

UNIVERSITY OF MINNESOTA BULLETIN

JULY 30, 1979

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College of Education

EDUCATION

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 (refer to Index for specific page references):

- Courses of Study
- Admission Requirements
- Graduation Requirements
- Procedures and Practices in the College of Education
- Student Services
- Special Agencies
- Awards and Scholarships
- Master of Education Degree Requirements
- Graduate Study in Education

Section II, Curricula — 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 of this bulletin for specific page references.

Section III, Description of Courses — This section lists the undergraduate and graduate courses offered in the College of Education.

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All students and prospective students should refer to the *General Information Bulletin*. Some may wish to refer also to the bulletins of the following divisions of the University:

- College of Liberal Arts
- College of Biological Sciences
- School of Business Administration
- Institute of Technology
- Agriculture
- School of Home Economics
- Graduate School

Any of these may be obtained at the Morrill Hall information booth or by writing to the Office of Admissions and Records, University of Minnesota, Minneapolis, Minnesota 55455.

The days, hours, and rooms for class sessions are contained in the *Class Schedule* published just before the registration period each quarter.

COLLEGE OF EDUCATION **1970-72**
UNIVERSITY OF MINNESOTA BULLETIN

UNIVERSITY OF MINNESOTA

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COLLEGE OF EDUCATION

Section I. General Information

The University of Minnesota is guided by the principle that there shall be no differences in the treatment of persons because of race, creed, color, sex, or national origin, and that equal opportunity and access to facilities shall be available to all. This principle is particularly applicable in the admission of students in all colleges, and in their academic pursuits. It is also applicable in University-owned or University-approved housing, in food services, student unions, extra-curricular activities, and all other student services. It is a guiding policy in the employment of students either by the University or by outsiders through the University and in the employment of faculty and civil service staff.

The College of Education was established in 1905 to prepare men and women for teaching in the schools of Minnesota and for other kinds of educational service. It has a threefold obligation—to extend continuously the frontiers of knowledge and tested skill, to provide education of high quality for prospective and present members of the education profession, and to afford leadership in applying tested insights to school and college problems.

The College of Education is united with other colleges of the University in the common aim of fostering liberal education for all students, regardless of specialization or vocational goals. A liberal education is one that frees us from ignorance, enables us to experience life more fully, and enlarges our powers to judge intelligently. To participate in the quest for a liberal education requires that we seek to expand our control over the primary instruments of acquiring and communicating knowledge; that we seek to understand both the broadly significant findings of the sciences and the methods whereby the sciences contribute to man's knowledge of himself and his environment; that we seek historical and philosophical perspective on the nature of our own lives and the world in which we live; and that we seek to vivify our lives through an understanding and appreciation of the arts. Learning to view and use these knowledges, skills, and appreciations in a way that will disseminate them more broadly throughout society is integral to the quest for a liberal education as it is understood by the College of Education.

A student desiring to complete an undergraduate degree program in the College of Education is expected to distribute some part of his course work in areas of study beyond those most closely associated with his specialized or vocational interests.

COURSES OF STUDY

All students who plan to receive a teacher's certificate from the state of Minnesota upon graduation from the University of Minnesota (Minneapolis and St. Paul) must complete a B.S. degree program in the College of Education. Students wishing physical education or recreation and park administration programs enter the College of Education as freshmen. All other majors take 1 or 2 years of preprofessional work in another college before entering the College of Education.

This section of the bulletin contains brief descriptions of the courses of study, admission requirements, graduation requirements, and procedures and practices that are followed in the College of Education. These requirements should be studied as well as the detailed requirements for a particular curriculum as listed in Section II of this bulletin.

General Information

Detailed information concerning general entrance requirements, as well as University admission procedures and estimated expenses, will be found in the *General Information Bulletin*. The Office of Admissions and Records will send a copy upon request.

Programs in Which Students Normally Begin Directly in the College of Education

Students who wish to be graduated in physical education or recreation and park administration are encouraged to register as freshmen in the College of Education and complete the program of study as prescribed in Section II. Students in other colleges who decide on one of these majors should transfer to the College of Education as soon as possible.

Programs in Which Students Normally Spend the Freshman Year in the College of Liberal Arts

Students who wish to major in art education, business education, distributive education, industrial education or music education spend 1 year in the College of Liberal Arts taking preparatory work as prescribed in the appropriate curriculum in Section II. They apply for a transfer to the College of Education early in the third quarter of the freshman year.

Programs in Which Students Normally Spend Two Years in the College of Liberal Arts

Students wishing to major in one of the following programs spend 2 years in the College of Liberal Arts:

Biological Science	Latin
Chemistry	Mathematics
Earth Science	Physics
Economics	Political Science
Elementary Education	Russian
English	School and Community Health Education
French	Sociology
Geography	Spanish
German	Speech
History	Speech Pathology and Audiology
Language Arts	

These students apply for transfer to the College of Education early in the third quarter of their sophomore year.

Combined Programs with the College of Liberal Arts

Students who qualify may combine programs of the College of Liberal Arts and of the College of Education and earn both the B.A. and B.S. degrees. The student must complete the requirements of both colleges and must register 3 quarters in the Upper Division of each college. 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. They should formally apply for admission to the program early in the third quarter of the sophomore year.

Combined 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 at the Office of Admissions and Records (Change of College window) for admission to the combined program in the third quarter of their third (junior) year. The student carries courses in both colleges concurrently during the fourth and fifth years and is awarded both degrees when he meets the graduation requirements that include (a) the prescribed courses in both colleges and a total of 245 credits; (b) 45 credits with a 2.80 grade point average, in graduate-level courses (numbered 5-000 or higher), including a minimum of 24 credits in the major and 9 in the minor with a maximum of 12 in education; (c) a research or expository paper; and (d) a minimum of 45 credits earned while in residence in the College of Education. The residence requirement is to be met by transferring to the College of Education for the fifth year of the combined program. For additional information see the *Institute of Technology Bulletin* and inquire at 206 Burton Hall.

Master of Education Degree and Graduate Study in Education

(See index)

Reserve Officers Training Corps

Reserve training programs in military science, air science, and naval science are available to students in the College of Education as well as to students in other colleges of the University. (See *Army-Navy-Air Force ROTC Bulletin*.)

ADMISSION REQUIREMENTS

General Statement — Admission to the College of Education is granted on the basis of academic standards and an appraisal of other factors related to teaching fitness. Due to enrollment limitations in some major fields, the Admission Committee cannot accept all applicants who meet minimum requirements.

1. Students who apply for admission to the College of Education must satisfactorily complete certain clearance procedures as listed in the instruction sheet issued at the time of application. One of the clearances requires a certificate from the University Health Service indicating that the student has no physical limitations or health conditions which would prevent successful pursuit of educational work.
2. Students applying for admission must present a record of success in previous academic work.
 - a. To be considered for admission to the College of Education as a freshman, a high school graduate must have a college aptitude rating of 50 or higher. This rating is the average of the applicant's percentile rank in his high school graduating class and his percentile rank among University freshmen on a college aptitude test. Such students are considered without reference to the pattern of courses taken in high school.

General Information

- b. To be considered for admission with advanced standing a student must have at least a C (2.00) average in all of his previous work. In addition, a student applying for a program that prepares for teaching above the elementary grades must have earned at least a C+ (2.50) average in all college courses that will be counted toward his major. In fields for which enrollment is limited, preference may be given to applicants who more than meet these minimal requirements.
- c. Students who intend to enter the College of Education after 1 or 2 years of preprofessional study in the College of Liberal Arts must meet the freshman entrance requirements of that college. (See *General Information Bulletin*.)

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 which may be necessary in individual cases.

Admission Requirements for Specific Programs in Education

Specific admission requirements have been established for the elementary program as well as for the agricultural education, art education, business education, distributive education, home economics education, industrial education, music education, and speech pathology programs. The student who plans to enter the College of Education should read carefully the requirements for the program of his choice. (See Section II.)

Admission to Academic Secondary Curricula

Students who have taken 2 years of work in the College of Liberal Arts and are preparing to teach academic subjects in high school may be considered for admission to the College of Education upon satisfying the following requirements:

1. 90 quarter credits with a C (2.00) grade point average.
2. 15 quarter credits in a major field with a C+ (2.50) grade point average.
3. 10 quarter credits in a minor field with a C (2.00) grade point average. (In the case of those individuals taking broad field majors, the minors may be subdivisions of the broad field major and the student should present a minimum of 25 credits in the major.)
4. Freshman English: Engl 1-001/1-002/1-003 or Comm 1-001/1-002/1-003 or Engl 1-311/1-312/1-313, or exemption.
5. 48 credits from the following categories as indicated below. Courses used to meet major and/or minor requirements may be included in these 48 credits.
 - a. *Communication, Language, or Symbolic Systems*: English, speech fundamentals, and foreign language skills; linguistics, rhetoric, logic; mathematics (9 credits) (freshman composition may not be included)
 - b. *Physical and/or Biological Science*: (12 credits)
 - c. *Man and Society*: Psy 1-001, 1-002 and 12 credits selected from among at least two of the following fields: history, geography, political science, sociology, anthropology, and economics.
 - d. *Artistic Expression*: (9 credits from English or foreign literature, humanities, art, and music)
6. PubH 1-003 or 3-001 (3 credits) or equivalent.
7. Nonprofessional physical education courses (3 credits).

Graduation Requirements

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.

Limited Enrollment — Admission to English, language arts, speech, economics, geography, history, political science, and sociology programs will be limited starting in the fall of 1970. Most students will be accepted for the fall quarter, and some additional applicants will be admitted for the spring quarter. For admission in the fall, students should apply early in the preceding spring quarter and no later than May 1. Many factors will be considered, but preference will be given to students with an overall grade point average of 2.30 or higher and solid development of a major.

Admission of Students from Colleges Outside the University

Students who have not completed the amount and kind of course work necessary for admission to a program of the College of Education will generally be expected to complete the prescribed work in the College of Liberal Arts.

Students with 2 full years of quality college work who lack minor requirements may be admitted to the College of Education and make up deficiencies after admission. Such deficiencies, however, may delay graduation or necessitate extra summer work.

Admission of Students with Three 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. 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. degree requirements. The time needed will be influenced by the extent and strength of the preparation in the major teaching field. Ordinarily a quarter or 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.

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 upon application the appropriate Minnesota teaching certificate.

In some specialized curricula 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.)

General Information

Amount and Quality of Work

A minimum of 186 credits with a C (2.00) average, including the required courses in physical education, is needed for graduation. In a teaching minor a grade of C (2.00) is required. In the student's teaching major subject, excepting elementary education, a grade average of C+ (2.50) is required. For elementary education, the grade average is C (2.00). These grade averages are based on University of Minnesota work exclusive of General College courses.

The College of Education permits its students to register for certain courses offered on a P-N basis, but interested students should check the restrictions on the use of P-N courses that are posted at the Student Personnel Office.

Professional Requirements for Students Graduating from all Curricula Except Secondary Academic

The requirements for these programs are outlined in the descriptions of the specific curricula in Section II of this bulletin.

Professional Requirements for Students Graduating with Secondary Academic Majors

The following requirements are for students with 2 years of college preparation who are enrolled in the 2-year College of Education curricula 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 specialization, such as language arts or each of the majors in the area of social 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. Students should select majors and minors early in their college course and with regard to the demands of high schools. 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 — SeEd 3-150 and 3-155 (10 cr; prereq Psy 1-001 and 1-002).
- b. Methods and student teaching — The student must complete courses in methods and teaching in his major field (prereq SeEd 3-150 and 3-155). These courses are normally spread over more than 1 quarter.
- c. History and philosophy of education — Satisfactory completion of HEd 3-090 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. All of these courses are described in Section III, Description of Courses.

Health Education

All students in the College of Education except those in 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 1-003 (3 cr) or PubH 3-001 (3 cr). Alternates would be PubH 1-001 (2 cr) plus PubH 1-002 (2 cr) or PubH 3-002 (3 cr). Note that the alternate plans require more than the 3 credits for PubH 1-003 or 3-001.

Residence Requirements

A minimum of 45 credits must be earned while in residence in the College of Education. Thirty of the last 45 credits of the degree must be earned in residence. These are minimum residence requirements for graduation, and thus for a degree and teaching certificate. Correspondence courses do not count as residence credits.

The required courses in education are arranged in a sequence for the junior and senior years. 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 terms preceding his senior year in order to complete the professional sequence.

Degrees and Honors

College of Education graduates receive the bachelor of science degree on completion of an undergraduate program. Students graduating from an advanced professional program receive the master of education degree. Graduation with honors applies only to students whose first 4-year degree is received from this college; those entering with a previously earned Bachelor's degree are not eligible.

Application by the student for graduation with honors is not necessary. For consideration, a minimum of 45 credits in residence must be completed before the final quarter of the senior year. Grades for the final quarter cannot be included in determining eligibility for honors. For graduation with distinction, an average of at least 2.95 is required for all credits earned in this University and 3.00 (B) for the work of the junior-senior years; and for graduation with high distinction, these averages must be at least 3.45 and 3.50 (B+).

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 Student 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 another collegiate institution, and (4) adult special students.

1. Students without previous college training apply for admission as freshmen. They are referred to the *General Information Bulletin* and are expected to follow the same procedure as applicants for other colleges in the University. New students

General Information

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 the Office of Admissions and Records in Morrill Hall, 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 that office 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 — Students who believe themselves sufficiently prepared in some subjects to pass examinations in them upon entrance may, with the approval of the Committee on Student Scholastic Standing, take such examinations without charge. They may 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 instructions at 206 Burton Hall.

Change of Registration — The student who finds it necessary to change his program should obtain a change in 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.

A student is not permitted to change his registration in a course to a different grading system after the first week of classes.

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

Clearance for Admission to the Junior Year — Students who are enrolled in the College of Education in the sophomore year are asked to complete clearances during the spring quarter. They take the required physical examination and psychological and speech tests according to printed instructions mailed to them during winter quarter.

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 Committee on Student Scholastic Standing, 206 Burton Hall, 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 \$20.

Application for a Degree — The student should file an application for a degree at the information window, Office of Admissions and Records, 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 previous to the date the degree is to be granted.

Application and Registration for Student Teaching — Admission to student teaching is not automatic. Students obtain applications and information sheets in the Student Teaching Office, 227 Burton Hall. For assignment in any quarter of an academic year, application should be filed during the spring quarter of the *preceding* year at dates which are announced in the Official Daily Bulletin of the *Minnesota Daily* and are posted in Burton Hall. Student teaching is not available during summer sessions.

The programs listed in Section II of this bulletin indicate the courses in which students register for supervised teaching. Admission, subject to the director of clinical experiences, involves the following:

1. Completion of a satisfactory pattern of courses in the major field and the recommendation of the major adviser.
2. An average of C+ (2.50 grade points per credit) in secondary majors except agricultural education which has special requirements; or an average of C (2.00 grade points per credit) in the elementary education major.
3. Satisfactory progress toward degree requirements of the college, including an average of C in the teaching minor.
4. Completion of the basic junior courses (SeEd 3-150 and 3-155 for secondary education and Elem 3-100 for elementary education) and the recommendation of the instructors.
5. Completion of junior-year clearances in the College of Education, including psychological tests and satisfactory ratings on the physical examination and on Speech and Hearing Clinic tests.
6. In modern languages, passing a special proficiency examination.

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 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 percent 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 (2.00) for all credits earned in any 1 year.
3. An average of less than C+ (2.50) in a secondary teaching area.

General Information

4. An average of less than C (2.00) in courses counted in the elementary education major.

Students who fail to make satisfactory progress toward a degree after being on probation for 1 quarter are in danger of being dropped.

Teaching Certification — When the senior student who wishes to teach in Minnesota registers for the final quarter in the College of Education, he is expected to apply for the teacher's certificate. He obtains the application form in 206 Burton Hall, attaches a money order for the certification fee (payable to the Treasurer, State of Minnesota) and leaves the application and money order at the College of Education window in the Office of Admissions and Records. All other details are handled by the University and the qualified graduate is recommended for the appropriate certificate to teach in the area of his preparation in Minnesota schools.

Education Courses in the General Extension Division — For evening and correspondence study courses in education see the *Evening Classes Bulletin* and the *Independent Study Bulletin*. 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.

STUDENT SERVICES

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 Student Counseling Bureau in Eddy Hall.

Faculty Advisers — Each student admitted to a degree program has an adviser, a member of the faculty who teaches in his major field. The student should consult his adviser concerning preparation in his major field, registration each quarter, and on general 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.

Department of Clinical Experiences — Student teaching, with assignment to schools and agencies in Minneapolis, St. Paul, suburban communities, and other areas of the state, is coordinated by the Department of Clinical Experiences. A preceding section of this bulletin gives information about application and registration for student teaching.

Orientation-Registration Program — An orientation program for all students new to the campus is offered by the University shortly before the opening of each quarter. Students are expected to attend in order to complete first registration and to explore opportunities available to University students.

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 and candidates for the master of education degree, excepting those in recreation and park administration and in speech pathology and audiology, register with the Bureau of Recommendations, 400 12th Avenue S.E. The fee entitles the student to placement service for a 1-year period ending October 1.

SPECIAL AGENCIES

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 — Selected Minneapolis public schools are used for demonstration, observation, and research. Senior students do their student teaching in the public schools of the Minneapolis-St. Paul metropolitan area, or in other parts of the state.

Marshall-University High School is a 6-year secondary school designed to provide opportunity for observation, demonstration, student teaching, experimentation, and research in secondary education. The University Nursery School provides similar facilities. Minneapolis schools located near the campus are affiliated with the College of Education for demonstrations and research in the elementary grades.

Bureau of Field Studies and Surveys — The Bureau of Field Studies and Surveys is a component of the Division of Educational Administration within the College of Education. It provides research services to local school districts and other educational agencies in solving school problems of instruction, administration, finance, and physical plant planning. In performing these services the bureau functions as a resource center for instruction and clinical experiences in educational administration.

Educational Research and Development Council — The council includes public school systems of the metropolitan Twin Cities area and the College of Education. It conducts research relating to the conditions of learning for children and classroom practice. Additional activities focus on the development of school personnel and instructional programs through curriculum studies and in-service clinics. Students in the Division of Educational Administration have opportunities to work closely with the council.

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

General Information

institute offers both undergraduate and graduate majors in child psychology. The undergraduate major is administered by the College of Liberal 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. The research programs deal with personality and social development, language and cognitive development, perceptual development, psycho-physiological processes, and learning and motivation in children. The institute director, faculty, and nursery school are located in the Child Development Building.

Psycho-Educational Center — The Psycho-Educational Center is an interdisciplinary research, demonstration, and training unit administered by the College of Education. It is a laboratory for studying and modeling working relationships among related disciplines seeking to help individuals, groups, or agencies develop solutions for certain kinds of educational, psychological, and social problems. The center provides a variety of services for the University and community, including a child guidance clinic for diagnosis and treatment of the psycho-social-educational problems of children and young adults, practicum opportunity for graduate students and teachers, and consultation services to state and local agencies.

Graduate students in clinical, counseling, and school psychology, social work, regular and special education, and school administration participate in center activities in fulfilling some of their clinical experience requirements. In addition to a core staff representing the various disciplines, the center supervisory staff is augmented by the part-time help of staff of participating departments who serve as adjunct supervisors for cases or consultation services. The center has quarters in Pattee Hall and the Child Development Building with its main office in Pattee Hall. Parents, teachers, and agencies interested in securing help through the center apply to the director for assistance.

Office of Educational Research, Planning, and Development — This office provides a limited amount of financial support and other resources for the research and development activities of College of Education faculty members.

Center for Curriculum Studies — This center, an all-University agency attached to the College of Education, supports curriculum development activities at the various educational levels and across fields. It administers several major curriculum development projects.

FINANCIAL ASSISTANCE

Students seeking financial assistance should direct inquiries to the Office of Student Financial Aid, 107 Armory Building. Applications filed during the winter quarter (before the April 1 deadline) will receive priority consideration.

Students who are interested in special education programs should consult the office of that department, 101A Pattee Hall, about possible traineeships and fellowships.

In addition to all-University sources of assistance open to College of Education students, several awards are available only for students in this college.

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

Programs Leading to the M.Ed. Degree

Bertha Weiskopf Memorial Scholarship — 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.

Florence Goodrich Sinclair Awards — Six awards covering tuition and fees for 1 or more quarters for College of Education women students with financial need and above-average promise.

Bernie Reuper Memorial Scholarship — A scholarship of \$150 awarded to a junior or senior in the Department of Recreation and Park Administration selected on the basis of academic aptitude, financial need, and professional promise in this field.

Minnesota Recreation and Park Association Scholarships — Awarded annually to men and women majoring in recreation and park administration, covering partial or full tuition and fees for 1 or more quarters.

PROGRAMS LEADING TO THE MASTER OF EDUCATION DEGREE

A professional degree, the master of education, is granted to a student who satisfactorily completes one of the M.Ed. programs included in the description of various curricula in Section II of this bulletin. Master of education degree programs are of two types. The first is for experienced, certified teachers who wish to pursue advanced professional study. The second is for professional workers in educational fields not requiring teacher certification. The M.Ed. is not a certifying degree, except in the 5-year combined program with the Institute of Technology and special projects such as the Teacher Corps.

The student applies for admission to the College of Education in the major desired through the Office of Admissions and Records. The general requirements for this professional degree include:

1. Admission based on graduation from an accredited college, an undergraduate major or specialization appropriate to the professional degree sought, departmental approval of the application and concurrence of the college, and special requirements as established for each program.
2. A curriculum that includes a minimum of 45 resident credits of graduate level, a grade point average of 2.80 in courses taken in the major, and a distribution of courses as indicated for the particular program.
3. A comprehensive examination in the major field.
4. A 7-year time limit between the initiation of the program and graduation.

Credits transferred from another institution will not reduce the 45-credit residence requirement nor meet any special requirement of a particular program. No more than 18 credits may be transferred from the Graduate School of this University, and no more than 12 from the General Extension Division. Under adult special status, only credits earned in the first academic quarter or summer term of such registration may be transferred to an M.Ed. program.

The following M.Ed. programs are offered by the College of Education:

For Certified Teachers:

Agricultural Education
Geology (Earth Science)
Home Economics Education
Mathematics
Music Education
Physical Education
School Health Education

For Noncertified Professional Workers:

Agricultural Education (Home Economics Education)
Recreation and Park Administration

GRADUATE STUDY IN EDUCATION

Graduate study in education, leading to the master of arts, the doctor of philosophy, and the doctor of education degrees and specialist certificates may be pursued in the Graduate School. Application for admission to these programs 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 three or four full Summer Sessions.

Section II of this bulletin refers to various graduate programs, but for a full statement of regulations, consult the *Graduate School Bulletin*.

Section II. Curricula

AGRICULTURAL EDUCATION

Major Advisers: Professors Kitts, Marvin, Peterson, Swanson;
Associate Professors McMillion, Persons

Programs for the Bachelor of Science Degree

The agricultural education major, offered jointly with the College of Agriculture, Forestry, and Home Economics, is designed for students who plan to teach agriculture or horticulture in public schools, area vocational technical schools, and junior colleges in the communities of Minnesota. Agricultural extension workers and others preparing for professional careers in agriculture or for farming may find the agricultural education major appropriate to their needs. Agricultural education provides comprehensive training in technical agriculture and permits emphasis in such fields as animal science, agronomy, agricultural economics, horticulture, soils, and mechanized agriculture. In addition, it offers the special training in education needed to qualify students for certification as agriculture or horticulture instructors.

In the third quarter of the sophomore year, students should make application at the Office of Admissions and Records, Coffey Hall, St. Paul Campus, for joint registration in one of the combined curricula. They will then complete admission requirements of the College of Education, which include speech, health, and psychological examinations, and interviews.

To be eligible, the student must have a GPA of at least 2.00 for all courses taken at this University, and at least a 2.30 GPA in technical agriculture courses as follows:

For horticultural education specialization: 2.30 in courses in entomology, forestry, horticulture, mechanized agriculture, plant pathology, agricultural economics, and soils.

For agricultural education specialization: 2.30 in courses in agricultural economics, agronomy, animal science, entomology, food science, forestry, horticulture, agricultural journalism, mechanized agriculture, plant pathology, soils, and veterinary medicine.

The same grade averages are required for the student's later admission to student teaching and for graduation.

Students applying for the agricultural education specialization must have had satisfactory background in agriculture. Those entering the horticultural education specialization must have had adequate experience in horticulture or they must be employed for the equivalent of 3 months full time in an appropriate occupation before receiving the B.S. degree.

The agricultural education specialization requires a minimum of 204 credits for graduation, and the specialization in horticultural education requires 200 credits. For both of these programs, the students meet the minimum liberal education (CLE) requirements listed for the agricultural science and industries curriculum in the *Agriculture Bulletin*. Both curricula also require a minimum of 80 credits in technical agriculture. Common and additional special requirements for the two curricula are given below.

COMMON REQUIREMENTS

(Agricultural Education Specializations)

Education and Related Courses

Psy 1-001, 1-002 — General Psychology

SeEd 3-155 — Introduction to Secondary School Teaching

Curricula

PubH 1-003 (or 3-001) — Individual, Public Health
AgEd 1-001 — Introduction to Agricultural Education
AgEd 1-010 — Rural Education and Community Leadership
AgEd 3-020 — Rural Education Through Extension Methods
AgEd 3-030 — Teaching Agriculture in the Secondary School
AgEd 3-031 — Student Teaching
AgEd 5-060 — Planning Programs

Technical Agriculture Courses

Soil 1-122 — Introduction to Soil Science
PlPa 1-001 (or 3-050) — Introductory Plant Pathology
Hort 1-001 — Fundamentals of Horticulture
Ent 1-005 — Economic Entomology

ADDITIONAL REQUIREMENTS (Horticultural Education Specialization)

Education and Related Courses

Educ 5-104 (or AgEd 5-050) — Adult Education
Student teaching, arranged — 6-10 credits

Technical Agriculture Courses

PlPh 3-091, 3-092 — Survey of Plant Physiology
Ent 3-050 (may be substituted for Ent 1-005) — Forest Entomology
MeAg 3-210 — Engines and Tractors
Hort 1-016 — Greenhouse Management
Hort 1-036 — Plant Propagation
18 additional credits in horticulture

Recommended Electives

MeAg 1-010, 1-400, 3-200, 3-400, 3-410, 3-610, 5-020, AgEc 1-400, Mktg 3-000

ADDITIONAL REQUIREMENTS (Agricultural Education Specialization)

Education and Related Courses

AgEd 5-040 — Young Farmer Education in Agriculture
AgEd 5-050 — Adult Education in Agriculture

Technical Agriculture Courses

AnSc 1-100 — Introduction to Animal Science
AnSc 1-400 — Principles of Livestock Management
AnSc 1-520 — Milk Production
Agro 1-010 — Principles of Agronomy
Horticulture (may substitute Hort 3-032 for Hort 1-001)
MeAg 1-020 — Agricultural Shop — Metalwork
MeAg 5-020 — Program Planning and Instructional Methods in Agricultural Mechanics
9 credits selected from:
MeAg 1-600 — Building Construction
MeAg 3-200, 3-201 — Agricultural Machinery
MeAg 3-210, 3-211 — Engines, Tractors
MeAg 3-400 — Rural Sanitation, Water Supply
MeAg 3-410 — Hydrology, Water Control
MeAg 3-610 — Electricity in Agriculture
MeAg 5-010 — Agricultural Waste Management
MeAg 5-600 — Materials Handling

Recommended Electives

Soils: 3-210, 3-220, 3-412, 5-420, 5-430
Agronomy: 3-010, 3-020, 3-030, 5-010, 5-030
Horticulture: 1-010, 1-016, 1-021, 1-022, 1-023, 1-024, 1-036, 3-041, 3-074, 3-091, 5-042
Animal Science: 1-105, 1-110, 1-120, 1-300, 1-500, 1-700, 3-130, 3-200, 3-402, 3-403, 5-311, 5-601, 5-602, 5-603, 5-604, 5-605
Veterinary Medicine: 3-502
Agricultural Economics: 1-300, 1-400, 3-500, 3-710, 5-440
Food Science: 1-010
Forestry: 1-202
Agricultural Journalism: 3-530

SUPPORTING FIELDS

1. **Supporting Field in Agriculture for Agricultural Education Majors**—Students majoring in agricultural education may choose a concentration in an agriculture department. Such a supporting field consists of 18 credits exclusive of introductory courses. For details, consult the department or the *Agriculture Bulletin*.

2. **Supporting Field in Agricultural Education for College of AFHE Students**—A supporting field in agricultural education is open to students majoring in the agricultural science and industries curriculum. This field, however, will not include requirements for a teaching certificate. It is recommended that Psy 1-001 and 1-002 be completed before entering the supporting sequence. A minimum of 18 credits may be selected from AgEd 1-010, 3-020, 3-030, 5-032, 5-034, 5-040, 5-050, 5-051, 5-060, 5-070, and 5-071. Other courses may be selected as approved by an adviser in agricultural education.

Programs for the Master of Education Degree

Plan I

The College of Education will award the master of education degree (M.Ed.) to students who are certified teachers and who satisfactorily complete a year's advanced study in agricultural education meeting the requirements for this professional degree. In completing the general requirements for the M.Ed. degree, the student will present a total of 45 credits beyond the requirements for a Bachelor's degree in agricultural education, distributed to include:

1. Agricultural education (12 credits minimum) of which not more than 3 credits may be in a problems course
2. Education other than agricultural education (6-9 credits)
3. Technical agriculture and areas other than those listed above (at least 23 credits)

Application for admission to study toward the M.Ed. degree under Plan I can be made at the Office of Admissions and Records, St. Paul Campus.

Plan II

The master of education, Plan II, is designed for persons who are not certified to teach agriculture in public schools but who are engaged in professional agricultural education activities. Extension workers, employees of public service agricultural agencies, educational directors of agricultural industry and others whose primary responsibility is education may apply.

In meeting the requirements for the M.Ed. degree, the candidate must complete at least 45 credits beyond the Bachelor's degree. The distribution will include at least 12 credits in agricultural education (including the integrating paper), 6-9 credits in education other than agricultural education, and at least 23 credits in technical agriculture or other fields appropriate for the individual student. Candidates must have at least 1 year of professional experience in agriculture before the degree will be granted.

Applications for admission should be sent to the Office of Admissions and Records, St. Paul Campus.

ART EDUCATION

Major Advisers: Professors Gayne, Hastie; Assistant Professor Olson;
Instructors Cain, Hiniker, Leary

The Department of Art Education coordinates the varied facilities of the University available for art education training through program planning and advice

Curricula

for education majors at both undergraduate and graduate levels. On graduation from the 4-year program, the student is recommended for Minnesota certification for teaching art in elementary and secondary schools. This curriculum includes basic training in art; an opportunity to specialize, through selection of electives, in the art area of particular interest; a balanced general education; and professional preparation for teaching.

Students should apply for admission to the College of Education early in the third quarter of the freshman year or during the quarter in which they will meet admission requirements. Limited space restricts the number that can be accepted. Applicants should have completed 45 credits including a minimum of 15 in art with at least one course in each of the five areas: art history, design theory, drawing and painting, sculpture, and design in materials (architecture, ceramics, commercial, costume, crafts, industrial, interior, jewelry, landscape, photography, puppetry, stage, weaving). See "Admission Requirements" in Section I of this bulletin. The C+ major average, which is required for admission to the college, for admission to student teaching, and graduation, is computed on courses which will fulfill requirements in groups 1 and 2 below.

Major in Art Education

COURSE REQUIREMENTS

Group 1. Art Education Courses — 32 credits

- ArEd 1-501 — Introduction to Art Education (2) (sophomores and transfers)
- ArEd 3-306, 3-307, 3-308 — Basic Principles and Experiences in Art Education (15) (juniors)
- ArEd 3-506, 3-507, 3-508 — The Teaching and Supervision of Art (6) (seniors)
- ArEd 3-606, 3-607, 3-608 — Student Teaching and Supervision of Art (9) (seniors)

Group 2. Art and Related Courses — 46 credits required to be selected from the following or equivalents approved by major adviser:

- A. Art History and Theory — 8 credits required**
 - ArH 1-009, 1-011, 1-012 — Survey of History of Art (4-12)
- B. Design and Its Application — 24-28 credits required**
 - ArS 1-104 — Drawing and Painting (3)
 - ArS 1-701 — Photography (3)
 - ArS 1-801 — Ceramics (3)
 - ArS 3-117 — Drawing and Painting (3)
 - ArEd 3-010 — Introduction to Weaving (3)
 - ArEd 3-020 — Contemporary Crafts (3)
 - ArEd 3-030 — Puppetry in Education (3)
 - Th 1-502 — Stagecraft: Construction and Painting (3)
- C. Drawing, Painting, Sculpture, and Printmaking — 12-16 credits required**
 - ArS 1-101, 3-101, 3-121 — Drawing, Painting II and III (6)
 - ArS 1-301 — Sculpture I (3)
 - ArS 1-501 — Printmaking (3)

Group 3. A minor in a teaching subject, as listed in this bulletin, is recommended. As an alternative, 15 Upper Division credits outside both the major field and professional education may be chosen. In either case, a "C" average is required for this part of the program.

Group 4. Professional Education Courses — 15-18 credits required

- SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)
- HEd 3-090 — The School and Society (3)
- Methods in the minor (2-3)
- Education electives (2-3)

Group 5. Liberal Education Courses

- A. Freshman English Requirement**
 - Engl 1-001, 1-002, 1-003, or Comm 1-001, 1-002, 1-003, or Engl 1-311, 1-312, 1-313, or exemption
 - Additional courses in language, literature, writing, or foreign languages (9)

B. Physical and/or Biological Sciences — 9 credits

C. Man and Society

Hum 1-001, 1-002, 1-003 (15) (or) Hist 1-001, 1-002, 1-003 (9)

Soc 1-001 (3)

Psy 1-001, 1-002 (6)

D. Artistic Expression

(See Group 2)

Group 6. Physical Education and Health

Physical Education (3)

PubH 1-003 or 3-001 (3)

Group 7. Electives — to complete a total of 186 credits

Recommended: Continuation of a language begun in high school, speech and theatre arts, philosophy, history, sociology, psychology, sports, dance, journalism, music, literature. Electives may be in art courses beyond the minimal requirement.

Minors in Art Education

1. For Elementary School Teachers — 27 credits

Note — This minor does not satisfy the requirement of an academic minor in the elementary IA program.

ArEd 1-207 — Experiences with Pictorial Expression (3)

ArEd 1-208 — Experiences with Design and Materials (3)

ArEd 1-209 — Experiences with Functional Design and Crafts (3)

ArEd 3-414 — Teaching of Art in the Elementary School (2)

Drawing and design courses (6)

Electives (10)

2. For Secondary School Teachers — 28 credits:

ArEd 1-501 — Introduction to Art Education (2)

ArEd 3-306, 3-307 — Basic Principles and Experiences in Art Education (10)

ArEd 3-507 — The Teaching and Supervision of Art (2)

ArtH 1-009, 1-011, 1-012 — Survey of History of Art (4-8)

Courses in drawing and design (6)

Electives (3-5)

Programs for the Master of Education Degree

In addition to general requirements listed in Section I of this bulletin, the M.Ed. programs in art education require the following:

For certified art teachers in secondary schools — Completion of an undergraduate program approximating this University's major in art education is prerequisite. The M.Ed. program includes 10 credits in required art education courses and a selection of at least 14 credits from studio art, art history, and art education for the major of 24 credits. Other education courses and electives to complete the 45-credit program will be selected for their relevance to the individual's professional objectives and interests.

For elementary school teachers — Applicants must present at least 27 credits in art and art education. The M.Ed. program will be planned to provide further specialization in these areas for work at the elementary school level. The majority of the program will be in art and art education, plus 9 credits in education outside the major and electives to complete 45 credits.

These programs do not lead to certification at either the elementary or secondary level.

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 *Graduate School Bulletin* and the Department of Art Education advisers.

BUSINESS EDUCATION

Major Advisers: Professor Price; Assistant Professors Hopkins, McLean

The following curriculum, leading to the B.S. degree, prepares teachers of business subjects in secondary schools. Students will normally enter the College of Education at the beginning of their second year with 45 credits from the program for the freshman-sophomore years, listed below. They may enter later if they satisfy the admission requirements (see Section I of this bulletin). Major advisers should be consulted as early as possible.

FRESHMAN-SOPHOMORE YEARS

Students who have had high school courses or experience in bookkeeping may be exempt from Acct 1-024 and be admitted to Acct 1-025 by passing a placement test. Students who have had previous typewriting instruction may be admitted to SeEd 1-502 or SeEd 1-503 by passing a placement test. Students who have had previous shorthand instruction may be admitted to SeEd 1-506 or SeEd 1-507 by passing a placement test.

A. Liberal Education

1. Communication, Language, Symbolic Systems — 18-21 credits

Freshman English required: Comm 1-001, 1-002, 1-003 (12) (or) Engl 1-001, 1-002, 1-003 (9) (or) Engl 1-311, 1-312, 1-313 (9)

Mathematics — 3 credits required from Math 1-008, 1-001, 1-111, 1-441

6 credits from: speech, rhetoric, philosophy, linguistics, English, foreign language, journalism, or additional mathematics

2. Physical and/or Biological Sciences — 9 credits

From: astronomy, biology, botany, chemistry, geology, natural science, physics

3. Man and Society — 15 credits

Psy 1-001, 1-002 — General Psychology (6) (required)

9 additional credits from: anthropology, black studies, geography, history, Indian studies, social science, sociology, political science

4. Artistic Expression — 9 credits

Selected from art; music; literature; humanities; theatre arts; architecture; Ind 1-500, 1-510, 1-540, 1-542; HE 1-521, 1-523, 1-531, 1-541, and 1-552

B. Major and Related Courses

Required for the two sequences (Office and Basic Business; Clerical and Basic Business):

DE 1-100 — Introduction to Business and Distributive Education (3)

Econ 1-001, 1-002 — Principles of Economics (8)

GC 1-531 — Writing Laboratory: Business Writing (3)

CC 1-535 — Introduction to Data Processing (3)

Acct 1-024, 1-025, 1-026 — Principles of Accounting (9)

SeEd 1-501 — Beginning Typewriting (1)

SeEd 1-502 — Intermediate Typewriting (1)

SeEd 1-503 — Advanced Typewriting (2)

SeEd 1-508 — Office Procedures (3)

Additional requirements for Office and Basic Business only:

SeEd 1-505 — Beginning Shorthand (3)

SeEd 1-506 — Intermediate Shorthand (3)

SeEd 1-507 — Advanced Shorthand (3)

C. Other Requirements

Physical education — 3 credits

PubH 1-003 — Individual and Public Health (3)

(or) PubH 3-001 — Personal and Community Health (3)

D. Electives — consult adviser

JUNIOR-SENIOR YEARS

A. Major and Related Courses

- Economics — 9 credits to be elected
- Mktg 3-000 — Principles of Marketing (3)
- BLaw 3-058 — Business Law: Introduction to Law and the Law of Contracts (3)
- Mgmt 3-001 — Fundamentals of Management (3)
- Business administration — 12 credits to be elected from at least three of the following:
 - accounting, business law, business finance, industrial relations, insurance, management, marketing, transportation
- Soc 3-801 — Sociological Methods (3)
- SeEd 3-100 — Office Occupational Experience (3-9)
- SeEd 3-300 — Teaching Typewriting and Office Procedures (2)
- SeEd 3-301 — Teaching Shorthand (2) (required only in the Office and Basic Business sequence)
- SeEd 3-302 — Teaching Basic Business Subjects (2)
- SeEd 3-303 — Teaching Bookkeeping and Data Processing (2)
- SeEd 3-601 — Student Teaching in Business Subjects (9)

B. Other Professional Courses

- SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)
- HEd 3-090 — The School and Society (3)

C. Electives — to complete 186 credits, selected in consultation with adviser and recommended from: advanced courses in the School of Business Administration, audio-visual materials, consumer education in the schools, guidance, psychology of adolescence, social foundations of education, advertising, occupational psychology, cooperative part-time work-experience program, and pre-fall student teaching

The C+ (2.50) major average for admission to student teaching and for graduation is required for the following courses:

From Freshman-Sophomore Program:

- Econ 1-001, 1-002; SeEd 1-501, 1-502, 1-503, 1-508; Acct 1-024, 1-025, 1-026; GC 1-531, 1-535. Added for those in Office and Basic Business sequence: SeEd 1-505, 1-506, 1-507

From Junior-Senior Program:

- Mktg 3-000; BLaw 3-058; Mgmt 3-001; economics — 9 credits (electives); business administration — 12 credits (electives); SeEd 3-300, 3-302, 3-303; plus SeEd 3-301 for those in Office and Basic Business sequence

Minor in Basic Business

- | | |
|--|--|
| DE 1-100 — Introduction to Business and Distributive Education (3) | SeEd 3-601 — Student Teaching of Business Subjects (3) |
| Econ 1-001, 1-002 — Principles of Economics (8) | Economic electives — 9 credits |
| BLaw 3-058, 3-088 — Business Law (6) | Business administrative electives — 9 credits |
| Mktg 3-000 — Principles of Marketing (3) | from at least three of the following: business law, industrial relations, insurance, management, marketing, transportation |
| SeEd 3-302 — Teaching Basic Business Subjects (2) | |

**COUNSELOR EDUCATION, COUNSELING PSYCHOLOGY,
AND COLLEGE PERSONNEL WORK**

See Educational Psychology

DISTRIBUTIVE EDUCATION

Major Advisers: Professor Meyer; Associate Professors Ashmunn, Klaurens

The following curriculum, leading to the B.S. degree, prepares teachers of distributive education (sales and marketing) in the secondary schools. Although not

Curricula

required, a minor may be completed through careful selection of electives. Students will normally enter the College of Education at the beginning of their second year with 45 credits from the program for the freshman-sophomore years, listed below. They may enter later if they satisfy the admission requirements (see Section I of this bulletin). Major advisers should be consulted as early as possible.

FRESHMAN-SOPHOMORE YEARS

Students who have had high school courses or experience in bookkeeping may be exempt from Acct 1-024 and be admitted to Acct 1-025 by passing a placement test. Students who have had previous typewriting instruction may be exempt from SeEd 1-501.

Students preparing for vocational certification in distributive education may be exempt from part of DE 3-100 if they have had practical business experience or have completed a high school or post-high school cooperative distributive education program. The extent of this exemption will depend on the quality, amount, and recency of such experience.

A. Liberal Education

1. Communication, Language, Symbolic Systems — 18-21 credits

Freshman English required: Comm 1-001, 1-002, 1-003 (12)

(or) Engl 1-001, 1-002, 1-003 (9)

(or) Engl 1-311, 1-312, 1-313 (9)

(or) exemption

Mathematics — 3 credits required

6 additional credits from: speech, rhetoric, philosophic analysis, logic, linguistics, English, foreign language, journalism, or additional mathematics

2. Physical and/or Biological Sciences — 9 credits

From: astronomy, biology, botany, chemistry, geology, natural science, physics

3. Man and Society — 15 credits

Psy 1-001, 1-002 — General Psychology (6) (required)

9 additional credits from: anthropology, economic geography, history, political science, social science, sociology

4. Artistic Expression — 9 credits

Selected from: art, architecture, literature, theatre arts, humanities, HE 1-521, 1-541, Ind 1-540, or DE 5-305

B. Major and Related Courses

DE 1-100 — Introduction to Business and Distributive Education (3)

Econ 1-001, 1-002 — Principles of Economics (8)

GC 1-454 — Statistics (5)

(or) Soc 3-801 or 3-802 — Sociological Methods I: Descriptive Statistics (3)

(or) QA 3-052 — Quantitative Methods for Admin I (3)

GC 1-534 — Practical Law (5)

(or) BLaw 3-058 — Law, Contracts (3)

GC 1-537 — Salesmanship (3)

SeEd 1-501 — Materials and Techniques in Beginning Typewriting (1)

Acct 1-024, 1-025, 1-026 — Principles of Accounting (9)

C. Other Requirements

Physical education — 3 credits

PubH 1-003 — Individual and Public Health (3)

(or) PubH 3-001 — Personal and Community Health (3)

(or) Equivalent

D. Electives — consult adviser

JUNIOR-SENIOR YEARS

A. Major and Related Courses

DE 3-100 — Distributive Occupational Experience (0-9)

DE 3-301, 3-302, 3-303 — Methods: Distributive Education (6)

- DE 3-601 — Student Teaching in Distributive Education (9-12)
- DE 5-100 — Organization and Administration of Distributive Education (3)
- DE 5-105 — Coordination Techniques (3)
- DE 5-110 — Cooperative Vocational Education Programs (3)
- DE 5-305 — Teaching Merchandise Display (3)
- Ind 3-340 — Analysis, Course Organization (3)
- (or) Ind 5-330 — Industrial Course Construction (3)
- Economics — 3 credits to be elected
- IR 3-002 — Systems: Labor Marketing (3)
- Mktg 3-000 — Principles of Marketing (3)
- Mktg 3-065 — Retail Management I (3)
- (or) GC 1-553 — Marketing: Retailing, Sales (5)
- Marketing — 3 credits to be elected
- Psy 5-751 — Psychology of Advertising (3)
- (or) Jour 5-251 — Psychology of Advertising (3)

B. Additional Professional Courses

- SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)
- HED 3-090 — The School and Society (3)

C. Electives — to complete 186 credits, selected in consultation with adviser and recommended from: advanced courses in the School of Business Administration, audio-visual materials, consumer education in the schools, guidance and counseling, conference leading, psychology of adolescence, social foundations of education, education of the disadvantaged, advertising, textiles, occupational psychology, vocational psychology, vocational education, and pre-fall student teaching.

The C+ (2.50) major average for admission to student teaching and for graduation is required in the following:

- Econ 1-002; Acct 1-026; IR 3-002; Mktg 3-000, 3-065, or GC 1-553; Psy 5-751 or Jour 5-251; GC 1-537; DE 5-100; DE 5-105; DE 5-305; Ind 3-340; or Ind 5-330

Minor in Distributive Education

- Econ 1-001, 1-002 — Principles of Economics
- (or) Econ 1-014, 1-015 (or) Econ 3-001, 3-002 (or) AgEc 1-020, 1-030 (6-8)
- GC 1-537 — Salesmanship (3)
- Mktg 3-000 — Principles of Marketing (3)
- (or) AgEc 1-400 — Agricultural Marketing (3)
- Mktg 3-065 — Retail Management I (3)
- (or) GC 1-553 — Marketing: Retailing, Sales (5)
- DE 1-100 — Introduction to Business and Distributive Education (3)
- DE 3-100 — Distributive Occupational Experience (0-9)
- DE 3-302 — Methods: Distributive Education (2)
- DE 3-601 — Student Teaching in Distributive Education (3)
- DE 5-100 — Organization and Administration of Distributive Education (3)
- Electives — 12 credits approved by adviser

ECONOMICS

Major Adviser: Associate Professor Harlan Smith

During the student's first 2 years in the College of Liberal Arts, he includes in his program the first requirement listed below under the economics major and the requirements for junior-year admission to the College of Education as specified for academic secondary curricula in Section I of this bulletin. Spch 1-101 and a course in statistics are recommended, and the student should be proficient in typing before he reaches his senior year. An average of C+ (2.50) in all social science courses must be maintained.

Curricula

Major in Economics — 75 credits

Area Requirement

At least one course taken in economics or in any of the other social sciences on (a) the Soviet Union, (b) Asia, and (c) Africa. These credits are counted toward the totals listed below. Econ 5-307 or Econ 5-313 can be used to satisfy the requirement on the Soviet Union.

Economics — 36 credits, including:

Econ 1-001, 1-002 — Principles of Economics (6)
(or) 1-014, 1-015 — Scope, Methods and Application of Economics and Introduction to Economic Analysis (6)
(or) 3-001, 3-002 — Economic Problems of the American Society (6)
Econ 3-101 — Intermediate Economic Analysis: The Firm (3)
Econ 3-102 — Intermediate Economic Analysis: Income and Employment (3)
One course in each of the following fields: labor economics, comparative economics, public finance, and either economic development or international economics
Additional credits — at least 12 in courses in Upper Division or above

Supporting Fields — 39 credits

At least one course each in anthropology, geography, history, political science, and sociology. A survey course in American history (required for certification in many states) and a course in cultural anthropology are strongly recommended.

Professional Education — 29 credits, including:

SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)
SeEd 3-348, 3-349 — Methods of Teaching the Social Studies (5)
SeEd 3-640 — Student Teaching: Social Studies Juniors (1)
SeEd 3-641 — Student Teaching in the Social Studies (9)
HEd 3-090 — The School and Society (3)
Elective

EDUCATIONAL ADMINISTRATION

Major Advisers: Professors Hooker, Hendrix, Keller, Lambert, Popper;
Associate Professors Ammentorp, Cross, Morgan, Mueller, Nickerson, Sederberg, Weatherman;
Assistant Professors Alkire, Stark, Welch

The Division of Educational Administration includes graduate-level programs related to the preparation of educational leaders within the formal institutional structures of education. Preparation programs are designed to qualify personnel for administrative and supervisory positions in the elementary and secondary schools, junior and senior colleges, and graduate schools in both public and private institutions. Programs include preparation for leadership posts in regional, state, and federal educational agencies as well as professional and union groups, local, state, and national. Additional comprehensive information on programs offered for the M.A. degree, Specialist in Education certificate, the Ed.D. and Ph.D. degrees is available in the regular divisional publication, *Advanced Degree Programs in Educational Administration* and in the *Graduate School Bulletin*.

EDUCATIONAL PSYCHOLOGY

Major Advisers: Professors Hewer, Stecklein; Associate Professors Kellogg, Schreiner;
additional major advisers listed below under educational psychology areas

Graduate study in educational psychology leading to the M.A. or Ph.D. degree provides professional preparation in one of four specialized areas: psychological foundations (learning, cognition, personality, social psychology, measurement, statistics, research design, instructional systems, and computer applications); counseling and student personnel psychology (school counseling, counseling psychology, college personnel work); school psychology; and special education. The specialist

certificate (2-year program) is offered in counseling and student personnel psychology, special education, and school psychology. Students may also elect one of these areas as a minor field for the M.A. or Ph.D. degree.

Students who plan to major or minor in educational psychology should apply for admission to the Graduate School and plan their program in consultation with a department adviser. Although students apply and are admitted to concentrate their study primarily in one area, all students are expected to attain a level of competence in certain studies in the psychological foundations area including research methodology. For courses and requirements, see the *Graduate School Bulletin*.

Counseling and Student Personnel Psychology

Major Advisers: Professors Blocher, Borow, Edson, Glotzbach, Hagenah, Kingsley, Parker, Raygor, Snoke, Tennyson; Associate Professors A. Anderson, L. Hansen, Zander; Assistant Professor Shaffer

Graduate study leading to the M.A., specialist certificate (2-year program), or Ph.D. degree can be taken with a concentration in this area to prepare for professional 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 placed upon preparation that leads to understanding the individual student and group behavior. Emphasis is placed also upon clinical practice or supervised experience in school, university, or social agency guidance programs. Some of the areas most frequently included in the preparation for various fields of personnel work are psychology of learning, personality development, measurement, social psychology, and individual and group counseling. In addition, students are advised to become familiar with curriculum and administrative problems at either the public school or higher education level, and to take selected courses in psychology and sociology. Doctoral students should also take advanced courses in statistics and measurement and become involved in research projects.

Psychological Foundations

Major Advisers: Professors Collier, Corcoran, Hively, Hoyt, Merwin, Wilk; Associate Professors D. Anderson, Burris, David W. Johnson, P. Johnson, MacEachern, Samuels, Terwilliger, Welch; Assistant Professors Bart, Feldman

The Psychological Foundations Department in the Division of Educational Psychology provides graduate-level study as preparation for research and teaching. Majors in the program are expected to achieve broad competence in psychological foundations of education together with specialization in a field such as learning, development, cognition, personality, social psychology, measurement, statistics, research design, instructional systems, or computer applications.

The Psychological Foundations program also provides basic background offerings in psychology as applied to education for majors in related fields.

School Psychology Training Program

Major Adviser: Associate Professor Hall

The University of Minnesota offers training in school psychology at two levels: a 2-year graduate program leading to the specialist certificate in school psychological services and a 4-year graduate program leading to the Ph.D. degree. The program provides unique opportunities for interdepartmental interchange among faculty

Curricula

and students. Faculty are drawn from the three participating Departments of Psychology, Educational Psychology, and Child Development. Cooperating in the program are such specialized facilities as the Psycho-Educational Center and the University Hospitals. In addition to these on-campus facilities, the larger metropolitan area offers a variety of training opportunities, including practicum and internship placements in the Minneapolis Public Schools, in a number of suburban school systems, in several special school settings, and in various state and community agencies. Applicants for the School Psychology Training Program must fulfill all general standards and requirements of the Graduate School and those of one of the cooperating departments. An interview with representatives of the cooperating departments may be scheduled upon completion of application forms and necessary tests.

The School Psychology Training Program prepares psychologists for work in school settings. The curriculum includes courses in learning, personality, child development, learning difficulties, diagnostic and remedial procedures, statistics and measurement, specialized research techniques, special education, and practicum.

Special Education

Major Advisers: Professors Balow, Deno, Force, Reynolds, Wilderson; Associate Professors Moores, Rynders, Schreiner, Turnure, Weatherman, Wood; Assistant Professors Bruininks, Feldman, Gallistel

Undergraduate students interested in teaching physically handicapped or mentally retarded children should direct inquiries to the departmental admissions office (101A Pattee Hall) as early as possible, preferably before the beginning of or early in the junior year. A teaching minor may be completed in either area while meeting Bachelor's degree requirements. In these programs, SpEd 3-601 (Teaching Handicapped Children) is sometimes substituted for the second quarter of regular student teaching by students enrolled in either an elementary or secondary curriculum.

The other training programs in the Department of Special Education require admission to the Graduate School or adult special status in the College of Education at the postbaccalaureate level. Prospective students who hold regular teaching certificates do not follow exactly the programs outlined here. They should check with the departmental admissions office about state certification requirements, training programs, and departmental advising procedures.

No student can consider himself as being in a special education program until he has been officially accepted through a formal application procedure maintained by this department. Students in all curricula are urged to take SpEd 5-101 (Education of Exceptional Children) to obtain an overview of the relationship of special education to general education.

