

**University of Minnesota**

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**Bulletin**

JULY 20, 1972

146

**college of education**



UNIVERSITY OF MINNESOTA

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# College of Education

UNIVERSITY OF MINNESOTA

## HOW TO USE THIS BULLETIN

This bulletin is divided into four 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 Undergraduate Program Coordinators in most fields. 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.

**Section IV**—Departmental and Faculty Index.

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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

## Section I. General Information

**Use of This Bulletin**—This bulletin has been prepared to acquaint students with the programs and activities of the College of Education and to help them as they plan programs. Section I of the Bulletin contains information about the organization of the College, its basic programs, and the general requirements and procedures followed for admission, registration, and graduation. In Section II, each of the certification programs of the College is described in detail. This section also contains information about advisers and advising in each of the departments. Section III contains descriptions of all courses offered in the College at both undergraduate and graduate levels. An index to departments and faculty members follows Section III.

The bulletin can be of great help in program planning. Because new programs and courses are constantly being developed and requirements changed, the bulletin cannot be the only device used for planning. Students should consult frequently with their advisers or members of the Student Personnel Office in 206 Burton Hall. Useful also are the *General Information Bulletin* and the bulletins of other colleges, particularly the College of Liberal Arts, the Institute of Technology, and General College.

### THE COLLEGE

**Its Basic Goals**—The College of Education, established by the Board of Regents in 1905, prepares people for roles at all levels of professional education. Its mission statement identifies three basic goals—to develop knowledge about critical educational issues and problems, to provide high quality programs for present and future members of the education professions, and to provide leadership in applying tested insights to the problems of schools and colleges. The College seeks to move toward these goals by encouraging scholarly faculty activity in research, writing, and field services, and by offering instructional programs in a wide range of majors in secondary academic fields, elementary education, physical education, art and music education, educational psychology, educational administration, educational foundations, early childhood education, higher education, and vocational education. The College provides educational leadership and service not only to the large urban community of Minneapolis and St. Paul but also to the entire Northwest.

**Organization**—The basic unit of organization in the College is the department. In most instances, departments which have closely related functions are grouped into divisions. Departments and divisions exercise considerable authority over decisions about curriculum, personnel, and budget matters, with final review by appropriate all-College committees and the Dean's Office. Because departments are responsible for the management of certification programs, students should become acquainted with departmental officers and advisers.

**Governance of the College**—The basic policy-making body of the College is an elected student/faculty group called the College of Education Senate. The Senate meets monthly during the academic year, and its meetings are open to the public. Two faculty/student standing committees (Educational Policy and Personnel Policy) report to the Senate on needed policy changes.

## **General Information**

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**Education Student Assembly**—Students in the College of Education may play a significant role in governing the College through the Education Student Assembly. Members of the Assembly are elected on a proportional basis from the departments and divisions of the College. Ten members of the ESA are also elected by that body to the College of Education Senate and thus become involved in all-College decision making. The ESA sets its own agenda and carries on its own action program. Students interested in election to ESA or in ESA activities should consult with officers of the Assembly in 103 Burton Hall.

### **Student Services**

**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.

**Faculty Advisers**—Each student admitted to a degree program is assigned to an adviser who teaches in the student’s major field. The student should consult his adviser concerning preparation in his major program, for registration each quarter, and on general academic questions.

**Committee on Student Scholastic Standing**—A student who encounters difficulties in adjusting his program to his individual needs or background should first seek the assistance of his adviser. Requests for program exceptions which are recommended by the student’s adviser are submitted to the Committee on Student Scholastic Standing. This committee is charged with interpreting College policies regarding the requirements for degrees, and authorizes each adjustment in the curriculum by exemption, substitution, or examination.

**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. The section on Procedures and Practices in the College of Education in 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 at the University. The College will notify each new student of the dates he should attend.

**Teacher Placement Service**—The College of Education provides placement service for its qualified students and graduates for a nominal fee, helping them to secure the kinds of positions they desire. The fee entitles the student to placement service for a 1-year period ending October 1. All graduating seniors and candidates for the master of education degree are required to register with the Bureau of Recommendations, 400 12th Avenue S.E. or to secure an official exemption form from that office.

## 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 serve schools throughout the state and nation.

**Laboratory Schools**—Selected public schools in the Twin City area 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 demonstration and research in the elementary grades.

**Bureau of Field Studies and Surveys**—The Bureau 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 City 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, located on the second floor of Walter Library, contains an extensive collection of curriculum materials, school textbooks, literature for children and adolescents, and other aids to the improvement of instruction. During the last few years, the Library has greatly expanded its research literature in the fields of education, psychology, and library science, and currently subscribes to more than 2,000 serial titles. The Library also contains the complete Educational Resources Information Center (ERIC) microfiche collection of materials, a resource that will continue to grow in size and value. All told, the Library now houses an estimated 80,000 bound periodicals, in a total collection of 177,000 volumes. The reference material section has continued to expand as an important adjunct to these collections, and major nonbook resources will be developed more extensively in the foreseeable future.

**Institute of Child Development**—The Institute of Child Development of the University of Minnesota has been a prominent center for research and study in child psychology since its founding in 1925. In its academic instructional program, the Institute offers both undergraduate and graduate majors in child 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,

## **General Information**

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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 fulfill some of their clinical experience requirements by participating in center activities. 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 supports a number of College-wide planning, research, and development activities. Included among its programs are (1) the College planning office; (2) external funding; (3) promotion of educational research; (4) development, including innovative training models, facilities and equipment; (5) program evaluation assistance; and (6) limited support for faculty research.

## **EQUAL OPPORTUNITY**

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 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.

## **PROGRAMS OF THE COLLEGE**

This part of the bulletin contains a list of programs offered by the various units of the College. Each of the programs is described completely in Section II.

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 campuses) must apply for admission to a teacher education program in the College of Education and complete the requirements of that program. Students in all majors take one or two years of pre-professional work in another college before transferring to the College of Education.

Teaching certificates are awarded by the Minnesota State Department of Education, *not* by the University. After completion of an approved program, a student is recommended by the College for certification in his field of specialization. All certification programs described in this bulletin are approved by the State Board of Education and are accredited by the National Council for the Accreditation of Teacher Education.

Detailed information about entrance requirements, University admission procedures, and estimated expenses will be found in the *General Information Bulletin* available from the Office of Admissions and Records on request.

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

Art Education  
Business Education  
Distributive Education  
Industrial Education  
Music Education  
Physical Education  
Recreation and Park Administration

Students apply for transfer to these programs in the College of Education very early in the third quarter of the freshman year, and should check admission requirements under the chosen curriculum major.

### **Programs in Which Students Normally Spend Two Years in a College of Liberal Arts**

Elementary Education  
School Health Education  
Secondary Education  
    American Studies  
    Language Arts with majors in English, Language Arts, Speech, Theatre Arts  
    Mathematics  
    Foreign Languages with majors in French, German, Latin, Russian, Spanish  
    Science with majors in Earth Science, Biological Science, Chemistry, Physics  
    Social Studies with majors in Anthropology, Economics, Geography, History, Political Science, Sociology

Students apply for transfer to these programs in the College of Education very early in the third quarter of their sophomore year, and should check admission requirements under the chosen curriculum major.

### **Combined Programs with the Institute of Technology**

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 should apply at the Office of Admissions and Records (Room 6, Morrill Hall) for admission to the combined program early 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

## General Information

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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.

### 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*)

### 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 for 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 work taken in Continuing Education and Extension. 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 master of education programs are offered by the College of Education:

#### *For certified teachers:*

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

*For noncertified professional workers:*

Agricultural Education  
Home Economics Education  
Recreation and Park Administration

## Graduate Study in the College of Education

Instructional programs designed to prepare students for positions requiring specialization receive a major emphasis in the College of Education. Graduate programs leading to the M.A., Ph.D., Ed.D., and Specialist Certificate prepare students for work in school administration, college teaching, counseling, elementary and secondary curriculum supervision, and other specialized fields. Application for admission to these programs must be made to the Graduate School Office, 316 Johnston Hall. Graduate courses may be taken during the regular academic year and during the Summer Session. It is possible for a student holding the Bachelor's degree to complete the coursework for the M.A. through attendance in the summer terms. Section II of this bulletin refers to various graduate programs, but for details, consult the *Graduate School Bulletin*.

Students intending to take graduate work after finishing undergraduate studies should be aware of the policies of graduate schools for evaluating courses taken under S-N and similar systems. Most major graduate schools, including that at the University of Minnesota have adopted special policies for courses taken S-N which are offered in support of an application for admission. As approved by the Executive Committee of the Graduate School of the University of Minnesota it is as follows:

Applicants for admission submitting an undergraduate academic record containing "pass-no credit" (P-N) or "credit" only entries in advanced courses which have a bearing on the student's field of specialization should submit:

- (1) a written evaluation or letter grade by the instructor in each course, and
- (2) scores on the Graduate Record Examination aptitude test and on the advanced test if an appropriate advanced test is available in terms of the declared proposed major in the Graduate School.

## LIBERAL EDUCATION

The College of Education, together with other units of the University, believes that all of its students should hold in common the search for a liberal education. Toward this end the College subscribes to the all-University Policy on Liberal Education which states the objectives of liberal education and describes the minimal distribution requirements to be completed by all students.

Listed below are the specific credit distributions for all students in education except those majoring in music education. These requirements are similar in nature to those established by the College of Liberal Arts for the B.A. degree, and may, of course, be met by selection from a large number of Arts College courses. Students are encouraged to take work in areas which will help them to develop interpersonal skills (e.g. speech-communications, child psychology, educational psychology) and to understand the racial and cultural diversities in the United States and the world (Afro-American Studies, American Indian Studies, Anthropology, Chicano Studies).

Courses which meet the major and minor requirements of programs in the College of Education may usually be used toward the Liberal Education Distribution Requirements. For example, a student with a major in anthropology may use courses in that area to fulfill the Man and Society requirement. The student should read the program description of the intended major in Section II of this

## General Information

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bulletin with care, so he may plan a program in the most efficient way possible.

**Liberal Education Distribution Requirements**—Completion of Freshman English or exemption, and in addition 48 credits from the following categories as indicated:

- A. **Communication, Language, or Symbolic Systems**—8 credits  
History and structure of English, foreign language, and communication skill; linguistics, rhetoric, logic, philosophic analysis; mathematics
- B. **Physical and/or Biological Science**—12 credits
- C. **Man and Society**—16 credits including Psy 1-001
- D. **Artistic Expression**—12 credits  
Literature, humanities, art, and music

## ADMISSION TO THE COLLEGE OF EDUCATION

Admission to the College of Education is granted on the basis of academic standards and an appraisal of other factors related to the preparation of teachers. Admission criteria specific to each program are established with attention to the knowledge and skill requirements of the field. Experience in youth work or leadership may be considered, with differing degrees of importance, by each department. The student who plans to enter the College of Education should read carefully the requirements for the program of his choice in Section II. He should discuss transfer with a counselor in the Student Personnel Office, 206 Burton Hall as early as possible in his planning.

For many fields the number of applicants who can be accepted each year is limited, based on the resources available to the College (facilities, faculty, and clinical experience opportunities), the number of students required to plan coherent, systematic, quality programs, and the placement opportunities for graduates.

All limited fields admit students for initial enrollment in the fall quarter. Each field may accept additional applicants either for winter or for spring quarter. Those who wish to transfer in mid-year should obtain current transfer information for the major field of interest. Admission decisions are made during the academic year in the quarter prior to the quarter of proposed entry. Applications must be received in the Office of Admissions and Records no later than the close of the first week of the quarter before entry. The limited fields are:

- Art Education
- Elementary Education
- Physical Education—majors in Physical Education, Recreation and Park Administration
- Secondary Education
  - American Studies
  - Language Arts—majors in English, Speech, Theatre Arts, Language Arts
  - Mathematics
  - Foreign Languages—majors in French, German, Latin, Russian, Spanish
  - Science—majors in Earth Science, Biological Science, Chemistry, Physics
  - Social Studies—majors in Anthropology, Economics, Geography, History, Political Science, Sociology

General guidelines for admission to all fields are:

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. To be considered for admission a student must have earned at least a C (2.00) average in all of his previous college work. In addition, a student must have earned at least a C+ (2.50) average in all work completed in the major field prior to admission. In fields for which enrollment is limited, preference may be given to applicants who more than meet these *minimal* requirements.

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 of Students from Colleges Outside of the University**

It is College policy to give equal consideration to applicants applying from within and from outside the University. Information about transfer may be obtained by writing to the Student Personnel Office, 206 Burton Hall, or by talking with a counselor in that office.

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

### **Admission of Students with Three or More Years of College Work**

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 an additional degree and a teacher's certificate. Such students will be expected to earn a minimum of 45 credits while in residence in the College of Education and to fulfill the specific requirements of the curriculum in which they are enrolled. Courses transferred may be used to meet curriculum course requirements upon approval of the Scholastic Standing Committee. The time needed will be influenced by the extent and strength of preparation in the major field. Ordinarily, a quarter preceding a September-to-June registration will be needed.

## **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**

1. 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.
2. 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 from each college they have attended. Students will be notified of acceptance and receive further instructions by mail.

## General Information

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3. 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 in adult special status. An adult special student who wishes to become a candidate for a degree must complete the regular college admission procedure.

**Readmission Policy**—The student previously admitted to one of the undergraduate degree programs in the College of Education whose day school registration has been discontinued for 2 or more consecutive calendar years must apply for readmission at 206 Burton Hall. Readmission may occur any quarter as appropriate to the student's program planning, and applicants will be considered according to the admission criteria in effect at the time of readmission. Students who apply for readmission will be held accountable for graduation requirements current at the time of readmission. Prior course work will be evaluated by the education department representing the applicant's major field, and the student may be required to supplement course work in areas where course content has undergone change since earlier work was completed.

**Examinations for Advanced Standing Credit**—Students who believe themselves sufficiently prepared in a subject to pass an examination in it upon entrance may take such an examination without charge during the first quarter of University residence. Thereafter a \$20 fee is charged for each course examination for advanced standing credit. The student should apply to a representative of the Committee on Student Scholastic Standing in 206 Burton Hall early in his first quarter in residence.

**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 prepared 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 department concerned will appoint a special faculty committee to administer the examination. During the first quarter in University residence, no fee is charged for this examination; thereafter the fee is \$20.

**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. Subsequent addition of a course requires the written consent of the instructor and approval of the Scholastic Standing Committee. 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.

A student is not permitted to change his registration in a course to a different grading system after the second 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 for admission into professional education courses during the spring quarter. They take the required physical examination and psychological tests according to printed instructions mailed to them during winter quarter.

**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 approximately one quarter after application for a degree. It lists the required courses the student has completed, his total number of earned credits, and any deficiencies that must be removed before the student may graduate. It is to be used by the student and his adviser as a checklist of completed requirements.

**Senior Physical Examination**—A physical examination is required for teacher certification in the State of Minnesota. 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 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 terms.

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) in courses in the major except agricultural education which has special requirements, elementary education which requires a C (2.00).
3. Satisfactory progress toward degree requirements of the college, including an average of C in courses in the teaching minor.
4. Completion of basic junior courses (SeEd 3-150 and 3-155 for secondary education and Elem 3-100 for elementary education).
5. Completion of junior-year clearances in the College of Education, including psychological tests and satisfactory health clearance.
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 Progress**—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. This Committee reviews the overall academic performance of students as well as their performance in major courses. In all cases, the Committee will attempt to counsel and advise individual students on academic progress before recommending probation.

## ***General Information***

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**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 Commissioner of Education, 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 Minnesota schools in the area of his preparation.

**Education Courses in Continuing Education and Extension**—Many courses in academic fields and professional education for certified teachers who meet the stated prerequisites are offered in Continuing Education and Extension. For further information consult the *Extension Classes Bulletin*, the *Independent Study Bulletin*, or a counselor in the Student Personnel Office, 206 Burton Hall.

## **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 recommendation for an 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 in Section II of this bulletin.

### **Amount and Quality of Work**

A minimum of 186 credits with a C (2.00) average, including the required courses in physical education and public health is needed for graduation. In a teaching minor a grade of C (2.00) is required. In the student's 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 courses offered on a S-N basis, but interested students should check the restrictions on the use of S-N courses that are posted at the Student Personnel Office. Some departments have made provision for credit to be granted for independent study under a specified course number. Interested students should check with the department concerned.

### **Professional Requirements**

Professional education courses are reserved for students admitted to an approved certificate program. The requirements for these programs are outlined in the descriptions of the specific curricula in Section II of this bulletin.

### **Special Requirements**

State law requires that all candidates for teaching certificates complete course work in public health, drug education, and physical education. Students in the College of Education must complete these requirements before graduation but need *not* complete them before making application for transfer to the College. The drug education requirement may be met by completing PubH 3-004, Basic Con-

cepts in Personal and Community Health (4 credits). The physical education requirement of 3 credits may be met by completing appropriate courses offered by the Department of Physical Education.

