## 4:30-5:45
 °° 4:30-6
 ¶¶ 4:30-6:20