Teaching Disadvantaged Children and Youth

Adviser: Wood

Graduate-level courses on the education of low-income and minority group children and youth are offered through the Department of Special Education, and assistance in program planning is available to graduate students wishing to specialize in this area. There is no formally differentiated program for training teachers of disadvantaged children and youth; all programs are individually arranged.

Teaching Emotionally Disturbed and Socially Maladjusted Children

Adviser: Wood

Course work leading to certification in this field is available at the postbaccalaureate (adult special) or graduate level only. However, undergraduates who

are interested in teaching disturbed children should consider taking SpEd 3-600 (Junior Practicum in Special Education) and are invited to discuss the selection of undergraduate elective courses with staff of the departmental admissions office in 101A Pattee Hall.

Teaching Hearing-Impaired Children

Adviser: Moores

Students may take some of the special courses during the junior and senior years, but the major portion of the course work will generally be taken at a post-baccalaureate level. Most students will wish to use course work completed in this program toward the requirements for the Master's degree.

The following courses comprise the minimum program for preparation of teachers of hearing-impaired children. Additional and specialized courses may be required. Student teaching in a special class may sometimes be substituted for other student teaching requirements.

- SSPA 5-301 — Fundamentals of Sound (3)
- (or) SSPA 5-302 — Anatomy and Physiology of the Speech and Hearing Mechanisms (3)
- SSPA 5-702 — Audiometry I (4)
- SSPA 5-703 — Communication Problems of the Hearing Impaired (3)
- SSPA 5-705 — Auditory Training (3)
- SSPA 5-706 — Speech for the Hearing Impaired (3)
- SSPA 5-708 — Language for the Hearing Impaired (3)
- SpEd 5-100 — Childhood Language Development: Classroom Implications (3)
- SpEd 5-101 — Education of Exceptional Children (3)
- SpEd 5-140 — Introduction to the Education of Hearing-Impaired Children (3)
- SpEd 5-141 — Methods of Teaching School Subjects to the Hearing Impaired (3)
- SpEd 5-143 — Methods of Developing Language for the Hearing Impaired (3)
- SpEd 8-601 — Practicum: Special Education (9)
- (or) SpEd 3-601 and 3-602 — Teaching Handicapped Children (12)

Teaching Children with Learning Disabilities

Adviser: Gallistel

A 33-credit program provides the professional training necessary for a general resource teacher. This program may be taken as an adult special student in education or may be included in a graduate program or preparation for work with learning-disabled children. Acceptance in the program requires submission of a formal application and acceptance in the program through the departmental admissions office (101A Pattee Hall).

- CPsy 5-331 — Processes of Socialization of Children (3)
- Elem 5-334 — Reading Difficulties (3)
- Elem 5-335 — Clinical Diagnosis of Reading Difficulties (3)
- PsyF 5-120 — Educational Measurement in the Classroom (3)
- SpEd 5-100 — Childhood Language Development: Classroom Implications (3)
- SpEd 5-110 — Diagnosis and Remediation of Learning Disability I (3)
- SpEd 5-111 — Diagnosis and Remediation of Learning Disability II (3)
- SpEd 5-112 — Education of Learning-Disabled Children (3)
- SpEd 5-150 — Education of Emotionally Disturbed and Socially Maladjusted Children (3)
- SpEd 5-610 — Practicum: Diagnosis and Remediation of Learning Disability I (3)
- SpEd 5-611 — Practicum: Diagnosis and Remediation of Learning Disability II (3)

Teaching Mentally Retarded Children

Advisers: Bruininks, Rynders, Turnure

Inquiries about the minor for teaching mentally retarded pupils should be directed to the departmental office, 101A Pattee Hall. Admission of undergraduates to this program requires satisfactory completion of SpEd 3-600 and submission of a

Curricula

departmental application form. A prospective teacher of the mentally retarded must complete a program for certification to teach in the elementary or secondary school; and in addition, he completes the 27-33 credits listed below in order to receive special certification for teaching the mentally retarded.

Required of All — 24 credits

- CPsy 5-315 — Problems of Mental Deficiency (3)
- Elem 5-107 — Diagnosis and Treatment of Learning Difficulties (3)
- (or) SpEd 5-181 — Education of Disadvantaged Infants and Preschool Children (3) (for elementary level only)
- SpEd 3-600 — Junior Practicum in Special Education (3)
- SpEd 3-601 — Teaching Handicapped Children (6)
- SpEd 5-101 — Education of Exceptional Children (3)
- SpEd 5-120 — Introduction to Education of the Mentally Retarded (3)
- SpEd 5-121 — Education of Mentally Retarded Children in the Elementary School (3)
- (or) SpEd 5-122 — Education of the Mentally Retarded in the Secondary School (3)

Additional Requirements for Elementary Level — 3 credits

- Elem 5-331 — Teaching and Supervision of Reading in the Elementary School (3)
- (or) Elem 5-332 — Materials and Instructional Techniques of Elementary Reading (3)

Additional Requirements for Secondary Level — 9 credits

- Elem 3-331 — Teaching Reading in the Elementary School (3)
- Elem 3-391 — Teaching Mathematics in the Elementary School (3)
- Ind 5-320 — Vocational Guidance (3)

Certified teachers admitted to the College of Education with adult special status also must be formally admitted to the program itself through application in 101A Pattee Hall. They then meet all of the above requirements except SpEd 3-600. Their program includes, in addition, a practicum during the academic year and MthE 5-355 (Mathematics for Slow Learning Children).

Students admitted to the Graduate School may take an M.A. program in mental retardation, including the above courses. See the *Graduate School Bulletin*.

Teaching Children with Outstanding Abilities

Adviser: Feldman

The Department of Special Education offers no prescribed program to prepare for teaching children with outstanding abilities. However, course offerings, research training, and practicum arrangements are available to interested students at undergraduate and graduate levels. The Ph.D. in educational psychology may emphasize research concerning outstanding abilities, with a program including offerings in special education and psychological foundations of education.

Teaching Physically Handicapped Children

Adviser: Force

Inquiries about admission to the minor in teaching physically handicapped children should be directed to the departmental admissions office (101A Pattee Hall). Acceptance in this training program requires satisfactory completion of SpEd 3-600 (Junior Practicum in Special Education) and submission of a formal application for admission to the program. Required for completion of the program is a minimum of 23 credits from those listed below. SpEd 3-601 (Teaching Handicapped Children) may sometimes be substituted for a part of the student teaching requirements in other curricula.

Required — 18 credits

- SpEd 3-600 — Junior Practicum in Special Education (3)
- SpEd 3-601 — Teaching Handicapped Children (6)

Elementary School and Kindergarten Education

- SpEd 5-101 — Education of Exceptional Children (3)
- SpEd 5-130 — Education of Crippled Children (3)
- SpEd 5-131 — Educational Problems of the Neurologically Impaired (3)

Electives — from the following, selected in consultation with the adviser:

- Anat 1-027 — Anatomy for Physical Education Students (4)
- CPsy 5-313 — Psychology of Handicapped Children (3)
- CPsy 5-315 — Problems of Mental Deficiency (3)
- SpEd 5-110 — Diagnosis and Remediation of Learning Disability I (3)
- SpEd 5-111 — Diagnosis and Remediation of Learning Disability II (3)
- SpEd 5-120 — Introduction to Education of the Mentally Retarded (3)
- SpEd 5-121 — Education of Mentally Retarded Children in the Elementary School (3)
- PE 3-100 — Adapted Physical Education (3)
- PE 3-111 — Mechanics of Movement (3)
- PE 5-100 — Teaching Physical Education for the Handicapped Child (3)

Supervision and Administration of Special Education Programs

Adviser: Weatherman

Through the Department of Special Education, the Graduate School offers a program which leads to the certificate "Specialist in Education — Special Education" and the doctorate, with a major emphasis in special education administration. This program combines course work in general school administration and supervision with specialized courses and internships or other practical experiences for students who plan to serve as directors, coordinators, supervisors, or consultants in programs for handicapped and gifted children. Admission to this program requires completion of M.A. requirements, special certification, and experience in some area of special education.

Teaching Visually Impaired Children

Adviser: Force

Students wishing endorsement for a special certificate to teach visually impaired children must complete a regular curriculum leading to certification for elementary or secondary school teaching. They may take three courses in special education during the junior or senior year:

- SpEd 3-600 — Junior Practicum (3)
- SpEd 5-101 — Education of Exceptional Children (3)
- SpEd 5-170 — Introduction to Education of Visually Handicapped Children (3)

After graduation they take the remaining courses required for special certification. A selection of courses relating to the education of visually handicapped children is offered each year. The complete sequence of courses which qualifies students for certification is offered in a cycle covering several years.

ELEMENTARY SCHOOL AND KINDERGARTEN EDUCATION

Major Advisers: Professors Chase, Dykstra, Goossen, Jackson, Lambert, Manning, Odland, Stochl; Associate Professors Hansen, Humphreys, Post, Ryan, Schreiner; Assistant Professors Biesbrock, Cogan, Ellis, Howey, Roger Johnson, P. David Pearson

The curricula outlined in this section prepare students for elementary school teaching from kindergarten through the 8 years of the elementary school. Upon graduation the student, depending on his choice of curriculum, is eligible for one of two certificates: (a) the general elementary certificate for teaching in the elementary school (grades 1 through 8), and (b) the special certificate for kindergarten teaching which is earned in addition to the general elementary certificate.

Curricula

The following curricula are for persons of different backgrounds of education, training, and experience: Curriculum IA, for students who take 4 years of work; Curriculum IIIA, for students who already hold a B.A. or B.S. degree. The kindergarten endorsement program is for those who wish to qualify for kindergarten teaching in addition to completing the IA or IIIA curriculum.

After admission to the College of Education, the student will be assigned an adviser in the Division of Elementary Education. Information about curricula and assistance in making a choice may be secured at the Student Personnel Office, 206 Burton Hall.

Curriculum IA — Elementary Education

Students who plan to follow curriculum IA will register in the College of Liberal Arts for the first 2 years. A limited number of deficiencies in the Lower Division pattern can be made up by these students or by those transferring from other colleges, after entering the College of Education. The aim is to provide broad functional contacts with fields of knowledge essential for the liberal education of the teacher and as resources for teaching the common and special subjects of the elementary school.

Following the concept of controlled growth adopted by the University and the College of Education, the Division of Elementary Education has limited the number of those enrolled. Applicants will be admitted to start the major only in the fall and winter quarters. Three hundred juniors will be enrolled for the fall quarter, 1970. Applicants will be accepted for fall to fill this quota and for winter quarter to maintain it.

Readmission to the Program — Beginning in the fall of 1972, students previously admitted to one of the programs in elementary education whose day school registration has been discontinued for 2 or more consecutive calendar years must apply for readmission to a particular program. Such applicants will be considered according to the admission criteria in effect at the time of application for readmission.

Eligibility for Consideration for Admission — The criteria for considering admission include:

1. Completion of admission clearance procedures.
2. Completion of 2 years of liberal education, including Psy 1-001 and 1-002, with not more than 12 credits of the specified requirements remaining to be completed at the time of first registration in elementary education and not more than 96 credits to be completed before graduation.
3. Assessment of personal characteristics through recommendations, interviews, and other means.
4. Nature and scope of prior work with children.
5. A grade average of at least C (2.00); *for admission in 1970-71*, preference given to applicants with grade averages of 2.30 and above; *for admission in 1971-72*, preference given to applicants with averages of 2.50 and above.

FRESHMAN-SOPHOMORE YEARS

(In the College of Liberal Arts)

The program for the first 2 years should follow the listing below. Items marked with two asterisks (***) may be taken *only after completion of the freshman year*.

1. *Freshman English*

- Comm 1-001, 1-002, 1-003 (12)
(or) Engl 1-001, 1-002, 1-003 (9)
(or) Engl 1-311, 1-312, 1-313 (9)
(or) exemption

Elementary School and Kindergarten Education

2. *Natural Science*

NSci 1-004, 1-005 — The Physical World (8)
(and) Biol 1-001, 1-002 — General Biology (10)
(or) NSci 1-001, 1-002, 1-003 — Orientation to the Natural Sciences (15)
(or) Other patterns of course work for a minimum of 15 credits spread over both the physical and biological sciences

3. *Social Sciences*

Geog 1-301 — Human Geography (5)
(or) 1-401 — Geography of Natural Resources (5)
Hist 1-301, 1-302 — American History (8)
Soc 1-001 — Man in Modern Society (3) (and) Soc 1-003 — Social Problems (3)
(or) SSci 3-101, 3-102, 3-103 — Meaning of Humanity; Society and Technology; Community (9)**

4. *Mathematics*

Math 1-005 and 1-006 — Foundations of Arithmetic (6)

5. *Artistic Expression*

Mus 1-001 — Fundamentals (2) (or exemption)
At least 4 elective credits from the following areas to meet the required minimum of 6 credits in artistic expression: English, humanities, literature, theatre, art, music

6. *Speech-Communication*

Spch 1-101 — Fundamentals of Speech (5)
(or) Spch 1-102 — Communication in the Modern World: Interpersonal Communication (3)
(and) Spch 1-106 — Fundamentals of Speech (3)

7. *Psychology*

Psy 1-001, 1-002 — General Psychology (6)**

8. *Health and Physical Education*

PubH 1-003 — Individual and Public Health (3)
(or) PubH 3-001 — Personal and Community Health (3)**
Physical education activity courses (3), with inclusion of PE 1-560 (2) recommended for part of the requirement

9. *Electives*

To complete a total of 90 credits; should include courses toward an academic minor

JUNIOR-SENIOR YEARS

(In the College of Education)

Approximately half the work in the junior and senior years is in courses other than education. In selecting academic courses, students should consult the *College of Liberal Arts Bulletin* and confer with their major advisers.

Minimum Credit Load — All students will be expected to register for 12 or more credits each quarter during the academic year. Since a student might come to a final quarter with fewer than 12 credits remaining or have other reasonable basis for a less-than-12-credit load, the division chairman or delegated representative may grant exceptions.

Academic Requirements

1. *Upper Division Academic Credits*

Engl 3-601 — Introduction to English Language (3) (required)
At least 18 credits in Upper Division academic courses. An exception allows students to count toward these 18 credits any credits accumulated in Lower Division courses in the natural sciences in excess of the basic 15-credit requirement, and credits in any mathematics courses numbered 1-142 or above.

2. *Academic Minor*

A minimum of 30 credits from any one of the following fields: anthropology, art, economics, English, a foreign language, geography, history, humanities, mathematics, music, natural

Curricula

science, political science, psychology, sociology, speech. This minor is not expected to lead to junior high school certification and should not be confused with minors listed elsewhere in this bulletin.

Professional Requirements

1. Foundations

- Elem 3-100 — Psychological Foundations of Elementary Education (5) (jr yr)
- Elem 3-101 — Introduction to Elementary School Teaching (3) (sr yr)
- HEd 3-090 — The School and Society (3) (sr yr)

2. Art, Music, and Physical Education

- ArEd 3-001 — Survey of Art Activities (3)
- MuEd 3-011 — Teaching Music in the Elementary School (3)
- PE 3-325 — Teaching Health and Physical Education in the Elementary Schools (3)

3. Basic Methods

Six courses required, at least four of which must be taken in the College of Education:

- Elem 3-300 — Children's Literature (3)
- Elem 3-316 — Teaching English in the Elementary School (3)
- Elem 3-331 — Teaching Reading in the Elementary School (3)
- Elem 3-346 — Teaching Science in the Elementary School (3)
- Elem 3-361 — Teaching Social Studies in the Elementary School (3)
- Elem 3-391 — Teaching Mathematics in the Elementary School (3)

4. Student Teaching

Elem 3-600, 3-601 — Student Teaching in the Elementary School (12)

It is strongly recommended that students successfully complete 9 credits of the basic methods courses, listed above, prior to their first quarter of student teaching. Admission to student teaching requires a C (2.00) average in all the major courses (Elem 3-100, 3-300, 3-316, 3-331, 3-346, 3-361, 3-391, HEd 3-090) which are taken prior to student teaching.

5. Electives

To complete a total of 186 credits. College of Liberal Arts offerings or appropriate professional courses may be selected.

Quality of Work — The student must maintain a C (2.00) average for the total program and an average of C separately for the major courses: Elem 3-100, 3-101, 3-300, 3-316, 3-331, 3-346, 3-391, 3-600, 3-601, HEd 3-090. An average of C (2.00) is required in the major (Elem 3-100, 3-101, 3-300, 3-316, 3-331, 3-346, 3-361, 3-391, 3-600, 3-601, HEd 3-090), with a 2.00 average also for the total program.

Curriculum IIIA — Elementary Education

SENIOR YEAR

The B.A. or B.S. degree with at least a C+ (2.50) average is required for consideration of admission to this program. Admission assumes that the student's background of liberal education meets the minimum academic requirements of the freshman and sophomore years of the IA program. Where deficiencies exist, the student will take additional courses to meet the requirements in art, English, health, mathematics, music, natural science, physical education, psychology, social sciences, and speech.

Students are urged to enter the program in the fall and to complete it by enrolling for fall, winter, and spring quarters in sequence. Summer registration may be needed for making up deficiencies or lightening the student's load during the 3 quarters of the regular year. On completion of the curriculum, the student will be recommended for the B.S. degree and for certification to teach in grades 1-8.

Applications for curriculum IIIA were not accepted for the 1969-70 academic year. Students interested in curriculum IIIA should address inquiries to the Division

Elementary School and Kindergarten Education

of Elementary Education, 250 Burton Hall, to determine whether or not the program has reopened.

A minimum grade point average of C (2.00) based on all courses in the major program completed prior to student teaching is required for consideration of admission to student teaching.

A minimum of 47 credits with at least a C (2.00) average in the following program is required for graduation.

- Elem 3-100 — Psychological Foundations of Elementary Education (5)
- Elem 3-101 — Introduction to Elementary School Teaching (3)
- Elem 3-300 — Children's Literature (3)
- Elem 3-316 — Teaching English in the Elementary School (3)
- Elem 3-331 — Teaching Reading in the Elementary School (3)
- Elem 3-346 — Teaching Science in the Elementary School (3)
- Elem 3-361 — Teaching Social Studies in the Elementary School (3)
- Elem 3-391 — Teaching Mathematics in the Elementary School (3)
- Elem 3-600, 3-601 — Student Teaching in the Elementary School (12)
- MuEd 3-011 — Teaching Music in the Elementary School (3)
- PE 3-325 — Teaching Health and Physical Education in the Elementary School (3)
- Education Elective (3)

Kindergarten Endorsement Program

Students who wish to become certified for kindergarten teaching are required to complete the following credits with an average of C (2.00), in addition to the IA or IIIA curriculum:

- Elem 3-376 — Nursery School-Kindergarten Curriculum I (3)
- Elem 3-377 — Nursery School-Kindergarten Curriculum II (3)
- CPsy 3-301 — Child Psychology (3)
- Elem 3-603 — Student Teaching in the Kindergarten (6) — substituted for Elem 3-601 required in the IA or IIIA curriculum

Teaching Educationally Disadvantaged Children

Elementary education advisers will assist interested students in planning for a special emphasis on the teaching of the disadvantaged, through course selection and student teaching assignment. Such students should consult their advisers as early as possible in the junior year.

Nursery School Certification

Note — Students wishing to enter this program should contact Professor Shirley Moore, Institute of Child Development.

Elementary education majors wishing to qualify for teacher certification at the nursery school level must complete the following courses as part of, or in addition to, their preparation for elementary and kindergarten teaching:

Early Childhood Education — 15 credits

- Elem 3-376 — Nursery School-Kindergarten Education I (3)
- Elem 3-377 — Nursery School-Kindergarten Education II (3)
- Elem 3-378 — Social Learning in Early Childhood Education (3)
- Elem 3-604 — Student Teaching in the Nursery School (6)

Child Psychology — 12 credits

- CPsy 3-301 — Child Psychology (3)
- CPsy 5-323 — Case Study of Children (3)
- (or) CPsy 5-325 — Social Behavior of Children (3)

Two additional courses in child psychology, one of which must be selected from the following list:

- CPsy 5-331 — Processes of Socialization of Children (3)

Curricula

- CPsy 5-333 — Personality Development (3)
- CPsy 5-335 — Peer Relations (3)
- CPsy 5-339 — Parent-Child Relations (3)
- CPsy 5-343 — Cognitive Development (3)
- CPsy 5-345 — Language Development (3)

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 curricula leading to certification for elementary school teaching. These graduate programs prepare the teacher at an advanced level for his classroom work; or they prepare the several specialists in elementary education, such as school psychologist, supervisor or consultant, principal, teacher educator, child psychologist, and teacher of special classes.

Classroom teachers, supervisors, and consultants ordinarily will major in the Graduate School in elementary education. Prospective elementary school principals will major in educational administration, but their programs will include work in elementary education 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 psychology. For school psychological work, the programs combine graduate study in educational psychology, child psychology, psychology, and elementary education. Special-class teachers should refer to the listing of courses under elementary education 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 *Graduate School Bulletin*. In applying for admission to the Graduate School, the applicant should indicate specifically the area which he wishes to emphasize in his program.

ENGLISH

Major Advisers: Associate Professor Piché; Assistant Professors Brunetti, Shroyer;
Instructor Caddy

Students majoring in English register in the College of Liberal Arts for the first 2 years. Their programs during this time should include the Lower Division courses in the major, listed below. They must fulfill general requirements of the College of Education and the Lower Division requirements for admission to the junior year in the academic secondary curricula, listed in Section I of this bulletin.

Students who major in English must complete Spch 1-101 and one course selected from each of the following two groups:

Group A: Spch 3-401, 3-605, 3-641, 5-431

Group B: Th 1-101, 3-801 (or) both 1-501 and 3-707

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 second teaching field, should refer to the language arts curriculum.

Major in English — 56 credits

Engl 1-821, 1-822, 1-823 — Introduction to Literature (12)

Engl 3-155 (or) 3-156 — Shakespeare (4)

Engl 3-721 and 3-722 — American Literature (8) (or) one of these courses with an Upper

Division American literature course substituted for the other

Engl 3-723 — American Literature (4)

Engl 5-645 — Introduction to Modern English (4)

Engl 5-646 — History of the English Language (4)

Comp 1-027 (or) 1-028 — Advanced Writing (4)

Electives — 16 credits, including at least 8 credits from Upper Division courses in English and the remainder from Upper Division courses in English or humanities

Minor in English — 32 credits

Engl 1-822, 1-823 (8); 3-155 or 3-156 (4); 3-722 or Upper Division course in American literature (4); 3-723 (4); 5-645 (4); Comp 1-027 or 1-028 (4); elective, Upper Division English (4)

Professional Education Courses

SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)

SeEd 3-324 — Teaching Language Arts in Secondary Schools: Instructional Problems and Practice (3)

SeEd 3-325 — Instructional Practice in English and Speech (3)

SeEd 3-326 — Curriculum Problems and Issues in Teaching Literature in Secondary Schools (2)

SeEd 3-327 — Curriculum Problems and Issues in Teaching Language and Composition in Secondary Schools (2)

SeEd 3-621 — Directed Experiences in Teaching English, Speech, Language Arts (6-9)

HEd 3-090 — The School and Society (3)

Note — Students are encouraged to *elect* enrollment in SeEd 3-151 (Directed Study, 1-3 cr) to explore problems and issues beyond the scope of required courses. Individual faculty members will advise.

FOREIGN LANGUAGES

Major Advisers: Professor Birkmaier; Associate Professor Lange

For registration, students should consult with the appropriate language adviser.

The College of Education and the Departments of Classics (Latin), French and Italian (French), German, Slavic Languages (Russian), and Spanish and Portuguese (Spanish) of the College of Liberal Arts offer programs of study for teaching majors and minors in French, German, Latin, Russian, and Spanish.

A student wishing to obtain a major in any one of these areas registers for the first 2 years of work in the College of Liberal Arts and there meets the Lower Division requirements for admission to the junior year in the Academic Secondary Curriculum, listed in Section I of this bulletin, as well as all the requisites for Upper Division courses in the specific language.

Professional Education Requirements

For Majors in French, German, Russian, and Spanish

SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)

SeEd 3-334, 3-335 — Teaching Modern Languages (5)

SeEd 3-631 — Student Teaching in Modern Languages (9)

HEd 3-090 — The School and Society (3)

Electives (3)

Note — The student's proficiency in listening, speaking, reading, and writing will be tested before entrance into SeEd 3-334 and SeEd 3-631.

For Majors in Latin

SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)

SeEd 3-337, 3-338 — Teaching Latin (5)

SeEd 3-636 — Student Teaching in Latin (9)

HEd 3-090 — The School and Society (3)

Electives (3)

For Minors in Foreign Languages

A methods course in the minor field is required unless the student has a major in another language: SeEd 3-332 for minors in French, German, Russian, and Spanish; SeEd 3-339 for classics minors.

Curricula

Note to Minors — Ling 3-005 (Linguistics for Foreign Language Teachers, 3 cr) is strongly recommended for all foreign language minors.

French

Major Advisers: Professor Renaud; Lecturer Robinson

Major in French — 52 Upper Division credits, including:

- Ling 3-005 — Linguistics for Foreign Language Teachers (3)
- Fren 3-011 — French Composition (3)
- (or) Fren 3-011H — French Composition (3)
- A candidate for honors in French who completes Fren 3-011H must also take Fren 3-399H — Honors Seminar in French Literature (3)
- Fren 3-012 — Advanced French Composition (3)
- (or) Fren 3-031 — Thème et Version (3)
- Fren 3-021 — French Conversation and Pronunciation (3)
- Fren 3-022 — Advanced French Conversation (3)
- Fren 3-104 — Introduction to French Literary Texts (3)
- Fren 3-201 — The French Literary Tradition (3) (and) 6 credits selected from Fren 3-209, 3-219, 3-239, 3-259, 3-269, 3-289 (Topics in French Literature) or from Fren 3-301, 3-303, 3-305 (Genre Courses)
- Fren 3-501 — French and Italian Civilization and Culture (4)
- (and) Fren 3-502 — Contemporary French Civilization and Culture (3)
- (or) Fren 3-503 — Aspects of French Civilization and Culture (3)
- Fren 3-701 — The Development of the French Language (3)
- Fren 5-701, 5-702, 5-703 — Structure of Modern French (9)
- Electives — 6 credits, in addition to courses taken to meet the above requirements, selected from Fren 3-301, 3-303, 3-305, 3-209, 3-219, 3-239, 3-259, 3-269, 3-289, 3-289, 3-502, 3-503, 5-012 (Stylistics)

Minor in French — 28 Upper Division credits:

- Fren 3-011 — French Composition (3)
- Fren 3-012 — Advanced French Composition (3)
- Fren 3-021 — French Conversation and Pronunciation (3)
- Fren 3-022 — Advanced French Conversation (3)
- Fren 3-104 — Introduction to French Literary Texts (3)
- Fren 3-201 — The French Literary Tradition (3), and any 3-credit course from Fren 3-209, 3-219, 3-239, 3-259, 3-269, 3-289 (Topics in French Literature); or Fren 3-301, 3-303, 3-305 (Genre Courses)
- Fren 3-501 — French and Italian Civilization and Culture (4)
- Fren 3-502 — Contemporary French Civilization and Culture (3)
- Fren 3-503 — Aspects of French Civilization and Culture (3)

German

Major Adviser: Professor Menze

Major in German — 54 Upper Division credits:

- Ling 3-005 — Linguistics for Foreign Language Teachers (3)
- Ger 3-011, 3-012, 3-013 — Composition and Conversation (9)
- Ger 3-014, 3-015, 3-016 — Advanced Composition and Conversation (9)
- Ger 3-104 — Reading and Analysis of Literary Texts (3)
- Ger 3-501 — Contemporary German (3)
- Prerequisite for remainder of the major — literature course (3)
- Ger 3-202, 3-203 — Survey of Literature (6)
- Ger 3-511, 3-512, 3-513 — German Civilization and Culture (9)
- Ger 3-701 — History of the German Language (3)
- Ger 5-101, 5-102 — The Structure of Modern German (6)

Minor in German — 33 Upper Division credits:

- Ger 3-011, 3-012, 3-013 — Composition and Conversation (9)
- Ger 3-014, 3-015, 3-016 — Advanced Composition and Conversation (9)
- Ger 3-104 — Reading and Analysis of Literary Texts (3)
- Ger 3-501 — Contemporary German (3)
- Prerequisite course numbered Ger 3-301 or above (3)
- Ger 3-512, 3-513 — German Civilization and Culture (6)

Latin

Major Adviser: Assistant Professor Erickson

Sequence of courses in Latin — Students who have had no Latin in high school will take Lat 1-101, 1-102, 1-103; Lat 1-111, 1-122; or Lat 3-051, 3-052. Upon completion of any of these sequences, the student may enroll in any Latin course numbered 3-461 and above.

Students who have had Latin in high school will be placed in an appropriate level of Latin courses by the major adviser. College credit is given for successful completion of advanced placement programs in high schools.

Major in Latin — 46 credits, including:

Ling 3-005 — Linguistics for Foreign Language Teachers (3)

Two of the following:

Lat 3-462 — Caesar (5)

Lat 3-464 — Cicero (Oratory) (5)

Lat 3-469 — Virgil (Aeneid) (5)

Lat 5-701, 5-702, 5-703 — Structure of Latin (3)

15-20 credits of Latin in courses numbered Lat 3-460 or above

15 credits in classics, linguistics, or courses in the area of classical civilization offered by the Departments of Art, History, and Philosophy

Minor in Latin — 37 credits, including:

Ling 3-005 — Linguistics for Foreign Language Teachers (3)

Two of the following:

Lat 3-462 — Caesar (5)

Lat 3-464 — Cicero (Oratory) (5)

Lat 3-469 — Virgil (Aeneid) (5)

10-15 credits in Latin courses numbered Lat 3-460 or above

9 credits in classics, linguistics, or courses in the area of classical civilization offered by the Departments of Art, History, and Philosophy

Russian

Major Advisers: Professor Birkmaier; Instructor Donchenko

Major in Russian — 51 Upper Division credits, including:

Ling 3-005 — Linguistics for Foreign Language Teachers (3)

Russ 3-011, 3-012, 3-013 — Russian Composition (6)

Russ 3-021, 3-022, 3-023 — Russian Conversation (9)

Russ 3-104, 3-105 — Introduction to Literary Analysis (6)

Russ 3-201, 3-202, 3-203 — Survey of Russian Literature (9)

Russ 3-501, 3-502, 3-503 — Russian Civilization and Culture (9)

Russ 5-701, 5-702, 5-703 — Structure of Modern Russian (9)

Minor in Russian — 30 Upper Division credits, including:

Russ 3-011, 3-012, 3-013, 3-021, 3-022, 3-023, 3-104, 3-105, 3-501, 3-502, 3-503

Spanish

Major Adviser: Professor Floripe

Major in Spanish — 45 Upper Division credits in courses numbered 3-011 and above, including:

Ling 3-005 — Linguistics for Foreign Language Teachers (3)

Span 3-014 — Advanced Composition (3)

Span 3-021 — Conversation (3)

Span 3-024 — Advanced Conversation (3)

Span 3-104 — Introduction to Literary Texts (3)

Span 3-211, 3-212, 3-213 — Survey of Spanish Literature (9)

(or) Span 3-251, 3-252, 3-253 — Survey of the Literature of Spanish America (9)

Span 3-501, 3-502, 3-503 — Spanish Civilization, Culture (9)

(or) Span 3-511, 3-512, 3-513 — Latin-American Civilization, Culture (9)

Curricula

Span 5-711, 5-712, 5-713 — The Structure of Modern Spanish (9)
Span 3-721 — Origin and History of Spanish, Portuguese (3)

Minor in Spanish — 27 credits in courses numbered 3-011 and above, including:

Span 3-011 — Composition (3)
Span 3-014 — Advanced Composition (3)
Span 3-021 — Conversation (3)
Span 3-024 — Advanced Conversation (3)
Span 3-104 — Introduction to Literary Texts (3)

One of the following sequences:

Span 3-501, 3-502, 3-503 — Spanish Civilization, Culture (9)
Span 3-511, 3-512, 3-513 — Latin-American Civilization, Culture (9)

GEOGRAPHY

Major Advisers: Professors Barrett, Borchert; Associate Professor Adams

During the student's first 2 years in the College of Liberal Arts, he includes in his program the first three courses listed below under the geography major and the requirements for junior-year admission to the College of Education as specified for academic secondary curricula in Section I of this bulletin. Those majoring in geography are urged to take geology as part of the science requirement. Spch 1-101 is advised, and the student should be proficient in typing before he reaches his senior year. An average of C+ (2.50) in all social science courses must be maintained.

Because a geography teacher needs a broad social studies background and because most social studies positions require teaching in more than one subject within the area, the major includes supporting courses in other social science fields. A teaching minor is not required, but geography majors are urged to complete a minor outside the social sciences in order to improve their placement possibilities.

Major in Geography — 75 credits

Area Requirement

At least one course taken in geography or in any of the other social sciences on (a) the Soviet Union, (b) Asia, and (c) Africa. These credits are counted toward the total listed below.

Geography — 34 credits

Two of the following:

Geog 1-301 — Human Geography (5)
Geog 1-311 — Economic Geography (5)
Geog 1-401 — Physical Geography (5)

Two regional courses (or) one regional course and one field course

One technique course

Two topical courses

One course on history and philosophy of geography

Two additional Upper Division courses

Supporting Fields — 41 credits

At least one course each in anthropology, economics, history, political science, and sociology. It is recommended that survey courses in American history and American government be included because they are required for certification in several states.

Professional Education — 29 credits, including:

SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)
SeEd 3-348, 3-349 — Teaching Social Studies in the Secondary School (5)
SeEd 3-640 — Student Teaching: Social Studies Juniors (1)
SeEd 3-641 — Student Teaching in the Social Studies (9)
HEd 3-090 — The School and Society (3)
Elective

Minor in Geography — 49 credits

Geography — 25 credits

Two of the following: Geog 1-301 (5), 1-311 (5), 1-401 (5)
 Two regional courses
 Two topical courses
 One additional Upper Division course

Supporting Fields — 24 credits

At least one course each in anthropology, economics, history, political science, and sociology. It is recommended that survey courses in American history and American government be included because they are required for certification in several states.

HIGHER EDUCATION

Major Advisers: Professors Corcoran, Eckert, Keller, Mork;
 Associate Professors Ammentorp, Morgan

Graduate offerings in higher education are designed both for students majoring in education and for those specializing in other academic and professional disciplines. They are included in the Graduate School listings of courses under education, educational administration, and educational psychology. Interested students should consult the *Graduate School Bulletin* for information about majors, courses, and requirements for the M.A. and Ph.D. degrees.

HISTORY

Major Advisers: Associate Professors Bamford, Spear;
 Assistant Professors Tracy, Green

During the student's first 2 years in the College of Liberal Arts, he includes in his program the first two requirements listed below under the history major and the requirements for junior-year admission to the College of Education as specified for academic secondary curricula in Section I of this bulletin. History majors are urged to take geology as part of the science requirement. Spch 1-101 is recommended, and the student should be proficient in typing before he reaches his senior year. An average of C+ (2.50) in all social science courses must be maintained.

Because a history teacher needs a broad social studies background and because most social studies positions require teaching in more than one subject within the area, the major includes supporting courses in other social science fields. A teaching minor is not required, but history majors are urged to complete a minor outside the social sciences in order to improve their placement possibilities.

Major in History — 75 credits

Area Requirement

At least one course taken in history or in any of the other social sciences on (a) the Soviet Union, (b) Asia, and (c) Africa. These credits are counted toward the totals listed below.

History — 40 credits, including:

Hist 1-001, 1-002, 1-003 (9) or 3-001, 3-002, 3-003 (9) or other courses which provide a survey of modern European history
 Hist 1-301, 1-302 (8) or other courses which provide a survey of American history
 Additional credits — at least 23 in Upper Division courses

Supporting Fields — 35 credits

At least one course each in anthropology, economics, geography, political science, and sociology. A survey course in American government (frequently required for certification) and cultural anthropology are strongly recommended.

Curricula

Professional Education — 29 credits, including:

- SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)
- SeEd 3-348, 3-349 — Teaching the Social Studies in the Secondary School (5)
- SeEd 3-640 — Student Teaching: Social Studies Juniors (1)
- SeEd 3-641 — Student Teaching in the Social Studies (9)
- HEd 3-090 — The School and Society (3)
- Elective

Minor in History — 46 credits

History — 29 credits, including:

- Hist 1-001, 1-002, 1-003 (9) or 3-001, 3-002, 3-003 (9) or other courses which provide a survey of modern European history
- Hist 1-301, 1-302 (8) or other courses which provide a survey of American history
- 12 additional credits in Upper Division courses

Supporting Fields

At least one course each in anthropology, economics, geography, political science, and sociology. A survey course in American government (frequently required for certification) and cultural anthropology are strongly recommended.

HISTORY AND PHILOSOPHY OF EDUCATION

Major Advisers: Professors Bagley, Beck, Corcoran; Associate Professor Clark;
Assistant Professor Harkins

Work in the following fields is available at the graduate level leading to the M.A. and Ph.D. degrees: comparative-international education; history of education; intercultural education; philosophy of education; sociology of education. Limited offerings in the anthropology of education also are available. Students should arrange a program in consultation with an adviser in accordance with their special fields of interest. For courses and requirements see the *Graduate School Bulletin*.

HOME ECONOMICS EDUCATION

Major Advisers: Professors Brown, Ford, Whiteford; Associate Professor Newkirk;
Assistant Professors Christenson, Wantoch

The curricula in home economics education offered jointly by the College of Agriculture, Forestry, and Home Economics and the College of Education are designed for students who plan to become home economics teachers in secondary schools or adult programs or to assume home economics positions in the Agricultural Extension Service. Satisfactory completion of the teaching curriculum qualifies the student for teaching home economics in Minnesota including those departments which are federally aided.

During the first 2 years, the student registers in the College of AFHE for the required work of one of the home economics education curricula. In the junior and senior years, she completes the selected curriculum leading to the B.S. degree. Application for admission to the joint curriculum should be made during the first 2 weeks of the third quarter of the sophomore year or of the first quarter in residence for those transferring after 2 years of college work. The application form and information about procedure should be obtained at 109 McNeal Hall, St. Paul Campus.

In the following lists of courses, requirements *common* to both home economics teaching and home economics extension are shown first, and the *additional* requirements for each of the two curricula are then specified. In both categories, courses are grouped under freshman-sophomore and junior-senior years.

Graduation from both the home economics teaching and the home economics extension curricula requires averages of C+ (2.50) in 40 credits of required home economics work and C (2.00) for the total program.

Home Economics Teaching and Home Economics Extension

COMMON REQUIREMENTS

Freshman-Sophomore Years

- Rhetoric — Freshman communication requirement (9)
- Rhet 1-222 — Public Speaking (3)
- HE 1-101 — Home Economics in Contemporary Society (3)
- HE 1-102 — Home and Family in Society (3)
- HE 1-301 — Food Preparation (5)
- HE 1-311 — Food Management and Marketing (5)
- HE 1-381 — Principles of Nutrition (3)
- HE 1-401 — Household Equipment (3)
- HE 1-501 — Introduction to Related Art (3)
- HE 1-521 — Color (3)
- HE 1-552 — The Home: Selection and Furnishing I (3)
- HE 1-553 — The Home: Selection and Furnishing Experience I (3)
- HE 1-601 — Clothing Construction I (3)
- (or) HE 1-602 — Clothing Construction II (3)
- HE 1-661 — Clothing Selection (3)
- FScI 1-020 — Introductory Microbiology (4)
- PubH 1-003 — Individual and Public Health (3)
- (or) PubH 3-001 (see jr-sr list)
- AgEc 1-010, 1-020, 1-030 — Economics (9)
- (or) Econ 1-001, 1-002 — Principles of Economics (8)
- Psy 1-001, 1-002 — General Psychology (6)
- HEED 1-500 — Introduction to Home Economics Education (2)
- GC 1-132 — Human Body: Structure, Function, Health (5)
- 3 elective credits under communication or symbolic systems (see CLE course list)
- 9 credits under artistic expression: HE 1-501, 1-521 may be used (see CLE course list)

Junior-Senior Years

- HE 3-101 — Senior Seminar (3)
- HE 3-260 — Home Management Principles (3)
- HE 3-263 or 3-264 — Home Management Laboratory (4)
- HE 3-361 — Textiles (5)
- HE 3-381 — Current Problems in Nutrition (3)
- HE 5-200 — Family Relationships (3)
- HE 5-661 — Sociological and Economic Aspects of Clothing (3)
- (or) HE 5-662 — Family Clothing Problems (3)
- PubH 3-001 — Personal and Community Health (3)
- (or) PubH 1-003 (see fr-soph list)
- Rhet 3-551 — Exposition (3)
- SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)
- HEED 3-300 — Curriculum in Home Economics Education (3)
- HEED 3-305 — Methods of Teaching Home Economics (3)
- HEED 3-325 — Practicum in Child Development (1)
- CPsy 3-301 — Child Psychology (3)

ADDITIONAL REQUIREMENTS

(Home Economics Teaching)

Freshman-Sophomore Years

- Soc 1-001 — Man in Modern Society (4)
- Select one of the following options:

Option I

- Chem 1-004, 1-005 — General Principles of Chemistry (10)
- BioC 1-301 — Elementary Biochemistry I (5)
- (or) Chem 3-301, 3-302 — Elementary Organic Chemistry (10)
- Biol 1-001, 1-002 — General Biology (10)
- GC 1-163 — Physics (5)
- (or) NSci 1-004 — Physical World (4)

Option II

- Social science elective (3)
- Chem 1-004, 1-005 — General Principles of Chemistry (10)
- GC 1-163 — Physics (5)
- (or) NSci 1-004 — Physical World (4)

Curricula

Option III

12 credits social science (minimum) to include:

- Soc 1-003 — Social Problems (3)
- Anth 1-002 — Introduction to Cultural Anthropology (5)
- (or) Anth 5-101 — Principles of Cultural Anthropology (3)
- Anth 5-361 — Culture and Personality (3)
- Electives (3)
- NSci 1-004, 1-005 — The Physical World (8)

Junior-Senior Years

- HEd 3-090 — School and Society (3)
- HEEd 3-310 — Evaluation of Home Economics (3)
- HEEd 3-320 — Colloquium in Home Economics Education (2)
- HEEd 3-600 — Supervised Teaching in Home Economics (9)

9 credits to be selected from advanced courses in at least two areas. The following are recommended:

- Child Psychology: CPsy 5-303, 5-325, 5-333, 5-335
- Family Social Science: HE 5-201, 5-210, 5-220, 5-240, 5-330
- Foods: HE 3-302, 5-311, 5-312, 5-313
- Household Equipment: HE 5-404, 5-407, 5-414, 5-416, 5-418
- Related Art: HE 3-558, 5-502, 5-505, 5-552
- Textiles and Clothing: HE 3-601, 5-601, 5-602, 5-623

Application for student teaching must be made during the quarter prior to proposed enrollment in HEEd 3-600. Forms and information may be obtained at 109 McNeal Hall.

ADDITIONAL REQUIREMENTS

(Home Economics Extension)

Freshman-Sophomore Years

6 additional credits in social science to be selected from anthropology, geography, political science, sociology

- Chem 1-004, 1-005 — General Principles of Chemistry (10)
- GC 1-163 — Physics (5)
- (or) NSci 1-004 — Physical World (4)

Junior-Senior Years

- AgJo 3-530 — Publicity (3)
- AgEd 3-020 — Rural Education Through Extension Methods (3)
- HEEd 3-315 — Adult Education in Home Economics (3)
- HEEd 3-605 — Supervised Field Experience (6)
- HEEd 5-900 — Readings (2)

9 credits in advanced home economics courses to be selected in consultation with adviser
Electives to meet graduation requirement

Programs for the Master of Education Degree

Advanced professional programs in home economics education lead to the M.Ed. degree under the College of Education. General requirements for this degree are listed in Section I of this bulletin.

An applicant's undergraduate program must have included at least 6 quarter credits from each of the following areas, with a minimum total of 45 credits from the four areas combined: family social science and child development; housing, home planning, and furnishing and equipment; foods and nutrition; textiles and clothing. During the first quarter in residence, students will complete selected tests for guidance purposes.

Plan I, for certified home economics teachers, requires 21-31 credits (selected for breadth or concentration) in technical home economics; 6-9 credits in education other than home economics education; and 9 credits in home economics education including a comprehensive paper to integrate learning from the major field and from education (listed under a home economics education 3-credit course.) The remainder of the 45-credit total program is elective.

Plan II, to which professional home economists not qualified for certification may be admitted, includes all of the requirements for Plan I. In addition, a practicum may be recommended. The M.Ed. does not lead to certification for teaching.

INDUSTRIAL EDUCATION

Major Advisers: Professors Kavanaugh, Moss, Nelson; Associate Professors Pucel, Randleman

Students applying for admission to the industrial education undergraduate program must have completed 45 quarter credits with at least a C (2.00) average. The work of this first year should include courses in mathematics, physical science, and English, together with other courses selected from the liberal education requirements listed below.

On completion of the specified 4-year curriculum, the student is recommended for the B.S. degree and for the standard special certificate to teach industrial arts in Minnesota public schools. Background for later graduate study in the field is included.

Certain departmental courses are acceptable also for vocational certification leading to service in vocational-technical schools and programs (day, evening, and part-time). The state supervisor of trade and industrial education certifies the vocational competence of such candidates who then receive vocational certificates issued by the State Department of Education on completion of specified requirements for teachers. Industrial arts certificates and vocational-industrial certificates are based on wholly different preparations and therefore should not be confused.

In addition to classes scheduled on the campus, the department conducts off-campus courses in various centers throughout the state, planned in cooperation with officials of the State Department of Education and local school authorities. Such offerings are available with fee and credit, or without fee and noncredit, according to demand; but any class or group must be of one type or the other, not both combined. Services of the department are available to industrial groups, such as foremen and other personnel with instructional responsibilities, and to public schools. See Section III of this bulletin for the listing of departmental offerings.

Students may arrange to take a number of laboratory courses at William Hood Dunwoody Industrial Institute without fees other than those paid at the University. Consent of the department must be secured prior to registration in any off-campus laboratory course.

Industrial Education Four-Year Curriculum

I. Liberal Education — 84 credits

1. *Communication, Language, or Symbolic Systems* — 20 credits

Comm 1-001, 1-002, 1-003 (or) Engl 1-001, 1-002, 1-003 (or) Rhet 1-101, 1-102, 1-103
(and) Math 1-008, 1-111

Additional credits in speech or language to meet the total

2. *Physical Sciences* — 15 credits

Required: PubH 1-003 or 3-001

Suggested: Phys 1-010 and 1-015, 1-020 and 1-025, 1-030 and 1-035; Chem 1-004, 1-005

3. *Man and Society* — 14 credits

Required: Psy 1-001, 1-002

Suggested: Anth 1-002, 1-201, 5-101; AgEc 1-010, 1-020, 1-030; Econ 1-001, 1-002; history or social science

4. *Artistic Expression* — 14 credits

Suggested: GC 1-232 (recommended); Hum 1-001, 1-002, 1-003 (or) 1-101, 1-102, 1-103 (or) 3-001, 3-002, 3-003; AmSt 1-101, 1-102, 1-103 (or) 3-111, 3-112, 3-113; ArtS 1-103, 1-104, 1-701, 1-702; ArtH 1-001, 1-008, 1-009 (or) 3-001, 3-053, 3-152

Curricula

5. *Physical Education* — 3 credits

6. *Academic Electives* — to complete the total of 84 credits

From mathematics, science, language, English, speech, social science, philosophy, history, sociology, psychology, and child psychology. The student is urged to consult his adviser early in the sophomore year in order to plan for subject concentration which will directly reinforce his professional preparation.

Note — All General College courses must be taken during freshman or sophomore year.

II. *Industrial Education* — 74 credits

Ind 1-300 — Introduction to Industrial Arts Teaching (5)

Ind 3-330 — Fundamentals of Vocational Education (3)

Ind 3-340 — Analysis and Course Construction (3)

Ind 3-750 — Industrial Practices and Processes (3)

Ind 3-900 — Independent Study I (3)

Ind 5-301 — Tests in Industrial Subjects (3)

Ind 5-320 — Vocational Guidance (3)

Laboratory Blocks A, B, C, D — 42 credits distributed 6 in each of two blocks and 15 in each of two other blocks

Block A — Ind 1-492, 1-510, 1-511, 1-512, 1-530, 1-532, 3-630, 3-632; MeAg 1-600

Block B — Ind 1-500, 1-502, 1-504, 1-506, 1-540, 1-542, 3-600, 3-602, 3-640, 3-642

Block C — Ind 1-520, 1-522, 1-524, 1-526, 1-528, 3-620, 3-622

Block D — Ind 1-560, 1-562, 1-564, 1-566, 1-568, 3-660, 3-662; MeAg 1-020

Electives — 9 credits from: Ind 3-344, 3-706, 3-901, 3-902, 5-303; SeEd 5-105; Blocks A, B, C, D

III. *Professional Education* — 28 credits

SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)

HEd 3-090 — The School and Society (3)

Ind 3-360 — Teaching Industrial Arts (3)

Ind 3-700, 3-702, 3-704 — Student Teaching (9)

Ind 3-701, 3-703, 3-705, 3-707 — Student Teaching Seminar (1-3)

Hlth 1-500 — First Aid (2)

Student teaching prerequisites:

1. Advanced-junior or senior status

2. Completion of at least 30 of the 42 laboratory credits (Blocks A, B, C, D) required for the curriculum

3. Completion of Ind 1-300 and 3-360 (or) 1-300 and 5-360

4. An average of C+ (2.50) for all work in industrial education, including laboratory courses

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 cooperative clinical training program are invited to confer or to correspond with one of the major advisers.

Graduate Programs in Industrial Education

The Master's degree (M.A.) is offered under the Graduate School with a major in industrial education. Two doctoral programs are available: (1) for the Ph.D. degree, major in education with emphasis on industrial education; and (2) for the Ed.D. degree, emphasizing the needs of instructional personnel in industrial education. Consult departmental graduate advisers and refer to the *Graduate School Bulletin*.

JOURNALISM

Minor Adviser: Professor Sim

Journalism is a desirable minor for teachers who are called upon to supervise school publications, to teach subjects related to the field, or to assist with school public relations. It is recommended as a minor for students in the English, language arts, and social studies curricula.

Journalism as a Minor Subject

- Jour 1-011 — Introduction to Journalistic Writing (3)
- Jour 1-012 — Publications Editing (3)
- Jour 3-021 — Mass Communications and the News (3)
- Jour 3-182 — Supervision of School Publications (3)
- SeEd 3-328 — The Teaching of Journalism (3)
- 6 additional credits chosen from Jour 3-221, 3-231, 5-601, 5-606, 5-611, and 5-801

THE LANGUAGE ARTS

Major Advisers: *English* — Associate Professor Fiché; Assistant Professors Brunetti, Shroyer; *Speech* — Professor Graham; Associate Professors Adey, Fredericks, Piché

Language arts teaching is fundamentally interdisciplinary and demands background in both speech and English, as well as preparation in related areas. Requisite are knowledge of the literary heritage and of current books, acquaintance with the resources of communication media, and preparation for teaching the principles of effective speech and writing. The language arts teacher may also be expected to direct plays, supervise the school paper, or assist with the library.

Strong background in liberal education, especially in the social sciences, is important for language arts teaching. A minor outside the language arts is not required, but it provides useful supplementation for the student who can arrange to include it in his program.

Prospective teachers majoring in the language arts register for the first 2 years in the College of Liberal Arts, completing Lower Division work in the language arts and meeting the requirements for admission to the junior year in the College of Education academic curricula (see Section I of this bulletin).

Major in the Language Arts

Requirements

1. Completion of the major requirements in either English or speech, listed in this bulletin.
2. Completion of a minor in one of these two fields not selected at the major level.
3. Jour 3-021 (3) and 9 credits from Jour 1-011, 1-012, 3-182, 5-501, 5-601, 5-603, 5-606, 5-611; (or) Jour 3-021 (3) and 9 to 12 credits from Lib 5-201, 5-202, 5-203, 5-204, 5-301.
4. Professional courses:
 - SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)
 - SeEd 3-324 — Teaching Language Arts in Secondary Schools: Instructional Problems and Practice (3)
 - SeEd 3-325 — Instructional Practice in English and Speech (3)
 - SeEd 3-326 — Curriculum Problems and Issues in Teaching Literature in Secondary Schools (2)
 - (and) SeEd 3-327 — Curriculum Problems and Issues in Teaching Language and Composition in Secondary Schools (2) (English majors)
 - (or) SeEd 3-323 — Curriculum Problems and Issues in Teaching Speech in Secondary Schools (2) (speech majors)

Curricula

SeEd 3-621 — Directed Experiences in Teaching English, Speech, Language Arts (6-9)
HEd 3-090 — The School and Society (3)

5. All general graduation requirements of the College of Education, including a C+ (2.50) average in the major (item 1 above). See Section I of this bulletin.

LIBRARY SCIENCE

Program Adviser: Associate Professor Olson

Anyone intending to do library work in elementary or secondary schools should consult an adviser in the Library School, 3 Walter Library, before the beginning of junior year. The Library School offers two programs for school librarians:

1. A minimum certificate program of 24 credits in library science. A student in the College of Education who completes the program as part of his Bachelor's degree or as study after completing the degree may be employed as a school librarian with minimum qualifications.
2. A fifth-year program leading to the Master's degree. To qualify fully for professional librarianship, a librarian is expected to earn a 4-year Bachelor's degree and a Master's degree in library science.
 - a. For the education graduate who holds a valid teaching certificate, a regular M.A. program.
 - b. For the liberal arts graduate who lacks a teaching certificate, a special M.A. program.

For further information on courses and requirements see the *Library School Bulletin*.

Courses Advised — For recommendation to the Minnesota State Department of Education for endorsement as a school librarian the student must first be admitted to the 24-credit certification program by the Library School and the College of Education and then successfully complete the following courses: Lib 5-102, 5-201, 5-202, 5-203, 5-204, 5-205, 5-301, 5-401. SeEd 5-105 is recommended.