### 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 program* must be earned in residence. These are minimum residence requirements for graduation, and thus for a degree and recommendation for a 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 the University and 3.00 (B) for the work of the junior-senior years; for graduation with high distinction, these averages must be at least 3.45 and 3.50 (B+).

## 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.

Listed below are sources of assistance specifically for students in this College:

**Coffman Foundation Award**—For graduate study in education, made each year to a 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.

**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.

## ***General Information***

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**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.

**Alpha Delta Kappa Scholarship (Beta Chapter)**—To a junior or senior woman in the College of Education on the basis of scholastic achievement, vocational promise, and personal qualifications.

**Bernice D. Cestie Memorial Scholarship Fund**—To graduate or undergraduate students in the College of Education with special consideration to students planning to teach high school journalism or who are interested in advancing the quality of student publications.

**Minnesota Education Association NKP Scholarship**—To contribute to the educational opportunities of students in the nursery and kindergarten program who have a definite commitment to teach, on the basis of promise and financial need.

**Minnesota Future Farmers of America Foundation Scholarship in Agricultural Education**—To students in agricultural education on the basis of capacity for leadership, scholastic ability, practical farm experience, personality, and interest in teaching agriculture in the public schools of Minnesota.

## Section II. Curricula

### ART EDUCATION

Acting Chairman: George K. Olson, 135 Wulling Hall  
Undergraduate Program Coordinator: George K. Olson, 135 Wulling Hall

The Department of Art Education coordinates the varied facilities of the University available for art education training through program planning and advice for education majors at both undergraduate and graduate levels. Upon graduation from the 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 register for courses in liberal arts areas for the first year and may apply for admission early in the quarter in which they will have completed 45 credits, 15 of which must be in the major. Application for fall admission must be received by the Office of Admissions and Records no later than the end of the first week of the previous spring quarter; applications for spring admission no later than the end of the first week of winter quarter. No students are admitted for winter quarter or summer terms.

The criteria for consideration of admission are: (a) completion of clearance procedures; (b) completion of 45 credits including 15 credits in the major with courses from 3 of 5 areas: art history, design theory, drawing and painting, sculpture, and design in materials; (c) minimum grade point average of C+ (2.50) in the major and C (2.00) overall; and (d) submission of a portfolio which is a representative sample of the applicant's work for departmental review. In addition, the nature and scope of the applicant's prior work with children and an assessment of personal characteristics are considered.

Art education is a limited enrollment field, as noted in the statement on limited enrollment in Section I of this bulletin. Students seeking admission should inquire at the Student Personnel Office, 206 Burton Hall, for current information on admission procedures and practices and assistance in making a choice of curriculum.

The C+ (2.50) major average, which is required for admission to the College, for admission to student teaching, and for graduation, is computed on all art and art education courses. Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate related and major courses may be used toward those requirements. 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 (2.00) average is required for this part of the program.

#### *Major in Art Education*

##### *Related Course Requirements*

12 credits from humanities and/or history  
Soc 1-001—Introduction to Sociology (4)

##### *Major Courses (minimum 48 credits)*

Courses chosen to meet this requirement will be selected with departmental approval, to meet the needs of the individual art education student. The following courses are recommended to provide a well-balanced program:

8 credits in art history and theory

## Curricula

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Design and Its Application—minimum of 24 credits from:

- 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 3-009—Weaving without a Loom (4)
- ArEd 3-010—Introduction to Weaving (3)
- ArEd 3-020—Contemporary Crafts (3)
- ArEd 3-030—Puppetry (3)
- ArEd 5-020—Advanced Contemporary Crafts (4)
- ArtS 1-104—Color (4)
- ArtS 1-701—Introduction: Photo Medium (4)
- ArtS 1-801—Ceramic Processes (4)
- ArtS 3-116—Commercial Art Media (3)
- Th 1-504—Elements of Technical Theatre (4)

Drawing, Painting, Sculpture and Printmaking—minimum of 16 credits from:

- ArtS 1-101—Basic Drawing (4)
- ArtS 1-102—Drawing (4)
- ArtS 1-103—Introduction to Studio Arts (4)
- ArtS 1-301, 1-302—Basic Sculpture (4 cr each)
- ArtS 1-501, 1-502—Intaglio (4 cr each)
- ArtS 3-121, 3-122, 3-123—Painting (4 cr each)

*Professional Education Courses* (minimum 45 credits)

- ArEd 1-501—Introduction to Art Education (2)
- ArEd 3-306, 3-307, 3-308—Principles and Experiences in Art Education (4 cr each)
- ArEd 3-506, 3-507, 3-508—The Teaching and Supervision of Art (2 cr each) (juniors)
- ArEd 3-606, 3-607, 3-608—Student Teaching and Supervision of Art (3 cr each) (seniors)
- SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each) (seniors)
- HEd 3-090—School and Society (3)
- Electives in Education—3 credits

*Special Requirements for all Students* (See Section I of this bulletin)

- PubH 3-004—Basic Concepts in Personal and Community Health (4)
- Physical Education—3 credits

Electives to complete a total of 186 credits. Recommended are the continuation of a language begun in high school, speech and theatre arts, philosophy, history, sociology, psychology, sports, dance, journalism, music or literature. Electives may be in art courses beyond the minimal requirements.

### Minors in Art Education

**Minor in Elementary School Art** (minimum 27 credits)

*Minor Courses*

- 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)
- 6 credits in drawing and design
- 10 credits from studio art, related arts, or art history

*Professional Courses*

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

*Note:* Completion of 5 additional credits in studio art courses will satisfy the requirement of an academic minor in the Elementary Education Major for Undergraduate Students.

**Minor in Secondary School Art** (minimum 28 credits)

*Minor Courses*

- ArEd 3-306, 3-307—Basic Principles and Experiences in Art Education (4 cr each)
- 4 credits in art history and theory
- Electives—12 credits including a minimum of 8 in drawing and design

*Professional Courses*

- ArEd 1-501—Introduction to Art Education (2)  
ArEd 3-507—The Teaching and Supervision of Art (2)

**Programs for the Master of Education Degree**

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

*For Certified Art Teachers in Secondary Schools*—Completion of an undergraduate program approximating this College'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 Department of Art Education offers opportunities to work toward the M.A. and the Ph.D. See the *Graduate School Bulletin* and advisers in the Department of Art Education.

**CHILD PSYCHOLOGY**

Director: Willard W. Hartup, 190 Child Development  
Undergraduate Program Coordinator: John C. Masters, 104A Child Development

A major in child psychology is offered through the College of Liberal Arts. Students interested in the B.A. degree in that area should consult the CLA Bulletin. The College of Education offers a program in nursery school and kindergarten education. For information, see Elementary Education in this bulletin.

**EDUCATIONAL ADMINISTRATION**

Chairman: Van D. Mueller, 218 Health Services Bldg., St. Paul

The Division of Educational Administration offers 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

Chairman: Roger E. Wilk, 221 Burton Hall

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, evaluation, 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 an adviser in one of the four departments. 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

Chairman: Norman A. Sprinthall, 139 Burton Hall

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

Chairman: Wells Hively, Jr., 330 Burton Hall

The Psychological Foundations Department 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, evaluation, statistics, research design, instructional systems, or computer applications.

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

## **School Psychology**

Chairman: Marian D. Hall, 226 Child Development

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 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 psychology, learning difficulties, diagnostic and remedial procedures, statistics and measurement, specialized research techniques, special education, and practicum.

## **Special Education**

All training programs in the Department of Special Education require admission to the Graduate School or to adult special status in the College of Education. In addition, the department has its own procedure which includes an interview of prospective students. Inquiries about departmental admissions or advising procedures, State of Minnesota certification requirements, and training sequences should be directed to the departmental admissions office in 101A Pattee Hall.

Students in any college or graduate program may take specific courses such as SpEd 5-101, Education of Exceptional Children, to obtain an overview of the possible adaptations of school programs for children with special needs; however, special certification sequences of courses are no longer available at the undergraduate level.

**Consulting Resource Teacher**—The Department of Special Education is developing a new program to serve mild and moderately handicapped school children who may be accommodated in regular classrooms. Students interested in such a program should inquire of Professor W. Donald Crump, 210 Pattee Hall.

## ***Teaching Disadvantaged Children and Youth***

Graduate Program Adviser: Dewey G. Force, Jr., 101A Pattee Hall

Graduate level courses on the education of disadvantaged children and youth are offered through the Department of Special Education. 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 Children with Severe Hearing Impairments*

Graduate Program Adviser: W. Desmond Phillips, 106 Pattee Hall

Acceptance in this program requires a personal interview with the adviser and submission of a formal application through the departmental admissions office in 101A Pattee Hall. While some of the special courses may be taken at the undergraduate level most students will wish to use course work completed in this program toward the requirements for the Master's degree.

For certification in this area, students who do not hold regular teaching certificates must complete a set of course experiences in general and professional education delineated by the State of Minnesota for this area. In addition, the following courses or their equivalents comprise the minimum preparatory program for teachers of the severely hearing impaired. Additional and specialized courses are required for the Master's degree.

- CDis 5-302—Anatomy and Physiology of the Speech and Hearing Mechanisms
- CDis 5-303—Phonemics Laboratory
- CDis 5-702—Audiometry I
- SpEd 5-101—Education of Exceptional Children
- SpEd 5-140—Psycho-Social and Educational Aspects of Deafness
- SpEd 5-141—Methods of Teaching School Subjects to the Hearing Impaired
- SpEd 5-143—Teaching Language to the Hearing Impaired I
- SpEd 5-144—Teaching Language to the Hearing Impaired II
- SpEd 5-145—Teaching Speech to the Hearing Impaired I
- SpEd 5-146—Teaching Speech to the Hearing Impaired II
- SpEd 5-601—Practicum—Special Education

### *Teaching Children with Severe Learning and Behavior Problems*

Graduate Program Adviser: Frank Wood, 107 Pattee Hall

The Department of Special Education offers a program in this field at the post-baccalaureate level only. However, undergraduates are invited to discuss the selection of undergraduate elective courses with staff of the departmental admissions office in 101A Pattee Hall or with an adviser. Students admitted to the program can pursue course work toward Minnesota certification with specialization either in the "learning disability" or "emotionally disturbed and socially maladjusted" area. The two programs share a common core of basic training plus appropriate special training and experience. Because program changes are in progress, a student wishing to qualify for either certificate is strongly urged to make early contacts with the admissions office or an adviser for current information.

The student who wishes to be certified to teach children with learning difficulties (SLBP:LD) typically take the following courses or their equivalents, but should not proceed into the program until he has been formally admitted.

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

A typical program leading to Minnesota certification as a teacher of the "emotionally disturbed and socially maladjusted" (SLBP:ED) includes the following courses or their equivalents. A student should not proceed into the program until he has been formally admitted.

SpEd 5-150—Education of Emotionally Disturbed and Socially Maladjusted Children  
SpEd 8-601—Advanced Practicum  
Elem 5-334—Reading Difficulties  
SpEd 5-112—Education of Learning-Disabled Children  
PsyF 5-162—Personality and Social Development  
PsyF 5-170—Social Psychology of Education  
PsyF 5-141—Psychology of School Learning  
PsyF 5-120—Educational Measurement in the Classroom  
CPsy 5-319—Clinical Procedures  
CPsy 5-331—Processes of Socialization

### *Teaching Gifted Children*

Graduate Program Adviser: Maynard C. Reynolds, 101 Pattee Hall

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*

Graduate Program Adviser: Dewey G. Force, Jr., 101A Pattee Hall

A sequence of courses and practicums leading to state certification to teach children with physical impairments or disabilities is possible at the post-bachelor's level or master's degree level of study. A student expecting to be recommended for the certificate must have early clearance from the program adviser. Requirement for departmental recommendation of special certification is completion of a minimum of 30 credits from the following:

*Required*—18 credits from

SpEd 5-601—Practicum: Special Education  
SpEd 5-101—Education of Exceptional Children  
SpEd 5-130—Education of Crippled Children  
SpEd 5-131—Educational Problems of Neurological Impairment

*Electives*—12 credits selected in consultation with the adviser from the following, or other courses

Anat 1-027—Anatomy for Physical Education Students  
CPsy 5-313—Psychology of Atypical Children  
SpEd 5-120 (or CPsy 5-315)—Introduction to Mental Retardation  
PE 3-100—Adapted Physical Education  
PE 5-100—Teaching Physical Education for the Handicapped Child  
SpEd 5-112—Education of Learning-Disabled Children

### *Supervision and Administration of Special Education Programs*

Graduate Program Adviser: Richard F. Weatherman, 108 Pattee Hall

Through the Departments of Special Education and Educational Administration, the Graduate School offers a program which leads to the doctorate in educational administration with a major emphasis in administration of special education programs. 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 special education programs. Admission to this program requires completion of the Master's degree, special certification, and experience in some area of special education.

### Teaching Severely Retarded (Trainable) Pupils

Graduate Program Adviser: John Rynders, 104 Pattee Hall

Admission to this program, which leads to a Minnesota certificate to teach severely retarded (trainable) pupils, requires admission to the Graduate School as a degree candidate or as an adult special student in the College of Education at the post-baccalaureate level. Students interested in a program for preparing to teach mildly retarded (educable) pupils should inquire of Professor W. Donald Crump, 210 Pattee Hall.

A minimum of 30 credits, selected from the courses listed below or their equivalent, is required for completion of the program.

- SpEd 5-100—Childhood Language Development: Classroom Implications (preschool or elementary emphasis) (or)
- Ind 5-320—Vocational Guidance (secondary or adult emphasis)
- SpEd 5-101—Education of Exceptional Children
- SpEd 5-120 (or CPsy 5-315)—Introduction to Mental Retardation
- SpEd 5-123—Methods and Materials for Severely Retarded Preschool and School Age Children
- SpEd 5-301—Contingency Management in Special Education Systems
- SpEd 5-320—Workshop: Education of Trainable Retarded Children
- SpEd 5-601—Practicum in Special Education
- PsyF 5-141—Psychology of School Learning

**Undergraduate Students**—Undergraduate students at the junior and senior levels are invited to take course work in this area as elective credit. Courses listed below might be particularly interesting to students majoring in elementary or secondary education.

- SpEd 5-101—Education of Exceptional Children
- SpEd 5-120—Introduction to Mental Retardation
- SpEd 5-123—Methods and Materials for Severely Retarded Preschool and School Age Children

Undergraduate students are reminded that whether or not they have taken such courses as listed above, they may be admitted to the SR program *only* after they have completed the baccalaureate degree, submitted an application, and been formally accepted into the program.

**Adult Special Students**—Entry to the training program for teachers of severely retarded pupils does not require a baccalaureate degree in education. Degrees in related fields such as social work or child psychology are acceptable. Persons wishing to enter this certification program as adult special students must apply to the College of Education for adult special status and to the Department of Special Education for admission to the SR program. Application forms for the SR program are available in 101A Pattee Hall. Upon notification of acceptance, the student should see an adviser to plan a program of study.

**Graduate Students**—Students wishing to take the program as part of a graduate degree sequence should see the *Graduate School Bulletin* for information about graduate study requirements or contact the departmental admissions office in 101A Pattee Hall for descriptive materials.

## ELEMENTARY EDUCATION

Chairman: Ronald T. Lambert, 250 Burton Hall  
Undergraduate Program Coordinator: James Stochl, 530 Johnston Hall

The curricula outlined in this section prepare students for our recommendation for certification to teach in the elementary school. Two basic programs are offered for persons of differing backgrounds in education, training, and ex-

perience: a major in elementary education for undergraduate students, and a major in elementary education for students who already hold a B.A. or B.S. degree. Upon completion of the chosen program, students are eligible for recommendation for certification to teach grades 1 through 6 in the State of Minnesota. The kindergarten program is offered for those who wish to add this endorsement to their certificate.

Elementary education is a limited enrollment field, as noted in the statement on limited enrollment in Section I of this bulletin. Students seeking admission should inquire at the Student Personnel Office, 206 Burton Hall, for current information on admission procedures and assistance in making a choice of curriculum. After admission to the College of Education, the student will be assigned an adviser in the Division of Elementary Education.

### *Major in Elementary Education for Undergraduate Students*

Students should register for courses in liberal arts areas for the first two years, and may apply for admission to the program early in the quarter in which they will have completed 90 quarter credits. Applications for fall admission must be received by the Office of Admissions and Records no later than the end of the first week of the previous spring quarter; applications for winter admission no later than the end of the first week of fall quarter. No students are admitted for the spring quarter or summer terms.

The criteria for consideration for admission are:

1. Completion of Freshman English and the general psychology requirement
2. Completion of 90 quarter credits with a grade point average of C (2.00) Preference will be given to applicants with a higher grade point average
3. Within 12 credits of completion of items 1 through 5 of the *Related Course Requirements* listed below.