MATHEMATICS

Major Advisers: Professors Loud, Pedoe, Storvick; Associate Professors Joichi, Miracle;
Assistant Professors Fristedt, Grosser

Students enroll for the first 2 years in the College of Liberal Arts and meet the Lower Division requirements for admission to the junior year in the academic secondary curriculum, listed in Section I of this bulletin. They should include in their programs the courses prerequisite to Math 1-442, and as much as possible of the Math 1-442, 1-443, 1-444 sequence. Solid geometry (entrance credit or its equivalent, i.e., completion of an integrated plane and solid geometry course) and higher algebra taken either in high school or college are prerequisites for both majors and minors in mathematics. It is highly recommended that students who do not present a foundation in solid geometry meet this requirement by taking a course in the subject offered (a) by the Evening Classes Department, (b) in the Independent Study Department, or (c) by the public school system of Minneapolis in individualized instruction for adults at West High School.

Major in Mathematics

Math 1-441 — College Algebra (5)

Math 1-442, 1-443, 1-444 — Analytic Geometry and Calculus I, II, III (15)

Math 3-161 — Synthetic Metric Geometry (3)
6 additional credits in analysis
6 additional credits in algebra
3 additional credits in geometry
3 additional credits in probability and/or mathematical statistics
3 elective credits to be earned in Upper Division courses

The additional credits must be chosen from the following:

Analysis: Math 3-072, 3-445, 3-581, 5-151, 5-606, 5-607
Algebra: Math 3-142, 3-582, 5-209, 5-219, 5-282, 5-283
Geometry: Math 3-583, 5-366, 5-367, 5-368, 5-375
Probability and Statistics: Stat 3-091, 5-131, 5-132, 5-133; Math 5-681, 5-682, 5-683

Minor in Mathematics

Math 1-441 — College Algebra (5)
Math 1-442, 1-443, 1-444 — Analytic Geometry and Calculus I, II, III (15)
Math 3-161 — Synthetic Metric Geometry
3 additional credits in algebra
3 additional credits in analysis
3 additional credits

Professional Education Courses — The student majoring in mathematics must take the following courses and meet the minimum requirement of 29 credits in education:

SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)
SeEd 3-365, 3-366, 3-367 — Teaching Secondary School Mathematics (5)
SeEd 3-661 — Student Teaching in Mathematics (9)
HEd 3-090 — The School and Society (3)
Elective

Programs Leading to the Master of Education Degree

The College of Education offers a 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, 207 Main Engineering. 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.

Required Program

1. A total of 45 credits in courses numbered 5-000 or higher with an average of 2.80 for the 45 credits, including a minimum of 24 credits in mathematics with at least a 2.80 grade point average, including 6 credits in analysis, such as advanced calculus, critical reasoning in mathematical analysis, methods of applied mathematics.

2. Related academic field or fields — 9 credits
3. Education courses — 12 credits, including at least one course in the area of mathematics teaching and an expository paper on some mathematical topic of particular suitability for a secondary school teacher.

Final Examination

Major field examination, either written or oral, or both.

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 Combined Programs.

MATHEMATICS EDUCATION

Major Advisers: Professors Jackson, Donovan Johnson, Stochl;
Associate Professors David C. Johnson, Post

Graduate students interested in curriculum and instruction in mathematics education may work toward an M.A. degree in this field. A specialist certificate is available for those persons with an M.A. interested in becoming state and local mathematics curriculum specialists and/or supervisors, department chairmen, or for persons interested in mathematics curriculum development. For a statement of the programs and requirements, see the *Graduate School Bulletin*. Students who plan to major or minor in mathematics education at either level should apply for admission to the Graduate School and plan their program in consultation with one of the advisers listed above.

MUSIC EDUCATION

Major Advisers: Professors Caswell, Turrentine; Associate Professor Borg;
Assistant Professors Schultz, Steen

For the 4-year curriculum in music education, students normally enter the College Education after completing 1 year (45 credits with at least a C average) in the College of Liberal Arts. The freshman year's work must have included 6 credits in materials and structure of music, 6 credits in ear-training and sight-singing, 6 credits in applied music, and 3 credits in performing organization. See also Section I of this bulletin concerning admission procedures.

Two programs in music education are offered: (1) vocal-general concentration, and (2) instrumental concentration. Common and special requirements for these concentrations are listed below, following the information concerning applied music which relates to both. All music education majors are required to attend Music Hour, held weekly in Scott Hall Auditorium, and a minimum of five concerts per quarter sponsored by the Departments of Music and Music Education.

Applied Music

1. Entrance Requirements (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 techniques 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.

2. Course Credits and Classification

Courses in applied music carry either 2 credits per quarter for a minimum of 10 private half-hour lessons or 4 credits for a minimum of 10 one-hour lessons. They are classified according to three modes: *elective* (with and without credit), *applied*, and *performance*; and four levels: Lower Division (prefix 1, or 0 for no credit), Upper Division (prefix 3), and two graduate levels (prefixes 5 and 8). A student may not register for a course in applied music *for credit* until he has passed the required applied entrance examination. The examining committee will determine the mode(s) for which a student may register. The student should consult the Department of Music regarding the mode and level of applied music appropriate for fulfilling his specific program requirements.

3. Major Requirements

All Students — At least 18 credits in the principal applied medium, selected from Mus 1-201 through 1-224 (or) 1-301 through 1-324 (and) 3-201 through 3-224 (or) 3-301 through 3-324; at least 6 Upper Division credits required, for which the student may register after completing 12 Lower Division credits on the same instrument and passing an Upper Division qualifying examination.

Students with Principal Medium Other than Piano — 1 year of piano from the following: Mus 1-151, 1-152, 1-153 (or) 1-101 (or) 1-201 (or) 1-301

Students with Principal Medium Other than Voice — 1 year of voice from Mus 1-161, 1-162, 1-163 (or) 1-104 (or) 1-204 (or) 1-304

Recommended — Completion of applied music requirements by the end of the junior year and registration for applied music credits beyond the requirements if possible.

Four-Year Curriculum in Music Education

1. Liberal Education

Freshman English — 9 credits

Group A: Communication, Language, Symbolic Systems — 9 credits

Selected from linguistics, rhetoric, logic, philosophic analysis, mathematics, statistics

Group B: Physical and/or Biological Science — 9 credits (no lab required)

Group C: Man and Society — 9 credits

Psy 1-001, 1-002 — General Psychology (6)

Additional 3 credits from a social science field

Group D: Artistic Expression — satisfied by major courses

Health Requirement

PubH 1-003 (or) 3-001 (3)

Physical education — 3 credits

Curricula

2. Professional Education

- SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10) (prereq to student teaching)
HEd 3-090 — The School and Society (3)

3. Music and Music Education: Instrumental Concentration and Vocal-General Concentration

Common Requirements, both concentrations

- Mus 0-400 — Music Hour, Concert Requirement (required every quarter)
Mus 1-501 through 1-506 — Materials and Structure of Music I, II (12)
Mus 1-511, 1-512, 1-513 — Ear-Training and Sight-Singing I (6)
Mus 1-514, 1-515, 1-516 — Ear-Training and Sight-Singing II (3)
Applied Music — 18 credits from Mus 1-201 through 1-224 (or) 1-301 through 1-324 (and) 3-201 through 3-224 (or) 3-301 through 3-324
Mus 1-601, 1-602, 1-603 — History of Music (9)
Mus 3-531 — Analysis I (3)
Mus 3-604 — History of 20th-Century Music (3)
MuEd 3-302 — Teaching Music in Intermediate and Junior High School (3)
MuEd 3-303 — Teaching Music in Senior High School (3)
MuEd 3-557 — Instrumentation (3)
MuEd 3-650 — Student Teaching (12)

Special Requirements, Instrumental Concentration

- Mus 1-151, 1-152, 1-153 — Class Piano (or) Mus 1-101 (or) 1-201 (or) 1-301 — Piano (6)
Mus 1-161, 1-162, 1-163 — Class Voice (or) Mus 1-104 (or) 1-204 (or) 1-304 — Voice (6)
Mus 1-410 — Band (or) Mus 1-420 — Orchestra (6)
Mus 1-440 (or) 3-440 — Ensemble (2)
Instrumental Technique — 14 credits from MuEd 1-504, 1-505, 1-514, 1-515, 1-516, 1-524, 1-525, 1-526, 1-534
MuEd 3-551 — Teaching Instrumental Music (3)
MuEd 3-561, 3-562, 3-563 — Instrumental Conducting (4)

Special Requirements, Vocal-General Concentration

- Mus 1-151, 1-152, 1-153 — Class Piano (6) (or) Mus 1-101 (or) 1-201 (or) 1-301 — Piano (6) (required if principal applied medium is other than piano or organ)
Mus 1-161, 1-162, 1-163 — Class Voice (or) Mus 1-104 (or) 1-204 (or) 1-304 — Voice (6) (required if principal applied medium is other than voice)
Mus 1-430 — University Chorus, Women's Glee Club, Men's Glee Club (6) (or) Mus 3-430 — Chamber Singers (12)
Mus 5-741, 5-742, 5-743 — Vocal Literature (9)
MuEd 3-301 — Teaching Music in Primary Grades (3)
MuEd 3-415, 3-416, 3-417 — Choral Conducting Laboratory (6)
MuEd 1-504, 1-505 — Instrumental Technique (4)

Admission to Student Teaching — All applicants must have completed SeEd 3-150, 3-155 plus methods courses: for instrumental concentration, MuEd 3-551; and for vocal-general concentration, MuEd 3-301, 3-302, 3-303. An average of C+ (2.50) is required in major courses completed prior to student teaching (see listing of major for this average, below).

Major Average — For graduation, an average of C+ (2.50) is required for the following courses:

All Students

- Applied music, principal medium: 18 credits from Mus 1-201 through 1-224, 1-301 through 1-324, and 3-201 through 3-224, 3-301 through 3-324
Applied music, second medium: 6 credits from Mus 1-151, 1-152, 1-153, 1-161, 1-162, 1-163, 1-101 through 1-124, 1-201 through 1-224, 1-301 through 1-324
Mus 1-501 through 1-506, 1-511 through 1-516, 1-601, 1-602, 1-603, 3-604
MuEd 3-302, 3-303

Additional for Instrumental Concentration

- 14 credits from: MuEd 1-504, 1-505, 1-514, 1-515, 1-516, 1-524, 1-525, 1-526, and 1-534; (and) 3-551, 3-561, 3-562, 3-563

School of Physical Education and Recreation

Additional for Vocal-General Concentration

MuEd 3-301, 3-415, 3-416, 3-417, 3-504, 3-505

Minor in Music Education

This teaching minor is for secondary education majors only. An interview and written approval from a music education adviser is required before the student begins course work in the minor.

A minimum of 33 credits is required in music and music education from the following three groups:

1. Music Theory and Music History and Literature

- Mus 1-021 — Introduction to Music (5)
- (or) Mus 3-021 — Introduction to Music (5)
- Mus 1-024, 1-025, 1-026 — Music Literature (6)
- (or) Mus 3-027, 3-028, 3-029 — History of Musical Styles (4-8)
- Mus 1-501, 1-502, 1-503 — Materials and Structure of Music I (4-6)
- Mus 1-511, 1-512, 1-513 — Ear-Training and Sight-Singing I (4-6)

2. Music Education Methods

- MuEd 3-302 — Teaching Music in Intermediate and Junior High Grades (3)
- MuEd 3-303 — Teaching Music in Senior High School (3)

3. Practical Music

- Mus 1-101 (or) 1-201 — Applied Piano (4-6)
- (or) Mus 1-151, 1-152, 1-153 — Class Piano (4-6)
- Mus 1-104 (or) 1-204 — Applied Voice (4-6)
- (or) Mus 1-161, 1-162, 1-163 — Class Voice (4-6)
- Mus 1-430 — Women's Glee Club, University Chorus, Men's Glee Club (2-6)
- (or) Mus 3-430 — Chamber Singers (2-6)

Additional credits may be selected from the following:

- MuEd 1-504, 1-505, 1-514, 1-515, 1-516, 1-524, 1-525, 1-526, 1-534 — Instrumental Techniques (2-6)
- MuEd 3-415, 3-416, 3-417 — Choral Conducting (2-6)
- MuEd 3-561, 3-562, 3-563 — Instrumental Conducting (2-6)
- Mus 1-410 — Band (3-6)
- Mus 1-420 — Orchestra (3-6)
- Mus 1-440 (or) Mus 3-440 — Ensemble (2-6)

Program for the Master of Education Degree

The advanced professional program leading to the M.Ed. degree is open for application from certified teachers with an undergraduate major in music and music education with a 2.80 grade point average in that major and a 2.50 average for the total undergraduate program. These grade averages also are required for the 45-credit M.Ed. program. Section I of this bulletin lists general requirements for the master of education degree. For music teachers, the course pattern is as follows:

- Music Education — 12-15 credits, including a 3-credit integrating paper in the areas of music, music education, and education, completed under MuEd 5-970 — Independent Study
- Music — 24 credits selected from theory, applied music, music history, and/or literature, and ensemble
- Education — 6-9 credits
- Electives — to complete the 45-credit total

SCHOOL OF PHYSICAL EDUCATION AND RECREATION

The School of Physical Education and Recreation offers professional programs of instruction in physical education for men, physical education for women, dance education, recreation and park administration, camping and outdoor education, and

Curricula

school health education. Below are listed the requirements for B.S. degree majors or minors in these areas, followed by a description of the College of Education M.Ed. programs and the Graduate School programs leading to the M.A., Ph.D., and Ed.D. degrees. Also included is the curriculum for Minnesota certification in athletic coaching.

In addition to the undergraduate and advanced professional programs, non-professional activity courses are offered. They are open to any University student who may elect them as a part of his general education in accordance with the regulations of the college in which he is enrolled. Many sections of these courses are coeducational and others are for men only or for women only. For each activity course, Section III of this bulletin and the *Class Schedule* include this information, as well as the prerequisite health activity rating.

Physical Education for Men

Major Advisers: Professors Alexander, McAdam;
Associate Professors Kundla, Mowerson, Ostrander, Torpey;
Assistant Professors Bird, Serfass, Walsh; Instructor Walker

Four-Year Curriculum in Physical Education for Men

The following requirements must be met by students desiring the B.S. degree in physical education and recommendation for a Minnesota High School Standard Special Certificate.

In this curriculum, totaling 186 credits, an average of C+ (2.50) must be maintained in all PE courses except student teaching. The average required in a minor is C (2.00).

FRESHMAN-SOPHOMORE YEARS

A. Liberal Education — 57 credits

Category I: Communication, Language, Symbolic Systems — 18 credit minimum

Engl 1-001, 1-002, 1-003 (9)
(or) Comm 1-001, 1-002, 1-003 (12)
Speech and electives (8-9)

Category II: The Physical and Biological Sciences — 13 credit minimum

Chem 1-004, 1-005 — General Chemistry (10)
(or) NSci 1-004, 1-005 — Physical World (8)
Biol 1-001, 1-002 (10)
(or) GC 1-131 — Principles of Biology (5) (with grade of 7)

Category III: Man and Society — 12 credit minimum

Psy 1-001, 1-002 — General Psychology (6)
6 credits, 3 of which must be in sociology or anthropology

Category IV: Artistic Expression — 9 credit minimum

See *CLA Bulletin*, Group Distribution Requirements

B. Physical Education — 14-15 credits

1. Required of all:

PE 1-523 — Conditioning and Tactics (1)
PE 1-562 — Games and Elementary School Activities (1)
PE 1-580 — Orientation and Appraisal (1)
PE 1-620 — Gymnastics (1)
Ability to swim 100 yards
Clinics in selected sports

2. Select four courses:

- PE 1-553 — Baseball (1)
- PE 1-554 — Football (1)
- PE 1-555 — Soccer (1)
- PE 1-652 — Basketball (1)
- PE 1-653 — Volleyball (1)
- PE 1-654 — Track and Field (1)
- PE 1-655 — Ice Hockey (1)

3. Select five courses:

- PE 1-022 — Ballroom Dance (1)
- PE 1-410 — Water Safety Instructor (2)
- PE 1-510 — Fundamental Movement (1)
- PE 1-512 — Folk Dance (1)
- PE 1-630 — Golf (1)
- PE 1-640 — Wrestling (1)
- PE 1-641 — Racquet Sports (1)

4. Select one course:

- PE 1-034 — Judo (1)
- PE 1-035 — Karate (1)
- PE 1-045 — Angling (1)
- PE 1-049 — Camping (1)
- PE 1-051 — Hunting (1)
- PE 1-057 — Skiing (1)

C. Other Required Courses — 6-9 credits

- PubH 1-003 — Individual and Public Health (3)
- (or) PubH 3-001 — Personal and Community Health (3)
- Hlth 1-500 — American Red Cross First Aid: Standard, Advanced (2)
- (or) Current American Red Cross First Aid Card
- Anat 1-027 — Anatomy for Physical Education Students (4)
- (or) PE 3-110 — Human Anatomy (3)

D. Electives — 10-14 credits

JUNIOR-SENIOR YEARS

A. Professional Education — 29 credits

- SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)
- Hed 3-090 — The School and Society (3)
- PE 3-112 — Human Growth and Physical Development (3)
- PE 3-420 — Student Teaching Methods (2)
- PE 3-421 — Student Teaching Methods (1)
- PE 3-621 — Student Teaching: Elementary (4-6)
- PE 3-622 — Student Teaching: Secondary (4-6)

B. Physical Education — 33-35 credits

1. Required of all — 25 credits

- PE 3-100 — Adapted Physical Education (3)
- PE 3-111 — Mechanics of Movement (3)
- PE 3-113 — Motor Learning (3)
- PE 3-114 — Prevention and Care of Injuries (3)
- PE 3-130 — History and Principles of Physical Education (3)
- PE 3-141 — Administration of Physical Education (3)
- PE 3-150 — Testing in Physical Education (3)
- PE 3-310 — Athletic Training Laboratory (1)
- PE 5-151 — Curriculum (3)

2. Area of Emphasis or Electives — 8-10 credits

Each student must complete one of the following areas:

a. *Adapted Physical Education* — 9 credits

- Select 3 credits with consent of area head
- SpEd 5-101 — Education of Exceptional Children (3)
- PE 3-625 — Supervised Practical Experience (3)

Curricula

b. *Advanced Study Preparation* — 9 credits

With consent of the adviser and the department head, the student is assigned to a professor for study in one or more areas, such as motor learning, history, mechanics of movement, or research.

PE 3-900 — Independent Study (1-9)

c. *Aquatics* — 10 credits

PE 1-004 — Diving, Springboard (1)

PE 1-205 — Scuba and Skin Diving (1)

PE 1-410 — Water Safety Instructor (2)

PE 1-530 — Camp Aquatics (2)

PE 1-600 — Aquatics (1)

PE 3-625 — Supervised Practical Experience (3)

d. *Intramurals-Extramurals* — 9 credits

PE 3-160 — Programming Intramural-Extramural Sports (3)

PE 3-270 — Sports Officiating and Supervision (3)

PE 3-625 — Supervised Practical Experience (3)

e. *Coaching* — 8-9 credits

Coaching emphases are available for baseball, basketball, football, golf, gymnastics, ice hockey, swimming, tennis, track and field, and wrestling. Each area will consist of the following:

The professional activity course for the sport selected (1)

The coaching course for the sport selected (2)

PE 3-624 — Student Teaching: Coaching (3)

(or) PE 3-900 — Independent Study (3) (may be selected by varsity squad members instead of PE 3-624)

PE 3-625 — Supervised Practical Experience (3)

f. *Electives* in professional physical education courses — 9 credits

C. Other Requirements

PubH 3-385, 3-386 — Physiological Hygiene (8)

D. Any regular minor offered in the College of Education or electives to complete a total of 186 credits, at least 12 of which must be completed in Upper Division courses in one department outside the College of Education.

Minor in Physical Education for Men

For this minor, a total of from 33-37 credits should be distributed as follows:

A. Required of all — 5-7 credits

Hlth 1-500 — American Red Cross First Aid: Standard, Advanced (2)

(or) Current American Red Cross Standard Advanced First Aid Card

PE 3-420 — Student Teaching Methods (2)

PE 3-606 — Student Teaching for Minors in Physical Education (3)

B. Select one area of emphasis with the exception of Advanced Study as explained in the program for physical education major students. Any activity class listed in this area may not count in "D" — 9-10 credits

C. Select a minimum of 12 credits:

PE 3-110 — Human Anatomy (3)

(or) Anat 1-027 — Anatomy for Physical Education Students (4)

PE 3-111 — Mechanics of Movement (3)

PE 3-112 — Human Growth and Physical Development (3)

PE 3-113 — Motor Learning (3)

PE 3-114 — Prevention and Care of Injuries (3)

PE 3-115 — Physiological Application to Sports (3)

PE 3-141 — Administration of Physical Education (3)

School of Physical Education and Recreation

- (or) PE 5-170 — Foundations of Physical Education (3)
PE 3-150 — Testing in Physical Education (3)
PE 5-151 — Curriculum (3)

D. Seven activities courses (1 credit each except where indicated) distributed as follows:

- Two courses from PE 1-410 (2), 1-600, 1-630, 1-640, 1-641
Two courses from PE 1-553, 1-554, 1-555, 1-652, 1-653, 1-654, 1-655
Two courses from PE 1-022, 1-510, 1-512, 1-523, 1-562, 1-620
One course from PE 1-034, 1-035, 1-045, 1-049, 1-051, 1-057

Minnesota Public Secondary School Athletic Coaching Certification

A teacher in a Minnesota public secondary school who is head coach in baseball, basketball, football, hockey, track, or wrestling may be certified either by completion of the major or minor in physical education or by the following special coaching preparation. Students who successfully complete this program will receive the endorsement of the University for athletic coaching in Minnesota public secondary schools. A total of 19-26 credits from groups A, B, and C is required.

A. All Required — 12-18 credits

- Hlth 1-500 — American Red Cross First Aid: Standard, Advanced (2)
(or) Current American Red Cross Standard Advanced First Aid Card
Anat 1-027 — Anatomy for Physical Education Student (4)
(or) PE 3-110 — Human Anatomy (3)
PE 3-114 — Prevention and Care of Injuries (3)
PE 3-115 — Physiological Application to Sports (3)
PE 3-141 — Administration of Physical Education (3)
(or) PE 5-170 — Foundations of Physical Education (3)
PE 3-624 — Student Teaching: Coaching (3) (not required for those with public school coaching experience)

B. Select one course:

- PE 3-111 — Mechanics of Movement (3)
PE 3-112 — Human Growth and Physical Development (3)
PE 3-113 — Motor Learning (3)
PE 3-130 — History and Principles of Physical Education (3)

C. Select two coaching courses from PE 3-170, 3-171, 3-172, 3-173, 3-174, 3-175, 3-176, 3-177, 3-178, 3-179, 3-625

Physical Education for Women

Major Advisers: Professors Jaeger, Slocum, Wilson; Associate Professors Hauptfuehrer, Lampe; Assistant Professors Cato, Stoner, Young; Instructors Bayless, Plack

Four-Year Curriculum in Physical Education for Women

The 4-year major curriculum leads to the B.S. degree and recommendation for a Minnesota High School Standard Special Certificate. The program includes liberal education requirements in the four categories listed below; a minor selected from those offered in the College of Education; requirements in physical education, professional education, and other areas as specified for each of the 4 years; and electives to complete the 186-credit total. An average of C+ (2.50) is required in the major (PE courses) and C (2.00) in the minor.

A. Liberal Education — 57 credits (required within the 4 years but recommended for completion in the first 2 years)

Category I: Communication, Language, Symbolic Systems — 18 credits

- Engl 1-001, 1-002, 1-003 (9)
(or) Comm 1-001, 1-002, 1-003 (12)

Curricula

Spch 1-101 (5)
(or) Spch 1-102 and 1-106 (6)
Electives (0-4)

Category II: Physical and Biological Sciences — 18-20 credits

Biol 1-001, 1-002 — General Biology (10)
Chem 1-004, 1-005 — General Chemistry (10)
(or) NSci 1-004, 1-005 — Physical World (8)

Category III: Man and Society — 12 credits

Soc 1-001 — Man in Modern Society (3)
(or) Soc 1-003 — Social Problems (3)
Psy 1-001, 1-002 — General Psychology (6)
Electives (3)

Category IV: Artistic Expression — 9 credits

Mus 1-001 — Fundamentals (2)
PE 1-124 — Modern Dance (1)
PE 3-180 — History and Trends in Dance (3)
Electives (3)

B. Major Requirements

Students who meet specific major requirements through noncredit proficiency examinations must elect other appropriate PE courses in completing the credits required for the major.

1. Freshman Year

PE 1-510 — Fundamental Movement (1)
PE 1-511 — Rhythmic Analysis (1)
PE 1-513 — Modern Dance (1)
PE 1-521 — Tumbling, Free Exercise, and Trampoline (1)
PE 1-540 — Badminton (1)
PE 1-541 — Tennis (1)
PE 1-550 — Field Hockey-Volleyball (1)
PE 1-551 — Basketball (1)

Two credits in aquatics from the following:

PE 1-500 — Beginning Aquatics (1)
PE 1-601 — Advanced Aquatics (1)
PE 1-700 — Senior Life Saving (1)
PE 1-800 — Water Safety Instructor's Course (2)

2. Sophomore Year

PE 1-512 — Folk Dance (1)
PE 1-520 — Posture and Functional Exercise (1)
PE 1-522 — Apparatus (1)
PE 1-530 — Golf (1)
PE 1-552 — Speedway-Softball (1)
PE 1-561 — Physical Education Activities for the Elementary School (3)
PE 3-322 — Teaching of Posture, Exercise, and Gymnastics (3)
In addition, elect 1 credit in team sports.

3. Junior Year

PE 3-111 — Mechanics of Movement (3)
PE 3-130 — History and Principles of Physical Education (3)
PE 3-320 — Teaching Individual and Team Sports (3)
PE 3-321 — Teaching of Folk Dance (3)
PE 3-360 — The Intramural-Extramural-Interscholar Sports Program (3)

4. Senior Year

PE 3-140 — Administration of Physical Education (3)
PE 3-150 — Testing in Physical Education (3)
PE 3-601, 3-602, 3-603 — Student Teaching (elementary, junior high, and senior high school levels) (12)
PE 5-151 — Curriculum (3)

School of Physical Education and Recreation

C. Other Requirements

- PubH 1-003 — Individual, Public Health (3)
- Anat 1-027 — Anatomy for Physical Education Students (4)
- Hlth 1-500 — American Red Cross First Aid: Standard, Advanced (2)
- SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)
- PubH 3-385, 3-386 — Physiological Hygiene (8)
- (or) Phs 3-051 — Physiology (5)
- HEd 3-090 — The School and Society (3)

Minor in Physical Education for Women with a Major in a Secondary Education Field

For this minor, a minimum of 33 credits should be distributed as follows:

- A. A maximum of 3 credits may be allowed for credits earned in fulfilling the regular physical education requirement in nonprofessional classes. Courses selected under A cannot be duplicated under B.
- B. A minimum of 7 credits in professional skills courses (1 credit each) with a distribution in four of the five skill areas:
 - 1. Aquatics: PE 1-500, 1-601, 1-700
 - 2. Dance: PE 1-511, 1-512, 1-513
 - 3. Individual Sports: PE 1-530, 1-540, 1-541
 - 4. Posture and Self Testing Activities: PE 1-520, 1-521, 1-522
 - 5. Team Sports: PE 1-550, 1-551, 1-552, 1-650, 1-651
- C. Required Courses — 15 credits
 - Hlth 1-500 — American Red Cross First Aid: Standard, Advanced (2)
 - PE 1-510 — Fundamental Movement (1)
 - PE 3-130 — History and Principles of Physical Education (3)
 - PE 3-320 — Teaching Individual and Team Sports (3)
 - PE 3-605 — Student Teaching: Physical Education for Minors (3)
 - PE 5-151 — Curriculum (3)
- D. At least 8 credits selected from:
 - Hlth 5-120 — Role of the School Health Educator in Health Appraisal (3)
 - PE 1-800 — Water Safety Instructor's Course (2)
 - PE 3-111 — Mechanics of Movement (3)
 - PE 3-150 — Testing in Physical Education (3)
 - PE 3-180 — History and Trends in Dance (3)
 - PE 3-321 — Teaching of Folk Dance (3)
 - PE 3-322 — Teaching of Posture, Exercise, and Gymnastics (3)
 - PE 3-360 — The Intramural-Extramural-Interscholar Sports Program (3)
 - PE 3-600 — Orientation to Student Teaching (pre-fall experience) (3)
 - PE 5-100 — Teaching Physical Education for the Handicapped Child (3)

Note — The following courses are strongly recommended: PE 3-321, 3-322, 3-360, and 3-600.

Minor in Physical Education for Women with a Major in Elementary Education

Permission from the major adviser is required. A minimum of 31 credits should be distributed as follows:

- A. A maximum of 5 credits may be given for credits earned in fulfilling the regular physical education requirement in nonprofessional classes. Suggested courses are: stunts and tumbling, modern dance, folk and square dance, posture and individual exercise, and courses in team sports. Courses selected under A cannot be duplicated under B.

Curricula

- B. A minimum of 3 credits in professional skills courses (1 credit each), selected from:

Dance: PE 1-511, 1-512, 1-513
Posture and Self-Testing Activities: PE 1-520, 1-521, 1-522
Team Sports: PE 1-550, 1-551, 1-552

- C. Required Courses — 15 credits

Hlth 1-500 — American Red Cross First Aid: Standard, Advanced (2)
PE 1-510 — Fundamental Movement (1)
PE 1-561 — Physical Education Activities for the Elementary School (3)
PE 3-130 — History and Principles of Physical Education (3)
PE 3-325 — Teaching Health and Physical Education in the Elementary School (3) (elementary education majors only)
PE 3-605 — Student Teaching: Physical Education for Minors (3)

- D. At least 3 credits from:

PE 3-320 — Teaching Individual and Team Sports (3)
PE 3-321 — Teaching of Folk Dance (3)
PE 3-322 — Teaching of Posture, Exercise, and Gymnastics (3)
Plus 5 additional credits selected from these courses or the following:
Hlth 5-120 — Role of the School Health Educator in Health Appraisal (3)
PE 3-150 — Testing in Physical Education (3)
PE 3-600 — Orientation to Student Teaching (pre-fall experience) (3)
PE 5-100 — Teaching Physical Education for the Handicapped Child (3)
PE 5-151 — Curriculum (3)

Minor in Dance Education

The minor in dance is open to all College of Education students interested in the teaching of dance. A minimum total of 27 credits is required. Consultation should be held with the dance adviser as early as possible in order to plan for individual needs.

- A. A minimum of 5 credits in nonprofessional skills courses which should include experience in all dance forms, selected from:

Modern Dance: PE 1-024, 1-124, 1-224, 1-324
Ballroom Dance: PE 1-022, 1-122
Folk and Square Dance: PE 1-023

- B. Required Courses:

PE 3-180 — History and Trends in Dance (3)
PE 3-321 — Teaching of Folk Dance (3)

- C. Electives in Physical Education — a minimum of 7 credits selected from:

PE 3-111 — Mechanics of Movement (3)
PE 3-390 — Dance Composition (2)
PE 3-391 — Dance Composition (2)
PE 3-392 — Dance Production (3)

- D. Electives in Art, Music, and Theatre Arts — a minimum of 9 credits selected from two of the three areas:

Art, any one of the following: Arth 1-001 (5), 3-001 (3), ArtS 1-101 (3)
Music: Mus 1-001 (2), 1-161 (2), 3-021 (5), 3-027 (2), 3-028 (2) 3-029 (2)
Theatre Arts: Th 1-101 (3), 1-501 (1), 1-326 (3), 3-707 (3), 5-131 (3), 5-326, 5-327, 5-328 (3)

Recreation and Park Administration

Major Advisers: Professors Anderson, Chapman; Associate Professors Giles, Ostrander; Instructor Cheatham

Four-Year Major Program

Undergraduate professional preparation in recreation and park administration, open to men and women, leads to the B.S. degree. The program includes courses in

School of Physical Education and Recreation

liberal education, basic professional theory, recreation skills, practical field experience, and the selection of an undergraduate specialization from the following:

Option I: Recreation Program Leadership — Emphasis on developing activity leadership skills and techniques for those interested in pursuing a career where direct involvement with program participants is a major portion of the work.

Option II: Public Recreation and Parks — Emphasis on preparing individuals for supervisory and beginning administrative positions in governmental tax-supported agencies.

Option III: Therapeutic Recreation — Emphasis on preparing individuals for work with the ill and disabled in hospitals, institutions, and community agencies.

Option IV: Voluntary and Youth-Serving Agencies — Emphasis on the preparation of individuals to assume positions in YMCA's, scouting, boys' clubs, and other youth-serving agencies.

All of the general requirements of the College of Education govern admission and graduation from the program. Required grade averages are C (2.00) for the total work and C+ (2.50) in courses with a "Rec" prefix. Students who graduate from the major program in recreation and park administration are qualified to receive certification from the State Board of Education to direct recreation programs in public school facilities in Minnesota. This program does not culminate in a teaching certificate; however, a student may prepare for teaching in the many other programs outlined elsewhere in this bulletin.

FRESHMAN-SOPHOMORE YEARS

A. Liberal Education — 74 credits

Category I: Communication, Language, Symbolic Systems — 23 credits

Comm 1-001, 1-002, 1-003 — Communication (12)

(or) Engl 1-001, 1-002, 1-003 (9)

Spch 1-101 — Fundamentals of Speech (5)

Jour 1-011 — Reporting for Nonmajors (3)

Up to 8 credits from the following: Soc 3-801 (5), Phil 1-002 (5), mathematics, foreign languages

Category II: The Physical and Biological Sciences — 15 credits

15 credits from: anatomy, astronomy, biology, botany, chemistry, geology, natural science, physics, physiology, zoology

Category III: Man and Society — 27 credits

Psy 1-001, 1-002 — General Psychology (6)

PubH 1-003 — Individual and Public Health

(or) PubH 3-001 — Personal and Community Hygiene (3)

Soc 1-001, 1-002, 1-003 — Man in Modern Society; American Community; Social Problems (9)

At least three additional courses from anthropology, classics, economics, geography, history, humanities, philosophy, political science, social science, sociology (9)

Category IV: Artistic Expression — 9 credits

Mus 1-001 — Fundamentals of Music (2)

Th 1-101, 1-501 — Theatre Arts, Theatre Arts Lab (4)

ArtS 1-701 — Photography (3)

(or) ArtS 1-801 — Ceramic Processes (3)

(or) PE 1-024, 1-124, 1-224, 1-324, 1-325, 1-425, 1-426 (3)

B. Recreation — 20 credits

1. *Professional* — 10 credits

Rec 1-520 — Introduction to Recreation and Parks (2)

Rec 1-540 — Camp Craft (2)

Rec 1-600 — Leadership in Social Activities (3)

Rec 1-650 — Social Aspects of Leisure (3)

Curricula

2. *Related* — 10 credits

- Hlth 1-500 — American Red Cross First Aid: Standard, Advanced (2)
ArEd 1-209 — Experiences with Functional Design, Crafts (3)
(or) Ind 1-490 — Elementary Handicrafts (3)
5 credits to be selected from PE 1-001 through 1-174 (at least one course in aquatics required)

JUNIOR-SENIOR YEARS

A. Education — 19 credits

- SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)
SeEd 5-105 — Audio-Visual Materials in Education (3)
(or) PE 5-351 — Instructional Aids in Health, Physical Education, and Recreation (3)
Educ 5-104 — Adult Education (3)
HEd 3-090 — The School and Society (3)

B. Skill Techniques — 14 credits

Drama — 3 credits

- Th 1-321 — Beginning Acting: Creative Approach
(or) Th 5-131 — Creative Dramatics
(or) Th 5-132 — Children's Theatre

Music — 2 credits

- MuEd 3-001 — Music for Recreational Leadership

Outdoor Recreation — 3 credits

- Rec 3-150 — Leadership in Nature Recreation

Speech — 3 credits

- Spch 3-601 — Advanced Public Speaking
(or) Spch 5-431 or 5-602 or 5-603 — Argumentation and Persuasion
(or) Spch 5-411 — Discussion

Physical Education — 3 credits

- PE courses selected with the consent of the adviser (or) any PE courses numbered 1-001 through 1-498 not previously taken to satisfy freshman and sophomore requirements

C. Recreation Core Theory — 13 credits

- Rec 5-120 — Recreation in Community Organizations (3)
Rec 5-130 — Recreation and Park Areas and Facilities (3)
Rec 5-140 — Recreation Program Planning (3)
Rec 5-150 — Principles of Recreation and Park Administration (2)
Rec 5-330 — Methods in Recreation and Park Leadership (2)

D. Professional Options — 25-28 credits

The student, in consultation with a major adviser, selects one of the following four areas of concentration:

Option I: Recreation Program Leadership — 25-28 credits

11 credits selected from:

- Rec 1-530 — Camp Aquatics (2)
Rec 1-550 — Camp Leadership (2)
Rec 5-170 — Camp Administration (3)
Rec 5-180 — Industrial Recreation (3)
Rec 5-190 — Commercial Recreation (3)
Rec 5-200 — School Recreation (3)
Rec 5-210 — Introduction to Therapeutic Recreation (3)
Rec 5-230 — Recreation for the Mentally Retarded (3)
Rec 5-240 — Recreation for the Aging (3)
Rec 5-430 — Administrative Practices in Public Recreation and Parks (2)
Rec 5-460 — Administrative Practices in Therapeutic Recreation (2)
Rec 5-490 — Administrative Practices in Voluntary and Youth-Serving Agencies (2)
Rec 5-983 — Readings: Recreation (1-3)

School of Physical Education and Recreation

8 credits selected from the following departments with approval of major adviser: art, art education, theatre arts, physical education, music, industrial education

6 credits selected from related disciplines with approval of major adviser.

Option II: Public Recreation and Parks — 28 credits

Required courses — 19 credits

- Rec 5-430 — Administrative Practices in Public Recreation and Parks (2)
- For 5-232 — Management of Recreational Lands (3)
- Hort 3-075 — Landscape Construction (4)
- Hort 5-010 — Principles of Recreational Design (4)
- Soc 5-611 — Planning (3)
- Acct 1-024 — Beginning Accounting (3)

6 credits from:

- Pol 5-316 — Introduction to Community Politics (3)
- Pol 5-317 — Community Power Structures (3)
- Pol 5-318 — Metropolitan Government and Politics (3)

3 credits from:

- Rec 5-170 — Camp Administration (3)
- Rec 5-180 — Industrial Recreation (3)
- Rec 5-200 — School Recreation (3)
- Rec 5-210 — Introduction to Therapeutic Recreation (3)
- Rec 5-983 — Readings: Recreation (1-3)
- For 5-257 — Recreational Land Policy (3)

Option III: Therapeutic Recreation — 25-26 credits

Required courses — 14 credits

- Rec 5-210 — Introduction to Therapeutic Recreation (5)
- Rec 5-220 — Programming: Therapeutic Recreation (3)
- Rec 5-460 — Administrative Practices in Therapeutic Recreation (2)
- Soc 5-201 — Social Psychology (3)
- CPsy 3-301 — Child Psychology (3)

3 credits from:

- Rec 5-170 — Camp Administration (3)
- Rec 5-230 — Recreation for the Mentally Retarded (3)
- Rec 5-240 — Recreation for the Aging (3)
- Rec 5-983 — Readings: Recreation (1-3)

8 or 9 credits selected from the following fields with the approval of the major adviser: child psychology, educational psychology, social work, sociology

Option IV: Voluntary and Youth-Serving Agencies — 27 credits

Required courses — 7 credits

- Rec 1-530 — Camp Aquatics (or) 1-550 — Camp Leadership (2)
- Rec 5-170 — Camp Administration (3)
- Rec 5-490 — Administrative Practices in Voluntary and Youth-Serving Agencies (2)

3 credits from:

- Rec 5-210 — Introduction to Therapeutic Recreation (3)
- Rec 5-230 — Recreation for the Mentally Retarded (3)
- Rec 5-240 — Recreation for the Aging (3)
- Rec 5-983 — Readings: Recreation (1-3)

14 credits from:

- SW 3-001 — American Social Welfare (5)
- SW 3-005 — Introduction to Social Work (3)
- Soc 5-201 — Social Psychology (3)
- Soc 5-311 — Sociology of Conflict (3)
- Soc 5-401 — Social Organization (3)

Curricula

3 credits from:

- Soc 5-115 — Adult Parole (3)
- Soc 5-205 — Advanced Social Psychology (3)
- Psy 3-011 — Introduction to Psychology of Learning (3)

E. Field Experience — 9 credits

- Rec 3-700 — Field Experience (1-9)

F. Electives — to complete a total of 186 credits

Minor in Recreation and Park Administration

Minor Adviser: Associate Professor Giles

The minor in recreation and park administration is designed to prepare individuals for part-time and volunteer work of a general recreation nature. It is a non-teaching minor and cannot be used to meet minor requirements in any curriculum.

- Hlth 1-500 — American Red Cross First Aid: Standard, Advanced (2)
- Rec 3-700 — Field Experience (1-9) (3 required)
- Recreation theory — 12 credits with minor adviser's approval
- Skill techniques — 12 credits with minor adviser's approval
- Elective — one course to be selected from the following:
 - Psy 5-201 — Social Psychology (3)
 - Educ 5-104 — Adult Education (3)
 - SeEd 5-169 — Student Activity Programs in Secondary Schools (3)

Minor in Camping and Outdoor Education

Minor Adviser: Associate Professor Ostrander

This minor, designed to prepare individuals for work in camps and other outdoor settings, is open to prospective elementary and secondary teachers. It is not a teaching minor and cannot be substituted for the minor requirement of any curriculum.

- Rec 1-530 — Camp Aquatics (2)
- Rec 1-540 — Camp Craft (2)
- Rec 1-550 — Camp Leadership (2)
- Rec 1-600 — Leadership in Social Activities (3)
- Rec 3-150 — Leadership in Nature Recreation (3)
- Rec 5-170 — Camp Administration (3)
- Rec 5-330 — Methods in Recreation and Park Leadership (2)
- CPsy 3-301 — Child Psychology (3)
- ArEd 1-209 — Experience with Functional Design, Crafts
(or) Ind 1-490 — Elementary Handicrafts (3)
- Hlth 1-500 — American Red Cross First Aid: Standard, Advanced (2)
- MuEd 3-001 — Music for Recreation Leadership (2)
- 3 credits from:
 - PE 1-011 through 1-498
 - Th 1-101 — Theatre Arts (3)
 - Rec 3-700 — Field Experience (1-9) (3 cr completed in a camp leadership position during summer)

Note — See *General College Bulletin* for 2-year program in recreation for special groups.

School and Community Health Education

Major Advisers: Professor Slocum; Associate Professor Craig; Instructor Guthmann

Students complete 2 years of work in the College of Liberal Arts before applying for admission to the College of Education as juniors for the major in school and community health education. Ordinarily the applicant would have included in his

School of Physical Education and Recreation

Lower Division program most of the liberal education requirements (section A of program listed below), and he also might have completed a few Lower Division offerings in public health or health education. General requirements for admission and graduation from the college are listed in Section I of this bulletin.

Four-Year Program

A. Liberal Education — 68-71 credits

Category I: Communication, Language, Symbolic Systems — 20-24 credits

Engl 1-001, 1-002, 1-003 (9)
(or) Comm 1-001, 1-002, 1-003 (12)
Spch 1-101 (5)
(or) Spch 1-102 and 1-106 (6)
Electives (6)

Category II: Physical and Biological Sciences — 24-25 credits

Biol 1-001, 1-002 — General Biology (10)
(or) Ecol 1-001 — Introduction to Ecology (3)
(and) Ecol 1-002 — Ecology and Man (3)
(and) GCB 3-002 — Human Genetics and Social Affairs (3)
Chem 1-004, 1-005 — General Principles of Chemistry (10)
MicB 3-013 — General Microbiology (5)

Category III: Man and Society — 15 credits

Psy 1-001, 1-002 — General Psychology (6)
Soc 1-001 — Man in Modern Society (3)
(or) Soc 1-003 — Social Problems (3)
Anth 1-002 — Introduction to Anthropology: Cultural Anthropology (3)
(or) Anth 5-381 — Cultural Change and Development (3)
Elective (3)

Category IV: Artistic Expression — 9 credits

Electives from art, dance, music, humanities, literature, theatre arts

B. Professional Education — 28 credits

SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)
HEd 3-090 — The School and Society
Hlth 3-601, 3-602, 3-603 — Student Teaching (9)
Hlth 3-320 — Methods, Materials of School Health Education (3)
Electives (3)

C. Major in School and Community Health Education — 56-59 credits with C+ (2.50) grade average in all courses listed under "Hlth" or "PubH":

Hlth 1-500 — American Red Cross First Aid: Standard, Advanced (2)
Hlth 3-100 — Curriculum: School Health Education (3)
Hlth 3-300 — Instructor's Course in First Aid (3)
Hlth 5-120 — Role of School Health Educator in Health Appraisal (3)
Hlth 5-130 — Safety Education (4)
Hlth 5-140 — Administration of the School Health Program (3)
PubH 1-003 — Individual, Public Health (3)
(or) PubH 3-001 — Personal, Community Health (3)
PubH 3-151 — Introduction to Environmental Health (3)
PubH 3-385, 3-386 — Physiological Hygiene (8)
(or) Phsl 3-051 — Human Physiology (5)
PubH 3-600 — Human Nutrition (3)
(or) HE 1-381 — Principles of Nutrition (3)
PubH 5-065 — Health Education Preparation of Health and Allied Personnel (2)
(or) PubH 5-066 — Health Education and Contemporary Health Care Systems (2)
PubH 5-068 — Community Health Education Practice (6)
PubH 5-098 — Topics: Coordination of School and Community Health Education Services (3)
PubH 5-760 — Orientation to Medical Sciences (3)
Anat 1-027 — Anatomy for Physical Education Students (4)
PsyF 5-160 — Personality Development, Mental Hygiene (3)
FamS 1-001 or 3-001 — Dynamics of Dating, Courtship, Marriage (3)

Curricula

- (or) SeEd 5-112 — Family Life Education (3)
- Jour 1-001 — Introduction to Mass Communication (3)
- (or) Jour 1-003 — Communication in Modern World (3)
- (or) Jour 1-011 — Journalistic Writing for Nonmajors (3)

D. Physical Education — 3 credits

E. Teaching Minor

F. Electives to complete 186 credits

Minor in School Health Education

A. Basic Background Courses — 11-20 credits

- Biol 1-001, 1-002 — General Biology (10)
- (or) GC 1-131, 1-132 — Human Biology (6)
- (or) NSci 1-001, 1-002, 1-003 — Orientation in Natural Sciences (15)
- PubH 1-003 — Individual, Public Health (3)
- (or) PubH 3-001 — Personal and Community Health (3)
- Hlth 1-500 — American Red Cross First Aid: Standard, Advanced (2)

B. Minor Courses — 31-39 credits

- PsyF 5-160 — Personality Development and Mental Hygiene (3)
- (or) PubH 5-031 — Mental Hygiene (3)
- HE 1-381 — Nutrition (3)
- (or) HE 3-383 — Nutrition (2)
- (or) PubH 3-600 — Human Nutrition (3)
- Hlth 3-100 — Curriculum in School Health Education (3)
- Hlth 3-300 — Instructor's Course in First Aid (3)
- Hlth 3-320 — Methods and Materials of School Health Education (3)
- (or) Hlth 5-300 — Advanced Instruction in School Health for Secondary Schools (3)
- Hlth 5-120 — Role of School Health Educator in Health Appraisal (3)
- Hlth 5-140 — Administration of School Health Education (3)
- FamS 1-001 or 3-001 — Dynamics of Dating, Courtship, and Marriage (3)
- Anat 1-027 — Anatomy for Physical Education Students (4)
- (or) PE 3-110 — Anatomy (3)
- PubH 3-385, 3-386 — Physiological Hygiene (8)
- (or) Phsl 3-051 — Human Physiology for Nursing, Physical Therapy Students (5)
- Student teaching — 3 credits from Hlth 3-601, 3-602, 3-603 or the equivalent under PE 3-600, 3-602, 3-603, 3-622

Advanced Study in the School of Physical Education and Recreation

Programs for the Master of Education Degree

In the School of Physical Education and Recreation, programs leading to the M.Ed. degree are available in (1) physical education, (2) school health education, and (3) recreation. Two types of programs are offered: Plan I for teachers and Plan II for noncertified professional workers. All registrants in these M.Ed. programs are required to complete a short testing program. Refer to the general description of the master of education degree in Section I of this bulletin for admission, residence, transfer, and general program or graduation requirement. Specific requisites are given below.

Physical Education — The M.Ed. program in physical education is based on and is an extension of the undergraduate major. It is designed only for certified teachers with at least 1 year of full-time experience (Plan I). The minimum program consists of 24 credits in physical education; 12 credits in education, including a 3-credit integrating paper (PE 5-982); and sufficient elective courses outside physical education to complete 45 credits.

School Health Education — The M.Ed. program in school health education is a Plan I program requiring for admission a major in school health education or a minor in this field combined with a major in physical education, home economics, or biological sciences, plus teacher certification and teaching experience of at least 1 year full time in health or related sciences. Since this curriculum is designed as an interdisciplinary approach with the School of Public Health, certain areas of study must have been included in the undergraduate preparation or must be covered during the student's registration for the M.Ed. either through comparable Master's level courses or additional undergraduate work. These areas are health (personal, first aid, nutrition); science (human anatomy and physiology, biology, chemistry, bacteriology, or microbiology); sociology; and 18 credits in education. The minimum 48-credit program consists of 18 credits in school health education, 15 credits in public health, 12 credits in education, including an integrating paper (Hlth 5-982); and a 3-credit special project.

Recreation and Park Administration — Majors in recreation are under Plan II, the M.Ed. plan designed for noncertified professional workers. The student has a choice of five areas of concentration: industrial recreation; outdoor recreation; public park and recreation administration; therapeutic recreation; voluntary and youth-serving agencies. Admission requires an undergraduate degree in recreation or a related area, including undergraduate courses in psychology, sociology, and sciences plus at least 26 quarter credits of skill techniques in art, dramatics, music, nature recreation, physical education, and social recreation. Demonstration of proficiency may be substituted for parts of the skill requirement with consent of adviser. The minimum total of 45 credits is distributed as follows: recreation and park administration, 24-30 credits; education, 9-12 credits including a 3-credit practicum (Rec 8-630 or 8-640); and electives, 6 to 12 credits selected in consultation with the adviser.

Programs in the Graduate School

Graduate study leading to the M.A. degree is offered with majors in recreation and park administration and in physical education. For the latter major, a student may emphasize either physical education or school health education. Graduate programs leading to the Ph.D. degree with a major in *physical education* may be designed to provide professional preparation in one of three areas: physical education, recreation and park administration, or school health education. The Ph.D. degree with a major in *education*, with special emphasis on the student's departmental area of interest, also is available.

Graduate study leading to the Ed.D. degree in *physical education* offers preparation in the three areas: physical education, recreation and park administration, and school health education. The Ed.D. applicant is required to select one of two areas of emphasis within his major: (1) administration or (2) curriculum, methods, supervision. For requirements and course offerings for these degrees consult the *Graduate School Bulletin*. Application for admission should be made to the Graduate School.

POLITICAL SCIENCE

Major Adviser: Associate Professor Backstrom

During the student's first 2 years in the College of Liberal Arts, he includes in his program the first three requirements listed below under the political science major and the requirements for junior-year admission to the College of Education as specified for academic secondary curricula in Section I of this bulletin. Spch 1-101 is

Curricula

advised, and the student should be proficient in typing before he reaches his senior year. An average of C+ (2.50) in all social science courses must be maintained.

Because a political science teacher needs a broad social studies background and because most social studies positions require teaching in more than one subject within the area, the major includes supporting courses in other social science fields. A teaching minor is not required, but political science majors are urged to complete a minor outside the social sciences in order to improve their placement possibilities.

Major in Political Science — 75 credits

Area Requirement

At least one course taken in political science or in any of the other social sciences on (a) the Soviet Union, (b) Asia, and (c) Africa. These credits are counted toward the totals listed below.

Political Science — 36 credits

At least 18 credits in Upper Division courses. At least one course is required in each of the following general fields: American government, international relations, comparative government, and political theory. Pol 1-001, 1-002 and 1-051, 1-052 are prerequisite for many of the Upper Division courses.

Supporting Fields — 39 credits

At least one course each in anthropology, economics, geography, history, and sociology. A survey course in American history (required for certification in many states) and a course in cultural anthropology are strongly recommended.

Professional Education — 29 credits, including:

- SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)
- SeEd 3-348, 3-349 — Teaching Social Studies in the Secondary School (5)
- SeEd 3-640 — Student Teaching: Social Studies Juniors (1)
- SeEd 3-641 — Student Teaching in the Social Studies (9)
- HEd 3-090 — The School and Society (3)
- Elective

PSYCHOLOGICAL FOUNDATIONS

See Educational Psychology

SCHOOL PSYCHOLOGY

See Educational Psychology

SCHOOL SOCIAL WORK

Training to become a school social worker (or visiting teacher) is offered at the graduate level in the School of Social Work. Generally the M.S.W. degree in social work is required for this field of service. Students interested in this field should consult an adviser in the School of Social Work, 909 Social Sciences Building.

SCIENCE

Advisers: Professor Boeck; Associate Professor Gennaro

For registration, students should consult with the appropriate subject adviser.

Students planning to teach science in Minnesota high schools will be qualified to receive endorsement for certification upon completion of one of the four programs of teacher preparation below.

Registration for the first 2 years will be in the College of Liberal Arts. During this period the student will complete the Lower Division requirements for admission to the junior year in the academic secondary curriculum, listed in Section I of this bulletin. Early consultation with an appropriate subject adviser during this period is recommended.

After admission to the College of Education, the student will complete the major, a minor or related sciences, and the following professional courses and credits:

- SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)
- SeEd 3-356, 3-357, 3-358 — Teaching Secondary School Science (5)
- SeEd 3-651 — Student Teaching in Science (9)
- HEd 3-090 — The School and Society (3)
- Elective in education (2)

Science Majors

Earth Science

Major Adviser: Associate Professor Rapp

Completion of this program qualifies the student to be recommended for a Minnesota certificate to teach earth and general science full time in junior and senior high schools.

Requirements:

1. Field of concentration, grade average of C+ (2.50):

- Geo 1-001, 1-002 — Physical and Historical Geology (9)
- Geo 1-111, 1-112 (10)
- Geo 3-100 (or) 5-111 — Field Geology (2)
- Geo 3-201 — Structural Geology (3)
- Geo 3-401 — Mineralogy (5)
- Geo 3-651 — Sedimentology and Stratigraphy (3)
- Ast 1-011 — Descriptive Astronomy (5)
- Electives — to complete 40 credits, including a course in meteorology and others from Geo 5-151, 5-251, 5-261, 5-451; Soil 1-122

2. Related sciences, grade average of C (2.00):

- Biol 1-001, 1-002 — Biology (10)
- Chem 1-004, 1-005 — General Principles of Chemistry (10)
- Phys 1-101, 1-020, 1-030 (and) 1-015 (or) 1-025 (or) 1-035 — Physical Science (10)

Students who plan to register for earth science courses beyond the above requirements should take Math 1-142 and Phys 1-040, 1-050, 1-060.

Biological Science

Major Advisers: *Zoology* — Associate Professor Williams; *Botany* — Professor J. Hall, Assistant Professor Soulen; *Biochemistry* — Professor Jenness; *Genetics* — Associate Professor Snustad

Students completing the program will qualify to be recommended for Minnesota certification to teach biological and general sciences full time in junior and senior high schools.

Requirements:

1. Field of concentration, grade average of C+ (2.50):

A minimum of 41 credits, selected with the consent of an adviser, from the following fields with at least one course in each: biology, botany, genetics, microbiology, physiology, zoology.

2. Related sciences, grade average of C (2.00):

- Chem 1-004, 1-005 — General Principles of Chemistry (10)
- Chem 3-301, 3-302 — Elementary Organic Chemistry (10)

Curricula

(or) BioC 1-301, 1-302 — Elementary Biochemistry (9)
Geo 1-001 — Physical Geology (4)
Ast 1-011 — Descriptive Astronomy (5)
Phys 1-010, 1-020, 1-030 — Physical Science (9)

Chemistry

Adviser: Professor Boeck
Departmental Representative: Professor O'Connor

Graduates will be recommended for Minnesota certification to teach chemistry and physical science full time and for part-time teaching in the selected minor.

1. Major, average of C+ (2.50):
Chem 1-004, 1-005 — General Principles of Chemistry (10)
Chem 1-007 — Solution Chemistry (4)
Chem 3-100, 3-101 — Quantitative Analysis (5)
Chem 3-301, 3-302 — Elementary Organic Chemistry (10)
Chem 5-520, 5-521 — Elementary Physical Chemistry (6)
2. Related physics requirement, average of C (2.00):
Phys 1-270, 1-280, 1-290 — General Physics (15)
3. Minor in either physics or mathematics, average of C (2.00); recommended for mathematics minor, methods and student teaching in science (SeEd 3-362, 3-661).

Physics

Major Adviser: Professor Freier

Students completing the program will be qualified to receive endorsement for Minnesota certification to teach physics and physical science full time and for part-time teaching in the selected minor.

Requirements:

1. Major, average of C+ (2.50):
Phys 1-270, 1-280, 1-290 — General Physics (15) (or other sequence prerequisite to Phys 3-500)
Phys 3-500, 3-505, 3-510, 3-515 — Intermediate Physics (10)
A minimum of 10 credits selected from: Ast 3-051, Phys 5-010, 5-802, 5-851, 5-901, 5-441
2. Related chemistry requirement, average of C (2.00):
Chem 1-014, 1-015 (8)
Chem 1-301 (4)
Students seeking a chemistry minor should take: Chem 1-004, 1-005 (10) and 3-301 (5)
3. Minor in either chemistry or mathematics, average of C (2.00); recommended for mathematics minor, methods and student teaching in science (SeEd 3-362, 3-661).

Science Minors

A minor qualifies the student to teach half time or less in the specific minor field in Minnesota junior and senior high schools.

Requirements:

1. Courses listed below for the minor field, with an average of at least C (2.00)
2. Methods and student teaching in science — SeEd 3-352 (3), SeEd 3-651 (3)

Earth Science

- Geo 1-001, 1-002 — Physical and Historical Geology (9)
 (or) Geo 1-111, 1-112 (10)
 Geo 3-401 — Mineralogy (5)
 Ast 1-011 — Descriptive Astronomy (5)
 Electives, including a course in meteorology, from courses required in the major (5)

Biological Science

Twenty-seven credits selected with the consent of a field adviser including courses from the fields of biology, botany, zoology, physiology, and microbiology.

Chemistry

- Chem 1-004, 1-005 — General Principles of Chemistry (10)
 Chem 1-007 — Solution Chemistry (4)
 Chem 3-301 — Elementary Organic Chemistry (5)
 (or) Chem 1-301, 1-302 — Carbon Compounds (5)
 Chem 5-520, 5-521 — Elementary Physical Chemistry (6)

Physics

- Phys 1-270, 1-280, 1-290 — General Physics (15) (or other sequence prerequisite to Phys 3-500)
 Phys 3-500, 3-505, 3-510, 3-515 (10)

Programs for the Master of Education Degree***Geology (Earth Science)***

Major Advisers: Professor Phinney; Associate Professor Rapp

The M.Ed. program with a major in geology is available for certified teachers of science and/or mathematics. Some undergraduate preparation in geology (earth science) is expected; but if the applicant has had little background in this area, prerequisite courses can be arranged. See Section I of this bulletin for information concerning admission procedures and general requirements for the master of education degree.

Degree requirements include an average of 2.80 in the major and for the total 45-credit program:

1. Geology (earth science) — 24 credits (minimum)

- Geo 5-099 — Individual Research (5)
 Geo 5-111 — Field Geology (summer) (9)
 Additional courses — at least 10 credits from graduate offerings of the department of geology and geophysics, with selection from the following recommended:
 Geo 5-151 — Paleontology (5)
 Geo 5-251 — Geomorphology (4)
 Geo 5-261 — Glacial Geology (4-5)
 Geo 5-301 — Introductory Geochemistry (3)
 Geo 5-302 — General Geochemistry (3)
 Geo 5-451 — Optical Petrography (4)
 Geo 5-502, 5-503 — Introduction to Earth Physics (4)
 Geo 5-601 — Limnology (4)
 Geo 5-611 — Groundwater Geology (3)

2. Electives in Science and Mathematics — 9 credits

At least 6 credits in mathematics or a science other than geology, plus 3 credits in any science (including geology) or mathematics.

3. Education — 12 credits

SeEd 8-871 (3) — an integrative paper in science education relating to earth science, written under the direction of a College of Education faculty member in science education.

9 additional credits including at least 3 from the following: SeEd 5-390, 5-391, 5-392, 5-393, 8-887

Combined Programs in Science

(College of Education and Institute of Technology)

Five-Year Program — Students with majors in physics or chemistry 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. For other information see index for Combined Programs; also, see the *Institute of Technology Bulletin*.

SECONDARY EDUCATION

Graduate Programs

Major Advisers: Professors Birkmaier, Boeck, Gardner, Donovan A. Johnson, Kegler, McCune, West; Associate Professors Gennaro, Hill, David C. Johnson, Kimpston, Lange, Lewis, Pearson, Piché, Williams; Assistant Professor Shroyer

With a major in secondary education for the M.A. degree and in education for the Ph.D., students interested in secondary curriculum and instruction may emphasize English education, modern foreign language education, science education, social studies education, general secondary curriculum, or audio-visual education. Closely related programs are listed under business education, distributive education, and mathematics education. Information about M.A., Ph.D., and Specialist Certificate programs is included in the *Graduate School Bulletin*, to which school the student applies for admission. The applicant should indicate clearly the concentration he desires for his secondary education studies.

Programs leading to the M.Ed. degree, administered by the College of Education, offer another option to teachers in some fields. See Section I of this bulletin.

These graduate and professional programs typically prepare the teacher at an advanced level for his classroom work or for supervision, coordination, or other assignment associated with teaching. They also are appropriate for individuals interested in college or university teaching or in the responsibilities of state departments of education. Graduate offerings in secondary education are frequent components of programs in administration, vocational and technical education, and other areas.

SOCIAL STUDIES

Major Advisers: Professor West; Assistant Professor Mackey

Those interested in social studies majors should see individual social sciences (history, geography, economics, sociology, and political science). A minor may be completed in geography, history, or the broader social studies program listed below. This minor may be taken only by those not majoring in one of the social sciences. Students are advised to consult the Department of Secondary Education, 130 Peik Hall, concerning changes in requirements subsequent to the printing of this bulletin.

Minor in Social Studies

- 26 credits of history, including Hist 1-001, 1-002, 1-003 or 3-001, 3-002, 3-003; Hist 1-301, 1-302; and 9 additional credits in Upper Division courses.
- 8 credits of geography, including Geog 1-001 or 1-002; and 3 credits in courses numbered 5-000 and above
- 6 credits of economics, including Econ 1-001, 1-002 or 1-014, 1-015 or 3-001, 3-002
- 6 credits of sociology, including Soc 1-003 and a course numbered 3-000 or above
- 6 credits of political science, including Pol 1-001, 1-002
- Total — 52 credits in social science, including one course on Russia and one on the Far East, selected from any of the social sciences.

SOCIOLOGY

Major Advisers: Professor A. L. Johnson; Assistant Professor Haurek

During the student's first 2 years in the College of Liberal Arts, he includes in his program the first three requirements listed below under the sociology major and the requirements for junior-year admission to the College of Education as specified for academic secondary curricula in Section I of this bulletin. Spch 1-101 is recommended, and the student should be proficient in typing before he reaches his senior year. An average of C+ (2.50) in all social science courses must be maintained.

Because a sociology teacher needs a broad social studies background and because most social studies positions require teaching in more than one subject within the area, the major includes supporting courses in other social science fields. A teaching minor is not required, but sociology majors are urged to complete a minor outside the social sciences in order to improve their placement possibilities.

Major in Sociology — 75 credits

Area Requirement

At least one course taken in any of the social sciences on (a) the Soviet Union, (b) Asia, and (c) Africa. These credits are counted toward the total listed below.

Sociology — 30 credits including:

Soc 1-005, 1-006 — Principles of Sociology (8)

Soc 3-803 — Sociological Methods III: Research Methods (3)

Additional credits — 19, including at least 9 in Upper Division courses

Supporting Fields — 45 credits, including

At least one course each in anthropology, economics, geography, history, and political science. Survey courses in American government and American history (both required for certification in some states) and cultural anthropology are strongly recommended.

Professional Education — 29 credits, including:

SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)

SeEd 3-348, 3-349 — Teaching the Social Studies in the Secondary School (5)

SeEd 3-640 — Student Teaching: Social Studies Juniors (1)

SeEd 3-641 — Student Teaching in the Social Studies (9)

HEd 3-090 — The School and Society (3)

Elective

SPECIAL EDUCATION

See Educational Psychology

SPEECH, COMMUNICATION, AND THEATRE ARTS

Major Advisers: Associate Professors Adey, Brock, Fredricks, Piché

Speech, Communication, and Theatre Arts as a Major — 45-49 credits

There are three patterns for a major within speech, communication, and theatre arts. Each of the patterns requires Spch 1-101 or Spch 1-102 and 1-106 as a prerequisite.

I. *Speech-Communication Major* — 45 credits

A. Required courses — 30 credits

Spch 1-201 — Introduction to Broadcasting (3)

Spch 3-401 — Process of Interpersonal Communication (3)

Spch 3-605 — Advanced Public Speaking (3)

Spch 3-641 — Discussion and Conference Methods (3)

Spch 5-404 — Speech and Language in Human Behavior (3)

Spch 5-411 — Small Group Communication (3)

Curricula

- Spch 5-603 — Argumentation (3)
- Spch 5-615 — Introduction to Rhetorical Criticism (3)
- Th 3-801 — Interpretative Reading (3)
- One of the following:
 - Spch 1-110 — Voice and Articulation (3)
 - Spch 3-108 — Phonetics (3)
 - SSPA 3-101 — Introduction to Speech Pathology and Audiology (3)

B. Electives — 15 credits

Additional advanced work in speech-communication

II. Theatre Arts Major — 45 credits

A. Required courses — 30 credits

- Th 1-101 — Introduction to Theatre Arts (3)
- Th 1-321 — Beginning Acting: Creative Approach (3)
- Th 1-501 — Laboratory Section: Introduction to Theatre (1)
- Th 1-503 — Stagecraft: Construction, Painting (3)
- Th 3-709 — Play Production in Secondary School (3)
- Th 3-801 — Interpretative Reading (3)
- Th 5-711 — Stage Direction (3)
- Spch 1-104 — Communication in the Modern World: Performing Arts (3)
- Two of the following:
 - Th 3-512 — Costuming (3)
 - Th 3-514 — Scene Design (3)
 - Th 3-516 — Stage Lighting (3)
- One of the following:
 - Spch 1-110 — Voice and Articulation (3)
 - Spch 3-108 — Phonetics (3)
 - Th 1-311 — Voice Production for Theatre (2)

B. Electives — 15 credits

Additional advanced work in theatre

III. Speech-Communication and Theatre Arts Major — 49 credits

A. Required courses — 37 credits

- Spch 1-104 — Communication in the Modern World: Performing Arts (3)
- Spch 3-401 — Process of Interpersonal Communication (3)
- Spch 3-605 — Advanced Public Speaking (3)
- Spch 5-404 — Speech and Language in Human Behavior (3)
- Spch 5-615 — Introduction to Rhetorical Criticism (3)
- Th 1-101 — Introduction to Theatre Arts (3)
- Th 1-321 — Beginning Acting: Creative Approach (3)
- Th 1-501 — Laboratory Section: Introduction to Theatre (1)
- Th 3-707 — Play Production in Secondary School (3)
- Th 3-708 — Play Production in Secondary School (3)
- Th 3-801 — Interpretative Reading (3)
- One of the following:
 - Spch 1-108 — Voice and Articulation (3)
 - Spch 3-108 — Phonetics (3)
 - SSPA 3-101 — Introduction to Speech Pathology and Audiology (3)
- One of the following:
 - Spch 3-641 — Discussion and Conference Methods (3)
 - Spch 5-603 — Argumentation (3)

B. Electives — 12 credits

Additional advanced work in speech-communication and theatre

Professional Education Courses — The student majoring in speech, communication, and theatre arts must take the following courses in professional education and meet the minimum requirement of 29 credits.

- SeEd 3-150, 3-155 — Introduction to Secondary School Teaching (10)
- SeEd 3-323 — Curriculum Problems and Issues in Teaching Speech in Secondary Schools (2)
- (and) SeEd 3-326 — Curriculum Problems and Issues in Teaching Literature in Secondary Schools (2)

- (or) SeEd 3-327 — Curriculum Problems and Issues in Teaching Language and Composition in Secondary Schools (2)
SeEd 3-324 — Teaching Language Arts in Secondary Schools: Instructional Problems and Practice (5)
SeEd 3-325 — Instructional Practice in English and Speech (3)
SeEd 3-621 — Directed Experiences in Teaching English, Speech, and Language Arts (6-9)
HEd 3-090 — The School and Society (3)

Speech, Communication, and Theatre Arts as a Minor — 24 credits

There are two patterns for a minor within speech, communication, and theatre arts. Both require Spch 1-101 or Spch 1-102 and Spch 1-106 as a prerequisite.

I. *Speech-Communication Minor* — 24 credits

The same courses marked "required" in the Speech-Communication major, but with these two changes: Spch 5-603 or 5-411, Spch 5-615 or 5-404.

II. *Theatre Minor* — 24 credits

Th 1-101, 1-311, 1-321, 1-501, 3-707, 3-708, 3-709, 3-801
Spch 1-104

ADDITIONAL REQUIREMENTS

Because of the close relationship between English and speech in Minnesota high schools, students majoring in speech must have a minor in English. Modifications of the minor requirement may be made on recommendation of the departmental adviser with the approval of the Committee on Student Scholastic Standing, but all students majoring in speech must complete Comp 1-027 or 1-028 and Engl 5-645.

All students majoring or minoring in speech are expected to participate in one or more cocurricular activities such as debate, theatre, radio, public reading, and public speaking.

Students minoring in speech with a major other than English will register for SeEd 3-329.

SPEECH PATHOLOGY AND AUDIOLOGY

Major Advisers: Professor Starr; Associate Professor McDermott

The Department of Speech Science, Pathology, and Audiology offers a speech pathology and audiology curriculum for students interested in clinical work with persons having communication disorders. For the first 2 years, students enroll in the College of Liberal Arts and complete the requirements listed below. The B.S. degree is awarded upon completion of the 4-year undergraduate program. Those planning to enter professional positions in schools or other agencies must proceed with the M.A. program in the Graduate School.

Students interested in this field should consult a major adviser and take advantage of opportunities to observe clinical and laboratory activities. SSPA 3-101 (Introduction to Speech Pathology and Audiology) may be taken during the sophomore year. Students should apply for admission to the College of Education during the winter or spring quarter of the sophomore year and plan to begin the speech pathology and audiology curriculum during the fall quarter.

FRESHMAN-SOPHOMORE YEARS

I. *Communication, Language, Symbolic Systems*

Freshman English requirement: Engl 1-001, 1-002, 1-003 (0-12)

(or) Comm 1-001, 1-002, 1-003

(or) Engl 1-311, 1-312, 1-313

(or) Exemption

Spch 1-101 — Fundamentals of Speech (5)

(or) Spch 1-102 — Communication in the Modern World (interpersonal communication) (3)

(and) Spch 1-106 — Fundamentals of Speech (3)

Phil 1-002 — Logic (5)

Math 1-111 — College Algebra and Analytic Geometry (5)

Curricula

2. *The Physical and/or Biological Sciences* — 9 credits
3. *Man and Society*
Psy 1-001, 1-002 — General Psychology (6)
Psy 1-004, 1-005 — Introduction to Laboratory Psychology (4)
9 credits in the analysis of social, economic, and political institutions or in the development of civilization
4. *Artistic Expression* — 9 credits in literature or the arts
5. *Physical Education* — 3 credits
6. *Electives* — to complete the total of 90 credits

JUNIOR YEAR

- SSPA 3-101 — Introduction to Speech Pathology and Audiology (3)
SSPA 5-301 — Fundamentals of Sound (3)
SSPA 5-302 — Anatomy and Physiology of the Speech and Hearing Mechanisms (3)
SSPA 5-303 — Phonetics (3)
SSPA 5-501 — Diagnosis and Evaluation of Speech Disorders (4)
SSPA 5-502 — Stuttering (3)
SSPA 5-503 — Voice Disorders (3)
SSPA 5-504 — Articulation Disorders (3)
SSPA 5-701 — Hearing Disorders (3)
CPsy 3-301 — Child Psychology (3)
PsyF 5-110 — Introduction to Statistical Methods (3) (or equivalent)
Psy 3-011 — Introduction to Psychology of Learning (3) (or equivalent)
Elem 5-100 — Elementary School Curriculum (3)
(or) SeEd 3-150 — Introduction to Secondary School Teaching (5)

SENIOR YEAR

- SSPA 5-304 — Voice Science (3)
Three of the following five courses:
SSPA 5-505 — Neuromuscular Disorders (2)
SSPA 5-506 — Aphasia (2)
SSPA 5-507 — Cleft Palate (2)
SSPA 5-508 — Rehabilitation of the Laryngectomized (2)
SSPA 5-512 — Speech Development and Retardation (3)
SSPA 5-702 — Audiometry I (4)
SSPA 5-703 — Communication Problems of the Hearing Impaired (3)
SeEd 5-674, 5-675 — Clinical Methods, Practice in Speech Pathology (6)
HEd 3-090 — The School and Society (3)
Electives to complete the total of 186 credits to include at least 12 credits in two or more of the following departments: Psychology, Child Psychology, or Educational Psychology. Courses selected to fulfill this requirement must be approved by the student's adviser.

The required C+ (2.50) average is based on all the SSPA courses of the junior and senior year.

Section III. Description of Courses

This section contains descriptions of the courses offered in the College of Education. 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.

Course Numbering System

- 1-000 to 1-998 — Lower Division
- 3-000 to 3-998 — Upper Division
- 5-000 to 5-998 — Upper Division and/or Graduate
- 8-000 to 8-998 — Graduate School registrants only

The *Class Schedule*, published just before the registration period each quarter, contains the days and hours when classes meet, the place of meeting, quarter offered, and the name of the instructor. Students should check carefully with the *Class Schedule* for the exact course offerings for each quarter.

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 courses listed after section mark.
- ¶ Concurrent registration is required in course listed after paragraph mark.
- # Consent of instructor is required.
- Δ Consent of department offering course is required.

AGRICULTURAL EDUCATION (AgEd)

- 1-001 (1). INTRODUCTION TO AGRICULTURAL EDUCATION.** (1 cr; prereq #)
Orientation to employment and service; qualifications of teachers, survey of preparatory offerings; the program in Minnesota.
- 1-010 (20). RURAL EDUCATION AND COMMUNITY LEADERSHIP.** (3 cr)
Appraisal of community educational agencies; process of and responsibilities for community leadership; role of the school in the rural community; coordination of the school with nonschool educational agencies.
- 3-020 (56). RURAL EDUCATION THROUGH EXTENSION METHODS.** (3 cr; prereq soph)
Role of the Extension Service in rural education; methods and techniques of instruction in nonschool educational programs.
- 3-029 (90). DIRECTED EXPERIENCE IN AGRICULTURAL EDUCATION.** (1-3 cr)
Observation of the activities of teachers of agriculture; familiarization with the staff, the curriculum and the physical facilities and equipment in a department of vocational agriculture with opportunity to participate in the functions of a teacher.
- 3-030 (81). TEACHING AGRICULTURE IN THE SECONDARY SCHOOL.** (4 cr; prereq SeEd 3-155 and #)
Fundamentals of teaching agriculture to high school students; use of the home, farm, and community in structuring courses of study; the FFA, Vo-Ag Planning and Summary Book; building and utilizing teaching units.
- 3-031 (91). STUDENT TEACHING IN AGRICULTURE.** (6 cr; prereq sr, 3-030, SeEd 3-155, and #)
Instruction in developing individual farming programs, contacting parents, program analysis of community needs, conducting classes, community activities, Future Farmers, and case studies.
- 5-010* (120). RURAL EDUCATION AND COMMUNITY LEADERSHIP.** (3 cr, §1-010; prereq #)
Role of school in rural community, coordination of school with nonschool educational agencies; responsibility for community leadership.

Description of Courses

- 5-021* (156). **RURAL EDUCATION THROUGH EXTENSION METHODS.** (3 cr, §3-020; prereq grad or §)
Role of the Agricultural Extension Service; methods and techniques of instruction in non-school educational programs; special problem required.
- 5-032 (145). **HIGH SCHOOL CURRICULUM IN AGRICULTURE.** (3 cr; prereq 10 cr in education)
Philosophy, organization, and administration of instruction in agriculture departments in secondary schools.
- 5-033 (166). **TECHNIQUES OF INSTRUCTION IN RURAL ELECTRIFICATION.** (3 cr; prereq MeAg 5-020)
Developing a program of instruction in electricity and rural electrification; teaching aids, units of instruction, job sheets and demonstration facilities and materials for adult, young farmer, and high school classes.
- 5-034 (171). **PROCEDURES IN TEACHING AGRICULTURE.** (3 cr; prereq §)
New developments in methodology; assessment of innovations and procedures; consideration of various levels of instruction.
- 5-035 (147). **METHODS AND PRACTICES IN TEACHING POST-HIGH SCHOOL AGRICULTURE.** (3 cr)
Problems unique to area school and junior college teaching; improving the ability to organize and present subject matter.
- 5-040 (101). **YOUNG FARMER EDUCATION IN AGRICULTURE.** (4 cr; prereq sr)
Developing and organizing a continuing program of educational activities for farm youth not in school and not established in an occupation; coordinating community resources, determining needs, deriving goals and individual plans of procedure for establishment of young farmer programs.
- 5-050 (103). **ADULT EDUCATION IN AGRICULTURE.** (4 cr)
Systematic instruction for established farmers; analysis of the agricultural situation; adoption of appropriate management practices; determining needs in production, marketing, credit, conservation; developing a continuing program; observation of adult education programs.
- 5-051 (121). **ENTERPRISE ANALYSIS.** (3 cr; prereq §)
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.
- 5-052 (173). **FARM BUSINESS MANAGEMENT EDUCATION.** (3 cr; prereq 5-050 or §)
Administration, organization, and operation of farm business management education programs for adults; development and utilization of curriculum materials based on farm business record data.
- 5-060 (104). **PLANNING PROGRAMS.** (3 cr; prereq §)
Agricultural education program development in a community school; integration with total school program; administrative relationships and professional improvement.
- 5-065 (172). **EVALUATION OF LOCAL VOCATIONAL EDUCATION PROGRAMS.** (3 cr)
Procedures and instruments for assessing the effectiveness of programs for employment-bound youth and adults.
- 5-070 (141). **SUPERVISED FARM PRACTICE IN VOCATIONAL AGRICULTURE.** (3 cr per qtr, total 9; prereq 10 cr in education or §)
Selection, planning, supervising, and summarizing of individual farming programs; adaptation to meet needs of high school FFA students, young farmers, and adults.
- 5-071 (144). **SUPERVISED OCCUPATIONAL EXPERIENCES IN AGRICULTURE.** (3 cr)
Organization and administration of an occupation experience program in agriculture for high schools and area schools.
- 5-072 (146). **PRACTICUM: AGRICULTURAL BUSINESS AND INDUSTRY.** (1-3 cr per qtr, max 9)
Observation, study, and experience in agricultural business and industry; application to educational problems in agriculture.
- 5-080 (151). **ORGANIZATION AND MANAGEMENT.** (3 cr; prereq §)
Administrative structure and function of sub-collegiate programs.
- 5-085 (143). **CAREER DEVELOPMENT IN AGRICULTURAL EMPLOYMENT.** (3 cr)
Methods and materials in teaching career development for agricultural industries.
- 5-090 (170). **INDEPENDENT STUDY.** (1-3 cr; prereq sr)
Topics may be chosen to permit study of areas within education or to supplement areas of inquiry not provided in the regular course structure.

- 5-095 (195E). INDEPENDENT STUDY.** (3 cr; prereq MEd student in AgEd)
Preparation of a paper dealing with learnings in agricultural education applied to professional responsibilities.

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-001^o (232). RESEARCH IN AGRICULTURAL EDUCATION**
8-010 (286). CURRENT ISSUES IN AGRICULTURAL EDUCATION
8-020 (291). SEMINAR: AGRICULTURAL EDUCATION
8-081 (250). SUPERVISION OF VOCATIONAL AGRICULTURE
8-082 (283). ORGANIZATION AND ADMINISTRATION OF EDUCATIONAL PROGRAMS IN AGRICULTURE
8-091 (221). FIELD PROBLEMS

ART EDUCATION (ArEd)

- 1-207 (17C). EXPERIENCES WITH PICTORIAL EXPRESSION.** (3 cr)
Materials, techniques, and ideas important in art expression; relationship between adult expression, child expression, and art history.
- 1-208 (18C). EXPERIENCES WITH DESIGN AND MATERIALS.** (3 cr)
Projects in invention, arrangement, and decoration; color, lettering, posters, bulletin board displays.
- 1-209 (19C). EXPERIENCES WITH FUNCTIONAL DESIGN AND CRAFTS.** (3 cr)
Projects related to clothing, architecture, and interior design, community planning, commercial and industrial design, puppetry, dramatics, intercultural relations.
- 1-501 (14). INTRODUCTION TO ART EDUCATION.** (2 cr)
For art education majors, a preview of career opportunities, basic problems of teaching, professional qualifications, and use of educational resources at the University.
- 3-001 (50C). SURVEY OF ART ACTIVITIES.** (3 cr)
Introduction to pictorial expression, design, and the function of art in the social environment.
- 3-306, 3-307, 3-308 (56, 57, 58). PRINCIPLES AND EXPERIENCES IN ART EDUCATION.**
(5 cr per qtr; prereq 1-501)
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.
- 3-010 (53C). INTRODUCTION TO WEAVING.** (3 cr)
Equipment, design, setting up and operation of floor and table looms.
- 3-011 (54C). ADVANCED WEAVING.** (3 cr)
Multiharness floor looms, warp beams, draft studies, design, finishes.
- 3-020 (80C). CONTEMPORARY CRAFTS.** (3 cr)
Materials, equipment, design criteria, and techniques for textile, wood, metal and ceramics.
- 3-030 (81C). PUPPETRY.** (3 cr)
Construction, manipulation, and stage technique for basic puppet types.
- 3-414 (84). TEACHING ART IN ELEMENTARY SCHOOL.** (2 cr; prereq 1-100 or 6 cr from 1-207, 1-208, 1-209)
Place and content of art in the curriculum.
- 3-424 (84A). TEACHING ART IN THE ELEMENTARY SCHOOL.** (3 cr; prereq IIIA student only)
Materials, projects, and methods for students without previous background in art.
- 3-450 (85). ART FOR INTEGRATION IN SECONDARY EDUCATION.** (3 cr)
Using art to further the objectives of instruction in secondary school subjects.
- 3-506, 3-507, 3-508† (86A, 87A, 88A). TEACHING AND SUPERVISION OF ART.** (2 cr; total 6; prereq sr art education, 3-306 and 3-307, SeEd 3-150 and 3-155, ¶3-606, 3-607, 3-608)
Planning and methods for art education in the schools.

Description of Courses

- 3-606, 3-607, 3-608† (86, 87, 88). **STUDENT TEACHING AND SUPERVISION OF ART.** (3 cr per qtr, total 9; prereq art education sr, 3-306 and 3-307, SeEd 3-150 and 3-155, ¶3-506, 3-507, 3-508)
Observations, participation, student teaching, and supervisory experiences with various types and levels of art classes.
- 5-301 (151). **CURRICULUM BUILDING IN ART EDUCATION: CRITICAL SURVEY.** (3 cr)
Selection, evaluation, and organization of material for teaching units and projects.
- 5-302 (152). **CURRICULUM BUILDING IN ART EDUCATION: INNOVATIONS.** (3 cr)
Selection, evaluation, and organization of material for teaching units and projects.
- 5-303 (153). **CURRICULUM BUILDING IN ART EDUCATION: PROGRAMS FOR EXCEPTIONAL CHILDREN.** (3 cr)
Selection, evaluation, and organization of material for teaching units and projects.
- 5-316 (156). **INTERCULTURAL EDUCATION THROUGH ART.** (3 cr)
Approaches to international understanding through recognition of aesthetic contributions of diverse peoples to American life.
- 5-318 (158). **ART EDUCATION IN EUROPE.** (3 cr)
Current practices, problems, and achievements in art education in Western Europe compared with practices in American art education.
- 5-384 (184). **IMPROVING ART PROGRAMS IN THE ELEMENTARY SCHOOL.** (3 cr; prereq tchg exper or ‡)
Evaluating research findings; introducing new materials; developing cooperation between classroom teachers and art education specialists.
- 5-385 (185). **IMPROVING ART PROGRAMS IN THE SECONDARY SCHOOL.** (3 cr; prereq tchg exper or ‡)
For experienced teachers of art and advanced students; critical examination of art programs.
- 5-389 (189). **APPLICATION OF AESTHETIC THEORY IN EDUCATION.** (3 cr)
Contemporary theories of art, their psychological and philosophical foundations. Open to teachers, supervisors, and administrators concerned with art in general education at all levels.
- 5-600 (199). **INTERNSHIP.** (3-9 cr; prereq ‡)
Professional assignment for degree candidates under joint supervision of departments and cooperative agency.
- 5-605 (198). **PRACTICUM.** (3-9 cr; prereq ‡)
Independent project under direction; will include gathering data, developing proposals, experimenting with evaluating innovative practices.
- 5-900 (195). **PROFESSIONAL PROBLEMS.** (3 cr; prereq MEd student)
Independent study for MEd candidates integrating learning from art education, art, and education.

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-300 (284). **RESEARCH IN ART EDUCATION**
- 8-306 (296). **SEMINAR: ART EDUCATION**
- 8-900* (295). **PROBLEMS: ART EDUCATION**

BUSINESS EDUCATION (BsEd)

- 5-100 (130). **INSTRUCTION IN BUSINESS DATA PROCESSING.** (3 cr)
Teaching electronic data processing in the business education program.
- 5-101 (131). **ADVANCED TEACHING OF TECHNICAL BUSINESS SUBJECTS.** (3 cr)
Recent research and trends.
- 5-102 (132). **TEACHING THE BASIC BUSINESS SUBJECTS.** (3 cr)
Recent trends and developments in teaching general business, economic geography, marketing, business law, and consumer education.
- 5-103 (133). **CONSUMER EDUCATION IN SCHOOLS.** (3 cr)
Objectives, content, and curriculum organization at elementary and secondary levels.

- 5-104 (139). **OFFICE COORDINATION TECHNIQUES.** (3 cr, §DE 5-105)
Problems in the cooperative program; guidance and selection; placing students in office; job adjustments; developing and evaluation of the training program.
- 5-105 (156). **TRENDS IN BUSINESS EDUCATION.** (3 cr)
Historical development of business education; trends in philosophy, curriculum, and teaching procedures.
- 5-106 (157). **ORGANIZATION AND SUPERVISION OF BUSINESS EDUCATION.** (3 cr; prereq #)
Examination of evaluative criteria for business education departments, teacher selection, and supervision, and organization of business education in the United States.
- 5-107 (158). **MATERIALS AND METHODS IN OFFICE AND STENOGRAPHIC PROCEDURES.** (3 cr)
Recent research and developments in teaching office practice, clerical practice, and office machines.
- 5-108 (161). **CURRICULUM CONSTRUCTION IN BUSINESS EDUCATION.** (3 cr; prereq SeEd 5-113)
Curriculum problems; organization and preparation of teaching units.
- 5-110. **BUSINESS EDUCATION PROGRAMS BEYOND HIGH SCHOOL.** (3 cr)
Determining objectives and curricula for junior/community college, vocational-technical school, adult education, and collegiate business programs.

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-100 (235). **RESEARCH IN BUSINESS EDUCATION**
- 8-300 (237). **SEMINAR: RESEARCH IN BUSINESS, DISTRIBUTIVE, AND ECONOMIC EDUCATION**
- 8-600 (240). **INTERNSHIP: BUSINESS EDUCATION**
- 8-900* (239). **PROBLEMS: BUSINESS EDUCATION**

CHILD PSYCHOLOGY (CPsy)

- 1-970 (39H). **INDEPENDENT STUDY.** (Cr ar; prereq #)
Independent reading, tutorial or research.
- 3-301 (80). **CHILD PSYCHOLOGY.** (3 cr; prereq Psy 1-002)
Introduction to the science of child behavior; emphasis on a critical review of theories and research.
- 3-301 (80H). **HONORS COURSE: CHILD PSYCHOLOGY.** (3 cr; prereq Psy 1-002 and #)
Students attend the lectures in CPsy 3-301 and meet with the lecturer in a seminar each week.
- 3-360. **HONORS COURSE: JUNIOR SEMINAR.** (3 cr, §5-323; prereq 3-301 and #)
- 3-361. **HONORS COURSE: SENIOR SEMINAR.** (3 cr, §5-321; prereq 3-301 and #)
- 5-303 (81). **ADOLESCENT PSYCHOLOGY.** (3 cr; prereq Psy 1-002).
Physical, cognitive, and social development during adolescence.
- 5-311 (140). **BEHAVIOR PROBLEMS.** (3 cr; prereq 3-301 or equiv)
Types, origin, development, and treatment of behavior difficulties in normal children.
- 5-313 (142). **PSYCHOLOGY OF HANDICAPPED CHILDREN.** (3 cr; prereq 3-301 or equiv)
Research related to sensory, speech, language, and physical disabilities of children.
- 5-315 (143). **PROBLEMS OF MENTAL DEFICIENCY.** (3 cr; prereq 3-301 or equiv)
Diagnosis, care, training; social and vocational problems.
- 5-317 (144). **PSYCHOLOGY OF THE GIFTED CHILD.** (3 cr; prereq 3-301)
Psychology and development of high intellectual ability and of special talents.
- 5-319 (179). **CLINICAL PROCEDURES WITH CHILDREN.** (3 cr; prereq 12 cr in psychology, educational psychology, sociology, or child psychology)
Survey of methods of clinical psychology; basic concepts and research problems in clinical work with children. Primarily for students not majoring in clinical psychology.

Description of Courses

- 5-321 (125). EXPERIMENTAL RESEARCH WITH CHILDREN.** (3 cr; prereq 3-301, §)
Supervised research experience; design and conduct of experiments on child behavior in controlled laboratory situations.
- 5-323 (126). CASE STUDY OF CHILDREN.** (3 cr; prereq 3-301, §)
Supervised intensive study of intellectual, personality, and social development and functioning of individual normal children.
- 5-325 (127). SOCIAL BEHAVIOR OF CHILDREN.** (3 cr; prereq 3-301, §)
Behavior of children in groups; supervised observation and experience.
- 5-331 (100). PROCESSES OF SOCIALIZATION OF CHILDREN.** (3 cr; prereq 3-301 or grad)
Processes of social learning; identification, imitation, reward, and punishment, internalization, and object choice.
- 5-333 (180). PERSONALITY DEVELOPMENT.** (3 cr; prereq 5-331)
Psycho-analytic and behavior theory formulations and related research literature.
- 5-335 (181). PEER RELATIONS.** (3 cr; prereq 5-331)
Peer influences; social interactions and social relations; developmental changes.
- 5-337 (188). CHILDREN IN SOCIETY.** (3 cr; prereq 5-331 and §)
Historical, socio-economic, cross-cultural influences, and social changes in child development.
- 5-339 (189). PARENT-CHILD RELATIONS.** (3 cr; prereq 5-331)
Discussion of parent-child relationships and evaluation of relevant research literature.
- 5-341 (184). SENSORY AND MOTOR DEVELOPMENT.** (3 cr; prereq 3-301)
Development of sensory and perceptual processes; simple and complex motor skills.
- 5-343 (186). COGNITIVE DEVELOPMENT.** (3 cr; prereq 3-301)
Development of cognitive processes; theories of intelligence and intellectual functioning; related research literature.
- 5-345 (183). LANGUAGE DEVELOPMENT.** (3 cr; prereq 3-301)
Development of structure and function of language; methodological problems; speech and language development; language scales; theories of language development.
- 5-970 (190). DIRECTED READINGS IN CHILD PSYCHOLOGY.** (Cr ar; prereq §)
Independent reading.
- 5-990 (190). RESEARCH IN CHILD PSYCHOLOGY.** (Cr ar; prereq §)
Independent research.

Note: For child psychology courses at the graduate level consult the *Graduate School Bulletin*.

DISTRIBUTIVE EDUCATION (DE)

- 1-100 (45). INTRODUCTION TO BUSINESS AND DISTRIBUTIVE EDUCATION.** (3 cr)
Survey of the field at the secondary, junior college, and adult levels.
- 3-100 (51). DISTRIBUTIVE OCCUPATIONAL EXPERIENCE.** (3-9 cr; prereq jr, sr, distributive education majors only, §)
Observation and practice combined with weekly seminars on application to the teaching and guidance of high school and post-high school students.
- 3-301/3-302/3-303 (90A, B, C). METHODS: DISTRIBUTIVE EDUCATION.** (2 cr each; prereq §)
- 3-601 (72). STUDENT TEACHING IN DISTRIBUTIVE EDUCATION.** (3-12 cr; total 12; prereq SeEd 3-155 or §)
Required of all students majoring in distributive education.
- 5-100 (136). ORGANIZATION AND ADMINISTRATION OF DISTRIBUTIVE EDUCATION.** (3 cr)
Principles, practices, and legislation followed in developing cooperative part-time and adult programs under federal vocational acts; basic course for teacher-coordinators and vocational administrators.
- 5-105 (139). COORDINATION TECHNIQUES.** (3 cr)
Problems of coordinators in the cooperative part-time program; guidance and selection; placing students in work stations, assisting job adjustments, developing the training program.

- 5-110 (141). COOPERATIVE VOCATIONAL EDUCATION PROGRAMS.** (3 cr)
Planning, organizing, curriculum building, plant and equipment, promoting, and evaluating cooperative part-time distributive, office, miscellaneous trades, and diversified occupations programs.
- 5-115 (148). POST-SECONDARY BUSINESS AND DISTRIBUTIVE EDUCATION.** (3 cr)
Determining needs, curriculum, facilities, admission practices, placement, and follow-up of students, teacher qualifications, interorganizational relations in junior college and area technical school programs.
- 5-120 (142). BUSINESS AND DISTRIBUTIVE PROGRAMS FOR ADULTS.** (3 cr)
Selection and training of evening school instructors; planning and promoting evening school distributive education classes.
- 5-125 (146). ISSUES AND TRENDS IN DISTRIBUTIVE EDUCATION.** (3 cr; prereq sr or grad and §)
Identification, analysis, and discussion of recent issues and trends; review and synthesis of research.
- 5-300 (137A). MATERIALS AND METHODS IN COOPERATIVE VOCATIONAL EDUCATION.** (3 cr)
For cooperative part-time distributive, office, miscellaneous trades, and diversified occupations classes.
- 5-305 (147). TEACHING MERCHANDISE DISPLAY.** (3 cr; prereq §)
Materials and methods; practice in using equipment.
- 5-310 (159). MATERIALS LABORATORY: DISTRIBUTIVE EDUCATION.** (3 cr; prereq 3-303 or 5-300 or §)
Development of specific related vocational materials for distributive occupations, cooperative part-time classes.
- 5-315 (160). MATERIALS LABORATORY: OCCUPATIONAL ADJUSTMENT.** (3 cr; prereq 3-303, 5-300 or §)
Development of general related vocational materials for all types of cooperative part-time classes.
- 5-320 (161). TEACHING DATA PROCESSING IN DISTRIBUTIVE EDUCATION.** (3 cr; prereq 3-303 or 5-300 or §)
Implementation and application of electronic data processing principles, concepts, techniques, and materials for high school and post-high school distributive education programs.
- 5-330 (138). TEACHING SUPERVISORY TRAINING.** (3 cr)
Conducting short unit courses for store and office supervisors and improving on-the-job training in cooperative part-time programs.
- 5-340. DISTRIBUTIVE EDUCATION YOUTH ORGANIZATIONS.** (3-4 cr; prereq DE major)
Organization, administration, and operation of local, state, and national distributive education youth groups. Lab assignment included for students registering for 4 credits.

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-300 (237). SEMINAR: RESEARCH IN BUSINESS, DISTRIBUTIVE, AND ECONOMIC EDUCATION**
- 8-600 (239). INTERNSHIP: DISTRIBUTIVE EDUCATION**
- 8-900° (238). PROBLEMS: DISTRIBUTIVE EDUCATION**

EDUCATION (Educ)

- 5-104 (EdCI 104). ADULT EDUCATION.** (3 cr)
Agencies, programs, philosophies, history and trends. Each student will devote some time to a field of special interest.
- 5-184 (EdCI 184). SUPERVISION OF STUDENT TEACHING.** (3 cr; prereq 15 cr in education or §)
For persons planning to supervise or administer student teaching and other professional laboratory experiences in elementary and secondary education.

Description of Courses

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-228* (EdCI 228). **PROBLEMS: HIGHER EDUCATION AND TEACHER EDUCATION**
- 8-250 (EdCI 250). **HIGHER EDUCATION IN THE UNITED STATES**
- 8-251 (EdCI 251). **CURRICULUM TRENDS IN AMERICAN COLLEGES**
- 8-252 (EdCI 252). **EFFECTIVE COLLEGE TEACHING**
- 8-253 (EdCI 253). **SEMINAR: IMPROVEMENT OF COLLEGE INSTRUCTION**
- 8-254 (EdCI 254). **DIRECTED EXPERIENCE IN COLLEGE INSTRUCTION**
- 8-260 (EdCI 253A). **SEMINAR: MATERIALS AND METHODS IN MARRIAGE EDUCATION**
- 8-284* (EdCI 284). **PROBLEMS: TEACHER EDUCATION**
- 8-285, 8-286 (EdCI 285-286). **PROFESSIONAL EDUCATION OF TEACHERS**

EDUCATIONAL ADMINISTRATION (EdAd)

- 5-101 (101). **PUBLIC SCHOOL ADMINISTRATION.** (3 cr; not open to majors in educational administration; prereq 9 cr in education; sr)
Organization, administration, and general support of public schools in state and local school districts.
- 5-103 (103). **SUPERVISION AND ADMINISTRATION OF SPECIAL EDUCATION.** (3 cr; prereq #)
Procedures in establishing and improving educational programs for exceptional children.
- 5-128 (128). **WORKSHOP: EDUCATIONAL ADMINISTRATION.** (1-6 cr; prereq practicing educational administration or #)
Laboratory approach provides opportunities for experienced administrators to concentrate their study on common administrative and supervisory problems.
- 5-139 (139). **LABORATORY IN DECISION-MAKING.** (1-4 cr per qtr)
Contribution of recent research and theory to effective administration; analysis of administrative behavior in realistic settings and relations of administration to human behavior.
- 5-167 (167). **JUNIOR HIGH SCHOOL.** (3 cr; prereq 9 cr in education)
Sources of the movement; purposes, functions, and limitations; fundamental problems, types, and curricular implications of reorganization.
- 5-180, 5-181 (180-181). **SEMINAR: ADMINISTRATION OF SPECIAL EDUCATION.** (3 cr, §SpEd 8-560 and 8-561)
Problems of administration and organization of special education programs.

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-201 (201). **FOUNDATIONS OF EDUCATIONAL ADMINISTRATION**
- 8-202 (202). **FOUNDATIONS OF EDUCATIONAL ADMINISTRATION**
- 8-203 (203). **THE COMMUNITY SCHOOL**
- 8-210 (210). **PUBLIC SCHOOL FINANCE**
- 8-211 (211). **SCHOOL BUSINESS MANAGEMENT**
- 8-215 (215). **THE ELEMENTARY SCHOOL PRINCIPALSHIP**
- 8-216 (216). **RECENT RESEARCH IN ELEMENTARY SCHOOL ADMINISTRATION**
- 8-217 (217). **SEMINAR: ELEMENTARY SCHOOL ADMINISTRATION**
- 8-218 (218). **SEMINAR: THE SOCIAL ORGANIZATION OF SCHOOLS**
- 8-220/8-221† (220-221). **ANALYSIS OF ADMINISTRATIVE PROBLEMS**
- 8-222 (222). **ADMINISTRATIVE INFORMATION SYSTEMS**
- 8-224 (224). **LEGAL ASPECTS OF PUBLIC SCHOOL ADMINISTRATION**
- 8-226 (226). **SCHOOL PLANT PLANNING**

- 8-227 (227). PUBLIC SCHOOL PERSONNEL PROGRAMS
- 8-230 (230). SCHOOL COMMUNITY RELATIONS
- 8-231 (231). PRACTICUM IN SCHOOL-COMMUNITY RELATIONS
- 8-233 (233). PRACTICUM IN JUNIOR HIGH SCHOOL ADMINISTRATION
- 8-235 (235). SEMINAR: HUMANISM IN SCHOOL ADMINISTRATION
- 8-237 (237). SEMINAR: EDUCATIONAL LAW
- 8-238 (238). SEMINAR: THEORY AND RESEARCH
- 8-240 (240). SEMINAR: CLINICAL EXPERIENCES IN EDUCATIONAL ADMINISTRATION
- 8-241 (241). SEMINAR: INTERNSHIP IN EDUCATIONAL ADMINISTRATION
- 8-242 (242). ADMINISTRATIVE ORGANIZATION AND STAFFING OF SCHOOL SYSTEMS
- 8-244, 8-245, 8-426† (244-245-246). SEMINAR: ADMINISTERING PUBLIC EDUCATION IN METROPOLITAN AREAS
- 8-253 (253). ADMINISTRATION IN HIGHER EDUCATION
- 8-264 (264). THE SECONDARY SCHOOL PRINCIPALSHIP
- 8-265 (265). ADMINISTERING THE HIGH SCHOOL PROGRAM
- 8-270° (270A). PROBLEMS: ELEMENTARY SCHOOL ADMINISTRATION
- 8-271° (270B). PROBLEMS: SECONDARY SCHOOL ADMINISTRATION
- 8-272° (228). PROBLEMS: EDUCATIONAL ADMINISTRATION
- 8-273 (236). FIELD STUDY
- 8-274 (274). THE JUNIOR COLLEGE
- 8-275 (275). JUNIOR COLLEGE ADMINISTRATION
- 8-290 (290). FINANCING HIGHER EDUCATION
- 8-291 (291). PUBLIC RELATIONS FOR COLLEGES AND UNIVERSITIES

EDUCATIONAL PSYCHOLOGY

Counseling and Student Personnel Psychology (CSPP)

- 5-100 (EPsy 100). INDIVIDUAL APPRAISAL FOR COUNSELING. (3 cr; prereq 9 cr in education)
Analysis of techniques; use in guidance and counseling.
- 5-101 (EdCi 124). FOUNDATIONS OF CAREER DEVELOPMENT. (3 cr)
Vocational theory and career development research; occupational analysis and industrial structure; 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.
- 5-110 (EPsy 134). COUNSELING PROCEDURES. (3 cr)
For persons whose professional work includes counseling and interviewing; not for certification as school counselor. Emphasis on counseling relationship and principles of interviewing; utilizes case studies, role playing, and demonstration.
- 5-130 (EPsy 133). INTRODUCTION TO GUIDANCE. (3 cr; prereq 9 cr in education)
Philosophy, principles, and practices in development and operation of pupil personnel services; role of counselor, teacher, principal, and specialized personnel; guidance techniques and case studies.
- 5-131 (EdCi 135). GROUP PROCEDURES IN GUIDANCE. (3 cr; prereq 9 cr in education, 5-130, or #)
Content and material for home room groups, occupation units, and other guidance courses in junior and senior high school.
- 5-330 (EdCi 125). OCCUPATIONAL INFORMATION LABORATORY. (3 cr; prereq #)
Using, reviewing, and evaluation of occupational information; sources and types of material, occupational filing plans, and practical techniques at the secondary school level.

Description of Courses

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-140 (EPsy 250). COLLEGE STUDENT PERSONNEL WORK — FOUNDATIONS AND SCOPE
- 8-150 (EPsy 239). PSYCHOLOGICAL ASPECTS OF COUNSELING SUPERVISION
- 8-301 (EPsy 228). WORKSHOP: COUNSELING PSYCHOLOGY
- 8-310° (EPsy 225). COUNSELING THEORY AND PROCEDURE I
- 8-311° (EPsy 226). COUNSELING THEORY AND PROCEDURES II
- 8-320 (EPsy 236). GROUP COUNSELING: PRINCIPLES AND PROCEDURES
- 8-341 (EPsy 255). DIAGNOSIS AND TREATMENT OF COLLEGE LEARNING DIFFICULTIES
- 8-510 (EPsy 234). SEMINAR: COUNSELING THEORY AND RESEARCH
- 8-520 (EPsy 238). SEMINAR: RESEARCH IN GROUP COUNSELING
- 8-530° (EPsy 200). SEMINAR: GUIDANCE
- 8-540 (EPsy 252). SEMINAR: THE COLLEGE STUDENT
- 8-541 (EPsy 251A). COLLEGE STUDENT PERSONNEL WORK — HOUSING
- 8-542 (EPsy 251B). COLLEGE STUDENT PERSONNEL WORK — STUDENT ACTIVITIES
- 8-543 (EPsy 251C). COLLEGE STUDENT PERSONNEL WORK — DISCIPLINE AND ADMINISTRATION
- 8-610 (EPsy 282). COUNSELING PRACTICUM: INTRODUCTORY
- 8-611 (EPsy 283). COUNSELING PRACTICUM: INTERMEDIATE
- 8-612 (EPsy 284). COUNSELING PRACTICUM: ADVANCED
- 8-620 (EPsy 237). PRACTICUM IN GROUP COUNSELING
- 8-640 (EPsy 281). PRACTICE IN PERSONNEL WORK
- 8-641 (EPsy 256). CLINICAL PRACTICE IN DIAGNOSIS AND TREATMENT OF COLLEGE LEARNING DIFFICULTIES
- 8-701 (EPsy 285). INTERNSHIP: COUNSELING AND STUDENT PERSONNEL PSYCHOLOGY
- 8-900° (EPsy 233). PROBLEMS: GUIDANCE AND PERSONNEL WORK

Psychological Foundations (PsyF)

- 3-102 (EPsy 60). INTRODUCTION TO MEASUREMENT AND STATISTICS. (2-3 cr; prereq 6 cr in psychology)
Measures of central tendency, variability, and correlation; principles of test construction.
- 3-670 (EPsy 50). HUMAN RELATIONS AND GROUP DYNAMICS. (3 cr)
Based on small-group training theory and methods, the course is designed to help the student develop an understanding of his own behavior, the behavior of other individuals, and group and organizational behavior.
- 5-100 (EPsy 175). INDIVIDUAL DIFFERENCES AND EDUCATIONAL PRACTICE. (4 cr; prereq 5-121 or #)
Student characteristics (age, sex, personality, ethnicity, cognitive styles) as they relate to differences in performance. Methods and models for utilizing student characteristics to improve learning and development.
- 5-110 (EPsy 116). INTRODUCTORY STATISTICAL METHODS. (3 cr)
Basic statistical techniques; comprehension of literature using elementary concepts and methods. (Not equivalent to PsyF 8-110, 8-310)
- 5-120 (EPsy 110). EDUCATIONAL MEASUREMENT IN THE CLASSROOM. (3 cr)
Principles and methods for construction, evaluation, and improvement of test materials and procedures for use in classroom instruction.