The nature and scope of the applicant's prior work with children, and an assessment of personal characteristics are also considered. Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate related and major courses may be used toward these requirements.

#### *Related Course Requirements*

1. Spch 1-101—Fundamentals of Speech (5) (or) Spch 1-102—Communication in the Modern World: Interpersonal Communication (3)
2. Math 1-005 and 1-006—Foundations of Arithmetic (3 cr each)
3. 15 credits in science including courses in physical and biological science
4. 12 credits from at least 2 of the following areas: anthropology, economics, geography, history, political science, social science, and sociology
5. Mus 1-001—Fundamentals of Music (4)
6. 18 credits in Upper Division academic courses including Engl 3-851—Introduction to the English Language (4). (The student may also count PubH 3-004, any credits accumulated in Lower Division courses in physical and biological science in excess of the 15 credit requirement, and credits in mathematics courses numbered 1-142 or above to meet this requirement.)
7. A concentration of 30 credits in any one of the following fields: anthropology, art, economics, English, a foreign language, geography, history, humanities, mathematics, music, philosophy, science, political science, psychology, sociology, speech. Courses from items 1 through 6 may be included.

## Curricula

### Major and Professional Courses

- Elem 3-100—Psychological Foundations of Elementary Education (5)
- Elem 3-102—Orientation to Teaching in the Elementary School (1)
- Elem 3-103—The Teacher and the Elementary School (2)

#### Basic Methods Courses:

- 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)

(A student may use only 2 basic methods courses taken outside of the College of Education. It is strongly recommended that students complete 9 credits of the methods courses prior to the first quarter of student teaching.)

Minimum of 10 credits in student teaching from Elem 3-600, 3-601, 3-603, 3-605, 3-606, 3-607, 3-610, 3-630, 3-631, 3-633, 3-634, 3-636, 3-639

- ArEd 3-001—Survey of Art Activities (3)
- HEd 3-090—The School and Society (3)
- MuEd 3-011—Teaching Music in the Elementary School (3)
- Hth 3-330—Teaching Health in the Elementary School (3)

### Special Requirements for All Students (See Section I of this Bulletin)

- PubH 3-004—Basic Concepts in Personal and Community Health (4)
- PE 3-327—Teaching Physical Education in the Elementary School (3), which completes the physical education requirement

Electives to complete 186 credits

**Quality of Work**—The student must earn a C (2.00) average for the total program and average of C (2.00) separately for the major and professional education courses, excluding MuEd 3-011 and ArEd 3-001.

### Major in Elementary Education for Post-Baccalaureate Students

Completion of this program will culminate in a B.S. degree with a major in elementary education and recommendation by the College for certification to teach Grades 1 through 6 in the State of Minnesota.

A limited number of students will be accepted into the program each academic year. Applications are considered for fall quarter admission only and must be received in the Office of Admissions and Records no later than the end of the first week of the previous spring quarter. Criteria for consideration for admission include a baccalaureate degree from an accredited institution with a minimum overall grade point average of C+ (2.50) and a minimum grade point average of C+ (2.50) in the major.

The content of the baccalaureate program must meet the minimum Liberal Education Distribution Requirements (See Section I of this bulletin) and contain the liberal arts prerequisites for professional education courses; or the student must plan to complete these deficiencies during the summer terms prior to the fall quarter in which he enters the program. The liberal arts prerequisites are completion of one course in each of the following areas: general psychology, foundations of arithmetic, fundamentals of music, linguistics, and a course in public health which will satisfy the certification requirement of the State Department of Education.

Students admitted to this program are required to complete a minimum of 12 credits per quarter with a minimum grade point average of C (2.00).

### Major and Professional Courses (minimum 45 credits)

- 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 3-607—Student Teaching in the Elementary School: Full Days (10)  
MuEd 3-011—Teaching Music in the Elementary School (3)  
PE 3-327—Teaching Physical Education in the Elementary School (3)  
Hlth 3-330—Teaching Health in the Elementary School (3)

### *Kindergarten Endorsement Program*

Students who wish to be certified for kindergarten teaching are required to complete the following courses with an average of C (2.00) in addition to the major for undergraduate students or the major for post-baccalaureate students as outlined:

- Elem 3-376—Nursery School-Kindergarten Curriculum I (3)  
Elem 3-377—Nursery School-Kindergarten Curriculum II (3)  
CPsy 3-301—Child Psychology (4)  
Elem 3-603—Student Teaching in the Kindergarten (6)—substituted for Elem 3-601 in the elementary major

### *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 consult Professor Shirley Moore, Institute of Child Development. A minimum grade point average of C+ (2.50) is required for admission to this program, and a limited number of students will be accepted each academic year.

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, preparation for elementary and kindergarten teaching:

#### *Early Childhood Education—15 credits*

- Elem 3-376—Nursery School-Kindergarten Curriculum I (3)  
Elem 3-377—Nursery School-Kindergarten Curriculum 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 (4)  
Two additional courses in child psychology, from the following list:  
CPsy 5-311—Behavior Problems (4)  
CPsy 5-330—Directed Experiences with Children  
    Option a\*\*—Case Study of Children (4)  
    Option b\*\*—Social Behavior of Children (4)  
    Option c\*\*—Cognitive Stimulation of Children (4)  
CPsy 5-331—Processes of Socialization of Children (4)  
CPsy 5-333—Personality Development (4)  
CPsy 5-335—Peer Relations (4)  
CPsy 5-339—Parent-Child Relations (4)  
CPsy 5-341—Perceptual Development (4)  
CPsy 5-343—Cognitive Development (4)  
CPsy 5-345—Language Development (4)  
CPsy 5-347—Learning in Children (4)

\*\* Strongly recommended for students with no previous experience with groups of young children

### Graduate Programs

Programs leading to the M.A. and Ph.D. degrees are offered through the Graduate School emphasizing various areas of study in elementary education. Applicants should have completed an undergraduate curriculum 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.

### HIGHER EDUCATION

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.

### MUSIC EDUCATION

Chairman: Roy A. Schuessler, 104A Scott Hall

Undergraduate Program Coordinator: Adrian R. M. Lauritzen, 104D Scott Hall

For the undergraduate curriculum in music education, a student normally enters the College of Education after completing 45 credits with at least a C (2.00) average in a liberal arts area. The freshman year's work must include 6 credits in materials and structure of music, 6 credits in ear-training and sight-singing, 4 credits in history of music, 6 credits in applied music, 2 credits in Introduction to Public School Music Teaching (MuEd 1-201) and membership in performing organizations for 3 quarters. The student should apply for admission to the College of Education early in the quarter in which he will meet these requirements. See also Section I of this bulletin for admission procedures.

Five programs in music education are offered: (1) elementary concentration; (2) choral concentration; (3) instrumental concentration, wind emphasis; (4) instrumental concentration, string emphasis; and (5) general music concentration. A student may, with permission of the major adviser, select two concentrations for his program. Candidates for the general music concentration will be selected by personal interview with appropriate faculty—inquiries should be directed to Professor Roy Schuessler, 104A Scott Hall. Common and special requirements for the several concentrations are listed below, following the information concerning applied music which relates to all concentrations.

### Applied Music Entrance Requirements

In order to take applied music for credit a student must qualify on the basis of an entrance examination. Guidelines for examinations on the various instruments are:

*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 Bach invention or dance from one of the suites; one of the less difficult sonatas by Haydn, Mozart, or Beethoven; and one of the shorter pieces by a 19th or 20th-century composer.

*Organ*—same as for piano, and 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.

### 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 or 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.

### Major Requirements for All Students

At least 18 credits in the principal applied medium, selected from Mus 1-201 through 1-225 (or 1-301 through 1-325) and 3-201 through 3-225 (or 3-301 through 3-325); at least 6 Upper Division credits required, for which a student may register after completing 12 Lower Division credits on the same instrument, passing an Upper Division qualifying examination, and satisfactorily completing sophomore clearance. However, students electing two concentrations with differing applied music requirements should take 12 Lower Division credits in each of the two applied music areas. All students are required to pass a piano proficiency examination prior to admission to student teaching. It is recommended that a student complete the applied music requirements by the end of the junior year and register for applied music credits beyond the requirements if possible.

### Major in Music Education

Students are expected to complete the Liberal Education Distribution Requirements as follows:

Completion of Freshman English or exemption, and in addition a total of 28 credits in Groups A, B, and C:

- A. Communication, Language, Symbolic Systems (minimum 8 credits)  
Linguistics, rhetoric, logic, philosophic analysis, mathematics, statistics, foreign languages
- B. Physical and Biological Sciences (minimum 12 credits)  
(no lab required)
- C. Man and Society (minimum 8 credits including Psy 1-001)
- D. Artistic Expression (minimum 12 credits)  
Requirements in Group D are satisfied by course work in the major.

In addition, for a major in music education, a student must complete the following requirements.

#### REQUIREMENTS COMMON TO ALL CONCENTRATIONS

##### Major Courses

- Mus 1-501 through 1-506—Materials and Structure of Music I, II (2 cr each)  
Mus 1-511 through 1-516—Ear-Training and Sight-Singing I, II (2 cr each)  
18 credits in applied music from Mus 1-201 through 1-225 (or 1-301 through 1-325, and 3-201 through 3-225 (or 3-301 through 3-325)  
Mus 1-603 through 1-606—History of Music (4 cr each)  
Ensemble experience during every quarter of on-campus study, to be determined in consultation with an adviser

##### Professional Education Courses

- MuEd 1-201—Introduction to Public School Music Teaching (2)  
SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)  
(or) Elem 3-100—Psychological Foundations of Elementary Education (5)  
(and) Elem 3-101—Introduction to Elementary School Teaching (3)  
HEd 3-090—The School and Society (3)  
12 credits in MuEd 3-650—Student Teaching (3-12)

##### Special Requirements for All Students (See Section I of this Bulletin)

- PubH 3-004—Basic Concepts in Personal and Community Health (4)  
Physical Education—3 credits

**Admission to Student Teaching**—All applicants must have completed SeEd 3-150, 3-155 in the special music section in spring quarter of the junior year, plus music education methods courses: for elementary concentration, MuEd 3-301, 3-302; for choral concentration MuEd 3-415, 3-416, 3-331; for instrumental concentration MuEd 3-515, 3-516, 3-331; for general music concentration MuEd 3-311, 3-312, 3-331, and at least 8 credits in MuEd 3-320. An average of C+ (2.50) is required in music theory, history, principal applied medium, and major music education methods courses taken prior to student teaching.

**Grade Point Average Requirement**—An Average of C+ (2.50) is required in applied music, principal medium: 18 credits from Mus 1-201 through 1-225, 1-301 through 1-325, and 3-201 through 3-225, 3-301 through 3-325; Mus 1-501 through 1-506, 1-511 through 1-516, 1-603 through 1-606; MuEd 1-201, plus all courses listed for the student's concentration.

**Concentration Requirement**—In addition to the common requirements, a student is expected to complete one of the following concentrations:

**ELEMENTARY CONCENTRATION**

*Major Courses*

Applied voice major or minimum of 6 credits in applied voice

*Professional Education Courses* (minimum 17 credits)

- MuEd 3-301—Teaching Music in Grades K-3 (4)
- MuEd 3-302—Teaching Music in Grades 4-6 (4)
- MuEd 3-322—Techniques of Classroom Instruments (5)
- CPsy 3-301—Child Psychology (4)

**CHORAL CONCENTRATION**

*Major Courses*

Voice major or minimum of 6 credits of applied voice for non-voice major

Mus 5-741 or 5-742—Vocal Literature (4)

8 additional credits in music and/or music education to be selected in consultation with an adviser

*Professional Education Courses* (minimum 18 credits)

- MuEd 3-331—Teaching Choral and Instrumental Music in the Public Schools (4)
- MuEd 3-415, 3-416—Choral Laboratory I, II (5 cr each)
- MuEd 3-431—The Adolescent Singing Voice (4)

**INSTRUMENTAL CONCENTRATION, WIND EMPHASIS**

*Major Courses*

Applied major on a standard band instrument

*Professional Education Courses* (minimum 30 credits)

- MuEd 1-504—String Techniques I (4 cr) (or) MuEd 1-505—String Techniques II (4)
- MuEd 1-515—Woodwind Techniques (4)
- MuEd 1-525—Brass Techniques (4)
- MuEd 1-535—Percussion Techniques (4)
- MuEd 3-331—Teaching Choral and Instrumental Music in the Public Schools (4)
- MuEd 3-515, 3-516—Instrumental Laboratory I, II (5 cr each)

**INSTRUMENTAL CONCENTRATION, STRING EMPHASIS**

*Major Courses*

Applied major on a string instrument

*Professional Education Courses* (minimum 30 credits)

- MuEd 1-504—String Techniques I (4 cr) (or) Mus 3-361, 3-362, 3-363—Violin Pedagogy (2 cr each)
- MuEd 1-505—String Techniques II (4)
- 8 credits from MuEd 1-515—Woodwind Techniques (4), MuEd 1-525—Brass Techniques (4), MuEd 1-535—Percussion Techniques (4)
- MuEd 3-331—Teaching Choral and Instrumental Music in the Public Schools (4)
- MuEd 3-515, 3-516—Instrumental Laboratory I, II (5 cr each)

**GENERAL MUSIC CONCENTRATION**

*Major Courses*

- Mus 1-521, 1-522—Keyboard Training (2 cr each)
- Mus 5-027, 5-028—History of Musical Styles (4 cr each)
- Mus 5-551, 5-552—Composition (2 cr each)
- Applied major keyboard instrument

*Professional Education Courses* (minimum 28 credits)

- MuEd 3-311, 3-312—Teaching Music in the Secondary School I, II (4 cr each)
- 16 credits in MuEd 3-320—Seminar: General Music (4)
- MuEd 3-331—Teaching Choral and Instrumental Music in the Public Schools (4)

**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.

## Curricula

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### Minor Courses

- Mus 1-021—Introduction to Music (5) (or) Mus 3-021—Introduction to Music (5)  
Minimum of 4 credits from Mus 5-027, 5-028, 5-029—History of Musical Styles (4 cr each)  
(or) Mus 1-804—World Music (4)  
Minimum of 4 credits from Mus 1-501, 1-502, 1-503—Materials and Structure of Music (2 cr each)  
Minimum of 4 credits from Mus 1-511, 1-512, 1-513—Ear-Training and Sight-Singing I (2 cr each)  
Minimum of 2 credits from Mus 1-101, 1-201—Applied Piano (2-4 cr each) (or) Mus 1-151, 1-152, 1-153—Class Piano (2 cr each)  
Minimum of 2 credits from Mus 1-104, 1-204—Applied Voice (2 or 4 cr each) (or) Mus 1-161, 1-162, 1-163—Class Voice (4-6)  
Minimum of 2 credits from Mus 1-430 or 5-430—University Chorus, Women's Chorus, Men's Chorus (1) (or) Mus 5-490—Chamber Singers (2-6)

### Professional Education Courses

- MuEd 3-415, 3-416—Choral Laboratory I, II (5 cr each) (or) MuEd 3-311, 3-312—Teaching Music in Secondary School I, II (4 cr each)

### Master of Education Degree in Music Education

The master of education degree is designed for those who wish to strengthen their knowledge and skills in the areas of music and music education. This program includes courses in applied music, music theory, music history, music education, and education selected with the approval of an adviser.

**Entrance Requirements:** Bachelor's degree with a major in music education with a C+ (2.50) overall GPA and a 2.80 GPA in music and music education courses from an accredited institution.

#### Degree Requirements (minimum 45 credits)

- 12 credits in music education including a 3-credit integrating paper in the areas of music, music education, and education, for which a student registers in MuEd 5-970—Independent Study.
- 6 credits in education courses
- 24 credits in music selected from theory, applied, music history and/or literature, and practical (ensemble)
- 3 credits of appropriate electives

**Graduation Requirements**—a written and/or oral examination upon successful completion of all requirements with a C+ (2.50) overall GPA.

## PHYSICAL EDUCATION, RECREATION, AND SCHOOL HEALTH EDUCATION

Director: Eloise M. Jaeger, 110A Cooke Hall

The School of Physical Education and Recreation offers professional programs of instruction in physical education, dance education, recreation and park administration, camping and outdoor education, and school health education. Listed below are requirements for the B.S. degree, minors, and special certification programs, followed by a description of education M.Ed. programs and the Graduate School programs leading to the M.A., Ph.D., and Ed.D. degrees.

Non-professional activity courses 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 co-educational with others for men only or for women only. See Section III of this bulletin and the *Class Schedule* for further information about each activity course including the prerequisite health activity rating, or consult Eva Lou Dillin, 219 Cooke Hall.