- 5-121 (EPsy 117). **BASIC PRINCIPLES OF MEASUREMENT.** (3 cr; prereq 5-110 or 8-110 or Psy 3-801 or equiv)
Principles underlying construction of achievement examinations; developments in educational and psychological measurement; theory and practice related to statistical methods; types and uses of derived scores; factors influencing reliability and validity.
- 5-122 (EPsy 140). **INSTRUMENTS AND TECHNIQUES OF MEASUREMENT.** (3 cr; prereq 5-120 or 5-121)
Measuring intelligence, achievement, interests, attitudes, and personality traits; use in educational guidance, personnel work, administration, and supervision.
- 5-140 (EPsy 192). **INTRODUCTION TO LEARNING AND COGNITION.** (5 cr)
History, models, and theories, research methods of educational psychology; conditioning, learning and cognition; collection and analysis of data in the laboratory setting.
- 5-141 (EPsy 193). **PSYCHOLOGICAL ANALYSIS OF INSTRUCTION.** (3 cr)
Use of psychological concepts and principles in analysis of instructional problems and development of teaching strategies; consideration of behavior modification; behavioral objectives; task analysis.
- 5-142 (EPsy 194). **EXPERIMENTAL ANALYSIS OF INSTRUCTION I.** (3 cr; prereq 5-140 or #)
Laboratory study of instruction; methodological foundations; applications to programmed instruction and behavior modification.
- 5-143 (EPsy 195). **EXPERIMENTAL ANALYSIS OF INSTRUCTION II.** (3 cr; prereq 5-140 or Psy 5-017 or #)
Laboratory study of instruction; theoretical foundations; applications to programmed instruction and behavior modification.
- 5-144 (EPsy 196). **BEHAVIOR THEORY AND KNOWLEDGE ACQUISITION I.** (3 cr; prereq 5-140 or #)
Psychology of verbal learning and verbal behavior; theory and methodology.
- 5-145 (EPsy 197). **BEHAVIOR THEORY AND KNOWLEDGE ACQUISITION II.** (3 cr; prereq 5-144 or #)
Approaches to the study of complex human behavior; psychological bases for the acquisition of curriculum content.
- 5-146 (EPsy 198). **BEHAVIOR THEORY AND SOCIAL LEARNING.** (3 cr; prereq 5-140 or #)
Application of behavior theories to the development of social behavior patterns; modeling; social reinforcement; acquisition of attitudes and their role in school learning.
- 5-150 (EPsy 170). **PSYCHOLOGY OF THE INTELLECT I: COGNITION AND PEDAGOGY.** (3 cr; prereq 5-140 or #)
Overview and introduction to intellectual structure and functioning and implications for pedagogy.
- 5-151 (EPsy 171). **PSYCHOLOGY OF INTELLECT II.** (3 cr; prereq 5-150 or #)
Psychological and logical models of curricula; research methods; characteristics of children's physical, biological, mathematical, logical, and social concepts.
- 5-160 (EPsy 159). **PERSONALITY DEVELOPMENT AND MENTAL HYGIENE.** (3 cr)
Fall: For seniors and first-year graduate students only; elementary and secondary classroom conditions. Spring: For graduate students only; basic theory, groups and individual procedures in treatment.
- 5-170 (EPsy 125). **SOCIAL PSYCHOLOGY OF EDUCATION.** (3 cr)
Concepts and theories in areas of socialization, group dynamics, social perception, conflict resolution, organizational behavior, and social change. Laboratory sessions to make applications and develop skills in group behavior.
- 5-171 (EPsy 126). **ANALYSIS OF BEHAVIOR IN GROUPS.** (3 cr; prereq 5-170)
Laboratory experimentation; individual projects with class help.
- 5-310 (EPsy 118A). **INTRODUCTORY STATISTICAL METHODS (Laboratory).** (2 cr; prereq #5-110)
For students who wish more experience in solution of problems and use of machines than is obtained in 5-110.
- 5-330 (EPsy 141). **COMPUTER PROGRAMMING.** (3 cr; prereq sr)
Computer as a tool for research in the behavioral sciences; computer systems, language and the development of specific programs that demonstrate computer characteristics; laboratory experience.
- 5-331 (EPsy 142). **AUTOMATED INFORMATION RETRIEVAL IN EDUCATION.** (3 cr)
Theoretical bases of information systems, prerequisites for the structure of retrievable information; comparisons of existing information systems; laboratory experience.

Description of Courses

- 5-620 (EPsy 112). **PRACTICUM: STUDENT EVALUATION FOR SECONDARY TEACHERS**
(3 cr; prereq access to computer or ‡)
Philosophical and technical issues in evaluating student performance; applications of high speed data processing techniques in classroom measurement and evaluation; practical experience with computer systems.
- 5-640 (EPsy 199). **RESEARCH PRACTICUM IN PROGRAMMED INSTRUCTION AND BEHAVIOR MODIFICATION.** (1-3 cr; max 12 cr; prereq 5-142 or 5-143 or ‡)
Supervised experimentation with practical emphasis.

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-110, 8-111, 8-112 (EPsy 216-217-218). **STATISTICAL METHODS**
- 8-113 (EPsy 219). **DESIGN AND ANALYSIS OF EXPERIMENTS**
- 8-114 (EPsy 223). **CORRELATION AND REGRESSION METHODS**
- 8-115 (EPsy 222). **MULTIVARIATE CORRELATIONAL METHODS**
- 8-116 (EPsy 242). **COMPUTER APPLICATION TO STATISTICAL ANALYSES**
- 8-120° (EPsy 208). **METHODS IN EDUCATIONAL RESEARCH**
- 8-160 (EPsy 259). **PERSONALITY THEORY IN MENTAL HYGIENE**
- 8-170 (EPsy 279). **PSYCHOLOGY OF CONFLICT RESOLUTION**
- 8-310, 8-311, 8-312 (EPsy 216A, 217A, 218A). **STATISTICAL METHODS LABORATORY**
- 8-313 (EPsy 219A). **DESIGN AND ANALYSIS OF EXPERIMENTS — LABORATORY**
- 8-500 (EPsy 260). **SEMINAR: EDUCATIONAL PSYCHOLOGY**
- 8-501 (EPsy 292). **RECENT LITERATURE IN EDUCATIONAL PSYCHOLOGY**
- 8-502 (EPsy 293). **SEMINAR: CLASSIC LITERATURE IN EDUCATIONAL PSYCHOLOGY**
- 8-520 (EPsy 209). **SEMINAR: RESEARCH PLANNING**
- 8-521° (EPsy 254). **MEASUREMENT AND EVALUATION IN HIGHER EDUCATION**
- 8-522, 8-523 (EPsy 220-221). **ADVANCED THEORY OF MEASUREMENT**
- 8-524 (EPsy 224). **MEASUREMENT AND EVALUATION OF COGNITIVE DEVELOPMENT**
- 8-530 (EPsy 241). **SEMINAR: DEVELOPING COMPUTER APPLICATIONS**
- 8-540 (EPsy 271). **PSYCHOLOGICAL ANALYSIS OF VERBAL LEARNING AND READING**
- 8-541 (EPsy 297). **SEMINAR: PSYCHOLOGY OF KNOWLEDGE ACQUISITION**
- 8-542° (EPsy 298). **PSYCHOLOGICAL THEORIES OF TEACHING**
- 8-551 (EPsy 269). **SEMINAR: COGNITIVE PROCESSES OF THE CHILD AND EDUCATIONAL IMPLICATIONS.**
- 8-552. **SEMINAR: COGNITIVE PROCESSES OF THE ADOLESCENT AND EDUCATIONAL IMPLICATIONS.**
- 8-620 (EPsy 207). **RESEARCH PRACTICUM**
- 8-621 (EPsy 201). **PRACTICUM: INSTRUMENTS AND PROCEDURES FOR EVALUATION**
- 8-670 (EPsy 280). **PRACTICUM IN GROUP LEADERSHIP**
- 8-900° (EPsy 253). **RESEARCH PROBLEMS**
- 8-910° (EPsy 243). **PROBLEMS: STATISTICS FOR STUDENTS IN EDUCATION AND PSYCHOLOGY**
- 8-920° (EPsy 240). **PROBLEMS: MEASUREMENT**
- 8-921/8-922/8-923 (EPsy 245A, B, C). **PROBLEMS: CURRICULUM EVALUATION**

School Psychology Training Program (SchP)

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-100 (EPsy 152). **INTRODUCTION TO SCHOOL PSYCHOLOGICAL SERVICES**
- 8-310 (EPsy 210). **INDIVIDUAL MENTAL TESTING**

- 8-311 (EPsy 211). ADVANCED INDIVIDUAL MENTAL TESTING
- 8-312 (EPsy 212). PERSONALITY APPRAISAL IN CHILDREN AND ADOLESCENTS
- 8-510 (EPsy 248). SEMINAR: SCHOOL PSYCHOLOGY
- 8-513 (EPsy 213). THEORIES AND METHODS OF INTERVENTION: INDIVIDUALS
- 8-514 (EPsy 214). THEORIES AND METHODS OF INTERVENTION: GROUPS
- 8-520 (EPsy 249ABC). SEMINAR: RESEARCH IN SCHOOL PSYCHOLOGY
- 8-600 (EPsy 257). CLINICAL PRACTICE IN SCHOOL PSYCHOLOGY
- 8-610 (EPsy 287). PRACTICUM: SCHOOL PSYCHOLOGICAL SERVICES
- 8-700 (EPsy 299). INTERNSHIP: SCHOOL PSYCHOLOGICAL SERVICES
- 8-900* (EPsy 253). RESEARCH PROBLEMS

Special Education (SpEd)

- 3-600 (EdT 50). JUNIOR PRACTICUM IN SPECIAL EDUCATION. (3 cr; prereq #)
Supervised observation and participation in classroom and related school activities for exceptional children; a pre-student teaching exploratory experience.
- 3-601, 3-602 (EdT 53A-B). TEACHING HANDICAPPED CHILDREN. (6 cr per qtr; 3 cr in summer; prereq #)
Observing work with special classes; teaching under direction. Conducted in cooperation with the public schools of the Twin Cities.
- 5-100 (EPsy 177). CHILDHOOD LANGUAGE DEVELOPMENT: CLASSROOM IMPLICATIONS. (3 cr)
Recent trends and findings in the study of language acquisition; classroom implications for the education of exceptional children.
- 5-101 (EPsy 182). EDUCATION OF EXCEPTIONAL CHILDREN. (3 cr)
Introduction to field of special education for classroom teachers and other school personnel.
- 5-110 (EPsy 160). DIAGNOSIS AND REMEDIATION OF LEARNING DISABILITY I. (3 cr; prereq 5-310 and ¶5-610, Elem 5-334, and #)
Survey, demonstration, and evaluation of special techniques for diagnosis and remediation of severe learning deficits appearing in reading and written language (including dyslexia), and basic quantitative concepts.
- 5-111 (EPsy 161). DIAGNOSIS AND REMEDIATION OF LEARNING DISABILITY II. (3 cr; prereq 5-110, ¶5-611 and #)
Survey, demonstration, and evaluation of special techniques for amelioration of deficits in perceptive, integrative, and expressive processes.
- 5-112 (EPsy 165). EDUCATION OF LEARNING DISABLED CHILDREN. (3 cr)
Analysis of considerations in design and conduct of services for learning disabled children; approaches to education of such children.
- 5-120 (EPsy 184). INTRODUCTION TO EDUCATION OF THE MENTALLY RETARDED. (3 cr; prereq 5-101)
Issues which relate to educational practices; community planning; educational philosophy, administration and organization, and programming.
- 5-121 (EdCI 179). EDUCATION OF MENTALLY RETARDED CHILDREN IN THE ELEMENTARY SCHOOL. (3 cr; prereq 5-120)
Curriculum content, materials, and methods of instruction for educable mentally retarded children; preparation of units and development of teaching aids.
- 5-122 (EdCI 180). EDUCATION OF THE MENTALLY RETARDED IN THE SECONDARY SCHOOLS. (3 cr; prereq 5-120)
Curriculum, materials, and methods of instruction for the educable mentally retarded students; philosophy, administration, vocational, and personal guidance, parent consultation, and work programs. Field programs when possible.
- 5-130 (EPsy 187). EDUCATION OF CRIPPLED CHILDREN. (3 cr; prereq 5-101 or #)
Characteristics and abilities; methods and materials for training; observation of teaching situations involving these groups; personal consultation scheduled in addition to class hours.
- 5-131 (EPsy 190). EDUCATIONAL PROBLEMS OF THE NEUROLOGICALLY IMPAIRED. (3 cr; prereq 5-101 or #)

Description of Courses

Problems in development, learning, and adjustment produced by neurological impairment; study and development of materials to meet educational needs; observations of teaching and personal conferences.

- 5-140 (EdCI 128). INTRODUCTION TO THE EDUCATION OF HEARING IMPAIRED-CHILDREN.** (3 cr; prereq §)
Educational programs, services, and resources; historical background; philosophy; sociological and psychological problems.
- 5-141 (EdCI 127). METHODS OF TEACHING SCHOOL SUBJECTS TO THE HEARING-IMPAIRED.** (3 cr; prereq SSPA 5-708 and §)
Adaptation of materials and teaching methods for hearing-impaired children in reading, mathematics, social studies, and science.
- 5-142 (EPsy 185). EDUCATION OF THE AUDITORIALLY HANDICAPPED CHILD.** (3 cr)
Group and individual observation of classes for auditorially handicapped children; individual and small group conferences.
- 5-143 (EdCI 127A). METHODS OF DEVELOPING LANGUAGE FOR THE HEARING-IMPAIRED.** (3 cr; prereq 5-100, SSPA 5-708 or §)
Review of current methodological practices; practical application of linguistic theory to teaching language.
- 5-150 (EPsy 186). EDUCATION OF EMOTIONALLY DISTURBED AND SOCIALLY MAL-ADJUSTED CHILDREN.** (3 cr; prereq grad or §)
Discussion and evaluation of curricula, materials, and methods for instruction of disturbed and delinquent children in hospital and training school and public school settings.
- 5-170 (EdCI 115). INTRODUCTION TO EDUCATION OF VISUALLY HANDICAPPED CHILDREN.** (3 cr; prereq §)
Educational programs, services, and resources for blind and partially seeing children; historical background; philosophy; sociological and psychological problems.
- 5-171 (EdCI 116). BRAILLE I.** (3 cr; prereq 5-170 or §)
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.
- 5-172 (EdCI 117). BRAILLE II.** (3 cr; prereq 5-171)
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.
- 5-173 (EdCI 118). METHODS OF TEACHING VISUALLY HANDICAPPED CHILDREN.** (3 cr; prereq 5-170 or §)
Principles of preparation, selection, and effective use of instructional materials; adaptation of school environment; utilization of family, school, and community resources.
- 5-174 (EdCI 126). ORIENTATION AND MOBILITY FOR BLIND CHILDREN.** (3 cr; prereq §)
Provides basic techniques to help blind children gain skill in orientation and mobility; lectures and demonstrations; practice in basic techniques; conferences on psychological and physical factors in mobility; discussions of cane, dog guide, and related methods of travel.
- 5-175 (EdCI 178). STRUCTURE AND FUNCTION OF THE EYE — EDUCATIONAL IMPLICATIONS.** (3 cr; prereq §)
An ophthalmologist discusses the anatomy and physiology of the eye; an educator presents the educational implications. Consideration of visual screening, visual efficiency, aids; field trips, films, observations.
- 5-180 (EPsy 188). EDUCATION OF THE DISADVANTAGED.** (3 cr; prereq 12 cr in psychology, educational psychology, or sociology)
Educational needs of children handicapped by behavior related to deficiencies of physical and/or cultural environment; adaptations of educational programs.
- 5-181 (EdCI 152). EDUCATION OF DISADVANTAGED INFANTS AND PRESCHOOL CHILDREN.** (3 cr; prereq 12 cr in education or §)
Research implications, teaching strategies, and curricula for the prevention and/or amelioration of socio-cognitive deficits in infants and preschool children, particularly those whose mothers are mentally retarded.
- 5-190 (EPsy 183). OUTSTANDING ABILITIES AND THE EDUCATIONAL PROCESS.** (3 cr)
Critical analysis of the origin and development of the terms such as giftedness, creativity, genius, talent, and intelligence; implications for educational practice; current issues and trends.
- 5-301 (EPsy 163). CONTINGENCY MANAGEMENT IN SPECIAL EDUCATION SYSTEMS.** (3 cr)
Designing special instructional systems based on an experimental analysis of academic and social behavior.

- 5-302 (EPsy 128). **WORKSHOP: SPECIAL EDUCATION.** (1-6 cr; prereq #)
Laboratory approach provides opportunities for school personnel to study specific problems related to special education.
- 5-320 (EdCI 100A). **WORKSHOP: EDUCATION OF TRAINABLE RETARDED CHILDREN.**
(6 cr; prereq #)
Curriculum and materials for teaching trainable mentally retarded children.
- 5-321 (EdCI 100B). **WORKSHOP: EDUCATION OF EDUCABLE RETARDED STUDENTS.**
(6 cr; prereq #)
Curriculum and materials for teaching educable mentally retarded students.
- 5-340 (EPsy 162). **CLINICAL AND EDUCATIONAL PROCEDURES FOR PRESCHOOL AND PRIMARY HEARING-IMPAIRED CHILDREN.** (6 cr; prereq tchr of hearing impaired or #)
Overview of education of the deaf; practical application to guided clinical experience with hearing-impaired children from ages 1 to 6; for professionals working with the hearing impaired.
- 5-601. **PRACTICUM: SPECIAL EDUCATION.** (Cr ar; prereq #)
Supervised experience in teaching or related work in schools or other agencies serving exceptional children.
- 5-610 (EPsy 160A). **PRACTICUM: DIAGNOSIS AND REMEDIATION OF LEARNING DISABILITY I.** (3 cr; prereq ¶5-110 and #)
Clinical practice in prescriptive teaching using a selected range of techniques presented in SpEd 5-110.
- 5-611 (EPsy 161A). **PRACTICUM: DIAGNOSIS AND REMEDIATION OF LEARNING DISABILITY II.** (3 cr; prereq 5-610, ¶5-111 and #)
Clinical practice in prescriptive teaching using a selected range of techniques presented in SpEd 5-111.

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-120 (EPsy 261). **PSYCHOLOGICAL THEORY AND RESEARCH IN MENTAL RETARDATION.**
- 8-121 (EPsy 262). **FUNCTIONAL ANALYSIS OF BEHAVIOR IN MENTAL RETARDATES**
- 8-122 (EPsy 263). **DESIGN AND INTERPRETATION OF BEHAVIORAL RESEARCH WITH MENTALLY RETARDED**
- 8-150 (EPsy 286). **ADVANCED COURSE: EDUCATION OF EMOTIONALLY DISTURBED AND SOCIALLY MALADJUSTED CHILDREN**
- 8-151 (EPsy 265). **THEORIES OF EDUCATING DISTURBED CHILDREN**
- 8-152 (EPsy 266). **RESEARCH IN EDUCATION OF DISTURBED CHILDREN**
- 8-153 (EPsy 267). **RESEARCH DESIGNS IN EDUCATION OF DISTURBED CHILDREN**
- 8-500 (EPsy 289). **SURVEY OF SPECIAL EDUCATION PROBLEMS**
- 8-501 (EPsy 244). **RESEARCH IN SPECIAL EDUCATION**
- 8-502. **SEMINAR: SPECIAL EDUCATION**
- 8-520 (EPsy 264A). **EDUCATIONAL AND SOCIO-CULTURAL THEORY AND RESEARCH IN MENTAL RETARDATION**
- 8-540 (EPsy 277). **LANGUAGE ACQUISITION AND LEARNING THEORY**
- 8-560, 8-561† (EPsy 180-181). **SEMINAR: ADMINISTRATION OF SPECIAL EDUCATION**
- 8-580 (EPsy 268). **SEMINAR: THE DISADVANTAGED**
- 8-601 (EPsy 288). **ADVANCED PRACTICUM**
- 8-602. **RESEARCH PRACTICUM**
- 8-900* (EPsy 253). **PROBLEMS**

ELEMENTARY EDUCATION (Elem)

- 3-100 (Ed 75A). **PSYCHOLOGICAL FOUNDATIONS OF ELEMENTARY EDUCATION.** (5 cr; prereq Psy 1-002)
Educational psychology, learning, retention, transfer, intelligence, measurement, behavioral

Description of Courses

- management, and modification applied to elementary education; lecture, laboratory section, school or community agency participation.
- 3-101 (Ed 75B). INTRODUCTION TO ELEMENTARY SCHOOL TEACHING.** (3 cr; prereq 3-100, ¶3-600, and §)
Curriculum and organizational patterns; unit instruction; reporting, promotion and non-promotion classroom management; control and support of public education.
- 3-300 (EdCI 63). CHILDREN'S LITERATURE.** (3 cr)
Materials for children's reading in the elementary school program.
- 3-316 (EdCI 64). TEACHING ENGLISH IN THE ELEMENTARY SCHOOL.** (3 cr; prereq 3-100 and Engl 3-601)
Development of language power in elementary school in relation to all activities of the school day.
- 3-331 (EdCI 60). TEACHING READING IN ELEMENTARY SCHOOL.** (3 cr; prereq 3-100)
Emphasis on intermediate and upper elementary grades; reading readiness, word recognition techniques, development of basic study skills, word meanings, comprehension abilities, and interests and taste in reading.
- 3-346 (EdCI 65). TEACHING SCIENCE IN THE ELEMENTARY SCHOOL.** (3 cr; prereq 3-100; 10 cr in natural science)
Objectives, content, materials, philosophy, and methods of instruction and evaluation; practical applications.
- 3-361 (EdCI 61). TEACHING SOCIAL STUDIES IN THE ELEMENTARY SCHOOL.** (3 cr; prereq 3-100)
Content and philosophy of the social studies program; methods of instruction and problems.
- 3-376 (EdCI 56). NURSERY SCHOOL-KINDERGARTEN CURRICULUM I.** (3 cr; prereq 3-100)
Objectives of the kindergarten; use of literature; appropriate creative activities in the areas of art, dramatics, music, planning of learning activities.
- 3-377 (EdCI 57). NURSERY SCHOOL-KINDERGARTEN CURRICULUM II.** (3 cr; prereq 3-376)
Additional expansion and clarification of the methods and materials in the areas of mathematics, reading, science, and social studies.
- 3-378 (EdCI 59). SOCIAL LEARNING IN EARLY CHILDHOOD EDUCATION.** (3 cr; prereq CPsy 3-301)
Directed observations of nursery school children and procedures.
- 3-391 (EdCI 62). TEACHING MATHEMATICS IN THE ELEMENTARY SCHOOL.** (3 cr; prereq 3-100 and Math 1-005, 1-006)
Principles of learning pertinent to the modern program of mathematics in primary and elementary grades; objectives, content, philosophy, instructional materials, and methods of instruction and evaluation.
- 3-600, 3-601 (EdT 54A-B). STUDENT TEACHING IN THE ELEMENTARY SCHOOL.** (6 cr per qtr; prereq Δ)
Five half days a week in classroom participation and teaching under supervisor.
- 3-602 (EdCI 55). TEACHING IN INNER CITY SCHOOL.** (3 cr; prereq ¶ elem student tchg and §)
Lectures, observation, and participation directed toward understanding the child, his family, and the community in a low socio-economic area.
- 3-603 (EdT 78). STUDENT TEACHING IN THE KINDERGARTEN.** (6 cr; prereq 3-600 and 3-376)
Five half days each week in supervised classroom participation in public or private schools.
- 3-604 (EdT 77). STUDENT TEACHING IN THE NURSERY SCHOOL.** (6 cr [summer 3 cr]; prereq approval of major adviser and director student tchg)
Twelve hours each week in supervised classroom participation.
- 5-100 (EdCI 119). ELEMENTARY SCHOOL CURRICULUM.** (3 cr; prereq 3-101)
Selection and organization of subject matter for courses; methods, problems, and findings of research by subjects.
- 5-101 (EdCI 170). PROGRAMS AND PROCEDURES OF CURRICULUM DEVELOPMENT.** (3 cr; prereq 5-100 or SeEd 5-113)
Leadership in procedures; operational processes; major considerations in planning and organizing; interpersonal relationships, and evaluation of improvement programs.
- 5-102 (EdCI 173). PREPARATION OF CURRICULUM MATERIALS.** (3 cr; prereq 5-100 or SeEd 5-113)

Selecting and organizing units, courses of study, curriculum guides, and writing materials, individually and in groups.

- 5-103 (EdCI 171). **WORKSHOP: CURRICULUM LABORATORY PRACTICE.** (0-3 cr; prereq 5-100 or SeEd 5-113, #)
Analysis and construction of units, courses of study and curricula according to needs, interests, level, and specialization.
- 5-104 (EdCI 110). **PRACTICUM: LABORATORY SCHOOL TEACHING (K-6).** (Cr ar; prereq elem student tchg or elem school tchg exper, #)
Experience in teaching and/or research.
- 5-105 (EdCI 181). **FOUNDATIONS OF ELEMENTARY SCHOOL METHODS.** (3 cr; prereq 9 cr in education)
Psychology and philosophy related to improvement of elementary school instruction; utilization of research findings.
- 5-106 (EdCI 123). **SPEECH IN THE ELEMENTARY SCHOOL.** (3 cr; prereq sr)
Lectures, discussion, individual projects, role of the elementary teacher in promotion of good speech; prevention of speech problems, handling of speech defects. Projects related to the teacher's own teaching situation.
- 5-107 (EdCI 151). **DIAGNOSIS AND TREATMENT OF LEARNING DIFFICULTIES.** (3 cr)
Evaluation of the results of teaching; diagnosis of pupil difficulty; development and prevention; tests as aids to teaching; following up a testing program.
- 5-108 (EdCI 150). **SUPERVISION AND IMPROVEMENT OF INSTRUCTION.** (3 cr; prereq 9 cr in education)
Functions and duties of a supervisor; techniques; analysis of classroom activities.
- 5-300 (EdCI 121). **LITERATURE FOR THE ELEMENTARY SCHOOL.** (3 cr)
Evaluative survey of books for children; research related to children's reading interests; selection of literature.
- 5-316 (EdCI 153). **TEACHING AND SUPERVISION OF ENGLISH IN THE ELEMENTARY SCHOOLS.** (3 cr; prereq 3-316 or elem school tchg exper)
Improvement of instruction, study of trends in English education.
- 5-317 (EdCI 153A). **MATERIALS LABORATORY FOR TEACHING ENGLISH IN ELEMENTARY SCHOOLS.** (3 cr; prereq 3-316 or elem tchg exper)
Examination and evaluation of textbooks, programmed materials, and audio-visual resources for elementary school language arts instruction.
- 5-331 (EdCI 143A). **TEACHING AND SUPERVISION OF READING IN THE ELEMENTARY SCHOOL.** (3 cr; prereq 9 cr in education)
Objectives, materials, and teaching procedures; current practices and curricula; class and individual projects; observation of reading techniques and material in the demonstration school.
- 5-332 (EdCI 143B). **MATERIALS AND INSTRUCTIONAL TECHNIQUES OF ELEMENTARY READING.** (3 cr; prereq 3-331 or 5-331 or #)
Analysis and evaluation of materials; consideration of programmed, basal, linguistic, and other types of materials; laboratory projects and demonstrations of techniques of instruction; criteria for selection of materials and techniques for students with special needs.
- 5-333 (EdCI 143C). **INSTRUCTIONAL LEADERSHIP IN ELEMENTARY READING.** (3 cr; prereq 5-331 or #)
Survey of formal and informal procedures for evaluating reading instruction; demonstration teaching as instructional leadership; grouping procedures in improvement of reading programs. Intended for supervisors and principals.
- 5-334 (EdCI 145). **READING DIFFICULTIES.** (3 cr; prereq 5-331 or SeEd 5-344)
Causes, prevention, and correction; remedial practices useful to the classroom teacher, school counselor, and reading specialist.
- 5-335 (EPsy 148). **CLINICAL DIAGNOSIS OF READING DIFFICULTIES.** (3 cr; prereq 5-334)
Relationship to psychological factors and clinical remedial correction.
- 5-336 (EPsy 150). **CLINICAL PRACTICE IN REMEDIAL TEACHING.** (3 cr; prereq 5-334 or 5-107 and #)
Remedial tutoring of individual children who have difficulty in school learning.
- 5-346 (EdCI 103A). **TEACHING SCIENCE IN THE ELEMENTARY SCHOOL.** (3 cr; prereq elem tchg exper or #)
Materials, resources, and methods of teaching science at the elementary level.

Description of Courses

- 5-347 (EdCI 120A). WORKSHOP: CURRICULUM IMPLEMENTATION IN ELEMENTARY SCHOOL SCIENCE.** (3-6 cr; prereq elem tchg exper)
Offered in summers with focus on a single program for each offering: treating concept foundations, goals, and teaching and evaluation procedures.
- 5-348 (EdCI 120B). WORKSHOP: OUTDOOR SCIENCE EDUCATION.** (3 cr; prereq elem tchg exper)
Classroom and fieldwork activities dealing with models, materials, and methods in the outdoor setting; consideration of broad topics such as ecological relationships, cyclic processes, and change as well as more specific topics such as rocks and minerals, plants and animals, stargazing.
- 5-349 (EdCI 103B). ELEMENTARY SCHOOL SCIENCE: CURRICULUM AND SUPERVISION.** (3 cr; prereq 3-346 or 5-346)
Program foundations including elements from philosophy, psychology, the science disciplines; design of in-school curriculum improvement models; program evaluation; pupil reporting procedures.
- 5-350 (EdCI 120C). ELEMENTARY SCHOOL SCIENCE: MATERIALS AND RESOURCES.** (3 cr; prereq 5-349)
Experiences in the use of educational materials and media common to the teaching of modern elementary school science.
- 5-361 (EdCI 102). TEACHING SOCIAL STUDIES IN THE ELEMENTARY SCHOOL.** (3 cr; prereq 3-101 or equiv)
Content and organization of social studies program; programs of understanding, improving the learning situation, and effective use of materials.
- 5-362 (EdCI 155A). MATERIALS LABORATORY FOR ELEMENTARY SOCIAL STUDIES TEACHERS.** (3 cr; prereq 3-361 or 5-361 or §)
Printed, audio-visual, and other materials; investigation and evaluation of teaching materials and devices.
- 5-376 (EdCI 166). CURRENT TRENDS IN KINDERGARTEN EDUCATION.** (3 cr; prereq tchg exper in kindergarten or primary or §)
Continuing needs of children in our changing culture; current practices and recent research.

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-300. SPECIAL COLLECTIONS OF CHILDREN'S LITERATURE**
- 8-316 (EdCI 257). RESEARCH IN ENGLISH COMPOSITION IN ELEMENTARY SCHOOLS**
- 8-317 (EdCI 258). RESEARCH IN SKILL DEVELOPMENT IN SPELLING, HANDWRITING, AND LISTENING**
- 8-331 (EdCI 243A). RESEARCH FOUNDATIONS FOR READING INSTRUCTION**
- 8-332 (EdCI 243B). RECENT RESEARCH IN READING**
- 8-333 (EdCI 243C). SEMINAR: READING INSTRUCTION**
- 8-346* (EdCI 213). RESEARCH FOUNDATIONS OF ELEMENTARY SCHOOL SCIENCE TEACHING**
- 8-347 (EdCI 214). THE ELEMENTARY SCHOOL SCIENCE PROGRAM: ARTICULATION AND COORDINATION**
- 8-361 (EdCI 206). CURRICULUM CONSTRUCTION IN ELEMENTARY SOCIAL STUDIES**
- 8-362 (EdCI 208). RESEARCH IN ELEMENTARY SOCIAL STUDIES**
- 8-363 (EdCI 209). SEMINAR: ELEMENTARY SOCIAL STUDIES EDUCATION**
- 8-364 (EdCI 211). SEMINAR: ELEMENTARY SCHOOL SOCIAL STUDIES AND THE SOCIAL SCIENCES**
- 8-391 (EdCI 226). SEMINAR: ELEMENTARY SCHOOL PROBLEMS**
- 8-392 (EdCI 240). WORKSHOP: IMPROVEMENT OF INSTRUCTION**
- 8-916* (EdCI 296). PROBLEMS: TEACHING ENGLISH**
- 8-931* (EdCI 273). PROBLEMS: READING**
- 8-961* (EdCI 201). PROBLEMS: TEACHING SOCIAL STUDIES**
- 8-991* (EdCI 261). PROBLEMS: IMPROVEMENT OF INSTRUCTION**
- 8-992 (EdCI 264). RESEARCH IN EDUCATIONAL DIAGNOSIS**

HISTORY AND PHILOSOPHY OF EDUCATION (HEd)

- 3-090 (90). **THE SCHOOL AND SOCIETY.** (3 cr; prereq sr)
Readings in social science and philosophy give the student opportunity to integrate points of view in thinking about the role of the school in present-day society.
- 3-099. **DIRECTED STUDY.** (1-6 cr; prereq #)
Independent readings with guidance of the history of education faculty.
- 5-077. **CHANGING IDEOLOGIES OF EDUCATION IN INDIA.** (3 cr; prereq #)
Education in India in relation to various ideologies of education from the classical period to the present day.
- 5-078. **SCHOOL AND SOCIETY IN INDIA.** (3 cr; prereq #)
Analysis of educational institutions and processes in relation to the social structure of India.
- 5-079. **EDUCATIONAL DEVELOPMENT OF INDIA.** (3 cr; prereq #)
Educational planning and related problems in Indian education.
- 5-101 (101). **HISTORICAL FOUNDATIONS OF MODERN EDUCATION.** (3 cr)
Analysis and interpretation of important elements in modern education derived from the Greeks, Romans, the Middle Ages, and the Renaissance. Background course for all other courses in the history and philosophy of education.
- 5-110 (110). **INTERCULTURAL EDUCATION: SOCIAL SCIENCE AND SYSTEMS PERSPECTIVES.** (3 cr)
Application of social science and systems analyses to educational theories, ideologies, and operating contexts; preparation of students for later ethnically-focussed courses on the educational problems of minority populations in the United States.
- 5-112 (112). **INTERCULTURAL EDUCATION: SPANISH-AMERICAN POPULATIONS.** (3 cr)
Application of anthropological analysis to educational theories, ideologies, and operating contexts; emphasis on Spanish-speaking populations of the United States.
- 5-113 (113). **INTERCULTURAL EDUCATION: AFRO-AMERICAN POPULATIONS.** (3 cr)
Application of social science analysis to educational theories, ideologies, and operating contexts; emphasis on Afro-American populations in the United States.
- 5-121 (121). **ANALYSIS IN EDUCATIONAL PHILOSOPHY.** (3 cr)
Application of philosophical analysis to educational theories and philosophies.
- 5-125 (125). **ADOLESCENCE IN CHANGING SOCIAL INSTITUTIONS.** (3 cr)
Special status and conditions of adolescents in industrial societies; participation of youth in the socializing institutions: family, education, economic, religious and political; problems related to adolescent development; emphasis on school peer relations.
- 5-131 (131). **COMPARATIVE EDUCATION.** (3 cr)
European, Asiatic, and American systems and philosophies of education; possibilities of international education.
- 5-132 (132). **EDUCATION IN THE THIRD WORLD.** (3 cr)
Introduction to comparative and international education focusing on the role of education in ameliorating the social, economic, and political problems of nations in Asia, Africa, and Latin America.
- 5-141 (141). **CRITICAL ISSUES IN CONTEMPORARY EDUCATION.** (3 cr)
Introduces graduate students to ideas involved in current theory and practice.
- 5-149, 5-150, 5-151 (149-150-151). **SOCIAL HISTORY OF AMERICAN EDUCATION.** (3 cr per qtr, total 9)
Impact of education on social and institutional developments from colonial period to the present. Although schools, both private and public, will receive attention, education will be defined to include the work of the family, the religious congregation, the popular press, clubs, and other private associations.
- 5-155 (155). **HISTORY OF WESTERN EDUCATIONAL THOUGHT.** (3 cr)
Examination of the major educational classics of western civilization; Plato, Cicero, Locke, Rousseau, Dewey, and others.
- 5-156 (156). **HISTORY OF IDEAS IN AMERICAN EDUCATION.** (3 cr)
Readings in American political, economic, and social development; reference to the emerging system of public education. Recommended as background for 5-170 but not a prerequisite.
- 5-170 (170). **AMERICAN PRAGMATISM AND EDUCATION.** (3 cr)
Analysis and interpretation of the educational philosophy of pragmatism (experimentalism); readings from Dewey, Kilpatrick, Bode, Counts, Childs, and others.

Description of Courses

- 5-171 (171). **ANTHROPOLOGY AND EDUCATION.** (3 cr, §Anth 5-371)
Cross-cultural perspectives in examining educational patterns, the implicit and explicit cultural assumptions underlying them; methods and approaches to cross-cultural studies in education.
- 5-182 (182). **COMPARATIVE PHILOSOPHIES OF EDUCATION.** (3 cr)
Examination of competing philosophies of education.
- 5-190 (190). **SOCIOLOGY OF EDUCATION.** (3 cr, §Soc 5-953)
Advanced studies in the social aspects of education including the school as a socialization process, the social structure of education, the role of the school in social change.
- 5-191 **PROFESSIONALIZATION AND TEACHING.** (3 cr)
Process, social history, and ideology; role of teacher organizations; forms of militancy; comparison with professionalism in other occupations.
- 5-200, 5-201, 5-202 (114, 115, 116). **INTERCULTURAL EDUCATION — AMERICAN INDIANS.** (3 cr each; prereq 5-200 for 5-201 . . . 5-201 for 5-202)
Application of Indian historical material, contemporary research findings, and planned programs of educational change to the development of an integrated approach to college and public school curriculum redesign in Indian history and culture; preparation for consultative work with in-service teachers in the development of testing materials.
- 5-205 (117). **INTERCULTURAL EDUCATION: WORKSHOP IN URBAN SOCIAL SIMULATIONS.** (3 cr)
Analyses of operation of the city as a social system; use of simulation gaming techniques to study urban institutions and processes with emphasis on formal education.
- 5-210 (152). **APPLIED SOCIAL SCIENCE AND EDUCATION.** (3 cr)
Application of social sciences in their academic and applied dimensions to formal education, including the social-scientific and systems orientation toward communities.
- 5-211 (153). **SOCIAL PLANNING AND EDUCATION.** (3 cr)
Interdisciplinary analysis of the problems of specialization and generalization of human understanding; examination of the anticipated impacts of social and technologic trends upon education (such as computer controlled educational systems, political, economic, social and moral structural changes), stressing the interaction of cybernetics, technology, social sciences, business, and humanities and arts with formal education.

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-221, 8-222, 8-223 (221A-B-C). **SEMINAR: 20th-CENTURY EUROPE**
- 8-231 (231). **SEMINAR: COMPARATIVE AND INTERNATIONAL EDUCATION**
- 8-232. **SEMINAR IN COMPARATIVE EDUCATION: EDUCATION AND NATIONAL DEVELOPMENT.**
- 8-241* (241). **PROBLEMS: HISTORY AND PHILOSOPHY OF EDUCATION**
- 8-242 (242). **SEMINAR: EDUCATIONAL PHILOSOPHY**
- 8-290 (290). **ADVANCED SOCIOLOGY OF EDUCATION**
- 8-296, 8-297, 8-298† (296-297-298). **SEMINAR: AMERICAN SOCIAL AND EDUCATIONAL HISTORY**

HOME ECONOMICS EDUCATION (HEEd)

- 1-500 (49). **INTRODUCTION TO HOME ECONOMICS EDUCATION.** (2 cr; prereq Psy 1-002, soph)
Nature of the home economics teachers' work; means for developing necessary competences.
- 3-300 (60). **CURRICULUM IN HOME ECONOMICS EDUCATION.** (3 cr; prereq 1-500, Soc 1-001, SeEd 3-150 and 3-155 or either of these with concurrent registration in the other)
Selection and organization of content of curriculum at secondary level.
- 3-305 (61). **METHODS OF TEACHING HOME ECONOMICS.** (3 cr; prereq 3-300, ¶3-310)
Teaching procedures; materials of instruction.

Home Economics Education

- 3-310 (62). **EVALUATION IN HOME ECONOMICS.** (3 cr; prereq 3-300, ¶3-305)
Process of evaluation applied to appraisal of learning in home economics.
- 3-315 (64). **ADULT EDUCATION IN HOME ECONOMICS.** (3 cr; prereq 3-300)
Objectives; problems affecting community and family life; methods of helping adults and out-of-school youth in solving problems in home living.
- 3-320 (65). **COLLOQUIUM IN HOME ECONOMICS EDUCATION.** (2 cr; prereq 3-600)
Significant issues.
- 3-325 (90A). **PRACTICUM IN CHILD DEVELOPMENT.** (1 cr; prereq 3-320 or ¶3-320 and Δ)
Observation and experience with children as a method of teaching child development in home economics program.
- 3-600 (63). **SUPERVISED TEACHING IN HOME ECONOMICS.** (9 cr; prereq 3-305, 3-310 and Δ)
Observation, participation, and teaching under supervision.
- 3-605 (95). **FIELD EXPERIENCE FOR HOME AGENTS.** (6 cr; prereq 1-500 and consent of director of Agricultural Extension)
Observation, participation, and experience under supervision in the agricultural extension program on the St. Paul campus and in a selected county program.
- 5-300 (160A). **HOME ECONOMICS CURRICULUM.** (3 cr; prereq 3-600, §)
Examination of research and literature; development of units of study and programs at elementary and secondary level; production and evaluation of materials.
- 5-305 (160B). **HOME ECONOMICS CURRICULUM: COLLEGE LEVEL.** (3 cr; prereq §)
Examination of research and literature; course and program development in higher education; analysis of current college programs; production and evaluation of curriculum materials.
- 5-310 (161). **METHOD IN TEACHING HOME ECONOMICS: THEORY AND TECHNOLOGY.** (3 cr; prereq 3-305, 3-600, or §)
Derivation of theory for educational method from relevant research; application to the educational objectives; analysis of technology related to teaching method.
- 5-315 (162). **EVALUATION: THEORETICAL AND TECHNICAL ASPECTS.** (3 cr; prereq 3-310 and §)
Collecting and interpreting evidence related to achievement of objectives, emphasizing higher levels of cognition and affective behaviors.
- 5-320 (164). **ADULT EDUCATION IN HOME ECONOMICS.** (3 cr; prereq 3-315 or §)
Planning a community program; teaching procedures; special problems. Planned for teachers and supervisors of adult education.
- 5-325 (166). **TRENDS IN HOME ECONOMICS EDUCATION.** (3 cr; prereq 5-300 or 5-305)
Current status; purposes, programs, content emphasis, research, problems and issues in the field.
- 5-330 (195). **SPACE, EQUIPMENT, FURNISHINGS, AND MATERIALS FOR HOME ECONOMICS DEPARTMENTS.** (3 cr; prereq 3-305, 3-600, HE 1-401)
Remodeling old and planning new departments, and equipping and furnishing them; review of research; investigation of problems.
- 5-335 (196). **HOME EXPERIENCES AND THE EXTENDED PROGRAM.** (3 cr)
Place and procedures in directing home experiences in the high school program; effective use of the period of extended employment of homemaking teachers in the vocational program.
- 5-400 (196A). **WORKSHOP: HOME PLANNING AND FURNISHING.** (4 cr; prereq grad)
Problems at high school and adult levels; use of new materials and techniques; group and individual projects to meet the needs and interests of experienced teachers.
- 5-405 (196B). **WORKSHOP: CHILD DEVELOPMENT AND HUMAN RELATIONS.** (4 cr; prereq grad)
Recent emphasis on growth and guidance of individuals; materials and techniques for high school and adult levels to attain better understanding.
- 5-410 (196C). **WORKSHOP: FOODS AND NUTRITION.** (4 cr; prereq grad)
Problems in teaching at high school and adult levels; use of new materials and techniques; group and individual projects for experienced teachers.
- 5-415 (196D). **WORKSHOP: MATERIALS FOR INSTRUCTION.** (1-4 cr; prereq grad or teacher in service)
Problems in selection and use of new materials for instruction in home economics.

Description of Courses

- 5-420 (196E). **WORKSHOP: ADULT EDUCATION.** (4 cr; prereq grad)
Procedures in teaching adults; planning the program; use of new materials and techniques; group and individual problems for experienced teachers.
- 5-425 (196F). **WORKSHOP: HOME EXPERIENCE AND EXTENDED EMPLOYMENT.** (4 cr; prereq grad)
Methods of using the extended period of employment effectively; techniques for selection, execution, and evaluation of home experiences; group or individual problems for experienced teachers.
- 5-430 (196G). **WORKSHOP: CONTEMPORARY PROBLEMS IN HOME ECONOMICS EDUCATION.** (4 cr; prereq #)
Integration of FHA experiences into on-going home economics education programs; group and individual problems of experienced teachers.
- 5-500 (165). **PROSEMINAR: HOME ECONOMICS EDUCATION.** (2 cr; required of all new grad students)
Relation of the processes and standards of rational thought to professional competence and the goals of a graduate program of study.
- 5-600 (163). **PRACTICUM: ADULT EDUCATION.** (3 cr; prereq #)
Individual field assignments under supervision.
- 5-900 (190). **READINGS IN HOME ECONOMICS EDUCATION.** (1-3 cr; prereq #)
Independent study under tutorial guidance.

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-300 (200A). **RESEARCH METHODS**
- 8-305 (200B). **RESEARCH METHODS**
- 8-500 (260). **SEMINAR: CURRICULUM DEVELOPMENT**
- 8-505 (263). **SEMINAR: SUPERVISION OF STUDENT TEACHING**
- 8-510 (264). **SEMINAR: IMPROVEMENT OF INSTRUCTION IN ADULT EDUCATION**
- 8-515 (265). **SEMINAR: TEACHER EDUCATION**
- 8-520 (266). **SEMINAR: HISTORY AND PHILOSOPHY OF HOME ECONOMICS EDUCATION**
- 8-525 (265). **SEMINAR: ADMINISTRATION AND SUPERVISION OF HOME ECONOMICS PROGRAMS**
- 8-530° (295). **SEMINAR: HOME ECONOMICS EDUCATION**
- 8-900° (201). **PROBLEMS: HOME ECONOMICS EDUCATION**

INDUSTRIAL EDUCATION (Ind)

- 1-300 (6). **INTRODUCTION TO INDUSTRIAL ARTS TEACHING.** (5 cr; for freshmen and those contemplating the major)
Objectives, programs and experiences involving tools, materials, design and processes of industrial arts teaching.
- 1-490 (1). **ELEMENTARY HANDCRAFTS.** (3 cr)
For majors in elementary, art, special, and recreational education.
- 1-492 (12). **CRAFTWORK (A).** (3 cr)
Projects in mediums suitable for industrial arts, plastics, art metal, lapidary, and leatherwork.
- 1-500 (7). **DRAFTING (B).** (3 cr)
Sketching, lettering, use of instruments, orthographic projection, pictorial representation, and blue print reading.
- 1-502 (9). **BUILDING CONSTRUCTION DRAFTING (B).** (3 cr; prereq 1-500)
Principles of orthographic and pictorial representation applied to building construction.
- 1-504 (10). **ADVANCED DRAFTING (B).** (3 cr; prereq Δ)
- 1-506 (8). **DESIGN I (B).** (3 cr; prereq 1-500 or #)
Laboratory: creative design as a process of solving problems with tools and materials.

- 1-510 (2). **WOOD PROCESSING I (A).** (3 cr)
Use of common hand and machine tools, materials and finishing principles.
- 1-511 (3). **WOOD PROCESSING II (A).** (3 cr; prereq 1-510 or §)
Use and maintenance of power equipment; laboratory production experiences.
- 1-512 (4). **WOOD PROCESSING III (A).** (3 cr; prereq Δ)
Building construction practices; requirement may be satisfied by taking Dunwood Carpentry or MeAg 1-600.
- 1-520 (20). **ELECTRICITY AND ELECTRONICS (C).** (3 cr)
Introduction to electricity as an area of industrial arts; basic principles, fundamental skills, projects, processes, and teaching ideas particularized for junior high school.
- 1-522 (21). **COMMUNICATION ELECTRONICS (C).** (3 cr; prereq 1-520)
Continuation of 1-520 into basic principles of radio and audio equipment for industrial arts teaching; construction practice and principles of vacuum tubes and transistor circuitry.
- 1-524 (22). **INDUSTRIAL ELECTRONICS (C).** (3 cr; prereq 1-522)
Principles of television, oscillator circuits, computer circuits, telemetering and control and test equipment circuits; laboratory work.
- 1-526 (23). **APPLIED ELECTRONICS I (C).** (3 cr; prereq Δ)
- 1-528 (24). **APPLIED ELECTRONICS II (C).** (3 cr; prereq Δ)
- 1-530 (30). **SMALL GAS ENGINES (A).** (3 cr; prereq Δ)
Operating principles, maintenance and adjustment of 2 and 4 cycle gas engines; may be satisfied by Dunwoody Institute course of same title.
- 1-532 (31). **AUTOMOTIVE MECHANICS I (A).** (3 cr; prereq Δ)
- 1-534 (32). **AUTOMOTIVE MECHANICS II (A).** (3 cr; prereq Δ)
- 1-540 (15). **GRAPHIC ARTS I (A).** (3 cr)
Typesetting and presswork, photography, silk screen printing, and general duplicating.
- 1-542 (16). **GRAPHIC ARTS II (A).** (3 cr)
Letterpress, dry point etching, bookbinding, photography, and offset printing.
- 1-560 (25). **METAL PROCESSING I (D).** (3 cr; prereq Δ)
General metalwork.
- 1-562 (26). **METAL PROCESSING II (D).** (3 cr; prereq Δ)
Machine shop practices.
- 1-564 (27). **METAL PROCESSING III (D).** (3 cr; prereq Δ)
General metalwork, welding.
- 1-566 (28). **METAL PROCESSING IV (D).** (3 cr; prereq Δ)
General metalwork, sheet metal fabrication.
- 1-568 (29). **METAL PROCESSING V (D).** (3 cr; prereq Δ)
Advanced metalwork.
- 3-330 (35). **FUNDAMENTALS OF VOCATIONAL EDUCATION.** (3 cr)
Development and characteristics of vocational training; conservation of human and material resources; social and economic significance; current theories and practices; organization and control; types of programs, support; selection, training, and certification of teachers.
- 3-340 (40). **ANALYSIS AND COURSE ORGANIZATION.** (3 cr)
Need for and types of instructional analysis; objectives; course organization in selected fields.
- 3-344 (44). **EQUIPMENT AND MANAGEMENT.** (3 cr; prereq 1-300 or 3-340 or §)
Planning, evaluating, and management of industrial education shop and laboratory facilities.
- 3-360 (55). **TEACHING INDUSTRIAL ARTS.** (3 cr; prereq SeEd 3-150 or §3-150)
Laboratory in study and practice.
- 3-600 (70). **DRAFTING-TECHNICAL SPECIALTY I (B).** (3 cr; prereq Δ)
- 3-602 (71). **DRAFTING-TECHNICAL SPECIALTY II (B).** (3 cr; prereq Δ)
- 3-620 (78). **ELECTRONICS-TECHNICAL SPECIALTY I (C).** (3 cr; prereq Δ)
- 3-622 (79). **ELECTRONICS-TECHNICAL SPECIALTY II (C).** (3 cr; prereq Δ)
- 3-630 (74). **POWER MECHANICS-TECHNICAL SPECIALTY I (A).** (3 cr; prereq Δ)

Description of Courses

- 3-632 (75). **POWER MECHANICS-TECHNICAL SPECIALTY II (A).** (3 cr; prereq Δ)
- 3-640 (72). **GRAPHIC ARTS-TECHNICAL SPECIALTY I (B).** (3 cr; prereq Δ)
- 3-642 (73). **GRAPHIC ARTS-TECHNICAL SPECIALTY II (B).** (3 cr; prereq Δ)
- 3-660 (76). **METALS-TECHNICAL SPECIALTY I (D).** (3 cr; prereq Δ)
- 3-662 (77). **METALS-TECHNICAL SPECIALTY II (D).** (3 cr; prereq Δ)
- 3-700, 3-702, 3-704, 3-706 (60A-B-C-D). **STUDENT TEACHING.** (For 3-700, 3-702, 3-704: 3 cr ea, 9 cr required; prereq 1-300 and 3-360 or 1-300 and 5-360 and Δ . . . For 3-706: Elective course; 3 cr; prereq Δ)
- 3-701, 3-703, 3-705, 3-707 (60S). **STUDENT TEACHING SEMINAR.** (1-3 cr; prereq ¶3-700, 3-702, 3-704, 3-706)
- 3-750 (50). **INDUSTRIAL PRACTICES AND PROCESSES.** (3 cr; prereq 3-330)
An organized series of field trips to representative industrial plants preceded by classroom study and investigation.
- 3-900, 3-901, 3-902 (90, 91, 92). **INDEPENDENT STUDY.** (3 cr per qtr, prereq jr or #)
Self-directed study, preceded by classroom instruction in basic research procedures.
- 5-300 (150). **VOCATIONAL EDUCATION SURVEYS.** (3 cr; prereq 5-314 or 5-325 or equiv)
Practices and techniques in the study of communities or areas for the establishment or improvement of vocational courses and facilities.
- 5-301 (101). **TESTS IN INDUSTRIAL SUBJECTS.** (3 cr; prereq SeEd 3-155)
Application of principles of evaluation to shop and drawing subjects.
- 5-302 (102). **THE GENERAL SHOP.** (3 cr)
Lectures only; purpose of general shop organization; types of shops, equipment, instructional materials and procedures, pupil personnel plans.
- 5-303 (103). **INSTRUCTIONAL AIDS.** (3 cr; prereq 3-360 or 5-360 or equiv)
Planning, construction, use.
- 5-305 (155). **CRITICAL ISSUES IN INDUSTRIAL EDUCATION.** (3 cr)
Identification, analysis, and discussion of major current problems in the field.
- 5-306 (106). **INDUSTRIAL EDUCATION WORKSHOP.** (3 or 6 cr; prereq tchg exper and #)
Areas of concentration vary with each offering.
- 5-309 (109). **CONFERENCE LEADING FOR INDUSTRY.** (3 cr; prereq #)
Purposes, advantages, and limitations of method; techniques of procedure; experience in planning, leading, and evaluating conferences and in writing summaries.
- 5-310 (107). **COORDINATION.** (3 cr; prereq 3-330 or 5-325 or #)
Duties and responsibilities of coordinators in trade schools, part-time programs, and comprehensive high schools.
- 5-312 (115). **SUPERVISION OF INDUSTRIAL EDUCATION.** (3 cr; prereq 3-330 or 5-314)
Principles of creative supervision; duties, organization for supervision.
- 5-314 (105). **ADMINISTRATION OF INDUSTRIAL EDUCATION.** (3 cr; prereq 3-330 or #)
General and vocational phases; objectives, programs and practices; laws, rulings, and standards for aid; significant literature.
- 5-320 (110). **VOCATIONAL GUIDANCE.** (3 cr; prereq SeEd 3-155)
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.
- 5-325 (125). **PHILOSOPHY AND PRACTICE OF INDUSTRIAL EDUCATION.** (3 cr, §3-330)
History, objectives, development, and current practices of the field.
- 5-330 (135). **INDUSTRIAL COURSE CONSTRUCTION.** (3 cr, §3-340)
Principles and techniques; experience in planning, organizing and building a teaching guide.
- 5-360 (100). **INDUSTRIAL INSTRUCTION.** (3 cr; prereq 3-340, SeEd 3-155, and #)
Concepts and techniques of instruction in the industrial arts, trade, and industrial schools and classes, and training-within-industry programs.
- 5-400 (111). **INSTRUCTIONAL MATERIALS LABORATORY FOR NONMAJORS.** (3 cr; prereq tchg exper or #)
For students needing manipulative skills and craftwork activities in their teaching; individual and group projects.