## Physical Education

Chairman: John F. Alexander, 224A Cooke Hall  
Undergraduate Program Coordinator: Mary L. Young, 224B Cooke Hall  
Graduate Program Coordinator: Marjorie U. Wilson, 224B Cooke Hall

### Major in Physical Education

Students should apply for admission to the College of Education *early in the quarter in which they will meet admission requirements*. Applications for fall admission must be received by the Office of Admissions and Records no later than the end of the first week of the previous spring quarter; applications for winter admission no later than the end of the first week of fall quarter. No students are admitted for spring quarter. Minimum requirements for consideration are: 45 credits completed prior to transfer with a C (2.00) average if the transfer is from a liberal arts or junior college, or 7.00 numeric average if transfer is from General College; (2) completion of Freshman English or equivalent; (3) activity rating of 1 or 2; and (4) 3 credits in physical education activity courses. Consideration will be given to entrance examination test scores and background experience.

This curriculum prepares a student for a B.S. degree in physical education and recommendation for Minnesota certification in physical education (Grades K-12). A total of 186 credits must be completed with a C+ average (2.50) in major courses and a C (2.00) average in the teaching minor.

Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate related and major courses may be used toward those requirements.

#### *Related Course Requirements*

One course in Speech

Chem 1-004, 1-005—General Principles (5 cr each) (or) NSci 1-004, 1-005—The Physical World (4 cr each)

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

Anat 1-027—Anatomy for Physical Education Students (4) (or) PE 3-110—Human Anatomy (3)

PubH 3-385, 3-386—Physiological Hygiene (4 cr each) (or both) Phsl 3-051—Human Physiology (5) (and) PE 3-115—Physiological Application to Sports (3)

PsyF 3-370—Human Relations and Group Dynamics (3) (or) approved equivalent

#### *Major Courses (minimum 49 credits)*

1. Activities—10 credits

7 credits to demonstrate competency at the beginning level to include 2 team sports, 2 individual or dual sports, 1 form of dance, aquatics, and 1 new activity not included above, through registration in approved physical education activities courses or PE 1-980

3 credits to demonstrate competency at an advanced level through registration in 3 approved physical education activities or in PE 1-981

2. Required of all—12 credits

PE 1-521—Gymnastics (1)

PE 1-522—Gymnastics (1)

PE 1-561—Physical Education Activities for the Elementary School (3)

(or) selection of the Elementary Physical Education area of emphasis

PE 1-580—Orientation and Appraisal (1)

PE 1-870—Orientation to Movement (3)

PE 3-111—Mechanics of Movement (3)

3. 18 credits from:

PE 3-100—Adapted Physical Education (3)

PE 3-113—Motor Learning and Motor Development (4)

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

PE 3-120—Curriculum and Administration (5)

## Curricula

- PE 3-130—History and Principles (3)
- PE 3-150—Introduction to Evaluation (4)
- PE 3-160—Programming Intramural-Extramural Sports (3)

#### 4. Area of Emphasis or Electives

Each student must complete one of the following areas:

- a. Adapted Physical Education—9 credits
  - PE 3-100—Adapted Physical Education (3)
  - PE 3-625—Supervised and Practical Experience (3)
  - SpEd 5-101—Education of Exceptional Children (3)
- b. Advanced Study Preparation—9 credits
  - With consent of the department, the student completes 9 credits in one or more areas such as motor learning, history, mechanics of movement or research. PE 3-900 may be used to meet this requirement.
- c. Aquatics—10 credits
  - PE 1-410—Water Safety Instructor (2)
  - PE 1-801—Aquatics Administration (2)
  - 1 credit from:
    - PE 1-004—Diving and Springboard (1)
    - PE 1-205—SCUBA and Skin Diving (1)
    - PE 1-309—Synchronized Swimming (1)
  - 5 credits from:
    - PE 1-004—Diving and Springboard (1)
    - PE 1-204—Diving and Springboard (1)
    - PE 1-205—SCUBA and Skin Diving (1)
    - PE 1-309—Synchronized Swimming (1)
    - Rec 1-530—Camp Aquatics (2)
    - PE 3-176—Swimming and Diving Coaching (2) (or)
    - PE 3-900—Independent Study (1-9)
- d. Coaching—9 credits
  - Men: coaching emphases are available for baseball, basketball, football, golf, gymnastics, ice hockey, swimming, tennis, track and field, and wrestling. Each area will require the following:
    - 1 credit in an approved activity course for the sport selected
    - 2 credits in a coaching course for the sport selected
    - PE 3-624—Student Teaching: Coaching (3) (or) for varsity squad members 3 credits in PE 3-900—Independent Study
    - PE 3-625—Supervised Practical Experience (3)
  - Women: See Minnesota Public Secondary School Coaching Certification for Girl's Interscholastic Sports
- e. Dance—10 credits
  - PE 1-023—Folk and Square Dance (1)
  - PE 1-515—Modern Dance Technique and Improvisation I (2)
  - PE 1-615—Modern Dance Technique and Improvisation II (2)
  - PE 3-395—Advanced Improvisation (1)
  - 1 of the following:
    - PE 3-321—Teaching of Folk Dance and Social Forms (4)
    - PE 3-326—Teaching of Modern Dance (4)
    - PE 3-394—Creative Dance for Children (4)
- f. Elementary School Physical Education—10 credits
  - PE 1-563—Games, Sports, Track and Field for the Elementary School Child (2)
  - PE 1-564—Educational Gymnastics for Children (2)
  - PE 1-565—Dance for the Elementary School Child (2)
  - PE 3-324—Teaching Physical Education in the Elementary School (4)
- g. Gymnastics—9 credits
  - PE 1-564—Educational Gymnastics for Children (2)
  - PE 3-174—Gymnastics Coaching (2)
  - PE 5-123—Analysis of Movement in Gymnastics (3)
  - Required for women: PE 1-017—Rhythmic Gymnastics (1) (and)
  - PE 1-524—Gymnastics Composition (1)
  - Required for men: completion of Regional Judging Certification for 2 credits through registration in PE 1-990
- h. Intramurals-Extramurals—10 credits
  - Men:
    - PE 3-160—Programming Intramural-Extramural Sports (3)
    - PE 3-270—Sports Officiating and Supervision (3)
  - 4 credits from:
    - PE 3-625—Supervised Practical Experience (3)

## School of Physical Education and Recreation

- PE 3-900—Independent Study (1-9)
- PE 3-161—Coaching Women in Competitive Sports (3)

### Women:

- PE 3-160—Programming Intramural-Extramural Sports (3)
- PE 3-161—Coaching Women in Competitive Sports (3)

2 credits from:

- PE 1-650—Officiating Field Hockey-Volleyball (1)
- PE 1-651—Officiating Basketball (1)
- PE 1-656—Officiating Softball (1)

2 credits from:

- PE 3-625—Supervised Practical Experience (3)
- PE 3-900—Independent Study (1-9)

i. Electives—10 credits

### Professional Education Courses (minimum 28 credits)

- PE 1-875—Orientation to Teaching Physical Education (1)
- PE 3-323—Teaching Physical Education (5)
- PE 3-607—Student Teaching: College (1)
- 12 credits in student teaching from PE 3-621 and 3-622.
- SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each) (or) Elem 3-100—Psychological Foundations of Elementary Education (5) (and) SeEd 3-150—Introduction to Secondary School Teaching (5)
- Hed 3-090—The School and Society (3)

### Special Requirements for All Students (See Section I of this Bulletin)

- Physical Education—3 credits (satisfied by the major)
- PubH 3-004—Basic Concepts in Personal and Community Health (4)
- The student must also complete 12 credits at the Upper Division level in one department outside of the School of Physical Education and Recreation, or a regular teaching minor in the College of Education.
- Electives to complete 186 credits.

### Minnesota Public Secondary School Coaching Certification for Boy's Interscholastic Sports

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 in physical education or by the following special coaching preparation. This certificate is only available to students admitted to a program in the College of Education or to certified teachers. Before starting the program, prospective students must apply to the Department of Physical Education for admission. Students who successfully complete this program will be recommended for certification for interscholastic athletic coaching in Minnesota public secondary schools. A minimum of 19 credits from groups A, B, and C is required.

#### A. All required

- 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 Students (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 3-624—Student Teaching: Coaching (3) (not required for those with public school coaching experience)

#### B. Select 2 courses:

- PE 3-111—Mechanics of Movement (3)
- PE 3-113—Motor Learning and Motor Development (4)
- PE 3-130—History and Principles (3)

#### C. Select 2 courses:

- PE 3-170—Baseball Coaching (2)
- PE 3-171—Basketball Coaching (2)
- PE 3-172—Football Coaching (2)
- PE 3-173—Golf Coaching (2)
- PE 3-174—Gymnastics Coaching (2)
- PE 3-175—Ice Hockey Coaching (2)

## Curricula

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- PE 3-176—Swimming and Diving Coaching (2)
- PE 3-177—Tennis Coaching (2)
- PE 3-178—Track and Field Coaching (2)
- PE 3-179—Wrestling Coaching (2)
- PE 3-625—Supervised Practical Experience (3)

### *Minnesota Public Secondary School Coaching Certification for Girl's Interscholastic Sports*

A teacher in a Minnesota public secondary school who is coach of girl's interscholastic sports must be certified by completion of the following special coaching preparation. Students who successfully complete this program will be recommended for certification for coaching girl's interscholastic sports in Minnesota public secondary schools. This certificate is only available to students admitted to a program in the College of Education or to certified teachers. Before starting the program, prospective students must apply to the Department of Physical Education for admission. A minimum of 24 credits is required plus completion of the additional requirement outlined in Item D.

- A. All required
  - 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 Students (4) (or) PE 3-110—Human Anatomy (3)
  - PE 3-113—Motor Learning and Motor Development (4) (or) CPsy 5-303—Adolescent Psychology (4)
  - PE 3-114—Prevention and Care of Injuries (3)
  - PE 3-161—Coaching Women in Competitive Sports (3)
  - PE 3-360—The Intramural-Extramural-Interscholastic Sports Program (3) (or) PE 3-160—Programming Intramural-Extramural Sports (3)
  - PE 3-624—Student Teaching: Coaching (3)
  - PubH 3-385, 3-386—Physiological Hygiene (4 cr each) (or) PE 3-115—Physiological Application to Sports (3)
- B. One of the following:
  - PE 1-650—Officiating Field Hockey-Volleyball (1)
  - PE 1-651—Officiating Basketball (1)
  - PE 1-656—Officiating Softball (1)
  - or current D.G.W.S. Rating (local or above)
- C. One of the following:
  - PE 3-173—Golf Coaching (2)
  - PE 3-174—Gymnastics Coaching (2)
  - PE 3-176—Swimming and Diving Coaching (2)
  - PE 3-177—Tennis Coaching (2)
  - PE 3-178—Track and Field Coaching (2)
  - PE 3-370—Coaching Basketball and Volleyball (2)
  - PE 5-123—Analysis of Movement in Gymnastics (3)
- D. One season of participation in the Extramural Program at the University.

### *Dance Minor*

The minor in dance requires a minimum of 30 credits, and is open to all College of Education students. Programs should be planned with a dance adviser as early as possible.

#### *Minor Courses—20 credits*

- A. Required of all—10 credits
  - PE 1-515, 1-615, 1-715—Modern Dance Technique and Improvisation I, II, III (2 cr each)
  - PE 3-390, 3-391—Dance Composition (2 cr each)
- B. 10 credits from:
  - PE 1-022—Ballroom Dance (1)
  - PE 1-122—Ballroom Dance (1)
  - PE 1-023—Folk and Square Dance (1)

## School of Physical Education and Recreation

- PE 1-123—Folk and Square Dance (1)
- PE 1-581—Ballet I (2)
- PE 3-180—History and Trends in Dance (3)
- PE 3-321—Teaching of Folk Dance and Social Forms (4)
- PE 3-326—Teaching of Modern Dance (4)
- PE 3-392—Dance Production (3)
- PE 3-394—Creative Dance for Children (4)
- PE 3-395—Advanced Improvisation (1)

C. 10 credits selected from the following courses in art, anatomy, music, physical education, and/or theatre arts:

ArtH 3-001, 3-466, 3-467; Anat 1-027; Mus 3-021, 3-027, 3-028, 3-209; Th 1-101, 1-501, 1-310, 1-321, 1-326, 3-326, 3-370, 5-131, 5-132; PE 3-111

### **Recreation and Park Administration**

Chairman: Clarence E. Mueller, 203 Cooke Hall

Undergraduate Program Coordinator: Glenn Cheatham, 204 Cooke Hall

Undergraduate Program Adviser, CLA: Charles Boudreau, 204 Cooke Hall

Students should apply for admission to the College of Education early in the quarter in which they will meet admission requirements. Applications for fall admission must be received by the Office of Admissions and Records no later than the end of the first week of the previous spring quarter; applications for spring admission no later than the end of the first week of winter quarter. No students are admitted for winter quarter or summer terms. Admission will be based on the following criteria:

1. Completion of the appropriate admission procedures
2. Completion of a minimum of 1 year of liberal education (not less than 45 quarter credits) including the Freshman English requirement
3. An overall grade point average of at least C (2.00) with preference given to applicants with higher averages
4. Assessment of personal and professional characteristics through recommendations and interviews with preference given on the basis of an evaluation of the nature and scope of previous recreation and/or related experiences.

The program provides professional preparation in recreation and park administration leading to the B.S. degree. During the junior or senior years the student must select one area of specialization from the following:

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

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

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

*Option IV: Voluntary and Youth-Serving Agencies*—Emphasis on preparing to assume positions in YMCAs, scouting, boys' clubs, and other youth-serving agencies.

Students who graduate from the major program in recreation and park administration are qualified to receive Minnesota certification to direct recreation

## Curricula

programs in public school facilities. 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.

Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate major courses may be used toward these requirements. For graduation, the student must complete 186 credits and earn a grade point average of C+ (2.50) in course work with a "Rec" prefix. A minor is not required of majors in this program.

### COMMON REQUIREMENTS

#### *Related Course Requirements*

- Spch 1-101—Fundamentals of Speech (5)
- Jour 1-011—Journalistic Writing for Non-majors (5)
- Mus 1-001—Fundamentals of Music (4)
- Hlth 1-500—American Red Cross First Aid: Standard, Advanced (2)
- MuEd 3-001—Music for Recreational Leadership (4)
- 31 credits from anthropology, classics, economics, geography, history, humanities, philosophy, political science, social science, and sociology, including Soc 1-001—Introduction to Sociology (4) (and) Soc 1-002—American Community (4)
- 10 credits from theatre arts, speech, physical education, studio arts, art education, industrial education

#### *Major Courses (minimum 37 credits)*

- Rec 1-520—Orientation to Leisure and Recreation (5)
- 4 credits in Rec 1-525—Field Observation (1-4)
- Rec 1-540—Camp Counseling (4)
- Rec 1-600—Leadership in Social Activities (3)
- 12 credits in Rec 3-700—Senior Internship (1-12)
- Rec 3-701—Senior Seminar (3)
- Rec 5-130—Recreation and Park Areas and Facilities (5)
- Rec 5-140—Recreation Programming (5)
- Rec 5-150—Principles and Practices of Recreation Administration (5)
- 5 credits in courses numbered PE 1-001 through 1-174, including 1 course in aquatics

#### *Professional Education Courses (minimum 19 credits)*

- SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)
- SeEd 5-105—Audio-Visual Materials in Education (3)
- Educ 5-104—Adult Education (3)
- HEd 3-090—The School and Society (3)

#### *Special Requirements for All Students (See Section I of this Bulletin)*

- PubH 3-004—Basic Concepts in Personal and Community Health (4)
- Physical Education—3 credits (satisfied by the major)

Electives to complete 186 credits

### PROFESSIONAL OPTIONS

In addition to the common requirements, the student, in consultation with a major adviser, will complete one of the 4 options listed below:

#### **Option I—Recreation Program Leadership—31 credits**

#### *Related Course Requirements*

- 9 credits from disciplines related to the major
- 8 credits from art education, theatre arts, physical education, music, industrial education

#### *Major Courses*

- 14 credits from:
  - Rec 1-530—Camp Aquatics (2)
  - Rec 3-150—Leadership in Nature Recreation (3)
  - 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 (5)
  - Rec 5-230—Recreation for the Mentally Retarded (3)

## School of Physical Education and Recreation

- Rec 5-240—Recreation for the Aging (3)
- Rec 5-250—Financing Public Recreation (3)
- Rec 5-983—Readings: Recreation (1-3)

### Option II—Public Recreation and Parks—31 credits

#### Related Course Requirements

6 credits in political science Upper Division courses

#### Major Courses

- FRD 5-232—Management of Recreational Lands (3)
- FRD 5-233 (or) Hort 5-010—Principles of Outdoor Recreation Design and Planning (4)
- 6 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 (5)
  - Rec 5-983—Readings: Recreation (1-3)
- 12 credits from:
  - Hort 1-024—Theory of Landscape Design (4)
  - FRD 5-257—Recreation Land Policy (3)
  - FRD 5-258—Outdoor Recreation Economics (3)
  - FRD 5-259—Recreation Land Amenities and the User (3)
  - FRD 5-260—Advanced Management of Recreational Lands (3)
  - Actt 1-024—Principles of Accounting (3)

### Option III—Therapeutic Recreation—31 credits

#### Related Course Requirements

17 credits from child psychology, educational psychology, social work, and sociology, including Soc 5-201—Introduction to Social Psychology (4) (and) CPsy 3-301—Child Psychology (4) (and) 1 course from PsyF 3-670—Human Relations and Group Dynamics (4) (or) Anat 1-004—Elementary Anatomy (4) (or) Psy 1-004 (or) 1-005—Introduction to Lab Psychology (3 cr each)

#### Major Courses

- Rec 5-210—Introduction to Therapeutic Recreation (5)
- Rec 5-220—Programming in Therapeutic Recreation (3)
- 6 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)

### Option IV—Voluntary and Youth-Serving Agencies—31 credits

#### Related Course Requirements

CPsy 5-303—Adolescent Psychology (4)  
9 credits from psychology, sociology, social work

#### Major Courses

- Rec 5-170—Camp Administration (3)
- 3 credits from:
  - Rec 3-150—Leadership in Nature Recreation (3)
  - Rec 5-120—Introduction to Therapeutic Recreation (5)
  - Rec 5-230—Recreation for the Mentally Retarded (3)
  - Rec 5-240—Recreation for the Aging (3)
  - Rec 5-983—Readings: Recreation (1-3)
- 12 credits from:
  - SW 3-001—American Social Welfare (5)
  - SW 3-005—Introduction to Social Work Processes (5)
  - Soc 5-201—Introduction to Social Psychology (4)
  - Soc 5-311—Sociology of Conflict (4)
  - Soc 5-401—Social Organization (4)

## Curricula

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### **Minor in Recreation and Park Administration**

Minor Adviser: Glenn Cheatham, 204 Cooke Hall

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. Courses should be chosen with minor adviser's approval.