- 5-401 (112). **WORKSHOP: OCCUPATIONAL EDUCATION PROGRAMS FOR HANDICAPPED.** (3 cr; prereq §)
An examination of exemplary programs in occupational education; workshop sessions involving directors of model programs and other personnel.
- 5-600 (136). **INSTRUCTIONAL MATERIALS LABORATORY.** (3-6-9 cr; prereq major, tchg exper or §)
Laboratory and shop experiences with new materials, processes, and equipment; development of complementary instructional materials.

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-300 (250). **LITERATURE OF INDUSTRIAL EDUCATION**
- 8-310 (251). **RESEARCH**
- 8-700 (205). **SEMINAR: INDUSTRIAL EDUCATION**
- 8-900, 8-901, 8-902* (200). **RESEARCH PROBLEMS**

MATHEMATICS EDUCATION (MthE)

- 5-101 (100). **WORKSHOP: ELEMENTARY SCHOOL MATHEMATICS.** (3 cr; prereq §; not open to mathematics education majors)
Modern trends, methods, and materials used to convey mathematical ideas.
- 5-301 (116). **INSTRUCTIONAL LEADERSHIP IN ELEMENTARY SCHOOL MATHEMATICS.** (3 cr; prereq §; not open to majors in mathematics education)
Current trends in methods, materials, content and evaluation; program development and research; intended for supervisors and principals.
- 5-311 (111). **TEACHING AND SUPERVISION OF MATHEMATICS IN THE ELEMENTARY SCHOOL.** (3 cr; prereq Elem 3-391 or §)
Present practices and trends in methods, evaluation, and diagnosis; objectives, psychology, and philosophy related to improvement of instruction.
- 5-312 (112). **TEACHING AND SUPERVISION OF MATHEMATICS IN THE SECONDARY SCHOOL.** (3 cr; prereq math tchg exper or §)
Methods, materials, and curriculum development; principles of learning; review of research; preparation and evaluation of tests, units, and materials of instruction.
- 5-321 (121). **MATERIALS LABORATORY FOR ELEMENTARY SCHOOL MATHEMATICS INSTRUCTION.** (3 cr; prereq 5-311 or Elem 3-391 or §)
Printed and programmed materials, audio-visual aids, community resources; laboratory projects and techniques of using mathematical devices and instruments.
- 5-322 (122). **MATERIALS LABORATORY FOR SECONDARY SCHOOL MATHEMATICS INSTRUCTION.** (3 cr; prereq 5-312 or §)
Sources and types of materials; laboratory projects and techniques of using mathematics devices and instruments, visual aids, and community resources.
- 5-331 (131). **CURRENT DEVELOPMENTS IN ELEMENTARY SCHOOL MATHEMATICS INSTRUCTION.** (3 cr; prereq 5-311 or §)
Contemporary literature, trends, and experimentation with content; criteria for program evaluation.
- 5-332 (132). **NEW CONTENT AND METHODS IN SECONDARY SCHOOL MATHEMATICS INSTRUCTION.** (3 cr; prereq 5-312 or §)
Trends and experimentation with content; special programs for the gifted and slow learner; methods in mathematics; program evaluation.
- 5-345 (145). **MATHEMATICS FOR GIFTED CHILDREN.** (3 cr; prereq 5-311 or Elem 3-391 or §)
Curriculum and methods of instruction for academically talented children; development of enrichment units; source material for teachers.
- 5-355 (155). **MATHEMATICS FOR SLOW LEARNING CHILDREN.** (3 cr; prereq 5-311 or Elem 3-391 or §)
Units of instruction emphasizing mathematical concepts essential for vocational competence; experimental materials and methods designed to improve performance of low achievers.

Description of Courses

- 5-366 (166). COMPUTER ASSISTED MATHEMATICS INSTRUCTION.** (3 cr; prereq 5-311 or 5-312 or SeEd 3-365 or #)
Role of the computer in a mathematics department: its contribution to learning concepts, problem solving, and computational skill; consideration of various types of equipment and languages, programming of problems, instructional materials.

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-500 (200). THEORY AND CLASSICAL RESEARCH IN MATHEMATICS EDUCATION**
8-570 (270). RESEARCH IN MATHEMATICS EDUCATION
8-590 (290). SEMINAR: MATHEMATICS EDUCATION
8-680 (286). INTERNSHIP: MATHEMATICS EDUCATION
8-980* (280). PROBLEMS: MATHEMATICS EDUCATION

MUSIC EDUCATION (MuEd)

- 1-504 (4). APPLIED INSTRUMENTAL TECHNIQUES: VIOLIN, VIOLA.** (2 cr; prereq music education major or #)
Theory and technical development of instruments, elementary instruction in performing, special attention to routine of class instruction.
- 1-505 (7). APPLIED INSTRUMENTAL TECHNIQUE: CELLO, STRING BASS.** (2 cr; prereq music education major or #)
Theory and technical development of instruments, elementary instruction in performing, special attention to routine class instruction.
- 1-514 (5). APPLIED INSTRUMENTAL TECHNIQUE: SINGLE REEDS.** (2 cr; prereq music education major or #)
Theory and technical development of instruments, elementary instruction in instrument playing, special attention to routine of class instruction.
- 1-515 (9). APPLIED INSTRUMENTAL TECHNIQUE: FLUTE.** (2 cr; prereq music education major or #)
Theory and technical development of instruments, elementary instruction in performing, special attention to routine class instruction.
- 1-516 (10). APPLIED INSTRUMENTAL TECHNIQUE: DOUBLE REEDS.** (2 cr; prereq music education major or #)
Theory and technical development of instruments, elementary instruction in performing, special attention to routine class instruction.
- 1-524 (6). APPLIED INSTRUMENTAL TECHNIQUE: TRUMPET, BARITONE.** (2 cr; prereq music education major or #)
Theory and technical development of instruments, elementary instruction in performing, special attention to routine class instruction.
- 1-525 (11). APPLIED INSTRUMENTAL TECHNIQUE: FRENCH HORN.** (2 cr; prereq music education major or #)
Theory and technical development of instruments, elementary instruction in performing, special attention to routine class instruction.
- 1-526 (12). APPLIED INSTRUMENTAL TECHNIQUE: TROMBONE, TUBA.** (2 cr; prereq music education major or #)
Theory and technical development of instruments, elementary instruction in performing, special attention to routine class instruction.
- 1-534 (8). APPLIED INSTRUMENTAL TECHNIQUE: PERCUSSION.** (2 cr; prereq music education major or #)
Theory and technical development of instruments, elementary instruction in performing, special attention to routine class instruction.
- 3-001 (55). MUSIC FOR RECREATIONAL LEADERSHIP.** (2 cr; prereq Mus 1-001)
Directing and working with students in musical performing groups, rhythmic activities, singing, musical instruments, and listening.
- 3-011 (56). TEACHING MUSIC IN THE ELEMENTARY SCHOOL.** (3 cr; prereq Mus 1-001 or exemp)
For nonmusic majors; methods and materials in teaching singing, rhythm, music reading, creativity, classroom instruments, fundamentals, appreciation in K-6.

- 3-301 (50A). TEACHING MUSIC IN PRIMARY GRADES.** (3 cr; prereq #)
Practical methods for teaching music in nursery school, kindergarten, and grades 1, 2, 3; the child's voice, rote singing, note reading; appreciation, classroom instruments, materials.
- 3-302 (50B). TEACHING MUSIC IN INTERMEDIATE AND JUNIOR HIGH GRADES.**
(3 cr; prereq 3-301 and #)
Music methods in grades 4-9; note reading, part singing, changing voices, voice testing, appreciation, classroom instruments, integration.
- 3-303 (53). TEACHING MUSIC IN THE SENIOR HIGH SCHOOL.** (3 cr; prereq Mus 1-506 or #)
Music in the general education of high school students, methods and materials for music courses in the modern high school.
- 3-304 (57). MUSIC READING METHODS AND MATERIALS.** (3 cr; not applicable toward BS degree)
Recent research in eye movements in reading and music reading; methods and materials for developing music reading skills.
- 3-415 (59). CHORAL CONDUCTING LABORATORY.** (2 cr; prereq Mus 1-505 and major or minor in music education)
Development of basic conducting skills and rehearsal techniques with emphasis on development of basic conducting gestures; methods and materials for choirs, glee clubs, and ensembles.
- 3-416 (59). CHORAL CONDUCTING LABORATORY.** (2 cr; prereq Mus 1-505 and major or minor in music education)
Development of basic conducting skills and rehearsal techniques with emphasis on interpretation of a choral composition; methods and materials for choirs, glee clubs, and ensembles.
- 3-417 (59). CHORAL CONDUCTING LABORATORY.** (2 cr; prereq Mus 1-505 and major or minor in music education)
Development of basic conducting skills and rehearsal techniques with emphasis on study of repertoire; methods and materials for choirs, glee clubs, and ensembles.
- 3-551 (68). TEACHING INSTRUMENTAL MUSIC.** (3 cr; prereq Mus 1-506)
Supervision and administration of instrumental music; rehearsal techniques for elementary and secondary band and orchestra; playing techniques of band and orchestra instruments, materials.
- 3-557 (65). INSTRUMENTATION.** (3 cr; prereq Mus 1-506)
Theoretical study of orchestral and band instruments, in combination; revision of materials suitable for school use; capacity and capability of school performance on the various instruments.
- 3-561 (69). INSTRUMENTAL CONDUCTING I.** (1 cr)
Introduction to baton technique and podium procedures.
- 3-562 (70). INSTRUMENTAL CONDUCTING II.** (1 cr; prereq 3-561)
Development of baton technique and podium procedures.
- 3-563 (71). INSTRUMENTAL CONDUCTING III.** (2 cr; prereq 3-562)
Adaptation of techniques and procedures to score preparation.
- 3-571 (85). LITERATURE FOR TEACHING WIND MUSIC.** (3 cr; not applicable toward BS degree)
Survey and analysis of solo, chamber, and large ensemble music literature for the elementary and secondary school teacher of wind instruments.
- 3-650 (61). STUDENT TEACHING AND SUPERVISION OF MUSIC.** (3-12 cr; prereq #)
Experience in carrying forward, under supervision, the music activities of elementary, junior, and senior high school teachers.
- 5-111 (113). BIBLIOGRAPHY.** (3 cr)
Sources, materials, and techniques.
- 5-112 (170). RECENT RESEARCH AND LITERATURE.** (3 cr; prereq sr, #)
Current research; evaluation of teaching materials; appraisal of techniques.
- 5-115 (172). TESTS AND MEASUREMENTS.** (3 cr; prereq #)
Principles of music aptitude and achievement testing; current status of music testing; survey of existing published tests in music.
- 5-118 (171). RESEARCH TECHNIQUES.** (3 cr; prereq 5-111)
Methods and techniques employed in investigating and reporting of music education problems.

Description of Courses

- 5-211 (101). PHILOSOPHIES OF MUSIC EDUCATION.** (3 cr)
Analysis and interpretation of philosophies in music and education; objectives, trends, curriculum, evaluation.
- 5-212 (147). COMPARATIVE MUSIC EDUCATION.** (3 cr; prereq #)
Study, performance, and analysis of music; unique methods of instruction, roles of creative and performing musicians in elementary and secondary school music teaching in selected countries.
- 5-214 (103). PSYCHOLOGICAL FOUNDATIONS.** (3 cr; prereq #)
Analysis and interpretation of psychologies of music and education as applied to the teaching of music.
- 5-217 (143). HISTORICAL FOUNDATIONS OF MUSIC EDUCATION.** (3 cr; prereq #)
Analysis and interpretation of important elements in modern music teaching derived from the past.
- 5-221 (106). MUSIC AND THE HUMANITIES IN THE SECONDARY SCHOOLS.** (3 cr; prereq Mus 1-506 and 1-603 or #)
Teaching music as part of the humanities emphasis in high schools; methods and music materials appropriate to the humanities.
- 5-231 (151). SUPERVISION AND ADMINISTRATION OF ELEMENTARY MUSIC.** (3 cr; prereq major or minor in music or music education)
Analysis and evaluation of instructional techniques; supervisory and administrative techniques; readings; new trends.
- 5-232 (152). SUPERVISION AND ADMINISTRATION OF JUNIOR HIGH MUSIC.** (3 cr; prereq major or minor in music or music education)
Evaluation of instructional techniques and materials for the required and elective courses; supervisory and administrative practices; readings; new trends.
- 5-233 (153). SUPERVISION AND ADMINISTRATION OF HIGH SCHOOL MUSIC.** (3 cr; prereq major or minor in music or music education)
Materials, scheduling and teaching of performance ensembles; courses in theory and literature; individual and class lessons; extracurricular activities.
- 5-305 (102). GENERAL MUSIC IN ELEMENTARY AND JUNIOR HIGH SCHOOLS.** (3 cr; prereq 3-011 or #)
Open to music education and nonmusic majors. Methods, materials, and problems in teaching general music classes; emphasis on music literature.
- 5-306 (112). TEACHING MUSIC LITERATURE.** (3 cr; prereq 3-011 or 3-302 or #)
Principles, methods, and materials for teaching music history (appreciation) in grades K-12.
- 5-311 (121). MUSIC FOR EXCEPTIONAL CHILDREN.** (3 cr; prereq 3-011 or #)
Trends; methods and materials for a functional program of singing, playing, rhythm, listening, and creative activities for mentally and physically handicapped and gifted pupils.
- 5-421 (124). SELECTION, CONDUCTING OF CHORAL MATERIALS.** (3 cr; prereq sr)
Student conducting with class as performing ensemble; criteria for selecting choral and combined choral and instrumental materials; rehearsal techniques.
- 5-422 (194). ADVANCED SELECTION, CONDUCTING OF CHORAL MATERIALS.** (3 cr; prereq 5-421)
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.
- 5-431 (104). ADVANCED TOPICS: VOCAL MUSIC.** (3 cr; prereq #)
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.
- 5-441 (114). READING AND STYLISTIC INTERPRETATION OF CHORAL MUSIC.** (3 cr; prereq 5-431 or #)
Defining means of teaching choristers to read and interpret music of representative periods and styles of compositions.
- 5-504 (115). ADVANCED STRING INSTRUMENT TECHNIQUES.** (3 cr; prereq BS in music education or #)
Research reports, lecture-demonstrations; performance by class members and by school-age laboratory groups.
- 5-514 (118). ADVANCED WIND AND PERCUSSION TECHNIQUES.** (3 cr; prereq BS in music education or #)
Research reports, practical performances and lectures.

- 5-581 (105). **SELECTION OF INSTRUMENTAL MATERIAL I.** (3 cr; prereq #)
Application of formal and stylistic characteristics represented in selected wind chamber music to the teaching of instrumental music on the pre-collegiate level.
- 5-582 (145). **SELECTION OF INSTRUMENTAL MATERIALS II.** (3 cr; prereq #)
Application of formal and stylistic characteristics represented in selected solo wind instrumental music to the teaching of instrumental music on the pre-collegiate level.
- 5-583 (125). **SELECTION OF INSTRUMENTAL MATERIALS III.** (3 cr; prereq sr, #)
Analytical survey of wind instrument literature from the 18th century to the present and a comparative analysis of transcriptions for modern band.
- 5-970 (100). **INDEPENDENT STUDY.** (1-3 cr; prereq # and Δ)
An independent study project organized by the student in consultation with the appropriate instructor.

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-281/8-282/8-283 (251-252-253). **SEMINAR: CURRICULUM DEVELOPMENT**
- 8-990° (224). **RESEARCH PROBLEMS**

SCHOOL OF PHYSICAL EDUCATION AND RECREATION

Physical Education (PE)

Activity courses are offered on successive levels in each of the following areas:

- Adapted activities
- Aquatics
- Conditioning
- Dance
- Dual sports and activities
- Individual sports and activities
- Team sports

The beginning courses, listed first in the numerical ordering, require no prerequisite. For courses at more advanced levels, prerequisites are indicated; but a student with skills or experience in a given area may start with one of the more advanced offerings rather than registering for the prerequisite course. Advisers in Cooke Hall (men) and Norris Gymnasium (women) will aid a student who has questions about the appropriate level for his registration.

Activity Permit Cards may be secured at 101 Norris Gymnasium (women) or 202 Cooke Hall (men), and students should be sure their activity rating is acceptable for the class selected. A student who does not attend the first meeting of a class forfeits his place. If a class is closed at the time of registration, the student may report to the first class meeting to ask about possible cancellations.

Nonprofessional Courses

("A.R." stands for "Activity Rating")

- 1-001 (PEM 1A, PEW 1A). **ACTIVITIES FOR THE HANDICAPPED.** (1 cr; men, women; prereq women #; A.R. 4)
- 1-004 (PEM 2A, PEW 2A). **DIVING, SPRINGBOARD.** (1 cr; men, women; prereq men 1-007, women 1-308; A.R. 1)
- 1-007 (PEM 5A, PEW 5A). **SWIMMING.** (1 cr; men, women; A.R. 1)
- 1-014 (PEM 11A, PEW 11A). **CONDITIONING.** (1 cr; men, women; A.R. 1, 2)
- 1-015 (PEM 12A). **WEIGHT TRAINING.** (1 cr; men only; A.R. 1, 2)
- 1-016 (PEW 13A). **POSTURE AND INDIVIDUAL EXERCISE.** (1 cr; women only; A.R. 1, 2, 3)

Description of Courses

- 1-020 (PEM 18A, PEW 18A). **FUNDAMENTALS, MOVEMENT.** (1 cr; coed; A.R. 1, 2)
- 1-022 (PEM 14A, PEW 14A). **BALLROOM DANCE.** (1 cr; coed; A.R. 1, 2, 3)
- 1-023 (PEM 15A, PEW 15A). **FOLK AND SQUARE DANCE.** (1 cr; coed; A.R. 1, 2)
- 1-024 (PEM 16A, PEW 16A). **MODERN DANCE.** (1 cr; coed; A.R. 1, 2)
- 1-032 (PEM 24A, PEW 24A). **BADMINTON.** (1 cr; men, women, coed; A.R. 1, 2)
- 1-033 (PEM 28A, PEW 28A). **FENCING.** (1 cr; coed; A.R. 1, 2)
- 1-034 (PEM 8A, PEW 8A). **JUDO.** (1 cr; men, women; A.R. 1, 2)
- 1-035 (PEM 9A, PEW 9A). **KARATE.** (1 cr; men, women; A.R. 1, 2)
- 1-036 (PEM 31A). **PADDLEBALL-HANDBALL.** (1 cr; men only; A.R. 1, 2)
- 1-037 (PEM 35A, PEW 35A). **SQUASH RACQUETS.** (1 cr; men, women; A.R. 1, 2)
- 1-038 (PEM 36A, PEW 36A). **TENNIS.** (1 cr; men, women, coed; A.R. 1, 2)
- 1-039 (PEM 10A). **WRESTLING.** (1 cr; men only; A.R. 1, 2)
- 1-045 (PEM 22A, PEW 22A). **ANGLING.** (1 cr; coed; A.R. 1, 2, 3)
- 1-046 (PEM 19A, PEW 19A). **APPARATUS.** (1 cr; men, women; A.R. 1, 2)
- 1-047 (PEM 23A, PEW 23A). **ARCHERY.** (1 cr; men, women; A.R. 1, 2, 3)
- 1-048 (PEM 25A, PEW 25A). **BOWLING.** (1 cr; men, women, coed; A.R. 1, 2, 3)
- 1-049 (PEM 26A, PEW 26A). **CAMPING.** (1 cr; coed; A.R. 1, 2, 3)
- 1-050 (PEM 29A, PEW 29A). **GOLF.** (1 cr; men, women; A.R. 1, 2, 3)
- 1-051 (PEM 30A, PEW 30A). **HUNTING.** (1 cr; coed; A.R. 1, 2, 3)
- 1-052 (PEW 32A). **RIFLEMANSHIP.** (1 cr; women only; A.R. 1, 2, 3)
- 1-053 (PEM 33A, PEW 33A). **ICE SKATING.** (1 cr; coed; A.R. 1, 2)
- 1-055 (PEM 17A). **FOUNDATIONS OF PHYSICAL ACTIVITY.** (2 cr; men only; A.R. 1, 2)
- 1-057 (PEM 34A, PEW 34A). **SKIING.** (1 cr; coed; A.R. 1, 2)
- 1-058 (PEM 27A, PEW 27A). **PHYSICAL EDUCATION FOR FAMILY LIVING.** (1 cr; coed; A.R. 1, 2, 3)
- 1-059 (PEM 37A, PEW 37A). **TRACK AND FIELD.** (1 cr; men, women; A.R. 1, 2)
- 1-060 (PEM 20A, PEW 20A). **TUMBLING, FLOOR EXERCISE, AND TRAMPOLINE.** (1 cr; men, women; A.R. 1, 2)
- 1-067 (PEM 38A, PEW 38A). **BASKETBALL.** (1 cr; men, women; A.R. 1, 2)
- 1-068 (PEM 39A, PEW 39A). **CURLING.** (1 cr; coed; A.R. 1, 2, 3)
- 1-069 (PEM 40A, PEW 40A). **FIELD HOCKEY.** (1 cr; men, women; A.R. 1, 2)
- 1-070 (PEM 41A). **ICE HOCKEY.** (1 cr; men only; prereq 1-053 or equiv; A.R. 1, 2)
- 1-071 (PEW 42A). **LACROSSE.** (1 cr; women only; A.R. 1, 2)
- 1-072 (PEM 44A). **SOCCER.** (1 cr; men only; A.R. 1, 2)
- 1-073 (PEM 45A, PEW 45A). **SOFTBALL.** (1 cr; men, women; A.R. 1, 2)
- 1-074 (PEM 46A, PEW 46A). **VOLLEYBALL.** (1 cr; men, women; A.R. 1, 2)
- 1-080 (PEM 43A). **OFFICIATING, FOOTBALL-BASKETBALL.** (1 cr; men only; A.R. 1, 2)
- 1-081 (PEW 43A). **OFFICIATING, BASKETBALL-VOLLEYBALL.** (1 cr; women only; prereq 1-067 and 1-074; A.R. 1, 2)
- 1-082 (PEM 43B). **OFFICIATING, HOCKEY-BASKETBALL-VOLLEYBALL.** (1 cr; men only; A.R. 1, 2)
- 1-083 (PEM 43C). **OFFICIATING, SWIMMING-WRESTLING-SOFTBALL-TRACK.** (1 cr; men only; A.R. 1, 2)
- 1-101 (PEM 1B, PEW 1B). **ACTIVITIES FOR THE HANDICAPPED.** (1 cr; men, women; prereq women ♀; A.R. 4)
- 1-104 (PEM 2B). **DIVING, SPRINGBOARD.** (1 cr; men only; prereq 1-007 or equiv; A.R. 1)
- 1-107 (PEM 5B, PEW 5B). **SWIMMING.** (1 cr; men, women; prereq men ability to swim 100 yards, women 1-007 or equiv; A.R. 1)

Physical Education and Recreation

- 1-121 (PEM 16H, PEW 16H). RHYTHMIC ANALYSIS. (1 cr; coed; prereq 1-020 or ‡; A.R. 1, 2)
- 1-122 (PEM 14B, PEW 14B). BALLROOM DANCE. (1 cr; coed; prereq 1-022 or equiv; A.R. 1, 2, 3)
- 1-123 (PEM 15B, PEW 15B). FOLK AND SQUARE DANCE. (1 cr; coed; prereq 1-023 or equiv; A.R. 1, 2)
- 1-124 (PEM 16B, PEW 16B). MODERN DANCE. (1 cr; coed; prereq 1-024 or equiv; A.R. 1, 2)
- 1-132 (PEM 24B, PEW 24B). BADMINTON. (1 cr; men, women, coed; prereq 1-032 or equiv; A.R. 1, 2)
- 1-133 (PEM 28B, PEW 28B). FENCING. (1 cr; coed; prereq 1-033 or equiv; A.R. 1, 2)
- 1-134 (PEM 8B). JUDO. (1 cr; men only; prereq 1-034 or equiv; A.R. 1, 2)
- 1-135 (PEM 9B). KARATE. (1 cr; men only; prereq 1-035 or equiv; A.R. 1, 2)
- 1-138 (PEM 36B, PEW 36B). TENNIS. (1 cr; men, women, coed; prereq 1-038 or equiv; A.R. 1, 2)
- 1-139 (PEM 10B). WRESTLING. (1 cr; men only; prereq 1-039 or equiv; A.R. 1, 2)
- 1-145 (PEM 22B, PEW 22B). ANGLING. (1 cr; coed; prereq 1-045 or equiv; A.R. 1, 2, 3)
- 1-146 (PEM 19B, PEW 19B). APPARATUS-GYMNASTICS. (1 cr; men, women; prereq 1-046 or equiv; A.R. 1, 2)
- 1-147 (PEW 23B). ARCHERY. (1 cr; women only; prereq 1-047 or equiv; A.R. 1, 2, 3)
- 1-148 (PEM 25B, PEW 25B). BOWLING. (1 cr; men, women, coed; prereq men 1-048 and 125 average, women 120 average; A.R. 1, 2, 3)
- 1-150 (PEM 29B, PEW 29B). GOLF. (1 cr; men, women; prereq women 1-050 or equiv; A.R. 1, 2, 3)
- 1-154 (PEM 33B, PEW 33B). FIGURE SKATING. (1 cr; coed; prereq 1-053 or equiv; A.R. 1, 2)
- 1-157 (PEM 34B, PEW 34B). SKIING. (1 cr; coed; prereq 1-057 or equiv; A.R. 1, 2)
- 1-159 (PEM 37B, PEW 37B). TRACK AND FIELD. (1 cr; men, women; prereq 1-059 or equiv; A.R. 1, 2)
- 1-160 (PEM 20B, PEW 20B). TUMBLING, FLOOR EXERCISES, AND TRAMPOLINE. (1 cr; men, women; prereq women 1-060 or equiv; A.R. 1, 2)
- 1-167 (PEM 38B, PEW 38B). BASKETBALL. (1 cr; men, women; prereq 1-067; A.R. 1, 2)
- 1-172 (PEM 44B). SOCCER. (1 cr; men only; prereq 1-072 or equiv; A.R. 1, 2)
- 1-173 (PEM 45B). SOFTBALL. (1 cr; men only; prereq 1-073 or equiv; A.R. 1, 2)
- 1-174 (PEM 46B, PEW 46B). VOLLEYBALL. (1 cr; men, women; prereq 1-074 or equiv; A.R. 1, 2)
- 1-201 (PEM 1C, PEW 1C). ACTIVITIES FOR THE HANDICAPPED. (1 cr; men, women; prereq women ‡; A.R. 4)
- 1-204 (PEM 2C). DIVING, SPRINGBOARD. (1 cr; men only; prereq 1-007 or equiv; A.R. 1)
- 1-205 (PEM 3A, PEW 3A). SCUBA AND SKIN DIVING. (1 cr; men, women; prereq men 1-107 or equiv; women 1-207 or equiv; A.R. 1)
- 1-207 (PEW 5C). SWIMMING. (1 cr; women only; prereq 1-107 or equiv; A.R. 1)
- 1-224 (PEM 16C, PEW 16C). MODERN DANCE. (1 cr; coed; prereq 1-124 or equiv; A.R. 1, 2)
- 1-238 (PEM 36C, PEW 36C). TENNIS. (1 cr; men, women, coed; prereq 1-138; A.R. 1, 2)
- 1-246 (PEW 19C). APPARATUS-GYMNASTICS. (1 cr; women only; prereq 1-146 or equiv; A.R. 1, 2)
- 1-248 (PEM 25C, PEW 25C). BOWLING. (1 cr; men, women, coed; prereq 160 avg; A.R. 1, 2, 3)
- 1-250 (PEM 29C, PEW 29C). GOLF. (1 cr; men, women; prereq women 1-150; A.R. 1, 2, 3)
- 1-254 (PEM 33C, PEW 33C). FIGURE SKATING. (1 cr; coed; prereq 1-154 or equiv; A.R. 1, 2)

Description of Courses

- 1-256 (PEM 33D, PEW 33D). SKATING, ICE DANCING. (1 cr; coed; prereq 1-154 or equiv; A.R. 1, 2)
- 1-260 (PEW 20C). TUMBLING, FLOOR EXERCISE, AND TRAMPOLINE. (1 cr; women only; prereq 1-060 or equiv; A.R. 1, 2)
- 1-306 (PEM 4A, PEW 4A). SENIOR LIFESAIVING. (1 cr; men, women; prereq ability to swim 440 yds; A.R. 1)
- 1-307 (PEW 5D). SWIMMING. (1 cr; women only; prereq 1-207 or equiv; A.R. 1)
- 1-308 (PEW 5E). SWIMMING AND DIVING. (1 cr; women only; prereq 1-207 or equiv; A.R. 1)
- 1-309 (PEW 6A). SYNCHRONIZED SWIMMING. (1 cr; women only; prereq 1-207 or equiv; A.R. 1)
- 1-324 (PEM 16D, PEW 16D). MODERN DANCE. (1 cr; coed; prereq 1-224 or equiv; A.R. 1, 2)
- 1-325 (PEM 16E, PEW 16E). MODERN DANCE, COMPOSITION. (2 cr; coed; prereq 1-224 or equiv; A.R. 1, 2)
- 1-386 (PEM 48A). FRESHMAN BASEBALL. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-387 (PEM 48B). FRESHMAN BASKETBALL. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-388 (PEM 48C). FRESHMAN CROSS COUNTRY. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-389 (PEM 48D). FRESHMAN FOOTBALL. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-390 (PEM 48E). FRESHMAN GOLF. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-391 (PEM 48F). FRESHMAN GYMNASTICS. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-392 (PEM 48G). FRESHMAN HOCKEY. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-393 (PEM 48H). FRESHMAN SWIMMING. (1 cr; men only; prereq #; A.R. 1)
- 1-394 (PEM 48J). FRESHMAN TENNIS. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-395 (PEM 48K). FRESHMAN TRACK AND FIELD. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-396 (PEM 48L). FRESHMAN WRESTLING. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-410 (PEM 7A, PEW 7A). WATER SAFETY INSTRUCTOR. (2 cr; men, women; prereq current American Red Cross Senior Lifesaving Certificate; A.R. 1)
- 1-425 (PEM 16F, PEW 16F). MODERN DANCE, COMPOSITION. (2 cr; coed; prereq 1-325 or equiv; A.R. 1, 2)
- 1-426 (PEM 16G, PEW 16G). MODERN DANCE, PRODUCTION. (3 cr; coed; prereq 1-224 or #; A.R. 1, 2)
- 1-486 (PEM 49A). VARSITY BASEBALL. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-487 (PEM 49B). VARSITY BASKETBALL. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-488 (PEM 49C). VARSITY CROSS COUNTRY. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-489 (PEM 49D). VARSITY FOOTBALL. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-490 (PEM 49E). VARSITY GOLF. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-491 (PEM 49F). VARSITY GYMNASTICS. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-492 (PEM 49G). VARSITY HOCKEY. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-493 (PEM 49H). VARSITY SWIMMING. (1 cr; men only; prereq #; A.R. 1)
- 1-494 (PEM 49J). VARSITY TENNIS. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-495 (PEM 49K). VARSITY TRACK AND FIELD. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-496 (PEM 49L). VARSITY WRESTLING. (1 cr; men only; prereq #; A.R. 1, 2)
- 1-497. INDEPENDENT STUDY. (1-6 cr; prereq 3 cr in phy ed and Δ)
For the non-professional student who wishes to study a topic or problem under tutorial guidance.

Professional Courses

- 1-500 (PEWP 20D). BEGINNING AQUATICS. (1 cr; women only)

Physical Education and Recreation

- 1-510 (PEMP 16, PEWP 21B). **FUNDAMENTAL MOVEMENT.** (1 cr; coed)
Basic steps and folk dances.
- 1-511 (PEWP 21C). **RHYTHMIC ANALYSIS.** (1 cr; coed; prereq 1-510)
- 1-512 (PEMP 17, PEWP 22A). **FOLK DANCE.** (1 cr; coed)
Instruction in circle, line, square, mixer, and couple dances; square dance calling.
- 1-513 (PEWP 40A). **MODERN DANCE.** (1 cr; coed)
- 1-520 (PEWP 21D). **POSTURE AND FUNCTIONAL EXERCISE.** (1 cr; women only)
- 1-521 (PEWP 40C). **TUMBLING, FREE EXERCISE, AND TRAMPOLINE.** (1 cr; women only)
- 1-522 (PEWP 40D). **APPARATUS-GYMNASTICS.** (1 cr; women only)
- 1-523 (PEMP 4). **CONDITIONING AND TACTICS.** (1 cr; men only)
Participation in and understanding of various methods of physical conditioning; physiological basis and methods of evaluation; methods of moving and organizing large and small groups; public school observation included.
- 1-530 (PEWP 22B). **GOLF.** (1 cr; women only)
- 1-540 (PEWP 20A). **BADMINTON.** (1 cr; women only)
- 1-541 (PEWP 22C). **TENNIS.** (1 cr; women only)
- 1-550 (PEWP 20B). **FIELD HOCKEY-VOLLEYBALL.** (1 cr; women only)
- 1-551 (PEWP 21A). **BASKETBALL.** (1 cr; women only)
- 1-552 (PEWP 22D). **SPEEDAWAY-SOFTBALL.** (1 cr; women only)
- 1-553 (PEMP 9). **BASEBALL.** (1 cr; men only)
- 1-554 (PEMP 11). **FOOTBALL.** (1 cr; men only)
Demonstrations and practice in fundamentals for all positions on a team.
- 1-555 (PEMP 13). **SOCCER.** (1 cr; men only)
- 1-560 (PEWP 45). **PHYSICAL EDUCATION ACTIVITIES FOR THE ELEMENTARY SCHOOL.** (2 cr; coed; prereq soph)
Laboratory course for 3-325; experience with graded activities; problems of organization and teaching progressions considered.
- 1-561 (PEWP 44). **PHYSICAL EDUCATION ACTIVITIES FOR THE ELEMENTARY SCHOOL.** (3 cr; women only; prereq physical education major, soph)
Analysis of basic skills, observations and laboratory experience in teaching activities.
- 1-562 (PEMP 15). **GAMES AND ELEMENTARY SCHOOL ACTIVITIES.** (1 cr; men only)
Types of games, guided movement experiences, movement education content; public school observation included.
- 1-580 (PEMP 32). **ORIENTATION AND APPRAISAL.** (1 cr; men only)
Rationale underlying the course of study, advising procedures, Minnesota Credential requirements; vocational considerations; philosophical and professional aspects; sports competency and physical fitness testing.
- 1-600 (PEMP 2). **AQUATICS.** (1 cr; men only; prereq swim 50 yds in 45 sec)
Advanced swimming, diving, lifesaving.
- 1-601 (PEWP 41A). **ADVANCED AQUATICS.** (1 cr; women only)
- 1-620 (PEMP 5). **GYMNASTICS.** (1 cr; men only; prereq 1-046)
Stunts on the buck, side horse, long horse, parallel bars, rings, trampoline, mats, stall bar exercises, rope climbing, and pyramid building; public school observation included.
- 1-630 (PEMP 6). **GOLF.** (1 cr; men only; prereq 1-050 or equiv)
- 1-640 (PEMP 3). **WRESTLING.** (1 cr; men only; prereq 1-039 or equiv)
- 1-641 (PEMP 7). **RACQUET SPORTS.** (1 cr; men only; prereq 1-032 or 1-038 or equiv)
- 1-650 (PEWP 40B). **OFFICIATING FIELD HOCKEY-VOLLEYBALL.** (1 cr; women only; prereq 1-550)
- 1-651 (PEWP 41B). **OFFICIATING BASKETBALL.** (1 cr; women only; prereq 1-551)
- 1-652 (PEMP 10). **BASKETBALL.** (1 cr; men only; prereq 1-067 or equiv)
Demonstration and practice, individual and team offensive and defensive tactics.
- 1-653 (PEMP 14). **VOLLEYBALL.** (1 cr; men only)

Description of Courses

- 1-654 (PEMP 8). **TRACK AND FIELD.** (1 cr; men only; prereq 1-059 or equiv)
Demonstrations and practice in all events.
- 1-655 (PEMP 12). **ICE HOCKEY.** (1 cr; men only; prereq 1-053 or equiv)
- 1-700 (PEWP 42A). **SENIOR LIFE SAVING.** (1 cr; women only; prereq 1-601)
- 1-800 (PEWP 46). **WATER SAFETY INSTRUCTOR'S COURSE.** (2 cr; women only; prereq current Am Red Cross Sr Life Sav Cert)
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.
- 1-990. **INDEPENDENT STUDY.** (1-6 cr; prereq Δ)
For students majoring or minoring in physical education who wish to study a topic or problem under tutorial guidance.
- 3-100 (PEMP 65). **ADAPTED PHYSICAL EDUCATION.** (3 cr; men only; prereq 3-111, Anat 1-027)
Philosophy, principles, and techniques of adapting the program to meet the needs of handicapped pupils.
- 3-110 (PEMP 50). **HUMAN ANATOMY.** (3 cr; coed)
Emphasizes bones, nerves, and muscles and their significance in physical education.
- 3-111 (PE 51). **MECHANICS OF MOVEMENT.** (3 cr; coed; prereq Anat 1-027)
Structure of the body, principles and mechanics of bodily movements.
- 3-112 (PEMP 52). **HUMAN GROWTH AND PHYSICAL DEVELOPMENT.** (3 cr; men only; prereq SeEd 3-155)
Synthesis of research and materials bearing on individual growth patterns of physique and organic systems; implications and applications for physical education; pre-student teaching experience.
- 3-113 (PEMP 54). **MOTOR LEARNING.** (3 cr; men only)
Perception, motivation, emotion, and learning as factors in physical activity; competition, reaction time, and coordination in motor performance.
- 3-114 (PEMP 60A). **PREVENTION AND CARE OF INJURIES.** (3 cr; men only; prereq 3-110 or Anat 1-027)
Policies for conditioning athletes in interscholastic and intercollegiate sports; safety controls.
- 3-115 (PEMP 71). **PHYSIOLOGICAL APPLICATION TO SPORTS.** (3 cr, §PubH 3-385, 3-386; men only)
Consideration of muscular contraction for strength development programs; contributions of training programs to endurance, speed, and skill acquisition; influence of training on the cardiovascular system; fatigue and recovery; early season training, pregame meals and ergogenic aids in athletics. Required for the physical education minor and the Minnesota Coaching Certificate.
- 3-130 (PE 91). **HISTORY AND PRINCIPLES.** (3 cr; coed)
Influence of societal factors; geography, culture, politics, religion, education, and technology in the development of physical education; principles and application of various disciplines.
- 3-140 (PEWP 95). **ADMINISTRATION.** (3 cr; women only; prereq sr)
Professional responsibilities, organization of instructional and extracurricular program in the school and community; personnel, maintenance and supervision of facilities and equipment.
- 3-141 (PEMP 63). **ADMINISTRATION.** (3 cr; men only)
Problems of organization and supervision in the instructional program, intramural sports and interscholastic athletics.
- 3-150 (PE 97). **TESTING.** (3 cr; coed; prereq SeEd 3-155)
Selection, evaluation, construction, and administration of tests; administration of sports skill and motor ability tests for elementary and secondary school levels.
- 3-160 (PEMP 64). **PROGRAMMING INTRAMURAL-EXTRAMURAL SPORTS.** (3 cr; coed)
Study of the basic ingredients required for administering intramural-extramural sports programs.
- 3-170 (PEMP 80). **BASEBALL COACHING.** (2 cr; men only; prereq 1-553 or #)
Techniques of playing each position, batting, coaching runners, and team play; study of rules; officiating methods and practice; organization of practices.

Physical Education and Recreation

- 3-171 (PEMP 81). **BASKETBALL COACHING.** (2 cr; men only; prereq 1-652 or #)
Techniques, styles of offense and defense, conditioning and handling of players.
- 3-172 (PEMP 82). **FOOTBALL COACHING.** (2 cr; men only; prereq 1-554 or #)
Techniques and orientation, strategy, generalship, styles of offense and defense, methods of organizing practices and handling players.
- 3-173 (PEMP 83). **GOLF COACHING.** (2 cr; men only; prereq 1-630 or #)
Techniques for organizing the squad, selecting the team, and conducting tournaments; principle of the golf swing, practice routines, rules and strategy of play.
- 3-174 (PEMP 84). **GYMNASTICS COACHING.** (2 cr; men only; prereq 1-620 or #)
Analysis of elementary through advanced stunts in tumbling, floor exercise and on trampoline, side horse, parallel bars, still rings, and long horse; emphasis on teaching and techniques. Aspects of legal liability, budget, scheduling, regulations, training, research; purchase and care of equipment and constructing gymnastic gymnasiums.
- 3-175 (PEMP 85). **ICE HOCKEY COACHING.** (2 cr; men only; prereq 1-655 or #)
Techniques and orientation to coaching high school hockey; planning and conducting practices, team offense and defense; drills to develop individual skills; conditioning.
- 3-176 (PEMP 86). **SWIMMING AND DIVING COACHING.** (2 cr; men only; prereq 1-600 or #)
Instruction in and practice of the basic techniques used in competitive swimming and diving; rules and regulations governing staging of competition.
- 3-177 (PEMP 87). **TENNIS COACHING.** (2 cr; men only; prereq 1-641 or #)
Techniques and orientation, methods and organization; emphasis on high school and college level; coverage of coaching techniques, analysis of strokes and organization of practice sessions.
- 3-178 (PEMP 88). **TRACK AND FIELD COACHING.** (2 cr; men only; prereq 1-654 or #)
Technique of performance in all standard events; methods of coaching; organization of track meets; study of rules; officiating methods and practice.
- 3-179 (PEMP 89). **WRESTLING COACHING.** (2 cr; men only; prereq 1-640 or #)
Analysis of the moves, combinations, and sequence; training, safety, and health features; administrative responsibilities of the coach; review of the literature.
- 3-180 (PEWP 80). **HISTORY AND TRENDS IN DANCE.** (3 cr; coed; prereq #)
History and philosophy of dance; relation to allied arts.
- 3-270 (PEMP 66). **SPORT OFFICIATING AND SUPERVISION.** (3 cr; men only)
Philosophy, principles, and problems of officiating athletic contests; interpreting game rules, officiating procedures, and participant relationship in a variety of sports.
- 3-310 (PEMP 60B). **ATHLETIC TRAINING LABORATORY.** (1 cr; men only; prereq 3-114)
Thirty hours of practical experience in the training room under supervision.
- 3-320 (PEWP 55). **TEACHING INDIVIDUAL AND TEAM SPORTS.** (3 cr; women only; prereq 1-530, 1-540, 1-541, 1-550, 1-551, 1-552)
General methods of teaching sports; techniques for class organization; skill analysis; individual and group guidance; evaluation; application of methods to badminton, golf, tennis, fall team sports, volleyball, basketball, and softball; observations and practical experience.
- 3-321 (PEWP 56). **TEACHING OF FOLK DANCE.** (3 cr; women only; prereq 1-510, 1-511, 1-512)
Methods and materials for the teaching of folk dance through lecture and laboratory experiences.
- 3-322 (PEWP 57). **TEACHING OF POSTURE, EXERCISE, AND GYMNASTICS.** (3 cr; women only; prereq 1-520, 1-521, 1-522)
Experiences include observations, units and lesson planning, and student teaching within the class; activities designed to develop competency in methods of teaching posture exercise, stunts, tumbling, apparatus, and floor exercise.
- 3-325 (PEWP 70). **TEACHING HEALTH AND PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL.** (3 cr; coed; §H1th 3-325)
Methods of instruction for elementary education majors.
- 3-360 (PEWP 58). **THE INTRAMURAL-EXTRAMURAL-INTERSCHOOL SPORTS PROGRAM.** (3 cr; women only; prereq physical education major or minor, jr)
Objectives, principles, policies, procedures, and personnel involved in the planning of sports programs for girls and women.
- 3-370 (PEWP 53). **COACHING BASKETBALL AND VOLLEYBALL.** (2 cr; women only; prereq 1-550 and 1-551 or #)
Emphasis on strategy in coaching; theoretical and practical experience.

Description of Courses

- 3-390 (PEWP 87). **DANCE COMPOSITION.** (2 cr; coed; prereq adv modern dance or equiv)
Principles of composition with practical application.
- 3-391 (PEWP 88). **DANCE COMPOSITION.** (2 cr; coed; prereq 3-390 or equiv)
Advanced theory and practice including various approaches to dance composition.
- 3-392 (PEWP 89). **DANCE PRODUCTION.** (3 cr; coed; prereq #)
Culmination of dance composition with a dance production including experience in stagecraft and costuming.
- 3-420 (PEMP 76A). **STUDENT TEACHING METHODS.** (2 cr; men only; prereq 3-112 and ¶3-621 or 3-622)
Methods and techniques of instruction in elementary or secondary school physical education; general information on teaching process; should be elected when enrolling in the first student teaching experience.
- 3-421 (PEMP 76B). **STUDENT TEACHING METHODS.** (1 cr; men only; prereq 3-112 and ¶3-621 or 3-622)
Methods and techniques of instruction in elementary or secondary school physical education; should be elected with the second student teaching experience.
- 3-600 (PEWP 90A). **ORIENTATION TO STUDENT TEACHING.** (3 cr; women only; prereq #)
Program and problems of organization and management; begins with fall semester opening of public schools.
- 3-601 (PEWP 90D). **STUDENT TEACHING: ELEMENTARY SCHOOL.** (6 cr; women only; prereq SeEd 3-150 and 3-155, physical education major)
- 3-602 (PEWP 90B). **STUDENT TEACHING: JUNIOR HIGH SCHOOL.** (3 cr; women only; prereq ¶3-603, SeEd 3-150 and 3-155, major in physical education)
- 3-603 (PEWP 90C). **STUDENT TEACHING: SENIOR HIGH SCHOOL.** (3 cr; women only; prereq ¶3-602, SeEd 3-150 and 3-155, major in physical education)
- 3-604 (PEWP 90E). **ADVANCED STUDENT TEACHING.** (3 cr; women only; prereq #)
Optional for those who have done superior work in 3-601, 3-602, 3-603.
- 3-605 (PEWP 93). **STUDENT TEACHING IN PHYSICAL EDUCATION FOR MINORS.** (3 cr; women only; prereq SeEd 3-150 and 3-155, physical education minor)
- 3-606 (PEMP 74). **STUDENT TEACHING: PHYSICAL EDUCATION FOR MINORS.** (3 cr; men only; prereq SeEd 3-150 and 3-155 and #)
Observation, participation, and directed teaching under supervising teacher.
- 3-621 (PEMP 75A). **STUDENT TEACHING: ELEMENTARY.** (4-6 cr; men only; prereq 3-112, ¶3-420 or 3-421)
Student teaching in physical education in grades 1-6 in public schools.
- 3-622 (PEMP 75B). **STUDENT TEACHING: SECONDARY.** (4-6 cr; men only; prereq 3-112, ¶3-420 or 3-421)
Student teaching in physical education in grades 7-12 in public schools.
- 3-624 (PEMP 77). **STUDENT TEACHING: COACHING.** (3 cr; men only; prereq SeEd 3-150, 3-155)
May be elected by physical education majors and minors; required of candidates for coaching credential only for men without public school coaching experience.
- 3-625 (PEMP 78). **SUPERVISED PRACTICAL EXPERIENCE.** (3 cr; men only; prereq Δ)
On-the-job experience under a specialist in the particular area of study.
- 3-900 (PEMP 99). **INDEPENDENT STUDY.** (1-9 cr; men only; prereq Δ)
Self-directed study preceded by classroom study and possession of basic competence.
- 5-100 (PE 104). **TEACHING PHYSICAL EDUCATION FOR THE HANDICAPPED CHILD.** (3 cr; prereq #)
Selection and organization of appropriate activities for students with physical disabilities; program planning at all levels; observations, demonstrations, special lectures.
- 5-110 (PE 124). **SUPERVISION OF SCHOOL HEALTH AND PHYSICAL EDUCATION.** (3 cr. §Hlth 5-110; prereq #)
Functions; adaptations of accepted procedures for observation, guidance, and training of teachers.
- 5-111 (PE 164). **PHYSICAL EDUCATION FACILITIES.** (3 cr)
Planning of areas and facilities for physical education and athletics with special emphasis on current trends and problems in the field.
- 5-112 (PE 165). **PHYSICAL EDUCATION EQUIPMENT.** (3 cr)
Selection, purchase, and maintenance of athletic equipment and supplies with opportunity to investigate selected equipment in depth.

Physical Education and Recreation

- 5-120 (PE 115). **ADVANCED KINESIOLOGY.** (3 cr; prereq undergrad kinesiology or #)
Principles of mechanics applied to human movement, analysis of motor skills, application to individual projects.
- 5-121 (PE 130). **CONTRIBUTIONS OF BASIC SCIENCE TO PHYSICAL EDUCATION.** (3 cr; prereq #)
Recent research in related physical sciences; applications in selected areas.
- 5-122 (PE 171). **APPLIED PHYSIOLOGY.** (3 cr; prereq PubH 3-386 or Phsl 3-051 or equiv)
Application of concepts in human physiology to exercise physiology, sports training and physical activities with particular reference to respiratory and cardiovascular systems.
- 5-123 (PE 140). **ANALYSIS OF MOVEMENT IN GYMNASTICS.** (3 cr; prereq 3-111 and 3-174 or 3-322 or #)
Scientific principles of body mechanics and training relating to teaching, analysis and development of advanced performance techniques.
- 5-150 (PE 100). **TEACHING ELEMENTARY SCHOOL PHYSICAL EDUCATION.** (3 cr; prereq tcbg cert or #)
Principles, techniques, and procedures in developing basic motor skills, physical fitness and sports skills.
- 5-151 (PE 102). **CURRICULUM.** (3 cr; prereq sr)
For students without previous experience in curriculum; objectives, content, organization, evaluation, and trends.
- 5-152 (PE 106). **CURRICULUM DEVELOPMENT.** (3 cr; prereq 5-151 or equiv)
Trends, issues, and problems at selected levels of interest; elementary, secondary, junior college; for experienced teachers.
- 5-160 (PE 135). **TESTS AND MEASUREMENT IN PHYSICAL EDUCATION.** (3 cr; prereq grad, or MEd, #)
Place and limitations of measurement; construction and interpretation of evaluative procedures.
- 5-170 (PE 101). **FOUNDATIONS OF PHYSICAL EDUCATION.** (3 cr; prereq grad or MEd)
Establishment of guide lines for individual and group professional action; examination of pertinent social forces, educational philosophies, and general ethics.
- 5-255 (PE 147). **INTRAMURALS-EXTRAMURALS.** (3 cr)
Analysis and interpretation of philosophies of men's and women's programs; principles, objectives, and techniques of program development.
- 5-351 (PE 155). **INSTRUCTIONAL AIDS IN HEALTH, PHYSICAL EDUCATION, AND RECREATION.** (3 cr)
Evaluation, construction, and use of materials stressing audio-visual aids.
- 5-620 (PE 160). **PRACTICUM: PREVENTION AND CARE OF ATHLETIC INJURIES.** (3 cr; prereq #)
An overview of problems (recognition, principles, responsibilities) related to athletic injuries in secondary and college programs; demonstration and practice in training techniques and familiarity with practice in training techniques and familiarity with use of instruments for athletic rehabilitation.
- 5-695 (PE 177). **PRACTICUM: INTRAMURALS-EXTRAMURALS.** (3-9 cr; prereq 5-255)
Theory and application of principles in developing programs including supervised experiences in program operation.
- 5-980 (PE 136). **INTRODUCTION TO RESEARCH.** (3 cr; prereq #)
Methods and design for research in health, physical education, and recreation.
- 5-981 (PE 118E). **PROBLEMS.** (Cr ar; prereq MEd candidate, #)
Focus on teaching of physical education.
- 5-982 (PE 128E). **INTEGRATING PAPER.** (3 cr, §Hlth 5-982; MEd only)
Independent paper integrating learnings from a course or courses in education with learnings in physical education.
- 5-983 (PE 137). **READINGS: PHYSICAL EDUCATION.** (1-3 cr; prereq sr honor, grad, #)
Independent study under tutorial guidance.