#### **Related Course Requirements**

Hlth 1-500—American Red Cross First Aid: Standard, Advanced (2)  
12 credits in skills, techniques

#### **Minor Courses (minimum 15 credits)**

3 credits in Rec 3-700—Senior Internship (1-12)  
12 credits in recreation theory

#### **Professional Education Courses (minimum 3 credits)**

Psy 5-201—Social Psychology (4) (or) Educ 5-104—Adult Education (3) (or) SeEd 5-169—Student Activity Programs in Secondary Schools (3)

### **Minor in Camping and Outdoor Education**

Minor Adviser: Maurice Ostrander, 202 Cooke Hall

#### **Related Course Requirements**

CPsy 3-301—Child Psychology (4)  
Hlth 1-500—American Red Cross First Aid: Standard, Advanced (2)  
1 cr from PE 1-001 through 1-498 (or) Th 1-101—Introduction to Theatre Arts (4)  
(or) 3 credits to be completed by registration in Rec 3-700 in a camp leadership position during the summer

#### **Minor Courses (minimum 24 credits)**

Rec 1-530—Camp Aquatics (2)  
Rec 1-540—Camp Counseling (4)  
Rec 1-600—Leadership in Social Activities (3)  
Rec 3-150—Leadership in Nature Recreation (3)  
Rec 5-140—Recreation Programming (5)  
Rec 5-170—Camp Administration (3)  
MuEd 3-001—Music for Recreational Leadership (4)

### **School and Community Health Education**

Chairman and Program Coordinator: Helen M. Slocum, 158 Norris Gymnasium

The major curriculum outlined in this section prepares the student for recommendation for Minnesota certification for teaching health education full-time in the public school and/or serving as a health educator in a community health agency.

Before applying for admission to the College of Education, a student must have satisfactorily completed 90 credits in liberal arts areas with at least a C (2.00) average in all of his previous work and a C+ (2.50) average in all health and public health courses that will apply toward the major. The minor curriculum meets the minimum State of Minnesota certification standards for teaching health in the public school. Students should consult their major or minor adviser in these programs for requirements which must be met prior to student teaching.

Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate related and major courses may be used toward these requirements. For a major in school and community health education, additional requirements are listed below.

## *School of Physical Education and Recreation*

### *Related Course Requirements* (minimum 37 credits)

- Spch 1-101—Fundamentals (5) (or) 1-102—Communication in the Modern World: Interpersonal (4)
- Biol 1-011—General Biology (5) (or) Ecol 3-001—Introduction to Ecology (4) (and) GCB 3-032—Human Genetics, Social Affairs (3)
- Chem 1-004, 1-005—General Principles (5 cr each)
- MicB 3-103—General Microbiology (5)
- Soc 1-001—Introduction to Sociology (4)
- Anth 1-002—Introduction to Anthropology: Cultural Anthropology (5)
- Jour 1-001—Introduction: Mass Communication (2) (or) Jour 1-003—Communication in the Modern World: Mass Media (4) (or) Jour 1-011—Journalistic Writing for Nonmajors (5)

### *Major Courses* (minimum 42 credits)

- Hlth 1-500—American Red Cross First Aid: Standard, Advanced (2)
- Hlth 3-100—Curriculum: School Health Education (3)
- Hlth 5-120—Role of the School Health Educator in Health Appraisal (3)
- Hlth 5-140—Administration of the School Health Program (3)
- PubH 3-385, 3-386—Physiological Hygiene (4 cr each) (or) Phsl 3-051—Human Physiology for Nursing and Physical Therapy Students (5)
- PubH 3-600—Human Nutrition (3) (or) HE 1-381—Principles of Nutrition (3) (or) PubH 5-380—Applied Human Nutrition (3)
- PubH 5-069—Community Health Education Laboratory (6)
- PubH 5-070—Communication Skills for Health Professionals (3)
- PubH 5-072—Community and School Health Education (3)
- PubH 5-152—Introduction to Environmental Health (2)
- PubH 5-760—Orientation to Medical Sciences (3) (or) Clas 3-048—Technical Terms of Science, Medicine, Humanities (2)
- Anat 1-027—Anatomy for Physical Education Students (4)
- PsyF 5-162—Personality and Social Development (3) (or) CPsy 3-301—Child Psychology (4) (or) CPsy 5-303—Adolescent Psychology (4) (or) PubH 5-031—Mental Hygiene (3)

### *Professional Education Courses* (minimum 34 credits)

- Hlth 3-300—Instructor's Course in First Aid (3)
- Hlth 3-320—Methods and Materials of School Health Education (3)
- 9 cr in student teaching from Hlth 3-601, 3-602, 3-603—Student Teaching
- Recommended in addition: Hlth 3-600—Pre-fall Student Teaching (3)
- SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)
- SeEd 5-112—Family Life Education (3) (or) Hlth 5-150—Curriculum: Family Life and Sex Education in Secondary Schools (3)
- CSPP 5-130—Introduction to Guidance (3)
- HED 3-090—The School and Society (3)

### *Special Requirements for All Students* (see Section I of this Bulletin)

- Physical Education—3 credits
- PubH 3-004—Basic Concepts in Personal and Community Health (4)

The student is expected to complete 186 credits, including a teaching minor, and earn a C+ (2.50) average in the major courses and an overall C (2.00) average.

## *Minor in School Health Education*

### *Related Course Requirements* (minimum 13 credits)

- Biol 1-011—General Biology (5) (or) GC 1-132—Biological Science and the Human Body (5) (or) Ecol 3-001—Introduction to Ecology (4) (and) GCB 3-032—Human Genetics and Social Affairs (3)
- Chem 1-004, 1-005—General Principles (5 cr each) (or) NSci 1-004, 1-005—Physical World (4 cr each)

### *Minor Courses* (minimum 22 credits)

- PsyF 5-162—Personality and Social Development (3) (or) CPsy 3-301—Child Psychology (4) (or) CPsy 5-303—Adolescent Psychology (4) (or) PubH 5-031—Mental Hygiene (3)
- HE 1-381—Principles of Nutrition (3) (or) PubH 3-600—Human Nutrition (3)
- Anat 1-027—Anatomy for Physical Education Students (4) (or) PE 3-110—Anatomy (3)

## Curricula

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- PubH 3-385, 3-386—Physiological Hygiene (4 cr each) (or) Phsl 3-051—Physiology for Nursing, Physical Therapy Students (5)  
Hlth 1-500—American Red Cross First Aid: Standard, Advanced (2)  
Hlth 3-100—Curriculum: School Health Education (3)  
Hlth 5-120—Role of the School Health Educator in Health Appraisal (3)  
Hlth 5-140—Administration of the School Health Program (3)

### *Professional Education Courses (minimum 12 credits)*

- 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—Contemporary Problems in School Health Education (3)  
SeEd 5-112—Family Life Education (3) (or) Hlth 5-150—Curriculum: Family Life and Sex Education in Secondary Schools (3)  
Student Teaching—equivalent of 3 credits required from PE 3-600, 3-602, 3-603, 3-622 or registration in Hlth 3-601 or 3-602 or 3-603

### ***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 students in these M.Ed. programs are required to complete entrance tests. See description of the master of education degree in Section I of this bulletin for admission, residence, transfer, and general program or graduation requirements. Specific requirements are given below.

**Physical Education**—The M.Ed. program in physical education is based on an extension of the undergraduate major. It is designed only for certified teachers with at least 1 year of full-time experience (Plan I). Two options are available: (1) general preparation in physical education and (2) a concentration in physical education for the handicapped.

The general preparation in physical education consists of a minimum of 24 credits in physical education; 12 credits in education, including a 3-credit integrating paper (PE 5-982); and sufficient elective courses outside of physical education to complete 45 credits.

A concentration in physical education for the handicapped requires a minimum of 21 credits in physical education; a minimum of 15 credits in special education; and a minimum of 9 credits in education including a 3-credit integrating paper (PE 5-982).

**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 together with the School of Public Health, certain areas of study must have been included in the undergraduate preparation or must be fulfilled 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); 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, and 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 the adviser. A minimum total of 45 credits is distributed as follows: recreation and park administration, 24 to 30 credits; education, 9 to 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. A graduate program leading to the Ph.D. degree with a major in *physical education* is available. The Ph.D. degree with a major in *education*, with special emphasis in physical education, recreation and park administration, or school health education, is also offered.

Graduate study leading to the Ed.D. degree with a major 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, and supervision. For requirements and course offerings for these degrees consult the *Graduate School Bulletin*. Application for admission should be made to the Graduate School.

## SECONDARY EDUCATION

Chairman: Howard Y. Williams, 130 Peik Hall

**Admission to Secondary Education**—The student planning to teach in American Studies, language arts, foreign languages, mathematics, science, or social studies must complete two years of pre-professional work in liberal education areas before transferring to the College of Education. Students applying for the business education major should see the special requirements for that program listed on page 45 of this bulletin. Applications for fall admission must be received by the Office of Admissions and Records no later than the end of the first week of the previous spring quarter; applications for spring admission must be received no later than the end of the first week of winter quarter. No students are admitted for the winter quarter or summer terms. Social Studies majors are admitted only for fall quarter.

Criteria for admission include:

1. Completion of 90 quarter credits, including 15 quarter credits in a major field and 10 quarter credits in a minor field.
2. A minimum overall grade point average of C (2.00), C+ (2.50) in major courses, and C (2.00) in minor courses. Since a minor is not required with a major in any of the social studies fields, students must have completed a minimum of 25 credits in courses in the major and supporting fields with a C+ (2.50) grade point average.

## Curricula

Secondary Education limits admission to all of its programs. Because of these restrictions some majors may require higher minimum grade point averages for consideration. A student seeking admission to these majors should inquire at the Student Personnel Office, 206 Burton Hall, to obtain current information on admission procedures and practices.

**Requirements for Certification and Graduation**—University students who seek recommendation for Minnesota certification in their subject area in the secondary schools (grades 7-12) must complete that program within the College of Education. A student wishing to teach outside of Minnesota may have his program modified to meet the specific requirements of that state. In selecting a major or minor, the student should (a) choose from those subjects commonly taught in high schools, with regard to placement opportunities; (b) study the requirement in the chosen field described in this section, noting that some majors require a specific minor; and (c) make the decision as early as possible in his academic career.

### Major in American Studies

Undergraduate Program Coordinators: Edith West, 350 Peik Hall; and Gerald Brunetti, 230 Peik Hall

A student intending to major in American studies will take course work for the first 2 years in liberal education areas. Requirements for admission to a secondary education program are listed on page 43 of this bulletin.

An average of C+ (2.50) in all major courses is required. A student completing the American studies program will qualify to be recommended for Minnesota certification to teach American studies full time and for part-time teaching in the selected concentration of English or social studies.

Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate major courses may be used toward these requirements.

#### Major Courses

AmSt 1-101, 1-102, 1-103—American Life (4 cr each)

AmSt 3-301, 3-302, 3-303—Introduction to American Civilization (4 cr each)

1 course taken in each of the social studies departments: anthropology, economics, geography, history, political science, and sociology

Complete either an English or social studies concentration:

English Concentration (minimum 68 credits)

Engl 1-822, 1-823—Introduction to Literature (4 cr each)

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

12 credits in Upper Division English literature courses, including Engl 3-241 (or) 3-242—Shakespeare (4), (and) Engl 5-645—Introduction to Modern English (4)

24 credits in Upper Division courses approved for the B.A. degree in American Studies, including 8 credits in each of 3 fields: American history, American philosophy and fine art, and American social sciences

20 credits in Upper Division American literature courses approved for the B.A. degree in American Studies, including Engl 3-413—American Literature (4)

Social Studies Concentration (minimum 56 credits)

12 credits in Upper Division courses dealing with foreign civilization. Especially recommended are courses on the government, social institutions, and geography of foreign countries

16 credits in Upper Division courses approved for the B.A. degree in American Studies, including 8 credits in both American literature and American art and philosophy

28 credits in Upper Division social studies courses approved for the B.A. degree in American Studies, including a minimum of 8 credits in American history

#### Professional Education Courses (minimum 31 credits)

SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)

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

- SeEd 3-330—Methods and Materials for the Study of American Civilization (3)  
SeEd 3-342—Teaching Social Studies in Secondary Schools (3)  
SeEd 3-671—Student Teaching in American Studies (3-9)  
HEd 3-090—The School and Society (3)

*Special Requirements for All Students* (see Section I of this bulletin)

- PubH 3-004—Basic Concepts in Personal and Community Health (4)  
Physical Education—3 credits

### Major in Business Education

Undergraduate Program Coordinator: Charles Hopkins, 270 Peik Hall

A student preparing to teach business subjects will normally register for the first year in a liberal arts or junior college, or the General College. Application for admission to the program should be made early in the quarter in which the student will have completed 45 credits. These credits should include courses to meet the Liberal Education Distribution Requirements and major course requirements for the program in business education.

A student who has had high school courses or experience in bookkeeping/accounting may be exempt from Acct 1-024 and admitted to Acct 1-025 by passing a placement test. A student who has had previous instruction or experience in typewriting, shorthand, and/or office procedures and machines may take proficiency examinations for credit in the following courses: SeEd 1-501, 1-502, 1-503, 1-505, 1-506, 1-507, 1-508. (See Section I, Examinations for Advanced Standing Credit)

All students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate related and major courses may be used toward these requirements.

### COMMON REQUIREMENTS

*Related Course Requirements*

- Soc 3-801—Sociological Methods (4)  
3 credits from Math 1-001, 1-008, 1-111, 1-441

*Major Courses*

- Econ 1-001—Principles of Macroeconomics (4) (and) Econ 1-002—Principles of Microeconomics (4)  
GC 1-531—Business Writing (3)  
GC 1-535—Introduction to Data Processing (3)  
Acct 1-024, 1-025, 1-026—Principles of Accounting (3 cr each)  
SeEd 1-501—Beginning Typewriting (2)  
BLaw 3-058—Business Law: Introduction to Law and the Law of Contracts (3)  
Mgmt 3-001—Fundamentals of Management (3)  
Mktg 3-000—Principles of Marketing (3)

*Professional Education Courses*

- DE 1-100—Introduction to Business and Distributive Education (3)  
SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)  
9 credits in SeEd 3-601—Student Teaching: Business Subjects (3-9)  
HEd 3-090—The School and Society (3)

*Special Requirements for all Students* (See Section I of this Bulletin)

- PubH 3-004—Basic Concepts in Personal and Community Health (4)  
Physical Education—3 credits

## Curricula

### PROFESSIONAL OPTIONS

In addition to the common requirements listed above, students are required to complete one of the following professional options. Students are encouraged to complete more than one option to improve placement possibilities. They should also consult with their adviser to plan the electives needed to complete 186 credits. The department recommends that these be in Upper Division courses in the School of Business Administration, economics, audio-visual materials, business education, guidance, psychology of adolescence, social foundations of education, advertising, occupational psychology, office occupational experience, and pre-fall student teaching. A C+ (2.50) major average for admission to student teaching and graduation is required for major and professional courses except SeEd 3-150, 3-155, 3-601, and HED 3-090.