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-110 (PE 260). **ADMINISTRATION: GENERAL PRINCIPLES AND PROCEDURES**
- 8-111 (PE 261). **INTERSCHOLASTIC ATHLETICS ADMINISTRATION**

Description of Courses

- 8-112 (PE 262). INTERCOLLEGIATE ATHLETICS ADMINISTRATION
- 8-113 (PE 263). COLLEGE PHYSICAL EDUCATION ADMINISTRATION
- 8-120 (PE 290). KINESIOLOGY: PHOTOGRAPHIC AND CINEMATOGRAPHIC ANALYSES
- 8-121 (PE 291). KINESIOLOGY: ELECTROMYOGRAPHIC ANALYSIS
- 8-150 (PE 202). PROFESSIONAL PREPARATION OF PHYSICAL EDUCATION TEACHERS
- 8-320 (PE 292). SEMINAR: KINESIOLOGY
- 8-381 (PE 236). LABORATORY RESEARCH TECHNIQUES
- 8-980° (PE 224A). RESEARCH PROBLEMS
- 8-981° (PE 224B). RESEARCH PROBLEMS
- 8-985 (PE 261A). SEMINAR: CONTEMPORARY PROBLEMS

Recreation and Park Administration (Rec)

- 1-500 (30). RECREATION FOR SPECIAL GROUPS. (3 cr; prereq students in Recreation Special Groups program)
Problems of forced leisure; values, methods, and techniques for planning and leading recreation activities.
- 5-510 (31). RECREATION PROGRAMMING FOR SPECIAL GROUPS. (3 cr; prereq students in Recreation Special Groups program)
Techniques and guidelines for determining organization and content; resources for program activities.
- 1-520 (20). INTRODUCTION TO RECREATION AND PARKS. (2 cr)
Examination of the history and development of park and recreation movement; professional and service organizations; orientation to the professional field.
- 1-530 (43). CAMP AQUATICS. (2 cr)
Administration of waterfront program, basic skills in handling small craft.
- 1-540 (45). CAMP CRAFT. (2 cr)
Practical experience in various phases of camping and outdoor education.
- 1-550 (46). CAMP LEADERSHIP. (2 cr)
Introduction to camping and outdoor education for prospective counselors.
- 1-600 (47). LEADERSHIP IN SOCIAL ACTIVITIES. (3 cr)
Technique of leadership in social games, parties, dances, and outings.
- 1-650 (49). SOCIAL ASPECTS OF LEISURE. (3 cr)
Sociological consideration of leisure and recreation as parts of our total socio-economic structure.
- 1-700 (40). RECREATION FIELD WORK WITH SPECIAL GROUPS. (1-4 cr; students in Recreation Special Groups program only)
Student is assigned to an approved agency or institution for practical work experience under qualified supervision.
- 3-150 (64). LEADERSHIP IN NATURE RECREATION. (3 cr; prereq 15 cr in physical and biological sciences)
Identity and scope of nature recreation field; classwork and field trips.
- 3-700 (90). FIELD EXPERIENCE. (1-9 cr; prereq sr, recreation major or minor; 9 cr req for majors, 3 cr for minors)
- 5-120 (101). RECREATION IN COMMUNITY ORGANIZATIONS. (3 cr; prereq 1-520 or §)
Agencies and their interrelationship.
- 5-130 (111). RECREATION AND PARK AREAS AND FACILITIES. (3 cr; prereq 1-520 or §)
Orientation, design, planning, and standards.
- 5-140 (112). RECREATION PROGRAM PLANNING. (3 cr; prereq 1-520 or §)
Principles of program planning for an organized offering of recreation opportunities.
- 5-150 (160). PRINCIPLES OF RECREATION AND PARK ADMINISTRATION. (2 cr; prereq 5-130, 5-140, 5-330 or §)
Introduction to the management and direction of recreation and park agencies; managing authorities; legal basis; fiscal aspects; the personnel and staffing processes.

Physical Education and Recreation

- 5-160 (105). CONSERVATION OF NATURAL RESOURCES. (2 cr; prereq 3-150)
Importance and relation to recreation and outdoor education.
- 5-170 (107). CAMP ADMINISTRATION. (3 cr; prereq 1-550 and #)
Prepares qualified personnel for responsibilities.
- 5-180 (131). INDUSTRIAL RECREATION. (3 cr; prereq #)
History, scope, place, and relationship of management-employee recreation.
- 5-190 (132). COMMERCIAL RECREATION. (3 cr; prereq 5-130 or #)
Survey of the scope and development of profit-making recreation agencies, facilities, and services; consideration of standards, business procedures, financing, and legal status.
- 5-200 (151). SCHOOL RECREATION. (3 cr)
Principles of organizing and conducting school-sponsored recreation programs.
- 5-210 (141). INTRODUCTION TO THERAPEUTIC RECREATION. (3 cr; prereq #)
General field as background for the recreation leader, hospital administrator, and other personnel.
- 5-220 (143). PROGRAMMING: THERAPEUTIC RECREATION. (3 cr; prereq #)
Planning programs for hospital patients.
- 5-230 (144). RECREATION FOR THE MENTALLY RETARDED. (3 cr; prereq 5-210, 5-220, or #)
Characteristics and special needs in relation to recreation programs; consideration of skills and techniques for work with retarded persons in institutions and in the community.
- 5-240 (145). RECREATION FOR THE AGING. (3 cr; prereq #)
Examination of leisure problems of the aging citizen; modification of program activities; investigation of community resources; trends and developments in recreation planning.
- 5-250 (170). FINANCING PUBLIC RECREATION. (3 cr)
Overview of the methods of financing public recreation, including the legal basis, current practices and procedures, and fiscal policies.
- 5-330 (113). METHODS IN RECREATION AND PARK LEADERSHIP. (2 cr; prereq 1-520 or #)
Leadership methodology in all aspects of recreation.
- 5-430 (160A). ADMINISTRATIVE PRACTICES IN PUBLIC RECREATION AND PARKS. (2 cr; prereq 5-150)
Organization, structure, and legal status of government agencies; financial aspects, and liability.
- 5-460 (160B). ADMINISTRATIVE PRACTICES IN THERAPEUTIC RECREATION. (2 cr; prereq 5-150)
Organization and supervision of recreation programs in hospitals, institutions, and nursing homes.
- 5-490 (160C). ADMINISTRATIVE PRACTICES IN VOLUNTARY AND YOUTH-SERVING AGENCIES. (2 cr; prereq 5-150)
Organization and structure of organizations; legal status, fund raising and other financial aspects; community relations; personnel standards; recruitment, selection, and training of volunteers.
- 5-980 (136). INTRODUCTION TO RESEARCH. (3 cr, §PE 5-980; prereq #)
Basic techniques; emphasis on social research methodology; survey of present status of recreation and park research.
- 5-981 (118E). PROBLEMS. (Cr ar; prereq MEd candidate, #)
Focus on conduct of recreation programs.
- 5-983 (137). READINGS: RECREATION. (1-3 cr; prereq sr honor, grad, MEd or #)
Independent study under tutorial guidance.

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-120 (100). FOUNDATIONS OF RECREATION
- 8-150 (210). COLLEGE UNIONS
- 8-180 (211). PARK PLANNING AND DESIGN
- 8-370 (231). SEMINAR: ADMINISTRATIVE PROBLEMS IN THERAPEUTIC RECREATION
- 8-380 (232). SEMINAR: ADMINISTRATIVE PROBLEMS IN RECREATION AND PARKS

Description of Courses

- 8-620 (250). PRACTICUM: COLLEGE UNIONS
- 8-630 (251). PRACTICUM: THERAPEUTIC RECREATION
- 8-640 (252). PRACTICUM: PUBLIC RECREATION AND PARKS
- 8-980° (224A). RESEARCH PROBLEMS
- 8-981° (224B). RESEARCH PROBLEMS

School Health Education (Hlth)

- 1-500 (25). AMERICAN RED CROSS FIRST AID: STANDARD, ADVANCED. (2 cr)
Lectures, demonstrations, and practice in emergencies and first aid treatment. ARC Standard Certificate in First Aid received upon successful completion of course.
- 3-100 (82). CURRICULUM IN SCHOOL HEALTH EDUCATION. (3 cr; prereq PubH 1-003 or 3-001, school health education major or minor)
Study of the content included in units for the secondary school.
- 3-300 (59). INSTRUCTOR'S COURSE IN FIRST AID. (3 cr; prereq current American Red Cross Advanced Certificate)
Preparation to teach the standard course in first aid.
- 3-320 (83). METHODS AND MATERIALS IN SCHOOL HEALTH EDUCATION. (3 cr; prereq 3-100)
Methods, materials, problems, and evaluation in preparation for health teaching; allocation and gradation of subject matter.
- 3-325 (70). TEACHING HEALTH AND PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL. (3 cr, §PE 3-325)
Methods of instruction for elementary education majors.
- 3-601 (96). STUDENT TEACHING: ELEMENTARY SCHOOL. (3 cr; prereq 3-320, SeEd 3-150 and 3-155, major or minor in school health education)
Observation, participation, and teaching under supervision.
- 3-602 (97). STUDENT TEACHING: JUNIOR HIGH SCHOOL. (3 cr; prereq 3-320, SeEd 3-150 and 3-155, major or minor in school health education)
Observation, participation, and teaching under supervision.
- 3-603 (98). STUDENT TEACHING: SENIOR HIGH SCHOOL. (3 cr; prereq 3-320, SeEd 3-150 and 3-155, major or minor in school health education)
Observation, participation, and teaching under supervision.
- 5-110 (124). SUPERVISION OF SCHOOL HEALTH AND PHYSICAL EDUCATION. (3 cr, §PE 5-110; prereq §)
Functions; adaptations of accepted procedures for observation, guidance, and training of teachers.
- 5-120 (103). ROLE OF THE SCHOOL HEALTH EDUCATOR IN HEALTH APPRAISAL. (3 cr; prereq sr, §)
Role of school medical and dental advisers, nurse, teachers, and other school personnel in protection and maintenance phases.
- 5-130 (119). SAFETY EDUCATION. (4 cr; prereq sr)
Scope and nature of the accident problem in our society; study of curricular areas leading to accident prevention.
- 5-140 (114). ADMINISTRATION OF THE SCHOOL HEALTH PROGRAM. (3 cr; prereq 3-320, PubH 3-001 or equiv, or §)
Coordination 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.
- 5-300 (117B). CONTEMPORARY PROBLEMS IN SCHOOL HEALTH EDUCATION. (3 cr; prereq 3-320 or §)
Instructional and individual problems.
- 5-350 (121). FAMILY LIFE AND SEX EDUCATION IN THE ELEMENTARY SCHOOLS. (3 cr)
Research on sexual behavior of the pre-adolescent child; terminology, appropriate content and effective methods for teaching.
- 5-981 (118E). PROBLEMS. (Cr ar; prereq MEd candidate, §)
Focus on teaching of school health education.

- 5-982 (128E). **INTEGRATING PAPER.** (3 cr, §PE 5-982)
Independent paper integrating learnings from a course or courses in education with learnings in school health education.
- 5-983 (137). **READINGS: HEALTH EDUCATION.** (1-3 cr; prereq sr honor, grad and #)
Independent study under tutorial guidance.

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-980° (224A). **RESEARCH PROBLEMS**
- 8-981° (224B). **RESEARCH PROBLEMS**

SECONDARY EDUCATION (SeEd)

- 1-501 (EdCI 46). **BEGINNING TYPEWRITING.** (1 cr)
Emphasis on correct typewriting techniques; letter styles; manuscripts; simple tabulation; proofreading.
- 1-502 (EdCI 47). **INTERMEDIATE TYPEWRITING.** (1 cr; prereq 1-501 or proficiency exam)
Speed and accuracy building; carbons; tabulations; manuscripts; rough drafts; records management; office systems and procedures.
- 1-503 (EdT 80). **ADVANCED TYPEWRITING.** (2 cr; prereq 1-502 or proficiency exam)
Speed and accuracy building; manuscripts; footnotes; bibliographies; proofreading; legal documents and office forms; complex tabulations.
- 1-505 (EdCI 48). **BEGINNING SHORTHAND.** (3 cr; prereq 1-501 or equiv)
Gregg shorthand theory, speed building on familiar material, typewritten transcription; introduction of new matter dictation.
- 1-506 (EdCI 49). **INTERMEDIATE SHORTHAND.** (3 cr; prereq 1-502, 1-505, or proficiency exam)
Emphasis on building speed on new matter dictation and typewritten transcription.
- 1-507 (EdT 81). **ADVANCED SHORTHAND.** (3 cr; prereq 1-502, 1-506, or proficiency exam)
Continued emphasis on speed building, using new matter dictation; emphasis on transcription of mailable letters.
- 1-508 (EdCI 44). **OFFICE PROCEDURES.** (3 cr; prereq 1-502 or equiv)
Office organization, communications, systems and workflow, records management, office machines.
- 3-100 (EdCI 52). **OFFICE OCCUPATIONAL EXPERIENCE.** (3-9 cr; prereq jr, business education major, and #)
Observation and practice in business offices; weekly seminars on application to teaching and guidance of high school and post-high school students.
- 3-150 (Ed 55A). **INTRODUCTION TO SECONDARY SCHOOL TEACHING.** (5 cr; prereq Psy 1-002)
Secondary education; purposes, history, organization, curriculum, pupils; organization of instructional units; teaching profession; lecture, discussion section; individual youth leadership project.
- 3-151 (EdCI 54). **DIRECTED STUDY.** (1-3 cr; prereq #)
Analysis of instructional and organizational problems in secondary education.
- 3-155 (Ed 55B). **INTRODUCTION TO SECONDARY SCHOOL TEACHING.** (5 cr; prereq Psy 1-002)
Individual differences and educational measurement; statistics, standardized tests, teacher-made tests, marking and promotion, educational research; psychology of learning and human development; lecture, discussion section, and individual youth leadership project.
- 3-160 (Ed 55C). **FIELD STUDY.** (2 cr; prereq 3-150)
Additional credit available for students who have completed SeEd 3-150 and wish through independent study to gain further community experience. Special reports required.
- 3-300 (EdT 80A). **TEACHING TYPEWRITING AND OFFICE PROCEDURES.** (2 cr; prereq 3-155 or ¶3-155 and 1-502 or equiv)
Methods in developing typewriting, adding, calculating, and transcribing machine skills.

Description of Courses

- 3-301 (EdT 81A). **TEACHING SHORTHAND.** (2 cr; prereq 3-155 or ¶3-155 and 1-506 or equiv)
Classroom methods in developing shorthand and transcription skills.
- 3-302 (EdT 82). **TEACHING BASIC BUSINESS SUBJECTS.** (2 cr; prereq 3-155 or ¶3-155)
Developments in content and method of teaching nonvocational business subjects.
- 3-303 (EdT 83). **TEACHING BOOKKEEPING AND DATA PROCESSING.** (2 cr; prereq jr, 3-155 or ¶3-155)
Methods, materials, curriculum, and principles of learning pertinent to secondary school bookkeeping and data processing.
- 3-323 (EdT 75C). **CURRICULUM PROBLEMS AND ISSUES IN TEACHING SPEECH IN SECONDARY SCHOOLS.** (2 cr; prereq 3-150, 3-155)
Sources and procedures for selecting and developing curriculum objectives and materials related to the teaching of speech and coordinating co-curricular activities.
- 3-324 (EdT 75A). **TEACHING LANGUAGE ARTS IN SECONDARY SCHOOLS: INSTRUCTIONAL PROBLEMS AND PRACTICE.** (3 cr; prereq 3-150 and 3-155)
Observation, analysis, and evaluation of teaching practices; discussion of selected readings in conjunction with practice in simulated teaching episodes, role-playing, and videotaped playback.
- 3-325 (EdT 75B). **INSTRUCTIONAL PRACTICE IN ENGLISH AND SPEECH.** (3 cr; prereq 3-324)
Practice on and analysis of small-scale instructional episodes with small groups of secondary school students and in conjunction with regular secondary school classes; interaction analysis and videotaping procedures.
- 3-326 (EdT 76A). **CURRICULUM PROBLEMS AND ISSUES IN TEACHING LITERATURE IN SECONDARY SCHOOLS.** (2 cr; prereq 3-150 and 3-155)
Sources and procedures for selecting and developing curriculum objectives and materials related to the teaching of literature.
- 3-327 (EdT 76B). **CURRICULUM PROBLEMS AND ISSUES IN TEACHING LANGUAGE AND COMPOSITION IN SECONDARY SCHOOLS.** (2 cr; prereq 3-150 and 3-155)
Sources and procedures for selecting and developing curriculum objectives and materials related to the teaching of language and composition.
- 3-328 (EdT 74). **TEACHING JOURNALISM.** (3 cr; prereq Jour 1-012 or 3-151)
Methods and techniques of presenting journalism to students of less than college level. Required of all students with a minor in journalism.
- 3-329 (EdT 76D). **TEACHING LANGUAGE ARTS IN SECONDARY SCHOOLS.** (3 cr; prereq minor in English, language arts, or speech, with major other than speech or English)
Methods and content in development of curriculum materials and instruction in English, language arts, and speech.
- 3-332 (EdT 70M). **TEACHING MODERN LANGUAGES.** (3 cr; prereq minor only)
- 3-334, 3-335 (EdT 70A-B). **TEACHING MODERN LANGUAGES.** (3 cr for 3-334, 2 cr for 3-335; prereq sr and ¶3-631 for 3-334...3-334 and ¶3-631 for 3-335)
Procedures in selecting and organizing materials and teaching modern languages.
- 3-337, 3-338 (EdT 71A-B). **TEACHING LATIN.** (3 cr for 3-337, 2 cr for 3-338; prereq sr and ¶3-636 for 3-337...3-337 and ¶3-636 for 3-338)
Procedures in selection and organizing materials and in teaching Latin.
- 3-339 (EdT 71M). **TEACHING LATIN.** (3 cr; prereq minor only)
- 3-342 (EdT 69M). **TEACHING SOCIAL STUDIES IN SECONDARY SCHOOL.** (3 cr; prereq minor only)
- 3-348, 3-349 (EdT 69A-B). **TEACHING SOCIAL STUDIES IN THE SECONDARY SCHOOL.** (3 cr for 3-348, 2 cr for 3-349; prereq sr and ¶3-641 for 3-348...3-348 and ¶3-641 for 3-349)
- 3-352 (EdT 68M). **TEACHING SECONDARY SCHOOL SCIENCE.** (3 cr; prereq minor only)
- 3-356, 3-357, 3-358 (EdT 68A, B, C). **TEACHING SECONDARY SCHOOL SCIENCE.** (3 cr fall, 1 cr wtr, 1 cr sp, total 5 cr; prereq sr, ¶3-651 for 2 qtrs)
Procedures in selecting and organizing materials and in teaching secondary school science.
- 3-362 (EdT 67M). **TEACHING SECONDARY SCHOOL MATHEMATICS.** (3 cr; prereq minor only)
- 3-365, 3-366, 3-367 (EdT 67A, B, C). **TEACHING SECONDARY SCHOOL MATHEMATICS.** (3 cr fall, 1 cr wtr, 1 cr sp, total 5 cr; prereq sr, ¶3-661 for 2 qtr)

Methods, materials, curricula, and principles of learning, pertinent to secondary school mathematics.

- 3-600 (EdT 52). STUDENT TEACHING.** (Cr ar; prereq Δ)
Supervised teaching for students wishing to elect credits in student teaching in addition to regular requirements.
- 3-601 (EdT 73). STUDENT TEACHING IN BUSINESS SUBJECTS.** (3-9 cr [9 cr for majors, 3 cr for minors]; prereq SeEd 3-155 and $\#$)
Required of all students majoring or minoring in business education.
- 3-606 (EdT 60). STUDENT TEACHING IN LIBRARY SCIENCE.** (2-6 cr; prereq sr, Lib 5-201, 5-202, 5-102, 5-302, 5-303, and 5-205, or $\#$)
For both liberal arts college graduates and college of education undergrads intending to become school librarians.
- 3-621 (EdT 75). DIRECTED EXPERIENCES IN TEACHING IN ENGLISH, SPEECH, LANGUAGE ARTS.** (6-9 cr; prereq 3-324 and 3-325 with instructor's recommendation for continuation)
- 3-631 (EdT 70). STUDENT TEACHING IN MODERN LANGUAGES.** (3 cr on campus, 6 cr off campus, total 9 cr; prereq sr and 3-334, 3-335 during same yr)
- 3-636 (EdT 71). STUDENT TEACHING IN LATIN.** (3-9 cr [total 9 cr all off campus]; prereq sr and 3-337, 3-338 during same yr)
- 3-640 (EdT 69J). STUDENT TEACHING: SOCIAL STUDIES JUNIORS.** (1 cr; prereq 3-150 or $\#$ 3-150)
- 3-641 (EdT 69). STUDENT TEACHING IN SOCIAL STUDIES.** (3 cr sr yr on campus, 6 cr off campus, total 9; prereq sr, $\#$ 3-348, 3-349; satis completion of each qtr nec for continuation)
- 3-651 (EdT 68). STUDENT TEACHING IN SCIENCE.** (1 or 3 or 6 cr; prereq sr, $\#$ 3-356, 3-357, 3-358, and satis completion of each qtr nec for continuation)
- 3-661 (EdT 67). STUDENT TEACHING IN MATHEMATICS.** (1 or 3 or 6 cr; prereq sr, Math 3-160 or $\#$ Math 3-161 and 3-365, 3-366, 3-367 during same yr; satis completion of each qtr nec for continuation)
- 5-100 (EdCI 101A). DRIVER EDUCATION I.** (4 cr; prereq Δ)
Materials and methods of driver education, building a plan for driver education for a specific school; behind-the-wheel training. Valid Minnesota driver license required.
- 5-101 (EdCI 101B). DRIVER EDUCATION II.** (4 cr; prereq 5-100 and Δ)
- 5-105 (EdCI 105). AUDIO-VISUAL MATERIALS IN EDUCATION.** (3 cr; prereq sr)
Characteristics, advantages, limitations, and practical classroom use of audio-visual materials of nonprojected and projected types. Practice in operation of audio-visual equipment.
- 5-106 (EdCI 106). COORDINATING AN AUDIO-VISUAL EDUCATION PROGRAM.** (3 cr; prereq 5-105 or $\#$)
Criteria for equipment, facilities, and materials; in-service training of teachers; problems in schools or industry.
- 5-107 (EdCI 107). RADIO AND TELEVISION IN EDUCATION.** (3 cr; prereq 9 cr in education)
Production, techniques of classroom use, selection of equipment, teaching appreciation, and the administration of radio and television in the schools.
- 5-108 (EdCI 108). NONPROJECTED AUDIO-VISUAL MATERIALS AND EQUIPMENT LABORATORY.** (3 cr; prereq 5-105 or $\#$ 5-105)
Planning and making nonprojected materials for audio-visual education; use of materials and equipment.
- 5-109 (EdCI 109). PROJECTED AUDIO-VISUAL MATERIALS AND EQUIPMENT LABORATORY.** (3 cr; prereq 5-105 or $\#$ 5-105)
Planning and making projected materials for audio-visual education; use of materials and equipment.
- 5-110 (EdCI 105A). APPLIED INSTRUCTIONAL MEDIA EVALUATION AND SELECTION.** (3 cr; prereq 5-105)
Analysis of traditional and newer types of audio-visual materials; emphasis on selection applied to content, learning situations, and technical quality; opportunity for students to follow subject area and grade-level interests.
- 5-112 (EdCI 112). FAMILY LIFE EDUCATION.** (3 cr)
Sources and types of materials available; techniques of family life education, preparation and evaluation of instructional materials.

Description of Courses

- 5-113 (EdCI 113). **PRINCIPLES OF SECONDARY SCHOOL CURRICULUM.** (3 cr; prereq 3-155 or equiv)
Fundamental principles; curricular concepts, special services, student activity programs, instructional instruments, administrative systems, and future trends.
- 5-114 (EdCI 114). **INTERDISCIPLINARY APPROACHES TO CURRICULUM.** (3 cr)
Rationale, status, and trends, design, operation and evaluation of the core curriculum.
- 5-129 (EdCI 129). **TRENDS AND ISSUES IN SECONDARY CURRICULUM.** (3 cr; prereq 5-113 or equiv)
Research findings and analysis of current proposals at the national, state, and local levels.
- 5-131 (EdCI 168A). **INSTRUCTIONAL SIMULATIONS AND LEARNING GAMES: DEVELOPMENT AND CLASSROOM USE.** (3 cr)
Background, development factors, subject-matter models, and procedures for use of simulation and games materials; analysis of the value of such material.
- 5-155 (EdCI 155). **MATERIALS LABORATORY FOR SOCIAL STUDIES TEACHERS.** (3 cr; prereq #)
Printed and audio-visual materials useful in social studies classes.
- 5-167 (EdCI 167). **ECONOMIC EDUCATION PROGRAMS.** (1-3 cr; prereq Econ 1-002 or equiv or #)
Conceptual framework of economic education through analyzing its research, objectives, philosophy, scope, and curricular sequence.
- 5-168 (EdCI 168). **CURRENT DEVELOPMENTS IN THE SOCIAL STUDIES.** (3 cr; prereq grad or #)
Contemporary literature, curricular trends, and developments in methods.
- 5-169 (EdCI 169). **STUDENT ACTIVITY PROGRAMS IN SECONDARY SCHOOLS.** (3 cr; prereq 3-155)
Values, purposes, and practices in organizing, sponsoring, and evaluating student activity programs.
- 5-170 (EdCI 170). **PROGRAMS AND PROCEDURES OF CURRICULUM DEVELOPMENT.** (3 cr; prereq 5-113 or Elem 5-100)
Leadership in procedures; operational processes; major considerations in planning and organizing; interpersonal relationships, and evaluation of improvement programs.
- 5-172 (EdCI 172). **SUPERVISION OF SECONDARY INSTRUCTION.** (3 cr; prereq 5-113)
Achievement of appropriate teaching expectations focusing on problems of personnel responsible for their improvement.
- 5-173 (EdCI 173). **PREPARATION OF CURRICULUM MATERIALS.** (3 cr; prereq 5-113 or Elem 5-100)
Selecting and organizing units, courses of study, curriculum guides and writing materials, individually and in groups.
- 5-177 (EdCI 177). **DIRECTING SECONDARY SCHOOL SPEECH ACTIVITIES.** (3 cr; prereq Spch 1-101 or 1-102 and 1-106 or #)
Philosophy, organization, and administration of extemporaneous speaking, oratory, interpretive reading, and debate.
- 5-189 (EdCI 189). **MATERIALS AND CURRICULUM CONSTRUCTION IN MODERN LANGUAGES.** (3 cr; prereq 5-385 and #)
Curriculum development, preparation of units, testing techniques; materials for classroom, language laboratory, televised instruction, and programmed learning.
- 5-194 (EdCI 195A). **CURRICULUM DEVELOPMENT IN SECONDARY ENGLISH AND SPEECH.** (3 cr; prereq 3-326 or equiv)
Analysis and evaluation of curricula and trends; emphasis on articulation.
- 5-195 (EdCI 195B). **SOURCES FOR CURRICULUM DEVELOPMENT IN ENGLISH AND SPEECH.** (3 cr; prereq 5-194 or #)
Implications from anthropology, sociology, psychology, rhetoric, dialectology and dialect geography, mathematical linguistics, logic, and semantics.
- 5-321 (EdCI 122A). **TEACHING LITERATURE IN SECONDARY SCHOOLS.** (3 cr; prereq 3-155 or jr-sr high school tchg exper)
Background for guidance in reading of secondary school students; services of information and theory in development of program of instruction in literature.
- 5-322 (EdCI 122B). **TEACHING RHETORIC AND COMPOSITION IN SECONDARY SCHOOLS.** (3 cr)
Contemporary directions in rhetorical theory and analysis of recent curriculum developments bearing on the teaching of oral and written composition.

Secondary Education

- 5-323 (EdCI 122C). TOPICS IN LANGUAGE AND THE TEACHING OF ENGLISH.** (3 cr)
Psychological, linguistic, philosophical, sociological perspectives on language; cognitive and affective implications of language in discourse and in art; minority dialects, developmental aspects of language use, comparative grammatical systems and implications for English curriculum development.
- 5-340 (EdCI 140). TEACHING OF SPEECH.** (3 cr; prereq Spch 1-101 or 1-102 and 1-106 or #)
Methods and techniques of teaching speech in the high school classroom; social framework of spoken communication and responsibilities of the individual speaker.
- 5-344 (EdCI 144). TEACHING READING IN SECONDARY SCHOOLS.** (3 cr; prereq 9 cr in education)
Procedures, objectives, and materials for teaching reading in subject-matter fields.
- 5-371 (EdCI 171). WORKSHOP: CURRICULUM LABORATORY PRACTICE.** (0-3 cr per qtr; prereq 5-113 or Elem 5-100, #)
Analysis and construction of units, courses of study and curricula according to needs, interests, level and specialization.
- 5-382. TESTING AND EVALUATION IN FOREIGN LANGUAGE TEACHING AND LEARNING.** (3 cr; prereq PsyF 5-120)
Standardized achievement, proficiency, aptitude, and attitude tests in foreign languages; building test items for cognitive, affective, and psychomotor domains; techniques for evaluating curricula and teaching practices.
- 5-385 (EdCI 185). ADVANCED COURSE IN THE TEACHING OF MODERN LANGUAGES.** (3 cr)
New curricula, classroom procedures; use of language laboratory and other media and evaluation techniques. Open to teachers of modern languages and registrants in language institutes.
- 5-390 (EdCI 190). CURRENT DEVELOPMENTS IN SECONDARY SCHOOL SCIENCE TEACHING** (3 cr; prereq 3-356, 3-357, 3-358, or 3-352 or equiv undergrad courses or exper in teaching science)
Curricula, methods, materials of instruction, evaluation.
- 5-391 (EdCI 193A). METHODS AND MATERIALS FOR TEACHING PHYSICAL SCIENCE.** (3 cr; prereq 3-356, 3-357, 3-358, or 3-352 or equiv)
Individualized instruction in laboratory techniques and equipment with application to classroom use.
- 5-392 (EdCI 193B). METHODS AND MATERIALS FOR TEACHING BIOLOGICAL SCIENCES.** (3 cr; prereq 3-356, 3-357, 3-358, or 3-352 or equiv)
Individualized instruction in laboratory techniques and equipment with application to classroom use.
- 5-393 (EdCI 193C). METHODS AND MATERIALS FOR TEACHING EARTH SCIENCES.** (3 cr; prereq 3-356, 3-357, 3-358, or 3-352 or equiv)
Individualized instruction in laboratory techniques and equipment with applications to classroom use.
- 5-396 (EdCI 196). METHODS OF TEACHING ENGLISH AS A SECOND LANGUAGE.** (3 cr; prereq Ling 5-001 or #)
Principles of selection, sequencing, and presentation of instructional materials at various grade levels.
- 5-602. THE DRIVER SIMULATOR.** (3 cr; prereq teacher in service, 5-100 and #)
Working with the simulator program to improve, expand, and reduce the cost of conventional driver education.
- 5-609 (EdCI 199E). INTERNSHIP.** (Cr ar; prereq MED students)
- 5-674, 5-675, 5-676 (EdCI 174, 175, 176). CLINICAL METHODS AND PRACTICES IN SPEECH PATHOLOGY.** (Cr ar; prereq SSPA 5-502, 5-503, 5-504, and #)
Case histories and analysis; testing and diagnosis of speech defects; techniques and work programs; practical clinical work.
- 5-697 (EdCI 197). PRACTICUM: TEACHING ENGLISH AS A SECOND LANGUAGE.** (3 cr; prereq 5-396 or #)
Supervised observation and teaching of classes in English for students whose native language is not English.

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

8-104 (EdCI 204). SOCIAL STUDIES CURRICULUM

Description of Courses

- 8-188. SEMINAR: RESEARCH IN SECOND LANGUAGE LEARNING AND TEACHING
- 8-194 (EdCI 294). STRATEGIES AND PROBLEMS OF INSTRUCTION IN ENGLISH
- 8-322 (EdCI 222). SEMINAR: SECONDARY CURRICULUM AND INSTRUCTION
- 8-340 (EdCI 240). WORKSHOP: IMPROVEMENT OF INSTRUCTION
- 8-341 (EdCI 241). SEMINAR: ADVANCED STUDY IN SUPERVISION AND CURRICULUM DEVELOPMENT
- 8-387 (EdCI 289). SEMINAR: FOREIGN LANGUAGE EDUCATION
- 8-642 (EdCI 242). FIELD PRACTICUM: SUPERVISION AND CURRICULUM DEVELOPMENT
- 8-801° (EdCI 201). PROBLEMS: TEACHING SOCIAL STUDIES
- 8-805° (EdCI 205). PROBLEMS: AUDIO-VISUAL EDUCATION
- 8-807° (EdCI 207). PROBLEMS: RADIO-TELEVISION EDUCATION
- 8-825° (EdCI 225). PROBLEMS: SECONDARY SCHOOL SUPERVISION
- 8-869.° INFORMATION SOURCES IN FOREIGN LANGUAGE TEACHING AND RESEARCH
- 8-870.° SEMINAR: CURRICULUM, LEARNING, AND TEACHING OF FOREIGN LANGUAGES IN ELEMENTARY AND SECONDARY SCHOOLS
- 8-871° (EdCI 271). PROBLEMS: CURRICULUM CONSTRUCTION
- 8-887° (EdCI 287). RESEARCH FOUNDATIONS OF SECONDARY SCHOOL SCIENCE TEACHING
- 8-892 (EdCI 292). INTRODUCTION TO RESEARCH IN ENGLISH AND SPEECH EDUCATION
- 8-895 (EdCI 295). READINGS IN ENGLISH AND MODERN LANGUAGE EDUCATION
- 8-896° (EdCI 296). PROBLEMS: TEACHING ENGLISH
- 8-897 (EdCI 297). RESEARCH IN ENGLISH AND SPEECH EDUCATION
- 8-936 (EdCI 236). FIELD STUDY IN GENERAL CURRICULUM

VOCATIONAL EDUCATION (VoEd)

FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-100. VOCATIONAL EDUCATION TUTORIAL

INDEX

	Page		Page
Academic Secondary Curricula, Admission to	6	College Personnel Work, <i>see</i> Educational Psychology	
Administration, <i>see</i> Educational Administration		Combined Programs with College of Liberal Arts	4
Admission		Combined Programs with IT	5
Admission Procedures	9	Combined Programs in Science	72
Admission to Special Programs	6	Committee on Student Scholastic Standing	12
Admission to Academic Secondary Curriculum	6	Correspondence Courses	12
Admission from Colleges Outside the University	7	Counseling and Student Personnel Psychology	27, 85-86
Admission with 3 or More Years of College	7	Counselor Education, <i>see</i> Educational Psychology	
Admission Requirements	5	Courses of Study	3
Admission as an Adult Special Student	7	Crippled Children, <i>see</i> Physically Handicapped	
Admission with Advanced Standing	10	Curricula (Section II)	17
Advanced Standing, Examination for .	10	Dance Education	60
Advisers, Faculty	12	Degrees and Honors	9
Agricultural Education	17-19, 77-79	Description of Courses (Section III) . .	77
Air Science, <i>see</i> ROTC		Disadvantaged Children and Youth . .	28
Amount and Quality of Work	8	Distributive Education	23-25, 82-83
Application for a Degree	11	Earth Science	69
Art Education	18-21, 79-80	Economics	25
Athletic Coaching Certificate	57	Education Courses	83-84
Awards and Scholarships	14-15	Education Library and Instructional Materials Center	13
Balance Sheet, Senior	11	Educational Administration	26, 84-85
Biological Science	69	Educational Psychology	26, 85-91
Blind and Partially Sighted Children, <i>see</i> Visually Handicapped		Educational Resources and Develop- ment Council	13
Bureau of Field Studies and Surveys . .	13	Educationally Disadvantaged Children	35
Bureau of Recommendations	13	Elementary Education	31, 91-94
Business Education	22-23, 80-81	Emotionally Disturbed Children	28
Camping and Outdoor Education	64	English	36
Center for Curriculum Studies	14	Entrance Requirements	5-7
Certification of Teachers	12	Evening Courses	12
Change of Major	10	Examination for Advanced Standing . .	10
Change of Registration	10	Examination for Credit	10
Chemistry	70	Extension Courses	12
Child Psychology	81-82	Faculty Advisers	12
Children with Outstanding Abilities . .	30	<i>Fees, see General Information Bulletin</i>	
Class Schedule	77		
Clinical Experiences, Department of . .	12		
Coaching Certificate, Athletic	57		

Index

	Page	Page
Field Studies and Surveys, Bureau of	13	Master of Education Degree 15 (<i>also see</i> individual programs)
Financial Assistance, <i>see</i> Scholarships		Mathematics 48-50
Foreign Languages	37	Mathematics Education 50, 101-102
French	38	Mentally Retarded Children 29
General Information (Section I)	3	Methods and Student Teaching, <i>see</i> Clinical Experiences
Geography	40	Military Science, <i>see</i> ROTC
Geology, <i>see</i> Earth Science		Music Education 50-53, 102-105
German	38	
Grades	8	Naval Science, <i>see</i> ROTC
Graduate Study in Education	14	Nursery School Certification 35
Graduation Requirements	7	
Handicapped Children, <i>see</i> Special Education		Office of Educational Research, Planning and Development 14
Health Education Requirement	9	Orientation-Registration 13
Hearing-Impaired Children	29	Outdoor Education 64
Higher Education	41, 83-84	
History	41	P-N Grading 8
History and Philosophy of Education	42, 95-96	Philosophy of Education 42
Home Economics Education	42-44, 96-98	Physical Education for Men 54-57
Home Economics Extension	42	Physical Education for Men and Women, Course Listings 105-114
Honors, <i>see</i> Degrees		Physical Education for Women 57-60
Hospital Recreation, <i>see</i> Therapeutic Recreation		Physical Examination 11
Industrial Education	45-46, 98-101	Physically Handicapped Children 30
Information Desk	12	Physics 70
Institute of Child Development	13	Placement Service 13
Instructional Materials Center	13	Political Science 67, 68
Journalism	47	Probation 11
Junior Year, Admission to	10	Procedures and Practices in the College 9
Kindergarten Endorsement, <i>see</i> Elementary Education		Professional Education Requirements 8
Laboratory Schools	13	Psycho-Educational Center 14
Language Arts	47	Psychological Foundations 27, 86-88
Latin	39	Public Recreation and Parks 63
Learning Disabilities, Children with	29	
Library Science	48	Quality of Work 8
Limited Enrollment	7	
Manual Arts Therapy	46	Recommendations, Bureau of 13
		Recreation and Park Administration 114-116
		Recreation Program Leadership 62
		Registration Procedures 10
		Requirements for Admission 5
		Requirements for Graduation 7
		Reserve Officers Training Corps 5
		Residence Requirements 9

Page	Page
Romance Languages, <i>see</i> Foreign Languages	Speech Pathology and Audiology . . . 75-76
Russian 39	Student Personnel Office 12
Scholarships 14, 15	Student Scholastic Standing, Committee on 12
Scholastic Standing, <i>see</i> Committee on Student Scholastic Standing	Student Services 12
School and Community Health Education 64-67, 116-117	Student Teaching, Application and Registration for 11
School of Physical Education 53-67	Student Teaching, Office of, <i>see</i> Clinical Experiences
School Psychology Training Program 27, 88-89	Supervision and Administration of Special Education Programs 31
School Social Work 68	Symbols in Course Descriptions 77
Science 68-72	Teacher Certification 11
Secondary Education 72, 117-122	Therapeutic Recreation 63
Senior Balance Sheet 11	Theatre, <i>see</i> Speech, Communication, and Theatre Arts
Senior Physical Examination 11	Transfer Students 4-7
Social Studies 72	Unsatisfactory Work 11
Socially Maladjusted Children 28	Visually Impaired 31
Sociology 73	Vocational Education 122
Spanish 39	Voluntary and Youth Serving Agencies 63
Special Agencies 13	
Special Education 28, 89-91	
Special Programs, Institute of Technology 5	
Speech, Communication, and Theatre Arts 73-75	

Description of Course Numbering System

Within the College of Education the new course numbering system basically identifies courses as follows:

1-000 to 1-998 — Lower Division

3-000 to 3-998 — Upper Division

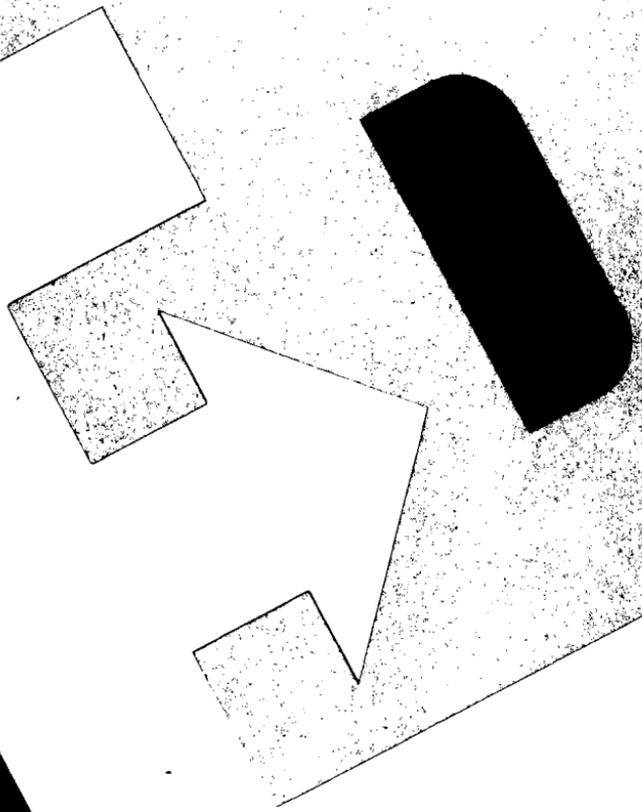
5-000 to 5-998 — Upper Division and/or Graduate

8-000 to 8-998 — Graduate School registrants only

As the College of Education changed over to the new pattern, there was a related shift to new prefixes in some areas. The following items contain the major changes:

1. All courses formerly labeled EdCI have now been assigned departmental identification: Elementary Education (Elem), Secondary Education (SeEd), or Educational Psychology.
2. The Division of Educational Psychology has further identified its program areas by individual course prefixes: Counseling and Student Personnel Psychology (CSPP), Psychological Foundations (PsyF), School Psychology (SchP), and Special Education (SpEd).
3. Those courses previously listed under Methods and Student Teaching (EdT) have now been given departmental designations and can be found in the listings for Elem, SeEd, BsEd, DE, and SpEd.
4. Physical Education has simplified its pattern to list all of its offerings under one prefix (PE) with individual course offerings marked as open to men only, to women only, or to men and women. Those physical education courses numbered under 1-500 are the former nonprofessional offerings; those courses numbered 1-500 and above are open *only* to students in the professional programs.

College of Education
Continuing Education Classes



UNIVERSITY OF MINNESOTA

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See list of graduate advisers on page 27

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August 31, 1970

UNIVERSITY OF MINNESOTA BULLETIN

Published by the University of Minnesota, Office of Admissions and Records, 105 Morrill Hall, Minneapolis, Minnesota 55455, January through September inclusive. One issue in January, two issues in March, two issues in April, three issues in May, one issue in June, five issues in July, three issues in August, and one issue in September. Second class postage paid at Minneapolis, Minnesota. Send change of address notices and other communications to Office of Admissions and Records, Minneapolis, Minnesota 55455.

The contents of this bulletin and other University bulletins, publications, or announcements are subject to change without notice.

Continuing Education Classes

(Late Afternoon and Saturday Morning Classes)

GENERAL INFORMATION

The following program of late afternoon and Saturday morning classes is arranged by the College of Education for teachers in service. 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.

For admission application, credentials examination fees of \$10 are required for undergraduate and adult special students, and \$15 for graduate students.

The fee for part-time registration in the College of Education is \$11.25 per credit for residents of the state and \$31.75 per credit for nonresidents. If 6 or more credits are taken, a student services fee of \$41 is required.

The fee in the Graduate School for 6 credits or less or thesis-only is \$75 for residents and \$190 for nonresidents. Graduate students taking more than 6 credits pay \$150 (resident) and \$380 (nonresident). The student services fee of \$41 is required of all students in the Graduate School except teachers in service taking less than 6 credits.

Other fees include a \$3 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 are expected to register during the advanced registration period (alphabetical control) or during the week before classes begin. Early registration is advised for classes which are limited in size.

Teachers who find it impossible to come in during the regular registration period may register from Monday through Friday of the first week of the quarter, but unless the procedure is started by early afternoon, it is unlikely that it can be completed in time for attending a late afternoon class on the same day. Closing hour for the *final* step in registration at the Office of Admissions and Records is 4 p.m., Monday through Friday afternoons of that week.

For students admitted to the Graduate School the location of registration materials depends on the major. For information, these students should check in 316 Johnston Hall or call 373-4584. 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; (b) those not so registered should report to the Office of Admissions and Records, Window 2, in Morrill Hall.

Special arrangements will be made for registering graduate and undergraduate students taking *only* Saturday classes and who find it *impossible* to register during the regular registration period. These students may report to register at 206 Burton Hall on Saturday morning of the first week of classes (fall quarter, October 3). Since advisers are not usually available on Saturday morning, students who register this late should make prior arrangements for advising. Veterans registering under Public Laws 815 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 as early as possible, and certainly before registration. Only those credits earned *in the first quarter* of adult special registration may be transferred to a Graduate School record. Adult special students are not permitted to take courses numbered 8-000 or above as these courses are reserved for students who have been admitted to the Graduate School.

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 apply *early in 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, Morrill Hall. See the *College of Education Bulletin* 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 admission 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, including transcripts, must be filed *at least 4 weeks* before the opening of the quarter for which the student hopes to register. (See deadline dates in Calendar, page . . .). 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.

A student previously registered in the Graduate School but not enrolled during the past 2 years must reapply for admission. Those admitted for M.A. programs who now wish to pursue studies leading to the Specialist Certificate or the Ph.D. degree also should reapply, specifying the advanced program and major in which they are interested.

Evening and Independent Study Offerings

Additional courses are available through evening and special classes and independent (correspondence) study. 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, Minnesota 55455.

No graduate credit is allowed for courses completed through independent (correspondence) study. Graduate students wishing to take evening classes appropriate to their programs will register jointly in the General Extension Division and the Graduate School.

Research Problems

In all major areas, research problems courses (with credits and hours arranged) are available for students who are candidates for the M.A. degree, Plan B. These courses are listed in the *Graduate School Bulletin* 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.* A nominal fee is required for each placement season during which service is desired. The bureau receives a great many requests for teachers, both experienced and inexperienced. The office of the Bureau of Recommendations is located at 400-12th Avenue S.E., Minneapolis, Minnesota 55414.

Human Rights

The University of Minnesota is guided by the principle that there shall be no differences in the treatment of persons because of race, creed, color, sex, or national origin and that equal opportunity and access to facilities shall be available to all. This principle is particularly applicable in the admission of students in all colleges, and in their academic pursuits. It is also applicable in University-owned or University-approved housing, in food services, student unions, extracurricular activities, and all other student services. It is a guiding policy in the employment of students either by the University or by outsiders through the University and in the employment of faculty and civil service staff.

Summary of Class Schedules

At the back of this bulletin is a summary of class schedules by quarters, days, and hours of offerings.

Symbols

The following symbols and explanations are used throughout the course description section which does not carry page footnotes:

° Courses through which it is possible for graduate students to prepare Plan B papers.

† To receive credit, a student must complete all courses listed after dagger.

‡ 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."

Please check the quarterly *Class Schedule* for building abbreviations. A *Class Schedule* will be given to each student with his registration material.

Hours and Days

Class hours identified by Roman numerals begin at the times shown below:

I	II	III	IV	V	VI	VII	VIII	IX	X
8:15	9:15	10:15	11:15	12:15	1:15	2:15	3:15	4:15	5:15

A class listed IX-X TTh meets the ninth through the tenth hours Tuesday and Thursday, the hyphen always indicating "through." The days of the week are abbreviated M, T, W, Th, F, S.

PROGRAM OF COURSES

FALL QUARTER, 1970

See page 4 for explanation of symbols

ADULT SPECIALS: Only those credits earned in the first quarter of adult special registration may be transferred to a Graduate School record. Courses numbered 8-000 or above are not open to adult special students.

Please check the current *Class Schedule* for revisions in course listings. Students are to register with the prefix and new course numbers although old course designations are listed within the parentheses for information only.

Agricultural Education (AgEd)

Persons interested in courses in agricultural education should write directly to the Department of Agricultural Education, University of Minnesota, St. Paul, Minnesota 55101.

Art Education (ArEd)

5-301 (151). *Curriculum Building in Art Education: Critical Survey.* (3 cr; limited to 30 students) I-II S, WuH 110, Ar

5-389 (189). *Application of Aesthetic Theory in Education.* (3 cr; limited to 35 students) III-IV S, WuH 130, Ar

8-306 (296). *Seminar: Art Education.* (1 cr) IX-X T, WuH 130, Gayne

Business Education (BsEd)

5-100 (130). *Instruction in Business Data Processing.* (3 cr) IX-X W, PeikH 255, Hopkins

5-101 (131). *Advanced Teaching of Technical Business Subjects.* (3 cr) III-IV S, PeikH 255, McLean

5-106 (157). *Organization and Supervision of Business Education.* (3 cr; prereq #) I-II S, PeikH 275, Halvas

5-108 (161). *Curriculum Construction in Business Education.* (3 cr; prereq SeEd 5-113) IX-X T, PeikH 255, Price

Child Psychology (CPsy)

8-343 (216). *Advanced Cognitive Development*. (3 cr; prereq 12 cr in child psychology or psychology) 3:45-5:00 MW, CD 218, Charlesworth

Distributive Education (DE)

5-100 (136). *Organization and Administration of Distributive Education*. (3 cr; limited to 30 students) 4:00-6:30 W, PeikH 275, Klaurens, Meyer

5-305 (147). *Teaching Merchandise Display*. (3 cr; limited to 20 students; prereq #) 4:00-6:30 M, PeikH 275, Klaurens

Education (Educ)

5-184 (EdCI 184). *Supervision of Student Teaching*. (3 cr; prereq 15 cr in education or #) III-IV S, CD 105, Bruning

8-228 (EdCI 228). *Problems: Higher Education and Teacher Education*. (Cr ar; prereq #) 7:30-9:30 p.m. M, off campus, Ammentorp, Corcoran, Eckert, Williams

8-250 (EdCI 250). *Higher Education in the United States*. (3 cr; prereq 18 cr in education or yr of grad study in any field) 3:45-5:00 TTh, Pt 111, Eckert

8-251 (EdCI 251). *Curriculum Trends in American Colleges*. (3 cr; prereq 18 cr in education or yr of grad study in any field) I-II S, Bu 125, Eckert, Moen

Educational Administration (EdAd)

8-201 (201). *Foundations of Educational Administration*. (3 cr) IX-X Th, Bu 120, Ammentorp

8-202 (202). *Foundations of Educational Administration*. (3 cr) III-IV S, Bu 120, Mazzoni

8-210 (210). *Public School Finance*. (3 cr) I-II S, Bu 123, Mueller

8-215 (215). *The Elementary School Principalship*. (3 cr; prereq 8-201 and 8-202 or #) IX-X T, Pt 102, Cross

8-218 (218). *Seminar: The Social Organization of Schools*. (3 cr; limited to 15 students; prereq EdAd major or #) IX-X W, CD 140, Popper

8-227 (227). *Public School Personnel Programs*. (3 cr) IX-X W, CD 216, Stark

8-265 (265). *Administering the High School Program*. (3 cr) IX-X M, PeikH 155, Nickerson

8-274 (274). *The Junior College*. (3 cr) IX-X M, CD 105, Morgan

Educational Psychology

COUNSELING AND STUDENT PERSONNEL PSYCHOLOGY (CSPP)

- 5-101 (EPsy 124). *Foundations of Career Development*. (3 cr) IX-X T, Bu 123, Tennyson
- 5-130 (EPsy 133). *Introduction to Guidance*. (3 cr; prereq 9 cr in education) IX-X W, Pt 102, Tennyson

PSYCHOLOGICAL FOUNDATIONS (PsyF)

- 3-670 (EPsy 50). *Human Relations and Group Dynamics*. (3 cr) 7:00-10:00 p.m. MW, Bu 123, A Anderson, Callahan, Foxley, David W Johnson
- 5-120 (EPsy 110). *Educational Measurement in the Classroom*. (3 cr) IX-X MW, NH 207, Corcoran
- 5-143 (EPsy 195). *Experimental Analysis of Instruction II*. (3 cr; prereq 5-140 or Psy 5-017 or #) IX-X TTh, NH 207, Hively
- 5-640 (EPsy 199). *Research Practicum in Programmed Instruction and Behavior Modification*. (1-3 cr [12 cr max]; prereq 5-142 or 5-143 or #) IX-X W, Bu 123, Hively
- 8-520 (EPsy 209). *Seminar: Research Planning*. (1 cr) IX-X T, Bu 330, Hoyt
- 8-921 (EPsy 245A). *Problems: Curriculum Evaluation*. (1-3 cr [9 cr max]; prereq 8-621 or #...8-111 and 8-120 recommended) IX-X M, PeikH 155, Welch

SPECIAL EDUCATION (SpEd)

- 5-100. (EPsy 177). *Childhood Language Development: Classroom Implications*. (3 cr) IX-X T, 1 hr ar, J 2, Moores
- 5-180 (EPsy 188). *Education of the Disadvantaged*. (3 cr; prereq 12 cr in psychology, educational psychology or sociology) IX-X TTh, J 4, Wood
- 5-301 (EPsy 163). *Contingency Management in Special Education Systems*. (3 cr; limited to 16 students) IX-X W, 1 hr ar, Pt 110, S Deno

Elementary Education (Elem)

- 5-100 (EdCI 119). *Elementary School Curriculum*. (3 cr; limited to 40 students; prereq 3-101) III-IV S, Bu 123, Ar
- 5-107 (EdCI 151). *Diagnosis and Treatment of Learning Difficulties*. (3 cr; limited to 40 students) I-II S, Bu 120, Ar
- 5-108 (EdCI 150). *Supervision and Improvement of Instruction*. (3 cr; limited to 25 students; prereq 9 cr in education) IX-X T, NH 201, Lambert
- 5-316 (EdCI 153). *Teaching and Supervision of English in the Elementary Schools*. (3 cr; limited to 40 students; prereq 3-316 or elem school tchgr exper) IX-X W, Bu 125, Chase

- 5-317 (EdCI 153A). *Materials Laboratory for Teaching English in Elementary Schools*. (3 cr; limited to 40 students; prereq 3-316 or elem tchg exper) IX-X Th, Bu 123, Dykstra
- 5-334 (EdCI 145). *Reading Difficulties*. (3 cr; limited to 40 students; prereq 5-331 or SeEd 5-344) IX-X M, Bu 120, Schreiner
- 5-346 (EdCI 103A). *Teaching Science in the Elementary School*. (3 cr; limited to 40 students; prereq elem tchg exper or #) IX-X M, Pt 102, Goossen
- 5-361 (EdCI 102). *Teaching Social Studies in the Elementary School*. (3 cr; limited to 40 students; prereq 3-101 or equiv) IX-X Th, Pt 214, Ryan
- 5-376 (EdCI 166). *Current Trends in Kindergarten Education*. (3 cr; limited to 40 students; prereq tchg exper in kindergarten or primary or #) IX-X T, Bu 120, H Hansen
- 8-331 (EdCI 243A). *Research Foundations for Reading Instruction*. (3 cr; limited to 15 students; prereq 5-331 and #) IX-X M, Bu 123, Manning

History and Philosophy of Education (HEd)

- 5-110 (110). *Intercultural Education: Social Science and Systems Perspectives*. (3 cr) IX-X M, Pt 110, Harkins
- 5-132 (132). *Education in the Third World*. (3 cr) IX-X Th, CD 105, Graham
- 5-141 (141). *Critical Issues in Contemporary Education*. (3 cr) IX-X W, Bu 120, Beck
- 5-155 (155). *History of Western Educational Thought*. (3 cr) IX-X T, PeikH 275, Bagley
- 5-191. *Professionalization and Teaching*. (3 cr) IX-X Th, Pt 110, Clark
- 5-200 (114). *Intercultural Education: Indian Americans*. (3 cr) IX-X T, Pt 214, Harkins
- 5-210 (152). *Applied Social Science and Education*. (3 cr) IX-X W, CD 105, Harkins

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, Minnesota 55101.