#### *Accounting and Data Processing*

##### *Major Courses* (minimum 36 credits)

- Acct 3-101—Accounting Theory and Practice I (4)
- Acct 3-102—Accounting Theory and Practice II (4)
- QA 3-052—Quantitative Methods for Administration I (3)
- QA 3-053—Quantitative Methods for Administration II (3)
- MIS 3-100 or QA 3-100—Basic Computer Systems (3)
- BFin 3-000—Finance Fundamentals (3)
- 3 credits in SeEd 3-100—Office Occupational Experience (3-9)
- 13 Upper Division credits from accounting, data processing, finance, management information systems, and quantitative analysis

##### *Professional Education Courses* (minimum 5 credits)

- SeEd 3-303—Teaching Accounting and Data Processing (2)
- 3 credits in Education courses

#### *Basic Business and/or Economics*

##### *Major Courses* (minimum 36 credits)

- Econ 3-101—Microeconomic Theory (4)
- Econ 3-102—Macroeconomic Theory (4)
- Econ 3-751—Money and Banking (4)
- BLaw 3-088—Business Law: Sales and Commercial Paper (3)
- IR 3-002—Systems of Industrial Relations: Labor Marketing (3)
- Ins 3-100—Risk Management and Insurance (3)
- Mktg 3-098—Introduction to Consumer Behavior (3)
- 12 Upper Division credits from economics and business administration

##### *Professional Education Courses* (minimum 5 credits)

- SeEd 3-302—Teaching Basic Business Subjects (2)
- 3 credits in Education courses

#### *Comprehensive Business*

##### *Major Courses* (minimum 50 credits)

- SeEd 1-502—Intermediate Typewriting (2)
- SeEd 1-503—Advanced Typewriting (2)
- SeEd 1-505—Beginning Shorthand (3)
- SeEd 1-506—Intermediate Shorthand (3)
- SeEd 1-507—Advanced Shorthand (3)
- 5 credits in SeEd 1-508—Office Procedures and Machines (2-5)
- 3 credits in SeEd 3-100—Office Occupational Experience (3-9)
- Mgmt 3-002—Psychology in Management (3)
- 26 credits chosen from economics, business administration or related areas including 2 Upper Division courses in economics and 4 courses chosen from at least 3 of the following areas: accounting, business law, finance, industrial relations, insurance, marketing, management, management information systems, quantitative analysis, transportation

*Professional Education Courses* (minimum 9 credits)

- SeEd 3-300—Teaching Typewriting and Office Procedures (3)
- SeEd 3-301—Teaching Shorthand and Transcription (2)
- SeEd 3-302—Teaching Basic Business Subjects (2)
- SeEd 3-303—Teaching Accounting and Data Processing (2)

*Comprehensive Business (Without Shorthand)*

Students will take the same courses as specified for the Comprehensive Business program substituting appropriate electives selected with the help of a major adviser to replace SeEd 1-505, 1-506, 1-507, and 3-301, which are not required.

*Vocational Office Education Certification*

Four thousand hours of occupational experience, or equivalent, in appropriate areas of preparation are required for certification for teaching vocational office education courses.

*Cooperative Office Education Coordinator Certification*

For this certificate, students will complete the requirements for the Accounting and Data Processing Specialization, or one of the Comprehensive Business Education programs, obtain the required amount of related work experience, and in addition complete the following courses: BsEd 5-104, 5-106, 5-107, and 5-113.

*Model/Simulated Office Teacher Certification*

Students will complete the requirements for the Accounting and Data Processing Specialization, or one of the Comprehensive Business Education programs, obtain the required amount of related work experience, and in addition complete the following courses to qualify for this certificate: BsEd 5-106, 5-111, and 5-113.

**English, Language Arts, Speech-Communication, Theatre Arts**

Undergraduate Program Coordinator: Gerald J. Brunetti, 230A Peik Hall

*Major in English*

A student intending to major in English should take course work for the first 2 years in liberal education areas. During this time he must complete a minimum of 16 credits in English courses beyond Freshman English. Requirements for admission to a Secondary Education program are listed on page 43 of this bulletin.

English majors have the option of completing a presently defined minor or declaring a supporting area of study developed by the individual student in cooperation with his program adviser, and approved by the Committee on Student Scholastic Standing. 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 major.

Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate related and major courses may be used toward these requirements.

## Curricula

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### Major Courses (minimum 65 credits)

- 8 credits in history and development of English literature: 4 credits at Lower Division level and 4 credits at Lower or Upper Division (3-000 or 5-000) level
- 8 credits in history and development of American literature: 4 credits at Lower Division level and 4 credits at Upper Division (3-000 or 5-000) level
- 4 credits in the study of a single major English or American literary figure (a course in Shakespeare is strongly recommended)
- 8 credits in the English language: Engl 8-851—Structure of Modern English (4) and 1 course from Engl 5-815—History of the English Language (4), Engl 5-831—American English (4), Engl 5-843—American Social dialects (4)
- 8 credits in composition: 4 credits from Comp 1-027 or Comp 1-028—Advanced Writing (4 cr each) (and) 4 credits from Comp 1-027, 1-028 or Comp 5-107—The Writing Experience (4) (or) Comp 5-108—The Writing Experience (4) (or) any Lower Division creative writing course
- 13 credits in speech and theatre: Spch 1-101—Fundamentals (5) (and) 1 course from Spch 3-401, 3-605, 3-641, 5-431 (and) 1 course from Th 1-101, 3-801, 1-504
- Electives—16 credits in Upper Division courses chosen from: English; humanities; AmSt 3-111, 3-112, 3-113; ArtH 3-921, 3-922, 3-923

### Professional Education Courses (minimum 29 credits)

- SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)
- 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 Experience in Teaching English, Speech, and Language Arts (6-9)
- HEd 3-090—The School and Society (3)

### Special Requirements for All Students (see Section I of this bulletin)

- PubH 3-004—Basic Concepts in Personal and Community Health (4)
- Physical Education—3 credits

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

## Minor in English

### Minor Courses (minimum 33 credits)

- 8 credits in history and development of English literature: 4 credits at Lower Division level and 4 credits at Lower or Upper Division (3-000 or 5-000) level
- 8 credits in history and development of American literature: 4 credits at Lower Division level and 4 credits at Upper Division (3-000 or 5-000) level
- Engl 5-851—Structure of Modern English (4)
- Comp 1-027 (or) Comp 1-028—Advanced Writing (4 cr each)
- Spch 1-101—Fundamentals (5)
- Th 1-101—Introduction to Theatre Arts (4) (or) Th 1-504—Elements of Technical Theatre (4) (or) Th 3-801—Oral Interpretation of Fiction (4)

## Major in Language Arts

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 and 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 will take course work for the first 2 years in a liberal education area, 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. Requirements for admission to a secondary education program are listed on page 43 of this bulletin.

Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate related and major courses may be used toward these requirements. An average of C+ (2.50) in major courses and C (2.00) in minor and journalism courses is required.

### Major Courses

Completion of the major requirements in English, speech-communication or theatre arts listed in this bulletin

Completion of a minor in one of the above fields not selected at the major level

Jour 3-021—Mass Communications and the News (4) (and) 8 credits from Jour 1-011, 3-182, 5-501, 5-601, 5-603, 5-606, 5-611 (or) 9 credits from Lib 5-101, 5-204, 5-221, 5-301, 5-401

### Professional Education Courses (minimum 29 credits)

SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)

SeEd 3-324—Teaching Language Arts in Secondary School: 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) (for English majors) (or) SeEd 3-323—Curriculum Problems and Issues in Teaching Speech in Secondary Schools (2) (for speech and theatre majors; offered fall quarter only)

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

HEd 3-090—The School and Society (3)

### Special Requirements for All Students (see Section I of this bulletin)

PubH 3-004—Basic Concepts in Personal and Community Health (4)

Physical Education—3 credits

## Major in Speech-Communication

The student majoring in Speech-Communication will take course work for the first 2 years in liberal education areas, completing a minimum of 17 credits in speech including Spch 1-101.

Requirements for admission to a Secondary Education program are listed on page 43 of this bulletin. Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate related and major courses may be used toward these requirements. An average of C+ (2.50) in major courses and C (2.00) in minor courses is required.

### Major Courses (minimum 54 credits)

Spch 1-101—Fundamentals (5)

33 credits from the listed courses distributed in the following areas of study:

1. Theory and practice in advanced public speaking

Spch 3-605—Advanced Public Speaking (4)

2. Speech science

CDis 3-101—Introduction to Speech Pathology and Audiology (4)

3. Theory and practice in the deliberative processes

Spch 3-641—Discussion and Conference Methods (4) (or) Spch 3-615—Argumentation (4)

4. Theory and practice in oral interpretation

Th 3-801—Oral Interpretation of Fiction (4)

5. Communication theory, language and human behavior

Spch 3-401—Process of Interpersonal Communication (4) (or) Spch 5-404—Speech and Language in Human Behavior (4)

## Curricula

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6. Theory and practice in broadcast media  
Spch 3-201—Introduction to Broadcasting (5)
7. Forensics  
Spch 3-621—Teaching Forensics: High School (4) (offered fall only)
8. Rhetorical theory, history, and criticism of public address  
Spch 5-611—Classical Rhetoric (4) (or) Spch 5-615—Introduction to Rhetorical Criticism (4) (or) Spch 5-616—History and Criticism of British Public Address (4) (or) Spch 5-617—History and Criticism of American Public Address (4) (or) Spch 5-618—History and Criticism of American Public Address (4)
- 16 elective credits from at least 2 of the above 8 areas of study, but not restricted to those specific courses listed above

### Professional Education Courses (minimum 29 credits)

- SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)  
SeEd 3-323—Curriculum Problems and Issues in Teaching Speech in Secondary Schools (2) (Offered fall only)  
SeEd 3-324—Teaching Language Arts in Secondary School: Instructional Problems and Practice (3)  
SeEd 3-325—Instructional Practice in English and Speech (3)  
SeEd 3-326—Curriculum Problems 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 3-621—Directed Experiences in Teaching English, Speech, and Language Arts (6-9)  
HED 3-090—The School and Society (3)

### Special Requirements for all Students (see Section I of this bulletin)

- PubH 3-004—Basic Concepts in Personal and Community Health (4)  
Physical Education—3 credits

Because of the close relationship between English and speech in Minnesota high schools, *students majoring in speech must minor in English*. Modification of the minor requirement may be made on recommendation of the program area adviser with the approval of the Committee on Student Scholastic Standing, but all speech majors must complete Comp 1-027 or 1-028, and one course from Engl 5-851, 5-843, 5-831. In addition to the course work listed above, all speech majors are required to participate in one or more activities such as debate, theatre, and broadcasting.

## Minor in Speech-Communication

### Minor Courses (minimum 29 credits)

- Spch 1-101—Fundamentals (5)  
24 credits from 6 of the 8 areas of study listed in the speech-communication major above

*Note*—English majors who are minoring in Speech-Communication may count the Speech-Theatre component of the English major as part of this minor if course work is properly selected. Such students should take Spch 1-101, Th 3-801, and 4 credits from Spch 3-401, 3-605 or 3-641 to satisfy both major and minor requirements.

## Major in Theatre Arts

A student majoring in theatre arts will take course work for the first two years in liberal education areas, completing a minimum of 16 credits in the theatre courses listed below. Requirements for admission to a secondary education program are listed on page 43 of this bulletin. Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate related and major courses may be used toward these requirements. An average of C+ (2.50) in major courses and C (2.00) in minor and related courses is required. In addition to the listed course work, majors and minors are required to participate in theatre and/or oral interpretation activities.

### Major Courses (minimum 45 credits)

- Th 1-101—Introduction to Theatre Arts (4)
- Th 1-321—Beginning Acting: Creative Approach (4)
- Th 1-504—Elements of Technical Theatre (4)
- Th 3-311—Voice Production for the Theatre (2)
- Th 3-708—Play Production: Secondary School (4) (or) Th 3-711—Stage Direction (4)
- Th 3-709—Play Production: Secondary School (4) (or) Th 5-712—Stage Direction (4)
- Th 3-801—Oral Interpretation of Fiction (4)
- Spch 1-104—Communication in the Modern World: Performing Arts (4)
- Electives—15 credits in Theatre courses selected with CLA and Education Theatre advisers

### Professional Education Courses (minimum 29 credits)

- SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)
- SeEd 3-323—Curriculum Problems and Issues in Teaching Speech in Secondary Schools (2) (offered fall only)
- 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) (or) SeEd 3-327—Curriculum Problems and Issues in Teaching Language and Composition in Secondary Schools (2)
- SeEd 3-621—Directed Experience in Teaching English, Speech, and Language Arts (6-9)
- HEd 3-090—The School and Society (3)

### Special Requirements for All Students (See Section I of this Bulletin)

- PubH 3-004—Basic Concepts in Personal and Community Health (4)
- Physical Education—3 credits

Because of the close relationship between English and theatre arts in Minnesota high schools, *students majoring in theatre arts must minor in English*. Modification of the minor requirement may be made on recommendation of the program area adviser with the approval of the Committee on Student Scholastic Standing, but all theatre arts majors must complete Comp 1-027 or 1-028, and one course from Engl 5-851, 5-843, 5-831.

### Minor in Theatre Arts

#### Minor Courses (minimum 24 credits)

- Th 1-101—Introduction to Theatre Arts (4)
- Th 1-321—Beginning Acting: Creative Approach (4)
- Th 1-504—Elements of Technical Theatre (4)
- Th 3-708—Play Production: Secondary School (4) (or) Th 3-711—Stage Direction (4)
- Th 3-801—Oral Interpretation of Fiction (4)
- Spch 1-104—Communication in the Modern World: Performing Arts (4)
- 1 theatre course to be elected—4 credits

### Foreign Languages

Undergraduate Program Coordinators: Emma M. Birkmaier, 224 Peik Hall,  
and Dale L. Lange, 148 Peik Hall

The College of Education and the language departments of the College of Liberal Arts offer programs of study for teaching majors in French, German, Latin, Russian, and Spanish; and minors in French, German, Italian, Russian, and Spanish. A student intending to major in any one of these areas will take course work for the first 2 years in liberal education areas. During this time the student should meet requirements for admission to a secondary education program listed on page 43 of this bulletin, as well as all the requisites for Upper Division courses in the specific language.

## Curricula

Students are expected to complete the Liberal Education Distribution Requirements as specified in Section I of this bulletin. Appropriate major and related courses may be used toward these requirements. It is strongly recommended that the student take courses in the areas Man and Society and Artistic Expression which relate to the specific language.

Experience in an appropriate foreign country is *strongly recommended* before student teaching. The student's proficiency in listening comprehension, speaking, reading, writing, culture and civilization, linguistics, and professional preparation will be tested before entrance into SeEd 3-334 (Teaching Foreign Languages) and SeEd 3-631 (Student Teaching in Foreign Languages).

### Major in French

*Note*—Students may choose to participate in the honors program if they wish. Consult the *College of Liberal Arts Bulletin*.

#### Major Courses (minimum 59 credits)

- Ling 3-005—Linguistics for Foreign Language Teachers (4)
- Fren 3-015—French Conversation and Composition (5)
- Fren 3-025—Advanced French Conversation (5)
- Fren 3-035—Advanced French Composition (5)
- Fren 3-104—Introduction to French Literary Texts (5)
- Fren 3-201—The French Literary Tradition (5)
- 1 course in literature from the course series on Topics: Fren 3-289, or 3-303, 3-305
- Fren 3-501—French Civilization and Culture (5)
- Fren 3-502—Contemporary French Civilization and Culture (5)
- Fren 3-701—The Development of the French Language (5)
- Fren 5-701, 5-702—Structure of Modern French Phonology, Morphology, Syntax (5 cr each)

#### Professional Education Courses (minimum 30 credits)

- SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)
- 9 cr in SeEd 3-334, 3-335—Teaching Foreign Languages
- 9 cr in SeEd 3-631—Student Teaching in Foreign Languages (3-6-9)
- Hed 3-090—The School and Society (3)

#### Special Requirements for All Students (See Section I of this Bulletin)

- PubH 3-004—Basic Concepts in Personal and Community Health (4)
- Physical Education—3 credits

### Minor in French

#### Minor Courses (minimum 30 credits)

- Fren 3-015—French Conversation and Composition (5)
- Fren 3-025—Advanced French Conversation (5)
- Fren 3-035—Advanced French Composition (5)
- Fren 3-104—Introduction to French Literary Texts (5)
- Fren 3-201—The French Literary Tradition (5)
- Fren 3-501—French Civilization and Culture (5) (or) Fren 3-502—Contemporary French Civilization and Culture (5)

#### Professional Education Courses

- SeEd 3-334—Teaching Foreign Languages (6)

### Major in German

#### Major Courses (minimum 60 credits)

- Ling 3-005—Linguistics for Foreign Language Teachers (4)
- Ger 3-011, 3-012, 3-013—Composition and Conversation (4 cr each)
- Ger 3-014, 3-015—Advanced Composition and Conversation (4 cr each)
- Ger 3-104—Reading and Analysis of Literary Texts (4)
- Ger 3-501—Contemporary German (4) (and)

12 credits in literature beyond Ger 3-104

Ger 3-512, 3-513—German Civilization and Culture (4 cr each)

Ger 3-701—History of the German Language (4)

Ger 5-101—The Structure of Modern German: German Phonology (4) (or) Ger 5-102—German Structure (4)

### *Professional Education Courses* (minimum 30 credits)

SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)

9 cr in SeEd 3-334, 3-335—Teaching Foreign Languages

9 cr in SeEd 3-631—Student Teaching in Foreign Languages (3-6-9)

HEd 3-090—The School and Society (3)

### *Special Requirements for All Students* (See Section I of this Bulletin)

PubH 3-004—Basic Concepts in Personal and Community Health (4)

Physical Education—3 credits

## *Minor in German*

### *Minor Courses* (minimum 36 credits)

Ger 3-011, 3-012, 3-013—Composition and Conversation (4 cr each)

Ger 3-014, 3-015—Advanced Composition and Conversation (4 cr each)

Ger 3-104—Reading and Analysis of Literary Texts (4)

Ger 3-501—Contemporary German (4)

Ger 3-512, 3-513—German Civilization and Culture (4 cr each)

### *Professional Education Courses*

SeEd 3-334—Teaching Foreign Languages (6)

## *Minor in Italian*

### *Minor Courses* (minimum 25 credits)

Ital 3-031—Writing Techniques (5)

Ital 3-045—Advanced Composition and Conversation (5)

Ital 3-502—Modern Italian Civilization and Culture (5)

Ital 3-201—Italian Literary Traditions (5)

1 course in Italian literature above Ital 3-201

### *Professional Education Courses*

SeEd 3-334—Teaching Foreign Languages (6)

## *Major in Latin*

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. Students who have had no Latin in high school will take Lat 1-101, 1-102, 1-103, 1-111, 1-122, or Lat 3-051 and 3-052 before registering in Latin courses numbered 3-461 and above.

### *Related Course Requirements* (minimum 16 credits)

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

### *Major Courses* (minimum 36 credits)

Ling 3-005—Linguistics for Foreign Language Teachers (4)

2 courses from Lat 3-462—Caesar (5), Lat 3-464—Cicero (Oratory) (5), Lat 3-469—Intermediate Latin: Virgil (Aeneid) (5)

3 credits from Lat 5-701, 5-702, 5-703—Structure of Latin

1 course from:

Clas 5-101—Introduction to Prehistoric Greek Archaeology (4)

Clas 5-102—Archaic and Classical Greek Art and Archaeology (4)

Clas 5-103—Hellenistic Art and Archaeology (4)

Clas 5-104—Early Roman Art and Archaeology (5)

## Curricula

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Clas 5-105—Roman Painting and Mosaics (5)

Clas 5-106—Greek Painting (5)

15 credits in Latin in courses numbered Lat 3-460 and above

### *Professional Education Courses* (minimum 30 credits)

SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)

9 cr in SeEd 3-334, 3-335—Teaching Foreign Languages

9 cr in SeEd 3-636—Student Teaching in Foreign Languages (3-6-9)

Hed 3-090—The School and Society (3)

### *Special Requirements for All Students* (see Section I of this bulletin)

PubH 3-004—Basic Concepts in Personal and Community Health (4)

Physical Education—3 credits

## *Major in Russian*

### *Major Courses* (minimum 54 credits)

Ling 3-005—Linguistics for Foreign Language Teachers (4)

Russ 3-101, 3-102, 3-103—Third Year Russian (5 cr each)

Russ 3-104, 3-105, 3-106—Fourth Year Russian (5 cr each)

Russ 3-501, 3-502, 3-503—Russian Civilization and Culture (4 cr each)

Russ 5-701, 5-702—Structure of Modern Russian (4 cr each)

*Note*—Russ 5-021, Soviet Union Study Tour, is strongly recommended (12-24 cr).

### *Professional Education Courses* (minimum 30 credits)

SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)

9 cr in SeEd 3-334, 3-335—Teaching Foreign Languages

9 cr in SeEd 3-631—Student Teaching in Foreign Languages (3-6-9)

Hed 3-090—The School and Society (3)

### *Special Requirements for All Students* (see Section I of this bulletin)

PubH 3-004—Basic Concepts in Personal and Community Health (4)

Physical Education—3 credits

## *Minor in Russian*

### *Minor Courses* (minimum 42 credits)

Russ 3-101, 3-102, 3-103—Third Year Russian (5 cr each)

Russ 3-104, 3-105, 3-106—Fourth Year Russian (5 cr each)

Russ 3-501, 3-502, 3-503—Russian Civilization and Culture (4 cr each)

*Note*—Russ 5-021, Soviet Union Study Tour, is recommended (12-24 cr).

### *Professional Education Courses*

SeEd 3-334—Teaching Foreign Languages (6)

## *Major in Spanish*

### *Major Courses* (minimum 55 credits)

Ling 3-005—Linguistics for Foreign Language Teachers (4)

Span 3-014—Conversation and Composition (5)

Span 3-021—Advanced Composition and Conversation (5)

Span 3-104 or 3-104H—Introduction to Spanish-American Literary Texts (4)

Span 3-211, 3-212, 3-213 (or) 3-211H, 3-212H, 3-213H—Survey of Spanish Literature (4 cr each) (or) Span 3-251, 3-252, 3-253 (or) 3-251H, 3-252H, 3-253H—Survey of the Literature of Spanish America (4 cr each)

Span 3-501—Spanish Civilization and Culture (5)

Span 3-502—Spanish Civilization and Culture (5) (or) Span 3-512—Latin-American Civilization and Culture (4)

Span 5-711, 5-712, 5-713—The Structure of Modern Spanish (4 cr each)

Span 3-721—Origin and History of Spanish and Portuguese (4)

*Professional Education Courses*

SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)  
9 cr in SeEd 3-334, 3-335—Teaching Foreign Languages  
9 cr in SeEd 3-631—Student Teaching in Foreign Languages (3-6-9)

*Special Requirements for All Students* (see Section I of this bulletin)

PubH 3-004—Basic Concepts in Personal and Community Health (4)  
Physical Education—3 credits

**Minor in Spanish**

*Minor Courses* (minimum 32 credits)

Span 3-014—Conversation and Composition (4)  
Span 3-021—Advanced Composition and Conversation (5)  
Span 3-104—Introduction to Literary Texts (4)  
Span 3-501, 3-502—Spanish Civilization and Culture (5 cr each) (or) Span 3-512—  
Latin-American Civilization and Culture (4)  
8 credits from other courses in Spanish

*Professional Education Courses*

6 cr in SeEd 3-334—Teaching Foreign Languages

**Library Science**

Undergraduate Program Adviser: Lowell Olson, 3 Walter Library

A student 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 the junior year. The Library School offers two programs for school librarians:

1. A minimum certificate program of 25 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 25-credit certification program by the Library School and the College of Education and then successfully complete the following courses: Lib 5-101, 5-102, 5-204, 5-205, 5-221, 5-301, 5-401. SeEd 5-105 is recommended.

**Journalism**

Undergraduate Program Coordinator: John Caddy, 230 Peik Hall

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.

## Curricula

### Minor Courses (minimum 23 credits)

- Jour 1-001—Journalistic Techniques for Nonmajors (5)
- Jour 1-701—Mass Communications Law (2)
- Jour 3-021—Mass Communications and the News (4)
- Jour 3-182—Supervision of School Publications (4)
- Jour 5-221—Graphic Arts: Processes (4)
- 1 course from Jour 1-201, 1-301, 1-501, 5-601, 5-606

## Mathematics

### Major in Mathematics

A minimum of three years of high school mathematics which includes a foundation in solid geometry is a prerequisite for both majors and minors in mathematics. Four years of high school mathematics is recommended. Students will take course work for the first 2 years in liberal education areas and meet the requirements for admission to a secondary education major, including courses prerequisite to Math 1-211 (Analysis I—One Variable Calculus) and a satisfactory mathematics placement test score, or Math 1-201 (Precalculus). Requirements for admission to a secondary education program are listed on page 43 of this bulletin. Students are expected to complete the Liberal Education Distribution Requirements as specified in Section I of this bulletin. Appropriate major courses may be used toward these requirements.

### Major Courses (minimum 48 credits)

- Math 1-211, 1-221, 1-231—Analysis (One Variable Calculus) I, II, III (5 cr each) (or) Math 1-311, 1-321, 1-331—Computer Calculus I, II, III (5 cr each) (or) Math 1-611, 1-621—Accelerated Calculus I, II (5 cr each)
- 2 courses in geometry including Math 3-161—Synthetic Metric Geometry (4)
- 2 courses in analysis including Math 3-211—Analysis IV (5) and 1 course in algebra (or) Math 3-511, 3-521, 3-531—Analysis (Linear Algebra and Multivariable Calculus) IV, V, VI (4 cr each). It is recommended that the student choose the option of Math 3-211, and a course in analysis and a course in algebra.
- Courses to complete 48 credits in the major including 1 course in algebra or analysis and 1 course in probability or mathematical statistics to be chosen from:
  - Analysis: Math 3-066, 3-581, 3-675, 5-151, 5-601, 5-602, 5-603, 5-606, 5-607, 5-612, 5-613, 5-614, 5-625
  - Algebra: Math 3-142, 3-582, 5-152, 5-209, 5-242, 5-243, 5-244, 5-282, 5-283, 5-284, 5-154
  - Geometry: Math 3-583, 5-341, 5-342, 5-357, 5-359, 5-366, 5-367, 5-368, 5-375, 5-376, 5-377
  - Probability and Statistics: Stat 3-091, 5-131, Math 5-679, 5-681
  - Computer Programming: CICS 3-101

### Professional Education Courses (minimum 29 credits)

- SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)
- HEd 3-090—The School and Society (3)
- 5 credits from SeEd 3-365, 3-366, 3-367—Teaching Secondary School Mathematics
- 9 credits in SeEd 3-661—Student Teaching in Mathematics (1-3-6)
- 2 credits in education electives (MthE 5-322 or 5-366 recommended)

### Special Requirements for All Students (See Section I of this Bulletin)

- PubH 3-004—Basic Concepts in Personal and Community Health (4)
- Physical Education—3 credits

### Minor in Mathematics

#### Minor Courses

- Math 1-211, 1-221, 1-231—Analysis (One Variable Calculus) I, II, III (5 cr each) (or) Math 1-311, 1-321, 1-331—Computer Calculus I, II, III (5 cr each) (or) Math 1-611, 1-621—Accelerated Calculus I, II (5 cr each)
- 2 courses in analysis including Math 3-211—Analysis IV (5) and 1 course in algebra (or) Math 3-511, 3-521, 3-531—Analysis (Linear Algebra and Multivariable Calculus) IV, V, VI (4 cr each). It is recommended that the student choose the option

of Math 3-211, and a course in analysis and a course in algebra.  
Math 3-161—Synthetic Metric Geometry (4)  
Electives—4 credits

*Professional Education Courses*

SeEd 3-365—Teaching Secondary School Mathematics (3)

***Program Leading to the Master of Education Degree***

The College of Education offers a program leading to the master of education degree in mathematics education. Requirements for admission are:

1. Bachelor's degree with a major in mathematics.
2. Currently valid teaching certificate with a minimum of 1 year of recent full-time successful secondary school teaching in mathematics.
3. An average of B (2.80) in Upper Division mathematics course work.
4. An undergraduate major in mathematics equivalent to the work required for the B.S. degree in the College of Education which is nearing completion may qualify a student for admission to the M.Ed. program directly following the B.S. degree, provided a year of successful full-time teaching experience is completed before the award of the M.Ed. degree.

A student should apply to the Office of Admissions and Records for admission to the M.Ed. program in the College of Education with a major in mathematics and complete the admission requirements of the College of Education and the Mathematics Department, 127 Vincent Hall.

*Required Program*

1. A total of 45 credits in courses numbered 5-000 or above 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***

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 programs in consultation with an adviser.

### SCIENCE

Undergraduate Program Coordinators: Clarence H. Boeck, 370 Peik Hall;  
and Eugene Gennaro, 370 Peik Hall

A student planning to teach science in Minnesota high schools will be recommended for appropriate certification upon completion of one of these major programs: earth science, biological science, chemistry, or physics. Students will take course work for the first 2 years in liberal education areas. Appropriate subject area advisers should be consulted in selecting Lower Division science courses.

Requirements for admission to a secondary education program are listed on page 43 of this bulletin. Early consultation with an undergraduate program coordinator is strongly recommended because required education methods and student teaching courses may not be available every quarter.

#### *Major in Earth Science*

A student completing the earth science program will be recommended for Minnesota certification to teach earth and general science full-time in junior and senior high schools. Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate related and major courses may be used toward these requirements. An average of C+ (2.50) in major courses and C (2.00) in minor and related science courses is required. The related science courses are taken in lieu of a teaching minor.

##### *Related Course Requirements*

- 2 courses in biological science
- 2 courses in chemistry
- 2 courses in physics (students planning advanced degree work should take calculus-based courses)

##### *Major Courses (minimum 40 credits)*

- 40 credits selected with the consent of an adviser from the following fields with at least 1 course in each: physical and historical geology, mineralogy, oceanography, astronomy, meteorology, and soil science

##### *Professional Education Courses (minimum 30 credits)*

- SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)
- SeEd 3-356—Teaching Secondary School Science (1)
- SeEd 3-357—Teaching Secondary School Science (3)
- SeEd 3-358—Teaching Secondary School Science (1)
- 9 cr in SeEd 3-651—Student Teaching: Science (1-3-6-9)
- HEd 3-090—The School and Society (3)
- Electives in Education—3 credits

##### *Special Requirements for All Students (see Section I of this bulletin)*

- PubH 3-004—Basic Concepts in Personal and Community Health (4)
- Physical Education—3 credits

#### *Minor in Earth Science*

##### *Minor Courses (minimum 27 credits)*

- 27 credits selected with the consent of an adviser from the following fields with at least 1 course in each: physical and historical geology, astronomy, meteorology

##### *Professional Education Courses (minimum 6 credits)*

- SeEd 3-352—Teaching Secondary School Science (3) (science majors exempt)
- 3 credits in SeEd 3-651—Student Teaching: Science (1-3-6-9)

### Major in Biological Science

Students completing the program will be recommended for Minnesota certification to teach biological and general sciences full-time in junior and senior high schools. Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this Bulletin. Appropriate related and major courses may be used toward these requirements. Averages of C+ (2.50) in major courses and C (2.00) in minor and related science courses is required. The related science courses are taken in lieu of a teaching minor.

#### Related Course Requirements

- 2 courses in physics
- 2 courses in general chemistry
- 2 courses in organic and/or biochemistry
- 1 course in geology and 1 in astronomy

Students may elect to complete an earth science minor and thereby reduce the major to 38 credits, eliminating the second course in organic or biochemistry in the biology major. Students completing the earth science minor will qualify for recommendation for certification to teach biological and general science full time and, in addition, earth science half time or less in junior and senior high schools. This pattern is strongly recommended to improve placement possibilities.

#### Major Courses (minimum 41 credits)

41 credits selected with the consent of an adviser from the following fields with at least 1 course in each: biology, botany, genetics, microbiology, physiology, zoology

#### Professional Education Courses (minimum 30 credits)

- SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)
- SeEd 3-356—Teaching Secondary School Science (1)
- SeEd 3-357—Teaching Secondary School Science (3)
- SeEd 3-358—Teaching Secondary School Science (1)
- 9 cr in SeEd 3-651—Student Teaching: Science (1-3-6-9)
- HEd 3-090—The School and Society (3)
- Electives in Education—3 credits

#### Special Requirements for All Students (See Section I of this Bulletin)

- PubH 3-004—Basic Concepts in Personal and Community Health (4)
- Physical Education—3 credits

### Minor in Biological Science

#### Minor Courses (minimum of 27 credits)

27 credits selected with the consent of an adviser from the following fields: biology, botany, zoology, physiology and microbiology

#### Professional Education Courses (minimum 6 credits)

- SeEd 3-352—Teaching Secondary School Science (3) (science majors exempt)
- 3 credits in SeEd 3-651—Student Teaching: Science (1-3-6-9)

### Major in Chemistry

Students completing the chemistry program will qualify for recommendation for Minnesota certification to teach chemistry and physical science full-time and for half-time teaching in the selected minor. Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate related science and major courses may be used toward these requirements. An average of C+ (2.50) in major courses and C (2.00) in minor and related science courses is required.