Industrial Education (Ind)

- 3-330 (35). *Fundamentals of Vocational Education*. (3 cr) IX-X W, PeikH 65, Miletich

- 3-340 (40). *Analysis and Course Organization*. (3 cr) IX-X Th, PeikH 155, Kavanaugh
- 5-301 (101). *Tests in Industrial Subjects*. (3 cr; prereq SeEd 3-155) IX-X Th, PeikH 155, Pucel
- 5-303 (103). *Instructional Aids*. (3 cr; limited to 24 students; prereq 3-360 or 5-360 or equiv) IX-X M, PeikH 50, Scholer
- 5-305 (155). *Critical Issues in Industrial Education*. (3 cr) IX-X W, PeikH 155, Kavanaugh
- 5-310 (107). *Coordination*. (3 cr; prereq 3-330 or 5-325 or #) IX-X T, PeikH 155, Smith
- 5-360 (100). *Industrial Instruction*. (3 cr; prereq 3-340, SeEd 3-155 and #) IX-X M, PeikH 65, Randleman

Mathematics Education (MthE)

- 5-311 (111). *Teaching and Supervision of Mathematics in the Elementary School*. (3 cr; limited to 36 students; prereq Elem 3-391 or #) IX-X MW, Pt 111, Stochl
- 5-312 (112). *Teaching and Supervision of Mathematics in the Secondary School*. (3 cr; prereq math tchg exper or #) IX-X MW, PeikH 335, Donovan Johnson
- 5-355 (155). *Mathematics for Slow Learning Children*. (3 cr; limited to 30 students; prereq 5-311 or Elem 3-391 or #) II-IV S, Pt 111, Post
- 8-590 (290). *Seminar: Mathematics Education*. (0-3 cr; prereq #) IX-X Th, PeikH 315, Jackson, Donovan Johnson, David C Johnson, Post

Music Education (MuEd)

- 5-214 (103). *Psychological Foundations*. (3 cr; prereq #) IX-X M, ScH 103, Caswell
- 5-441 (114). *Reading and Stylistic Interpretation of Choral Music*. (3 cr; prereq 5-431 or #) IX-X W, ScH 103 Caswell
- 8-281 (251). *Seminar: Curriculum Development*. (3 cr; prereq M.A. in music or music education) IX-X T, ScH 103, Borg

Physical Education

PHYSICAL EDUCATION (PE)

- 5-100 (PE 104). *Teaching Physical Education for the Handicapped Child*. (3 cr; prereq #) 4:00-6:00 M, 1 hr ar, NGW 3, Cato
- 5-123 (PE 140). *Analysis of Movement in Gymnastics*. (3 cr; prereq 3-111 and 3-174 or 3-322 or #) I-II S, 1 hr ar, CH 215, Bird

- 5-255 (PE 147). *Intramurals-Extramurals*. (3 cr) 4:00-5:30 MW, CH 214, Anderson
- 5-980 (PE 136). *Introduction to Research*. (3 cr; prereq #) 4:00-5:15 TTh, NGW 4, Wilson
- 8-110 (PE 260). *Administration: General Principles and Procedures*. (3 cr) III-IV S, 1 hr ar, NGW 4, Jaeger
- 8-120 (PE 290). *Kinesiology: Photographic and Cinematographic Analyses*. (3 cr; prereq 5-120 and #) IX-X T, 1 hr ar, CH 420, Stoner

SCHOOL HEALTH EDUCATION (Hlth)

- 5-150 (120). *Curriculum: Family Life and Sex Education in the Secondary Schools*. (3 cr; limited to 50 students) 4:00-6:00 W, 1 hr ar, NGW 3, Slocum

Secondary Education (SeEd)

- 5-105 (EdCI 105). *Audio-Visual Materials in Education*. (3 cr; prereq sr) I-II S, 1 hr ar, NH 211, Pearson
- 5-106 (EdCI 106). *Coordinating an Audio-Visual Education Program*. (3 cr; prereq 5-105 or #) IX-X T, WeH 206, Pearson
- 5-107 (EdCI 107). *Radio and Television in Education*. (3 cr; lab limited to 15 students; prereq 9 cr in education) Lect IX-X M, WeH 206, Pearson; Lab, sec 2, IX-X Th, WeH 206, Pearson
- 5-110 (EdCI 105A). *Applied Instructional Media Evaluation and Selection*. (3 cr; limited to 30 students; prereq 5-105) IX-X W, WeH 206, Newren
- 5-112 (EdCI 112). *Family Life Education*. (3 cr; limited to 30 students) IX-X W, BlegH 105, Hey
- 5-113 (EdCI 113). *Principles of Secondary School Curriculum*. (3 cr; limited to 40 students; prereq 3-155) IX-X Th, Pt 102, Hill
- 5-114 (EdCI 114). *Interdisciplinary Approaches to Curriculum*. (3 cr) IX-X Th, PeikH 325, Kimpston
- 5-129 (EdCI 129). *Trends and Issues in Secondary Curriculum*. (3 cr; prereq 5-113) IX-X W, PeikH 235, Kimpston
- 5-155 (EdCI 155). *Materials Laboratory for Social Studies Teachers*. (3 cr; limited to 15 students) IX-X M, PeikH 165, West
- 5-194 (EdCI 195A). *Curriculum Development in Secondary English and Speech*. (3 cr; limited to 20 students; prereq 3-326 or equiv) IX-X MW, PeikH 215, Shroyer
- 5-385 (EdCI 185). *Advanced Course in the Teaching of Modern Languages*. (3 cr) I-II S, PeikH 225, Birkmaier
- 8-322 (EdCI 222). *Seminar: Secondary Curriculum and Instruction*. (1 cr per qtr [total 3 cr]; prereq 5-113) IX-X M, PeikH 325, Ar
- 8-341 (EdCI 241). *Seminar: Advanced Study in Supervision and Curriculum Development*. (1 cr per qtr [total 3 cr]; prereq 5-113, 5-170, 5-172 or Elem 5-101) IX-X W, PeikH 225, Birkmaier, Hill

WINTER QUARTER, 1971

See page 4 for explanation of symbols

ADULT SPECIALS: Only those credits earned in the *first quarter* of adult special registration may be transferred to a Graduate School record. Courses numbered 8-000 or above are not open to adult special students.

Please check the current *Class Schedule* for revisions in course listings. Students are to register with the prefix and *new* course numbers although old course designations are listed within the parentheses for information only.

Agricultural Education (AgEd)

Persons interested in courses in agricultural education should write directly to the Department of Agricultural Education, University of Minnesota, St. Paul, Minnesota 55101.

Art Education (ArEd)

- 5-302 (152). *Curriculum Building in Art Education: Innovations.* (3 cr; limited to 35 students) I-II S, Ar
- 8-300 (284). *Research in Art Education.* (3 cr) III-IV S, Gayne
- 8-306 (296). *Seminar: Art Education.* (1 cr) IX-X T, Gayne

Business Education (BsEd)

- 5-102 (132). *Teaching the Basic Business Subjects.* (3 cr) IX-X T, Price
- 5-104 (139). *Office Coordination Techniques.* (3 cr, §DE 5-105) III-IV S, Halvas
- 5-110. *Business Education Programs Beyond High School.* (3 cr) IX-X W, Hopkins

Child Psychology (CPsy)

- 5-319 (179). *Clinical Procedures with Children.* (3 cr; prereq 12 cr in psychology, educational psychology, sociology, or child psychology) 4:15-5:30 TTh, Ar

- 8-333 (217). *Advanced Personality Development*. (3 cr; prereq #) 3:45-5:00 TTh, Ar
 8-347 (214). *Learning in Children*. (3 cr; prereq Psy 5-013 or #) 3:45-5:00 MW, Ar

Distributive Education (DE)

- 5-105 (139). *Coordination Techniques*. (3 cr; limited to 30 students) 4:00-6:30 W, Klaurens, Meyer
 5-310 (159). *Materials Laboratory: Distributive Education*. (3 cr; prereq 3-303 or 5-300 or #) 4:00-6:30 M, Ashmun, Klaurens

Education (Educ)

- 8-228 (EdCI 228). *Problems: Higher Education and Teacher Education*. (Cr ar; prereq #) 7:30-9:30 p.m. M, off campus, Ammentorp, Corcoran, Eckert, Williams
 8-250 (EdCI 250). *Higher Education in the United States*. (3 cr; prereq 18 cr in education or yr of grad study in any field) III-IV S, Corcoran
 8-251 (EdCI 251). *Curriculum Trends in American Colleges*. (3 cr; prereq 18 cr in education or yr of grad study in any field) 3:45-5:00 TTh, Eckert, Moen
 8-252 (EdCI 252). *Effective College Teaching*. (3 cr; prereq 18 cr in education or yr of grad study in any field) I-II S, Williams
 8-285 (EdCI 285). *Professional Education of Teachers*. (3 cr; prereq 15 cr in education incl 5-184 and 8-250 or HED 5-182 or CSPP 8-140 or #) III-IV S, Mork, Woestehoff

Educational Administration (EdAd)

- 8-202 (202). *Foundations of Educational Administration*. (3 cr) IX-X Th, Mazzoni
 8-216 (216). *Recent Research in Elementary School Administration*. (3 cr; prereq 8-215) IX-X T, Cross
 8-224 (224). *Legal Aspects of Public School Administration*. (3 cr) IX-X M, Hooker
 8-235 (235). *Seminar: Humanism in School Administration*. (3 cr; prereq 8-218, EdAd major or #) III-IV S, Popper
 8-264 (264). *The Secondary School Principalship*. (3 cr) IX-X W, Nickerson

Educational Psychology

PSYCHOLOGICAL FOUNDATIONS (PsyF)

- 5-141 (EPsy 193). *Psychological Analysis of Instruction*. (3 cr) IX-X MW, P Johnson

- 5-142 (EPsy 194). *Experimental Analysis of Instruction I*. (3 cr; prereq 5-140 or #) IX-X TTh, Hively
- 5-160 (EPsy 159). *Personality Development and Mental Hygiene*. (3 cr) IX-X MW, Rest
- 5-640 (EPsy 199). *Research Practicum in Programmed Instruction and Behavior Modification*. (1-3 cr [12 cr max]; prereq 5-142 or 5-143 or #) IX-X W, Hively
- 8-520 (EPsy 209). *Seminar: Research Planning*. (1 cr) IX-X T, Hoyt
- 8-521 (EPsy 254). *Measurement and Evaluation in Higher Education* (3 cr) IX-X MW, Corcoran
- 8-922 (EPsy 245B). *Problems: Curriculum Evaluation*. (1-3 cr [9 cr max]; prereq 8-921) IX-X M, Welch

SPECIAL EDUCATION (SpEd)

- 5-143 (EdCI 127A). *Methods of Developing Language for the Hearing Impaired*. (3 cr; prereq 5-100, SSPA 5-708 or #) IX-X Th, Kennedy
- 5-150 (EPsy 186). *Education of Emotionally Disturbed and Socially Maladjusted Children*. (3 cr; prereq grad or #) IX-X TTh, Ar
- 5-190 (EPsy 183). *Outstanding Abilities and the Educational Process*. (3 cr) 3:45-5:00 TTh, Feldman
- 5-301 (EPsy 163). *Contingency Management in Special Education Systems*. (3 cr; limited to 16 students) IX-X W, 1 hr ar, S Deno

Elementary Education (Elem)

- 5-100 (EdCI 119). *Elementary School Curriculum*. (3 cr; limited to 40 students; prereq 3-101) IX-X W, Goossen
- 5-107 (EdCI 151). *Diagnosis and Treatment of Learning Difficulties*. (3 cr; limited to 40 students) III-IV S, Ar
- 5-108 (EdCI 150). *Supervision and Improvement of Instruction*. (3 cr; limited to 40 students; prereq 9 cr in education) III-IV S, Ar
- 5-300 (EdCI 121). *Literature for the Elementary School*. (3 cr; limited to 40 students) I-II S, Odland
- 5-331 (EdCI 143A). *Teaching and Supervision of Reading in the Elementary School*. (3 cr; limited to 50 students; prereq 9 cr in education) IX-X M, D Pearson
- 5-332 (EdCI 143B). *Materials and Instructional Techniques of Elementary Reading*. (3 cr; limited to 40 students; prereq 3-331 or 5-331 or #) IX-X Th, Ar
- 5-334 (EdCI 145). *Reading Difficulties*. (3 cr; limited to 40 students; prereq 5-331 or SeEd 5-344) IX-X M, Schreiner

- 5-349 (EdCI 103B). *Elementary School Science: Curriculum and Supervision*. (3 cr; limited to 40 students; prereq 3-346 or 5-346) IX-X W, Humphreys
- 5-362 (EdCI 155A). *Materials Laboratory for Elementary Social Studies Teachers*. (3 cr; limited to 40 students; prereq 3-361 or 5-361 or #) IX-X T, Ellis
- 8-316 (EdCI 257). *Research in English Composition in Elementary Schools*. (3 cr; limited to 25 students; prereq 5-316 or equiv) IX-X W, Chase
- 8-332 (EdCI 243B). *Recent Research in Reading*. (3 cr; limited to 15 students; prereq #) IX-X M, Manning
- 8-361 (EdCI 206). *Curriculum Construction in Elementary Social Studies*. (3 cr; limited to 25 students; prereq 3-361 or 5-361 or #) IX-X T, Cogan

History and Philosophy of Education (HEd)

- 5-112 (112). *Intercultural Education: Spanish-American Populations*. (3 cr) IX-X M, Harkins
- 5-125 (125). *Adolescence in Changing Social Institutions*. (3 cr) IX-X Th, Clark
- 5-131 (131). *Comparative Education*. (3 cr) IX-X W, Beck
- 5-156 (156). *History of Ideas in American Education*. (3 cr) IX-X T and hrs ar, Bagley
- 5-201 (115). *Intercultural Education: Indian Americans*. (3 cr; prereq 5-200) IX-X T, Harkins
- 5-211 (153). *Social Planning and Education*. (3 cr) IX-X W, Harkins
- 8-232. *Seminar in Comparative Education: Education and National Development*. (Cr ar; prereq #) IX-X W, Graham

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, Minnesota 55101.

Industrial Education (Ind)

- 5-309 (109). *Conference Leading for Industry*. (3 cr; prereq #) IX-X T, Miletich
- 5-314 (105). *Administration of Industrial Education*. (3 cr; prereq 3-330 or #) IX-X Th, Van Tries
- 5-320 (110). *Vocational Guidance*. (3 cr; prereq SeEd 3-155) IX-X T, Ar
- 5-325 (125). *Philosophy and Practice of Industrial Education*. (3 cr, §3-330) IX-X M, Ar

- 5-330 (135). *Industrial Course Construction*. (3 cr, §3-340) IX-X T, Kavanaugh
- 8-310 (251). *Research*. (3 cr; prereq #) IX-XI W, Pucel

Mathematics and Education (MthE)

- 5-322 (122). *Materials Laboratory for Secondary School Mathematics Instruction*. (3 cr; limited to 30 students; prereq 5-312 or #) IX-XII M, Donovan Johnson
- 5-331 (131). *Current Developments in Elementary School Mathematics Instruction*. (3 cr; limited to 30 students; prereq 5-311 or #) IX-X MW, Post
- 5-366 (166). *Computer-Assisted Mathematics Instruction*. (3 cr; limited to 25 students; prereq 5-311 or 5-312 or SeEd 3-365 or #) II-IV S, David C Johnson
- 8-500 (200). *Theory and Classical Research in Mathematics Education*. (3 cr; prereq 5-311 or 5-312 or #) IX-X T, Donovan Johnson
- 8-590 (290). *Seminar: Mathematics Education*. (0-3 cr; prereq #) IX-X Th, Jackson, Donovan Johnson, David C Johnson, Post

Music Education (MuEd)

- 5-118 (171). *Research Techniques*. (3 cr; prereq 5-111) IX-X W, Turrentine
- 5-221 (106). *Music and the Humanities in the Secondary Schools*. (3 cr; prereq Mus 1-506, 1-603 or #) IX-X T, Steen
- 5-306 (112). *Teaching Music Literature*. (3 cr; prereq 3-011 or 3-302 or #) IX-X M, Borg
- 5-421 (124). *Selection, Conducting of Choral Materials*. (3 cr; prereq sr) IX-X W, Caswell
- 5-582 (145). *Selection of Instrumental Materials II*. (3 cr; prereq #) IX-X Th, Turrentine
- 8-282 (252). *Seminar: Curriculum Development*. (3 cr; prereq 8-281) IX-X T, Caswell

Physical Education

PHYSICAL EDUCATION (PE)

- 3-115 (PEMP 71). *Physiological Application to Sports*. (3 cr, §PubH 3-385, §PubH 3-386) 4:15-5:30 TTh, Serfass
- 5-110 (PE 124). *Supervision of School Health and Physical Education*. (3 cr, §Hlth 5-110; prereq #) III-IV S, 1 hr ar, Slocum

- 5-695 (PE 177). *Practicum: Intramurals-Extramurals*. (3-9 cr; prereq 5-255)
4:00-5:30 T and ar, Anderson
- 8-111 (PE 261). *Interscholastic Athletics Administration*. (3 cr; prereq 8-110)
4:00-6:00 M, 1 hr ar, Ar
- 8-980 (PE 224A). *Research Problems*. (3 cr; prereq 5-980, PsyF 5-110 or #)
4:00-6:00 Th, 1 hr ar, Ar

SCHOOL HEALTH EDUCATION (Hlth)

- 5-110 (124). *Supervision of School Health and Physical Education*. (3 cr,
§PE 5-110; prereq #) III-IV S, Slocum
- 8-980 (224A). *Research Problems*. (3 cr; prereq PE 5-980, PsyF 5-110 or #)
4:00-6:00 Th, Ar

Secondary Education (SeEd)

- 5-105 (EdCI 105). *Audio-Visual Materials in Education*. (3 cr; prereq sr)
IX-X T, 1 hr ar, Pearson
- 5-108 (EdCI 108). *Nonprojected Audio-Visual Materials and Equipment
Laboratory*. (3 cr; lab limited to 15 students; prereq 5-105 or 15-105)
Lect IX-X M, Pearson; Lab, sec 2, IX-X Th, Pearson
- 5-110 (EdCI 105A). *Applied Instructional Media Evaluation and Selection*.
(3 cr; limited to 30 students; prereq 5-105) IX-X W, Newren
- 5-112 (EdCI 112). *Family Life Education*. (3 cr; limited to 30 students)
IX-X W, Hey
- 5-113 (EdCI 113). *Principles of Secondary School Curriculum*. (3 cr; limited
to 40 students; prereq 3-155 or equiv) IX-X W, Kimpston
- 5-168 (EdCI 168). *Current Developments in the Social Studies*. (3 cr; limited
to 20 students; prereq grad or #) I-II S, McCune
- 5-170 (EdCI 170). *Programs and Procedures of Curriculum Development*.
(3 cr; prereq 5-113 or Elem 5-100) I-II S, Kimpston
- 5-172 (EdCI 172). *Supervision of Secondary Instruction*. (3 cr; prereq 5-113)
III-IV S, Hill
- 5-189 (EdCI 189). *Materials and Curriculum Construction in Modern Lan-
guages*. (3 cr; prereq 5-385 and #) I-II S, Birkmaier
- 5-323 (EdCI 122C). *Topics in Language and the Teaching of English*. (3 cr;
limited to 25 students) IX-X MW, Shroyer
- 8-322 (EdCI 222). *Seminar: Secondary Curriculum and Instruction*. (1 cr
per qtr [total 3 cr]; prereq 5-113) IX-X M, Kimpston
- 8-341 (EdCI 241). *Seminar: Advanced Study in Supervision and Curriculum
Development*. (1 cr per qtr [total 3 cr]; prereq 5-113, 5-170, 5-172 or
Elem 5-101) IX-X W, Birkmaier, Hill

- 8-887 (EdCI 287). *Research Foundations of Secondary School Science Teaching*. (3 cr) I-II S, Boeck
- 8-892 (EdCI 292). *Introduction to Research in English and Speech Education*. (3 cr; prereq 15 hrs of grad study incl 5-321 or 5-322, 5-194 or #)
X MW, Piché

SPRING QUARTER, 1971

See page 4 for explanation of symbols

ADULT SPECIALS: Only those credits earned *in the first quarter* of adult special registration may be transferred to a Graduate School record. Courses numbered 8-000 or above are not open to adult special students.

Please check the current *Class Schedule* for revisions in course listings. Students are to register with the prefix and *new* course numbers although old course designations are listed within the parentheses for information only.

Agricultural Education (AgEd)

Persons interested in courses in agricultural education should write directly to the Department of Agricultural Education, University of Minnesota, St. Paul, Minnesota 55101.

Art Education (ArEd)

5-318 (158). *Art Education in Europe.* (3 cr; limited to 30 students) IX-X M, Gayne

5-384 (184). *Improving Art Programs in the Elementary School.* (3 cr; prereq tchg exper or #) III-IV S, Olson

8-306 (296). *Seminar: Art Education.* (1 cr) IX-X T, Gayne

Business Education (BsEd)

5-103 (133). *Consumer Education in the Schools.* (3 cr) IX-X T, Price

5-105 (156). *Trends in Business Education.* (3 cr) I-II S, Halvas

8-100 (235). *Research in Business Education.* (3 cr; prereq #) III-IV S, McLean

Child Psychology (CPsy)

8-341 (215). *Perception in Children.* (3 cr; prereq Psy 5-031 and #) 3:45-5:00 MW, Ar

8-345 (226). *Advanced Language Development.* (3 cr; prereq 12 cr in child psychology or psychology and #) 3:45-5:00 TTh, Ar

Distributive Education (DE)

- 5-110 (141). *Cooperative Vocational Education Programs*. (3 cr; limited to 30 students) 4:00-6:30 W, Klaurens, Meyer
- 5-120 (142). *Business and Distributive Programs for Adults*. (3 cr; limited to 30 students) 4:00-6:30 M, Ashmun, Meyer

Education (Educ)

- 5-104 (EdCI 104). *Adult Education*. (3 cr; limited to 30 students) IX-X W, Woods
- 8-228 (EdCI 228). *Problems: Higher Education and Teacher Education*. (Cr ar; prereq #) 7:30-9:30 p.m. M, off campus, Ammentorp, Corcoran, Eckert, Williams
- 8-252 (EdCI 252). *Effective College Teaching*. (3 cr; prereq 18 cr in education or yr of grad study in any field) 3:45-5:00 TTh, Eckert
- 8-286 (EdCI 286). *Professional Education of Teachers*. (3 cr; prereq 8-285 or #) III-IV S, Mork, Woestehoff

Educational Administration (EdAd)

- 5-103 (103). *Supervision and Administration of Special Education*. (3 cr; prereq #) IX-X W, Weatherman
- 8-201 (201). *Foundations of Educational Administration*. (3 cr) III-IV S, Ammentorp
- 8-211 (211). *School Business Management*. (3 cr; prereq 8-210 or #) IX-X Th, Mueller
- 8-217 (217). *Seminar: Elementary School Administration*. (3 cr; prereq 8-216 or #) IX-X M, Lambert
- 8-226 (226). *School Plant Planning*. (3 cr) I-II S, Alkire
- 8-237 (237). *Seminar: Educational Law*. (1-3 cr; prereq 8-224 or #) IX-X W, Hooker

Educational Psychology

PSYCHOLOGICAL FOUNDATIONS (PsyF)

- 3-670 (EPsy 50). *Human Relations and Group Dynamics*. (3 cr) 7:00-10:00 p.m. MW, A Anderson, Callahan, Foxley, D Johnson
- 5-120 (EPsy 110). *Educational Measurement in the Classroom*. (3 cr) IX-X MW, Terwilliger
- 5-141 (EPsy 193). *Psychological Analysis of Instruction*. (3 cr) IX-X TTh, Samuels

- 5-640 (EPsy 199). *Research Practicum in Programmed Instruction and Behavior Modification*. (1-3 cr [12 cr max]; prereq 5-142 or 5-143 or #) IX-X W, Hively
- 8-520 (EPsy 209). *Seminar: Research Planning*. (1 cr) IX-X T, Hoyt
- 8-521 (EPsy 254). *Measurement and Evaluation in Higher Education*. (3 cr) IX-X MW, Corcoran
- 8-923 (EPsy 245C). *Problems: Curriculum Evaluation*. (1-3 cr per qtr [9 cr max]; prereq 8-922) IX-X M, Welch

SPECIAL EDUCATION (SpEd)

- 5-112 (EPsy 165). *Education of Learning Disabled Children*. (3 cr) IX-X TTh, E Deno
- 5-141 (EdCI 127). *Methods of Teaching School Subjects to the Hearing Impaired*. (3 cr; prereq SSPA 5-708 and #) IX-X Th, 1 hr ar, Kennedy
- 8-500 (EPsy 289). *Survey of Special Education Problems*. (3 cr; prereq 5-101 or exper and #) IX-X T, Weatherman
- 8-580 (EPsy 268). *Seminar: The Disadvantaged*. (3 cr; prereq #) IX-X W, Wood

Elementary Education (Elem)

- 5-100 (EdCI 119). *Elementary School Curriculum*. (3 cr; limited to 40 students; nonelementary education majors only) III-IV S, Ar
- 5-300 (EdCI 121). *Literature for the Elementary School*. (3 cr; limited to 40 students) IX-X M, Biesbrock
- 5-316 (EdCI 153). *Teaching and Supervision of English in the Elementary Schools*. (3 cr; limited to 40 students; prereq 3-316 or elem school tchg exper) I-II S, Ar
- 5-331 (EdCI 143A). *Teaching and Supervision of Reading in the Elementary School*. (3 cr; limited to 50 students; prereq 9 cr in education) IX-X W, D Pearson
- 5-332 (EdCI 143B). *Materials and Instructional Techniques of Elementary Reading*. (3 cr; limited to 40 students; prereq 3-331 or 5-331 or #) IX-X Th, Ar
- 5-334 (EdCI 145). *Reading Difficulties*. (3 cr; limited to 40 students; prereq 5-331 or SeEd 5-344) III-IV S, Schreiner
- 5-335 (EPsy 148). *Clinical Diagnosis of Reading Difficulties*. (3 cr; limited to 20 students; prereq 5-334) IX-X W, Schreiner
- 5-350 (EdCI 120C). *Elementary School Science: Materials and Resources*. (3 cr; limited to 40 students; prereq 5-349) IX-X W, Humphreys
- 5-361 (EdCI 102). *Teaching Social Studies in the Elementary School*. (3 cr; limited to 40 students; prereq 3-101 or equiv) IX-X Th, Ellis

- 8-333 (EdCI 243C). *Seminar: Reading Instruction*. (0-3 cr; limited to 15 students; prereq #) IX-X M, Manning
- 8-346 (EdCI 213). *Research Foundations of Elementary School Science Teaching*. (3 cr; limited to 20 students; prereq 5-346 or #) IX-X T, R Johnson
- 8-362 (EdCI 208). *Research in Elementary Social Studies*. (3 cr; limited to 20 students; prereq 5-361 or #) IX-X T, Ryan

History and Philosophy of Education (HEd)

- 5-113 (113). *Intercultural Education: Afro-American Populations*. (3 cr) IX-X M, Harkins
- 5-121 (121). *Analysis in Educational Philosophy*. (3 cr) II-IV S, Pilapil
- 5-170 (170). *American Pragmatism and Education*. (3 cr) IX-X T and hrs ar, Bagley
- 5-182 (182). *Comparative Philosophies of Education*. (3 cr) IX-X W, Beck
- 5-202 (116). *Intercultural Education: Indian Americans*. (3 cr; prereq 5-201) IX-X T, Harkins
- 8-290 (290). *Advanced Sociology of Education*. (3 cr; prereq 5-190 or Soc 5-953 or #) IX-X W, Clark
- 8-298 (298). *Seminar: American Social and Educational History*. (3 cr; prereq 8-297) IX-X W, Grissom

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, Minnesota 55101.

Industrial Education (Ind)

- 3-330 (35). *Fundamentals of Vocational Education*. (3 cr) IX-X M, Miletich
- 3-340 (40). *Analysis and Course Organization*. (3 cr) IX-X W, Kavanaugh
- 3-344 (44). *Equipment and Management*. (3 cr; prereq 1-300 or 3-340 or #) IX-X W, Ar
- 5-301 (101). *Tests in Industrial Subjects*. (3 cr; prereq SeEd 3-155) IX-X M, Ar
- 5-303 (103). *Instructional Aids*. (3 cr; limited to 24 students; prereq 3-360 or 5-360 or equiv) IX-X Th, Scholer
- 5-312 (115). *Supervision of Industrial Education*. (3 cr; prereq 3-330 or 5-314) IX-X W, Randleman
- 5-320 (110). *Vocational Guidance*. (3 cr; prereq SeEd 3-155) IX-X T, Pucel

Mathematics Education (MthE)

- 5-321 (121). *Materials Laboratory for Elementary School Mathematics Instruction*. (3 cr; limited to 20 students; prereq 5-311 or Elem 3-391 or #) Sec 2, II-IV S, Ar
- 5-322 (122). *Materials Laboratory for Secondary School Mathematics Instruction*. (3 cr; prereq 5-312 or #) IX-X MW, Donovan Johnson
- 5-345 (145). *Mathematics for Gifted Children*. (3 cr; limited to 30 students; prereq 5-311 or Elem 3-391 or #) IX-X T, Donovan Johnson
- 8-570 (270). *Research in Mathematics Education*. (3 cr; prereq 8-500 or #) IX-X T, David C Johnson
- 8-590 (290). *Seminar: Mathematics Education*. (0-3 cr; prereq #) IX-X Th, Jackson, Donovan Johnson, David C Johnson, Post

Music Education (MuEd)

- 5-111 (113). *Bibliography*. (3 cr) IX-X W, Turrentine
- 5-212 (147). *Comparative Music Education*. (3 cr; prereq #) IX-X W, Caswell
- 5-217 (143). *Historical Foundations of Music Education*. (3 cr; prereq #) IX-X Th, Turrentine
- 5-231 (151). *Supervision and Administration of Elementary Music*. (3 cr; prereq major or minor in music or music education) IX-X M, Borg
- 8-283 (253). *Seminar: Curriculum Development*. (3 cr; prereq 8-282) IX-X T, Turrentine

Physical Education

PHYSICAL EDUCATION (PE)

- 5-121 (PE 130). *Contributions of Basic Science to Physical Education*. (3 cr; prereq #) I-II S, 1 hr ar, Wilson
- 5-122 (PE 171). *Applied Physiology*. (3 cr; prereq PubH 3-385 or Phsl 3-051 or equiv) III-IV S, 1 hr ar, Alexander
- 5-695 (PE 177). *Practicum: Intramurals-Extramurals*. (3-9 cr; prereq 5-255) 4:00-5:30 Th and ar, Anderson
- 8-113 (PE 263). *College Physical Education Administration*. (3 cr; prereq 8-110) 4:00-6:00 M, 1 hr ar, Ar
- 8-121 (PE 291). *Kinesiology: Electromyographic Analysis*. (3 cr; prereq 5-120 and #) 4:00-6:00 T, 1 hr ar, Wilson
- 8-980 (PE 224A). *Research Problems*. (3 cr; prereq 5-980, PsyF 5-110 or #) 4:00-6:00 Th, 1 hr ar, Alexander

SCHOOL HEALTH EDUCATION (Hlth)

- 5-140 (114). *Administration of the School Health Program*. (3 cr; prereq 3-320, PubH 3-001 or equiv or #) 4:00-6:00 M, Slocum
- 5-350 (121). *Family Life and Sex Education in the Elementary Schools*. (3 cr) 4:00-6:00 W, Slocum
- 8-980 (224A). *Research Problems*. (3 cr; prereq PE 5-980, PsyF 5-110 or #) 4:00-6:00 Th, Alexander

Secondary Education (SeEd)

- 5-105 (EdCI 105). *Audio-Visual Materials in Education*. (3 cr; prereq sr) IX-X T, 1 hr ar, Pearson
- 5-109 (EdCI 109). *Projected Audio-Visual Materials and Equipment Laboratory*. (3 cr; lab limited to 15 students; prereq 5-105 or #5-105) Lect IX-X M; Lab, sec 2, IX-X Th, Pearson
- 5-110 (EdCI 105A). *Applied Instructional Media Evaluation and Selection*. (3 cr; limited to 30 students; prereq 5-105) IX-X W, Newren
- 5-112 (EdCI 112). *Family Life Education*. (3 cr; limited to 30 students) IX-X W, Hey
- 5-113 (EdCI 113). *Principles of Secondary School Curriculum*. (3 cr; prereq 3-155 or equiv) IX-X W, Hill
- 5-155 (EdCI 155). *Materials Laboratory for Social Studies Teachers*. (3 cr; limited to 15 students; prereq #) IX-X M, West
- 5-169 (EdCI 169). *Student Activity Programs in Secondary Schools*. (3 cr; prereq 3-155) IX-X Th, Ar
- 5-173 (EdCI 173). *Preparation of Curriculum Materials*. (3 cr; prereq 5-113 or Elem 5-100) IX-X W, Kimpston
- 5-189 (EdCI 189). *Materials and Curriculum Construction in Modern Languages*. (3 cr; prereq 5-385 and #) IX-X F, Birkmaier, Lange
- 5-390 (EdCI 190). *Current Developments in Secondary School Science Teaching*. (3 cr; prereq 3-356, 3-357, 3-358 or 3-352, or equiv undergrad courses or exper in tchg science) I-II S, Gennaro
- 8-104 (EdCI 204). *Social Studies Curriculum*. (3 cr) IX-X W, Gardner
- 8-322 (EdCI 222). *Seminar: Secondary Curriculum and Instruction*. (1 cr per qtr [total 3 cr]; prereq 5-113) IX-X M, Birkmaier, Kimpston
- 8-341 (EdCI 241). *Seminar: Advanced Study in Supervision and Curriculum Development*. (1 cr per qtr [total 3 cr]; prereq 5-113, 5-170, 5-172 or Elem 5-101) IX-X W, Birkmaier, Hill

GRADUATE ADVISERS**

Inquiry about the selection of an adviser from the following list should be made in the department concerned. For advisers in Child Psychology, not listed, inquire in 104 Child Development Building.

Adviser	Field	Office
Alexander, John F.	PEM	400 Cooke
Alkire, Gary F.	EdAd (Elem)	205 Burton
Ammentorp, William M.	EdAd and Higher Ed	203 Burton
Anderson, Alan R.	EPsy (CSPP)	255 Burton
Anderson, Bruce D.	PEM	203 Cooke
Anderson, Douglas H.	EPsy (PsyF)	330 Burton
Anderson, Eugene M.	Sec Ed — Clin Ex	212 Burton
Anderson, Jackson M.	Rec and Park Admin	204 Cooke
Ashmun, Richard D.	DE	270 Peik
Bagley, Ayers L.	Hist and Phil of Ed	139 Burton
Balow, Bruce E.	EPsy (SpEd)	109 Pattee
Bart, William M.	EPsy (PsyF)	330 Burton
Bear, W. Forrest	AgEd	222 AgEng (StP)
Beck, Robert H.	Hist and Phil of Ed	139 Burton
Biggs, Donald A.	EPsy (CSPP)	2001 Riverside Ave.
Bird, Patrick	PEM	202 Cooke
Birkmaier, Emma M.	Sec Ed (Lang)	224 Peik
Blocher, Donald H.	EPsy (CSPP)	253 Burton
Boeck, Clarence H.	Sec Ed (Sci)	370 Peik
Borg, Robert L.	MuEd	214 Scott
Borow, Henry	EPsy (CSPP)	30 Nicholson
Brown, Marjorie M.	HEEd	121 McNeal (StP)
Bruininks, Robert H.	EPsy (SpEd)	12 Pattee
Bruning, Charles R.	Teacher Ed	225 Burton
Burris, Russell W.	EPsy (PsyF)	400 Ford
Caswell, Arnold F.	MuEd	214 Scott
Chapman, Frederick M.	Rec and Park Admin	204 Cooke
Chase, Naomi C.	Elem (Lang Arts)	130 Burton
Clark, Shirley M.	Hist and Phil of Ed	139 Burton
Collier, Raymond O.	EPsy (PsyF)	330 Burton
Corcoran, Mary E.	Hist and Phil of Ed and Higher Ed	137 Burton
Cross, W. Ray	EdAd (Elem)	203 Burton
Dykstra, Robert	Elem (Lang Arts)	136 Burton
Eckert, Ruth E.	Higher Ed	226 Burton
Edson, William H.	EPsy (CSPP)	206 Burton
Feldman, David H.	EPsy (SpEd)	15 Pattee
Force, Dewey G., Jr.	EPsy (SpEd)	101 Pattee
Ford, Roxana R.	HEEd	212 McNeal (StP)
Gallistel, Elizabeth R.	EPsy (SpEd)	103 Pattee
Gardner, William E.	Sec Ed (Soc St)	104 Burton
Gayne, Clifton A.	Art Ed	135 Wulling
Gennaro, Eugene D.	Sec Ed (Sci)	270 Peik
Glotzbach, Charles J.	EPsy (CSPP)	206 Burton
Goossen, Carl V.	Elem (Sci)	201 Pattee
Hagenah, Theda	EPsy (CSPP)	200 Eddy
Hall, Marian D.	EPsy (School Psy)	226 CD
Hansen, Harlan S.	Elem and NKP	238 Burton
Hansen, Lorraine S.	EPsy (CSPP)	152 Peik
Hendrix, Vernon L.	EdAd	203 Burton
Hewer, Vivian H.	EPsy (CSPP)	101 Eddy

** Undergraduate students may consult the graduate adviser appropriate for the major, or inquire in 206 Burton Hall.

Adviser	Field	Office
Hill, Richard L.	Sec Ed (Curr)	130 Peik
Hively, Wells, Jr.	EPsy (PsyF)	330 Burton
Hooker, Clifford P.	EdAd (Gen)	203 Burton
Hopkins, Charles R.	BsEd	270 Peik
Hoyt, Cyril J.	EPsy (PsyF)	330 Burton
Hummel, Thomas J.	EPsy (PsyF)	206 Burton
Humphreys, Alan H.	Elem (Sci)	105 Pattee
Jackson, Robert L.	Math Ed and Elem	115 Burton
Jaeger, Eloise M.	PEW	101 Norris
Johnson, David C.	Sec Ed (Math)	336 Peik
Johnson, David W.	EPsy (PsyF)	330 Burton
Johnson, Donovan A.	Sec Ed (Math)	130 Peik
Johnson, Paul E.	EPsy (PsyF)	330 Burton
Kavanaugh, William A.	Ind Ed	125 Peik
Kegler, Stanley B.	Sec Ed (English)	217 Morrill
Kellogg, Theodore E.	EPsy (PsyF)	9 Morrill
Kimpston, Richard D.	Sec Ed (Curr)	345 Peik
Kingsley, G. Gordon	EPsy (CSPP)	10 Nicholson
Kitts, Harry W.	AgEd	208 Horticulture (StP)
Klaurens, Mary K.	DE	270 Peik
Lambert, Ronald T.	Elem and EdAd (Elem)	254 Burton
Lange, Dale L.	Sec Ed (Lang)	152 Peik
Lewis, Darrell R.	Sec Ed (Econ Ed)	1169 B.A. (WB)
MacEachern, Donald	EPsy (PsyF)	330 Burton
Manning, John C.	Elem (Reading)	144 Burton
Marvin, R. Paul	AgEd	208 Horticulture (StP)
Mazzoni, Tim L.	EdAd	203 Burton
McCune, George H.	Sec Ed (Soc St) and Higher Ed	418 Johnston
McFarland, Keith N.	AgEd	215 Coffey (StP)
McMillion, Martin B.	AgEd	208 Horticulture (StP)
Merwin, Jack C.	EPsy (PsyF)	104 Burton
Meyer, Warren	DE	249 Peik
Moen, Norman W.	Higher Ed	106 Nicholson
Moores, Donald F.	EPsy (SpEd)	106 Pattee
Morgan, Don A.	EdAd (Higher Ed)	211 Burton
Moss, Jerome, Jr.	Ind Ed	125 Peik
Mueller, Van Dyck	EdAd (Gen)	203 Burton
Nelson, Howard F.	Ind Ed	125 Peik
Newkirk, Gwendolyn	HEEd	106 McNeal (StP)
Nickerson, Neal C.	EdAd (Sec)	203 Burton
Odland, R. Norine	Elem (Literature)	136 Burton
Parker, Clyde A.	EPsy (CSPP)	249 Burton
Pearson, Neville P.	Sec Ed (Audio-Visual)	206 Wesbrook
Persons, Edgar A.	AgEd	315 North (StP)
Peterson, Milo	AgEd	208 Horticulture (StP)
Piché, Gene L.	Sec Ed (Lang Arts)	350 Peik
Popper, Samuel H.	EdAd (Gen and Sec)	203 Burton
Post, Thomas R.	Math Ed and Elem	117 Burton
Price, Raymond G.	BsEd	254 Peik
Pucel, David J.	Ind Ed	125 Peik
Randleman, Robert R.	Ind Ed	125 Peik
Raygor, Alton L.	EPsy (CSPP)	106 Eddy
Reynolds, Maynard C.	EPsy (SpEd)	101 Pattee
Ryan, Frank L.	Elem (Soc St)	258 Burton
Rynders, John E.	EPsy (SpEd)	13 Pattee
Samuels, S. Jay	EPsy (PsyF)	330 Burton
Schreiner, Robert L.	Elem (Reading)	138 Burton
Sederberg, Charles H.	EdAd (Gen)	205 Burton
Shaffer, Warren F.	EPsy (CSPP)	247 Burton
Shroyer, Thomas G.	Sec Ed (English)	230 Peik
Slocum, Helen M.	PEW and Hlth	158 Norris
Smith, Brandon B.	Ind Ed	145 Peik
Snoke, Martin L.	EPsy (CSPP)	200 Eddy

Adviser

Stark, Thomas
 Stecklein, John E.
 Stedman, Louise A.
 Stochl, James E.
 Stoner, Lela June
 Swanson, Gordon I.

Tennyson, W. Wesley
 Terwilliger, James S.
 Torpey, James E.
 Turnure, James E.
 Turrentine, Edgar M.
 Weatherman, Richard E.
 Welch, Wayne
 West, Edith
 Whiteford, Emma B.
 Wilderson, Frank B.
 Wilk, Roger E.
 Williams, Howard Y.
 Wilson, Marjorie U.
 Woestehoff, Arnold S.
 Wood, Frank H.
 Zander, Donald R.

Field

EdAd (Gen)
 EPsy (PsyF)
 HEEd
 Math Ed and Elem
 PEW
 AgEd

 EPsy (CSPP)
 EPsy (PsyF)
 PEM
 EPsy (SpEd)
 MuEd
 EPsy (SpEd) and EdAd
 EPsy (PsyF)
 Sec Ed (Soc St)
 HEEd
 EPsy (SpEd)
 EPsy (PsyF)
 Higher Ed and Sec Ed
 PEW
 Teacher Ed
 EPsy (SpEd)
 EPsy (CSPP)

Office

211 Burton
 9 Clarence Ave. S.E.
 200 McNeal (StP)
 530 Johnston
 165 Norris
 129 Burton
 208 Horticulture (StP)
 259 Burton
 330 Burton
 221 Cooke
 14 Pattee
 332 Scott
 108 Pattee
 330 Burton
 350 Peik
 107 McNeal (StP)
 104 Burton
 218 Elliott
 130 Peik
 108 Norris
 400-12th Avenue S.E.
 107 Pattee
 220 Morrill

CALENDAR 1970-71

FALL QUARTER

September

- 7 Holiday (Labor Day)
- 17 Fall quarter fees due for students registered through September 11
- 25 Last day for registration and payment of fees for undergraduates (including adult specials)
- 28 Fall quarter classes begin

October

- 1 Opening Convocation (IV hour classes excused)
- 2 Last day for registration and payment of fees for the Graduate School and for teachers in service
- 29 Twin Cities Assembly Meeting, 3:30 p.m.
- 31 Homecoming Day

November

- 26 Holiday (Thanksgiving Day)
- 27-28 Classes excused

December

- 1 Last day to file application for winter quarter admission to the undergraduate colleges or for change of college within the University
- 3 Senate Meeting, 3:30 p.m.
- 4 Deadline for application for admission to Graduate School, winter quarter
- 11 Review begins
- 12-18 Final examination period
- 19 Fall quarter closes
Commencement (Twin Cities Campus)

WINTER QUARTER

December

- 22 Last day for payment of winter quarter fees for students in residence fall quarter (including adult specials)
- 25 Holiday (Christmas Day)

January

- 1 Holiday (New Year's Day)
- 4 Winter quarter classes begin
- 8 Last day for registration and payment of fees for Graduate School and for teachers in service

February

- 4 Twin Cities Assembly Meeting, 3:30 p.m.
- 21-27 University of Minnesota Week
- 26 Charter Day Convocation (Crookston)
Graduate School application deadline for spring quarter

March

- 1 Last day to file application for spring admission to the undergraduate colleges or for change of college within the University
- 12 Senate Meeting, 3:30 p.m.
Review begins
- 13-19 Final examination period
- 18 Last day for payment of spring quarter fees for students in residence winter quarter in undergraduate colleges (including adult specials)
- 20 Winter quarter closes

SPRING QUARTER

March

- 22-26 Registration and payment of fees for new students in all undergraduate colleges
- 29 Spring quarter classes begin

April

- 2 Last day for registration and payment of fees for the Graduate School and for teachers in service
- 9 Holiday (Good Friday)
- 29 Twin Cities Assembly Meeting, 3:30 p.m.

May

- 13 Cap and Gown Day Convocation (IV hour classes excused)
- 24 Graduate School application deadline for First Term, Summer Session
- 27 Senate Meeting, 3:30 p.m.
- 31 Holiday (Memorial Day, May 30)

June

- 4 Review begins
- 5-11 Final examination period
- 12 Spring quarter closes
Commencement (Twin Cities Campus)

SUMMARY OF CLASS SCHEDULES 1970-71

Mon. (IX-X) Tues. (IX-X) Wed. (IX-X) Thur. (IX-X) Sat. (I-II) Sat. (III-IV)

FALL QUARTER

CPsy 8-343° DE 5-305† EdAd 8-265 EdAd 8-274 Educ 8-228†† PsyF 3-670§§ PsyF 5-120 PsyF 8-921 Elem 5-334 Elem 5-346 Elem 8-331 HED 5-110 Ind 5-303 Ind 5-360 MthE 5-311 MthE 5-312 MuEd 5-214 PE 5-100§ PE 5-255† SeEd 5-107 SeEd 5-155 SeEd 5-194 SeEd 8-322	ArEd 8-306 BsEd 5-108 EdAd 8-215 Educ 8-250° CSPP 5-101 PsyF 5-143 PsyF 8-520 SpEd 5-100 SpEd 5-180 Elem 5-108 Elem 5-376 HED 5-155 HED 5-200 Ind 5-310 MuEd 8-281 PE 5-980† PE 8-120 SeEd 5-106	BsEd 5-100 CPsy 8-343° DE 5-100† EdAd 8-218 EdAd 8-227 CSPP 5-130 PsyF 3-670§§ PsyF 5-120 PsyF 5-640 SpEd 5-301 Elem 5-316 HED 5-141 HED 5-210 Ind 3-330 Ind 5-305 MthE 5-311 MthE 5-312 MuEd 5-441 PE 5-255† Hlth 5-150§ SeEd 5-110 SeEd 5-112 SeEd 5-129 SeEd 5-194 SeEd 8-341	EdAd 8-201 Educ 8-250° PsyF 5-143 SpEd 5-180 Elem 5-317 Elem 5-361 HED 5-132 HED 5-191 Ind 3-340 Ind 5-301 MthE 8-590 PE 5-980† SeEd 5-107 SeEd 5-113 SeEd 5-114	ArEd 5-301 BsEd 5-106 EdAd 8-210 Educ 8-251 Elem 5-107 MthE 5-355 (II-IV) PE 5-123 SeEd 5-105 SeEd 5-385	ArEd 5-389 BsEd 5-101 EdAd 8-202 Educ 5-184 Elem 5-100 MthE 5-336 (II-IV) PE 8-110
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WINTER QUARTER

CPsy 8-347° DE 5-310† Educ 8-228†† EdAd 8-224 PsyF 5-141 PsyF 5-160 PsyF 8-521 PsyF 8-922 Elem 5-331 Elem 5-334 Elem 8-332 HED 5-112 Ind 5-325 MthE 5-322 (IX-XII) MthE 5-331 MuEd 5-306 PE 8-111§ SeEd 5-108 SeEd 5-323 SeEd 8-322 SeEd 8-892	ArEd 8-306 BsEd 5-102 CPsy 5-319‡ CPsy 8-333° EdAd 8-216 Educ 8-251° PsyF 5-142 PsyF 8-520 SpEd 5-150 SpEd 5-190° Elem 5-362 Elem 8-361 HED 5-156 HED 5-201 Ind 5-309 Ind 5-320 Ind 5-330 MthE 8-500 MuEd 5-221 MuEd 8-282 PE 3-115‡ PE 5-695† SeEd 5-105	BsEd 5-110 CPsy 8-347° DE 5-105† EdAd 8-264 PsyF 5-141 PsyF 5-160 PsyF 5-640 PsyF 8-521 SpEd 5-301 Elem 5-100 Elem 5-349 Elem 5-316 HED 5-131 HED 5-211 HED 8-332 Ind 8-310 MthE 5-331 MuEd 5-118 MuEd 5-421 SeEd 5-110 SeEd 5-112 SeEd 5-113 SeEd 5-323 SeEd 8-341 SeEd 8-892	CPsy 5-319‡ CPsy 8-333° EdAd 8-202 Educ 8-251 PsyF 5-142 SpEd 5-143 SpEd 5-150 SpEd 5-190° Elem 5-332 HED 5-125 Ind 5-314 MthE 8-590 MuEd 5-582 PE 3-115‡ PE 8-980§ Hlth 8-980§ SeEd 5-108	ArEd 5-302 Educ 8-252 Elem 5-300 MthE 5-366 (II-IV) SeEd 5-168 SeEd 5-170 SeEd 5-189 SeEd 8-887 (II-IV) PE 5-110 Hlth 5-110 SeEd 5-172	ArEd 8-300 BsEd 5-104 EdAd 8-235 Educ 8-250 Educ 8-285 Elem 5-107 Elem 5-108 MthE 5-366 (II-IV) PE 5-110 Hlth 5-110 SeEd 5-172
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SPRING QUARTER

ArEd 5-318 CPsy 8-341° DE 5-120† EdAd 8-217 Educ 8-228†† PsyF 3-670§§ PsyF 5-120 PsyF 8-521 PsyF 8-923 Elem 5-300 Elem 8-333 HED 5-113 Ind 3-330 Ind 5-301 MthE 5-322 MuEd 5-231 PE 8-113§ Hlth 5-140§ SeEd 5-109 SeEd 5-155 SeEd 8-322	ArEd 8-306 BsEd 5-103 CPsy 8-345° Educ 8-252° PsyF 5-141 PsyF 8-520 SpEd 5-112 SpEd 8-500 Elem 8-346 Elem 8-362 HED 5-170 HED 5-202 Ind 5-320 MthE 5-345 MthE 8-570 MuEd 8-283 PE 8-121§ SeEd 5-105	CPsy 8-341° DE 5-110† EdAd 5-103 EdAd 8-237 Educ 5-104 PsyF 3-670§§ PsyF 5-120 PsyF 5-640 PsyF 8-521 SpEd 8-580 Elem 5-331 Elem 5-335 Elem 5-350 HED 5-182 HED 8-290 HED 8-298 Ind 3-340 Ind 3-334 Ind 5-312 MthE 5-322 MuEd 5-111 MuEd 5-212 Hlth 5-350§ SeEd 5-110 SeEd 5-112 SeEd 5-113 SeEd 5-173 SeEd 8-104 SeEd 8-341	CPsy 8-345° EdAd 8-211 Educ 8-252° PsyF 5-141 SpEd 5-112 SpEd 5-141 Elem 5-332 Elem 5-361 Ind 5-303 MthE 8-590 MuEd 5-217 PE 5-695† PE 8-980§ Hlth 8-980§ SeEd 5-109 SeEd 5-169	BsEd 5-105 EdAd 8-226 Elem 5-316 HED 5-121 (II-IV) MthE 5-321 (II-IV) PE 5-121 SeEd 5-390	ArEd 5-384 BsEd 8-100 EdAd 8-201 Educ 8-286 Elem 5-100 Elem 5-334 HED 5-121 (II-IV) MthE 5-321 (II-IV) PE 5-122
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KEY

- ° 3:45-5:00
- † 4:00-5:15
- ‡ 4:00-5:30
- § 4:00-6:00
- ¶ 4:00-6:30
- ‡ 4:15-5:30
- §§ 7:00-10:00 p.m.
- ¶¶ 7:30-9:30 p.m.