#### Related Course Requirements

- A 3-course sequence of calculus-based physics
- A minor in either physics or mathematics

## Curricula

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### Major Courses (minimum 35 credits)

35 credits selected with the consent of an adviser from the following fields with at least one course in each: general, solution, organic, analytical, and physical chemistry

### Professional Education Courses (minimum 30 credits)

SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)  
SeEd 3-356—Teaching Secondary School Science (1)  
SeEd 3-357—Teaching Secondary School Science (3)  
SeEd 3-358—Teaching Secondary School Science (1)  
9 credits in SeEd 3-651—Student Teaching: Science (1-3-6-9)  
HEd 3-090—The School and Society (3)  
Electives in Education—3 credits

### Special Requirements for All Students (See Section I of this Bulletin)

PubH 3-004—Basic Concepts in Personal and Community Health (4)  
Physical Education—3 credits

## Minor in Chemistry

### Minor Courses (minimum 27 credits)

27 credits selected with the consent of an adviser from the following fields with at least 1 course in each: general, solution, organic, and physical chemistry

### Professional Education Courses (minimum 6 credits)

SeEd 3-352—Teaching Secondary School Science (3) (science majors exempt)  
3 credits in SeEd 3-651—Student Teaching: Science (1-3-6-9)

## Major in Physics

A student completing the physics program will qualify to be recommended for Minnesota certification to teach physics and physical science full-time and for half-time teaching in the selected minor. Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate related and major courses may be used toward these requirements. An average of C+ (2.50) in major courses and C (2.00) in minor and related science courses is required.

### Related Course Requirements

2 courses in general chemistry  
1 course in organic chemistry  
A minor in chemistry or mathematics

### Major Courses (minimum 36 credits)

A sequence of calculus-based general physics courses including laboratory (15)  
Minimum of 9 credits in wave concepts and quantum physics with laboratory  
Minimum of 4 credits in calculus-based courses in atmospheric physics, astronomy or meteorology  
8 credits in history of science

### Professional Education Courses (minimum 30 credits)

SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)  
SeEd 3-356—Teaching Secondary School Science (1)  
SeEd 3-357—Teaching Secondary School Science (3)  
SeEd 3-358—Teaching Secondary School Science (1)  
9 credits in SeEd 3-651—Student Teaching: Science (1-3-6-9)  
HEd 3-090—The School and Society (3)  
Electives in Education—3 credits

### Special Requirements for all Students (See Section I of this Bulletin)

PubH 3-004—Basic Concepts in Personal and Community Health (4)  
Physical Education—3 credits

**Minor in Physics**

*Minor Courses* (minimum 27 credits)

27 credits selected with the consent of an adviser, including calculus-based courses in general physics (including laboratory), wave concepts, quantum physics, and electives from atmospheric physics, astronomy, or history of science

*Professional Education Courses* (minimum 6 credits)

SeEd 3-352—Teaching Secondary School Science (3) (science majors exempt)  
3 credits in SeEd 3-651—Student Teaching: Science (1-3-6-9)

**Programs for the Master of Education Degree**

***Geology (Earth Science)***

The M.Ed. program with a major in earth science 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 B (2.80) in the major and for the total 45-credit program:

*Major Courses* (minimum 33 credits)

24 credits in geology (earth science), selected with the consent of an adviser, including a summer field course in geology and electives in geology in courses numbered 5-000 and above

9 credits of electives in science and mathematics including 6 credits in mathematics or a science other than geology, and 3 credits in any science (including geology) or mathematics

*Professional Education Courses* (minimum 12 credits)

3 credits in SeEd 8-871—Problems of Curriculum Construction  
9 elective credits including at least 3 from SeEd 5-390, 5-391, 5-392, 5-383, 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, and recommendation for a teaching certificate. For other information, see index for Combined Programs and the *Institute of Technology Bulletin*.

**SOCIAL STUDIES**

Undergraduate Program Coordinators: Edith West, 350 Peik Hall;  
James Mackey, 152A Peik Hall; Allen Glenn, 166 Peik Hall

Those interested in social studies majors should see individual social science major requirements (anthropology, history, geography, economics, sociology, and political science). A minor may be taken only by students *not* majoring in one of the social sciences and should be carefully planned with an adviser. Requirements for admission to a secondary education program are listed on page 43 of this bulletin.

## Curricula

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### Minor in Social Studies

#### Minor Courses (minimum 52 credits)

26 credits in one of the following core fields, including 9 credits in Upper Division courses: anthropology, economics, geography, history, political science or sociology  
26 credits in other social sciences, including 1 course in each of the fields listed above  
1 course each on Russia, the Far East, and Africa from the fields listed above; 1 survey course in American History and 1 survey course in American government.  
These courses may be used as part of the core and other social science requirements.

#### Professional Education Courses

SeEd 3-342—Teaching Social Studies in the Secondary School (3)

### Major in Anthropology

Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate major courses may be used toward these requirements. A minimum of C+ (2.50) is required in all social science courses. A student completing the anthropology program will qualify for recommendation for Minnesota certification to teach anthropology or social studies full time in junior and senior high schools.

Because of the anthropology teacher's need for a broad social studies background and because most social studies positions require teaching in more than one subject within the area, the anthropology major must complete supporting courses in the social sciences. A teaching minor is not required, but anthropology majors are urged to complete a minor outside the social sciences to improve placement possibilities. Programs should be planned with the help of an adviser.

#### Major Courses (minimum 75 credits)

##### Area Requirement

A course taken in anthropology or in any of the other social sciences in each of the following areas: the Soviet Union, Asia, and Africa. These courses may be counted toward credit requirements for the major and supporting field.

##### Anthropology—30 credits, including:

1 course in ethnology  
1 course in culture change  
1 additional topical course  
1 course on methodology  
15 Upper Division credits

##### Supporting Fields—45 credits, including

1 course in each of the following core fields: history, geography, sociology, political science, and economics. It is strongly recommended that these include a survey course in American history and one in American government, both frequently required by other states for certification.

#### Professional Education Courses (minimum 30 credits)

SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)  
5 credits in SeEd 3-348, 3-349—Teaching Social Studies in the Secondary School  
12 credits in SeEd 3-641—Student Teaching in Social Studies (3-6-9)  
HEd 3-090—The School and Society (3)

#### Special Requirements for All Students (See Section I of this Bulletin)

PubH 3-004—Basic Concepts in Personal and Community Health (4)  
Physical Education—3 credits

### Major in Economics

Students are expected to complete the Liberal Education Distribution Requirements as specified in Section I of this bulletin. Appropriate major courses may be used toward these requirements. An average of C+ (2.50) is required in all social science courses. Programs should be planned with the help of an adviser. A stu-

dent completing the economics program will qualify for recommendation for Minnesota certification to teach economics or social studies full time in junior and senior high schools.

**Major Courses** (minimum 75 credits)

**Area Requirement**

1 course taken in economics or in any of the other social sciences in each of the following areas: the Soviet Union, Asia, and Africa. These credits are counted toward the total listed below. Econ 5-307 or 5-313 may be used to satisfy the requirement on the Soviet Union.

**Economics—36 credits including**

Econ 1-001—Principles of Macroeconomics (4) (and) 1-002—Principles of Microeconomics (4) (or) Econ 1-014—Scope, Methods, and Application of Economics (5) (and) 1-015—Introduction to Economic Analysis (3) (or) Econ 3-001, 3-002—Problems of the American Economy (5 cr each)

Econ 3-101—Microeconomic Theory (4)

Econ 3-102—Macroeconomic Theory (4)

One course in each of these fields: labor economics, comparative economics, public finance, and either economic development or international economics

12 credits in Upper Division electives

**Supporting Fields—39 credits**

1 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 Courses** (minimum 30 credits)

SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)

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

12 credits in SeEd 3-641—Student Teaching in Social Studies (3-6-9)

HED 3-090—The School and Society (3)

**Special Requirements for All Students** (See Section I of this Bulletin)

PubH 3-004—Basic Concepts in Personal and Community Health (4)

Physical Education—3 credits

### **Major in Geography**

Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate major courses may be used toward these requirements. An average of C+ (2.50) in all social science courses is required. 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 to improve placement possibilities. Programs should be planned with the help of an adviser. A student completing the major in geography will qualify for recommendation for Minnesota certification to teach geography or social studies full time in junior and senior high schools.

**Major Courses** (minimum 75 credits)

**Area Requirement**

1 course taken in geography or in any of the other social sciences in each of the following areas: the Soviet Union, Asia, and Africa. These credits may count toward the total listed below.

**Geography—34 credits**

2 of the following:

Geog 1-301—Human Geography (5)

Geog 1-311—Economic Geography I: Introduction (5)

Geog 1-401—Physical Geography (5)

2 regional courses or 1 regional course and 1 field course

1 technique course

2 topical courses

1 course in history and philosophy of geography

2 additional Upper Division courses

## Curricula

### Supporting Fields—41 credits

1 course each in anthropology, economics, history, political science, and sociology. A survey course in American history and American government are strongly recommended because they are often required for certification in other states.

### Professional Education Courses (minimum 30 credits)

SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)  
5 credits in SeEd 3-348, 3-349—Teaching Social Studies in the Secondary School  
12 credits in SeEd 3-641—Student Teaching in Social Studies (3-6-9)  
HEd 3-090—The School and Society (3)

### Special Requirements for All Students (See Section I of this Bulletin)

PubH 3-004—Basic Concepts in Personal and Community Health (4)  
Physical Education—3 credits

## Major in History

Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate major courses may be used toward these requirements. An average of C+ (2.50) is required in all social science courses. 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 to improve placement possibilities. Programs should be planned with the help of an adviser. A student completing a history major will qualify for recommendation for Minnesota certification to teach history or social studies full time in junior and senior high schools.

### Major Courses (minimum 75 credits)

#### Area Requirement

1 course taken in history or in any of the other social sciences in each of the following areas: the Soviet Union, Asia, and Africa. These credits may be counted toward the totals listed below.

#### History—40 credits selected with the consent of an adviser including

Hist 1-001, 1-002, 1-003—Introduction to Modern European History (4 cr each)  
(or) Hist 3-001, 3-002, 3-003—Introduction to Modern European History (4 cr each) (or) other courses which provide a survey of modern European history  
Hist 1-301, 1-302 or other courses which provide a survey of American history  
23 Upper Division credits

#### Supporting Fields—35 credits

1 course in each of the following core fields: anthropology, economics, geography, political science, and sociology. It is strongly recommended that these include a survey course in American government (frequently required by other states for certification) and a course in cultural anthropology

### Professional Education Courses (minimum 30 credits)

SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)  
5 credits in SeEd 3-348, 3-349—Teaching Social Studies in the Secondary School  
12 credits in SeEd 3-641—Student Teaching in Social Studies (3-6-9)  
HEd 3-090—The School and Society (3)

### Special Requirements for All Students (See Section I of this Bulletin)

PubH 3-004—Basic Concepts in Personal and Community Health (4)  
Physical Education—3 credits

## Major in Political Science

Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate major courses may be used toward these requirements. An average of C+ (2.50) in all social science courses is required. 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 to improve placement possibilities. Programs should be planned with the help of an adviser. A student completing the major in political science will qualify for recommendation for Minnesota certification to teach political science or social studies full time in junior and senior high schools.

*Major Courses* (minimum 75 credits)

**Area Requirement**

At least 1 course taken in political science or in any of the other social sciences in each of the following areas: the Soviet Union, Asia, and Africa. These credits may count toward the totals listed below.

**Political Science—36 credits including**

Pol 1-001—American Government and Politics (5) (and) 18 credits in Upper Division courses including 1 course in each of the following fields: American government, international relations, comparative government, and political theory.

**Supporting Fields—39 credits including**

1 course in each of the following core fields: anthropology, economics, geography, history, and sociology. It is strongly recommended that these include a survey course in American history (frequently required for certification in other states) and a course in cultural anthropology.

*Professional Education Courses* (minimum 30 credits)

SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)

5 credits in SeEd 3-348, 3-349—Teaching Social Studies in the Secondary Schools

12 credits in SeEd 3-641—Student Teaching in Social Studies (3-6-9)

HEd 3-090—The School and Society (3)

*Special Requirements for All Students* (See Section I of this Bulletin)

PubH 3-004—Basic Concepts in Personal and Community Health (4)

Physical Education—3 credits

**Major in Sociology**

Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this Bulletin. Appropriate major courses may be used toward these requirements. An average of C+ (2.50) is required in all of the social science courses. 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 to improve placement possibilities. Programs should be planned with the help of an adviser. A student completing the major in sociology will qualify for recommendation for Minnesota certification to teach sociology or social studies full time in junior and senior high schools.

*Major Courses* (minimum 75 credits)

**Area Requirement**

1 course taken in any of the social sciences in each of the following areas: the Soviet Union, Asia, and Africa. These credits may count toward the total listed below.

**Sociology—30 credits including**

Soc 1-005, 1-006—Principles of Sociology (5 cr each)

1 course in sociological methods

9 Upper Division credits

**Supporting Fields—45 credits including**

At least 1 course each in anthropology, economics, and geography

1 survey course in American history

1 survey course in American government

*Professional Education Courses* (minimum 30 credits)

SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)

5 credits in SeEd 3-348, 3-349—Teaching Social Studies in the Secondary Schools

12 credits in SeEd 3-641—Student Teaching in Social Studies (3-6-9)

HEd 3-090—The School and Society (3)

*Special Requirements for All Students* (See Section I of this Bulletin)

PubH 3-004—Basic Concepts in Personal and Community Health (4)

Physical Education—3 credits

### 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 the field should consult an adviser in the School of Social Work, 909 Social Sciences Building, West Bank.

### SOCIAL AND PHILOSOPHIC FOUNDATIONS OF EDUCATION

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. A student should arrange his program in consultation with an adviser in accordance with his special field of interest. For courses and requirements see the *Graduate School Bulletin*.

### VOCATIONAL-TECHNICAL EDUCATION

Director: Howard F. Nelson, 125 Peik Hall

#### Agricultural Education

Chairman: R. Paul Marvin, 208 Horticulture Building, St. Paul Campus

The major in agricultural education, offered jointly with the College of Agriculture, is designed for the student who plans to teach agriculture or horticulture in public schools, area vocational-technical schools, and junior colleges in Minnesota communities. The program provides comprehensive training in technical agriculture and permits emphasis in animal science, agronomy, agricultural economics, horticulture, soils, and mechanized agriculture for those preparing for extension work, other professional careers in the field, or for farming. It also offers the special training in education needed for recommendation for certification as an instructor of agriculture or horticulture.

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 the admission requirements of the College of Education, which include 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 satisfactory background in agriculture. Those entering the horticultural education specialization must have 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. Both curricula require a minimum of 80 credits in technical agriculture; both require a total of 192 quarter credits for completion.

A student is expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate related and major courses may be used toward those requirements.

### COMMON REQUIREMENTS

#### *Related Course Requirements*

- Rhet 1-222—Public Speaking (4)
- Rhet 3-551—Professional Writing (3)
- Math 1-111—College Algebra, Analytic Geometry (5)
- Chem 1-004, 1-005—General Principles (5 cr each)
- BioC 1-301—Elementary Biochemistry I (5)
- Phys 1-041—Physics and Mankind (5)
- VMic 3-103—General Microbiology (5)

*Major Courses*—see specialization chosen

#### *Professional Education Courses* (minimum 30 credits)

- AgEd 1-001—Introduction (1)
- AgEd 1-010—Rural Education: Community Leadership (3)
- AgEd 3-021—Education Through Extension Methods (4)
- AgEd 3-031—Student Teaching (8)
- AgEd 5-028—Agricultural Education in the Secondary Schools (5)
- AgEd 5-061—Program Planning and Evaluation (4)
- SeEd 3-155—Introduction to Secondary School Teaching (5)

#### *Special Requirements for All Students* (See Section I of this Bulletin)

- PubH 3-004—Basic Concepts in Personal and Community Health (4)
- Physical Education—3 credits

### Vocational Agriculture Specialization

In addition to the common requirements listed above, those choosing this option will complete:

#### *Related Course Requirements*

- Biol 1-011—General Biology (5) (and) Biol 3-011 (or) Biol 3-012 (or) Bot 1-012 (or) Zool 1-013

#### *Major Courses* (minimum 80 credits)

- AgEc 1-020—Principles of Macroeconomics (5)
- AgEc 1-030—Principles of Microeconomics (4)
- AgEc 3-820—Farm Management Economics (4)
- AgEc 5-800—Farm Records and Business Analysis (4)
- Soil 1-122—Introduction to Soil Science (4)
- Agro 1-010—Principles of Agronomy (4)
- PIPa 1-001—Introduction to Plant Pathology (5)
- Hort 1-001—Fundamentals of Horticulture
- Ent 1-005—Economic Entomology (4)
- AnSci 1-100—Introduction to Animal Science (5)
- AnSci 1-401—Principles of Animal Nutrition (5)
- AgEn 1-020—Agricultural Shop-Metalwork (4)
- AgEn 5-020—Programming, Planning and Instructional Methods in Agricultural Mechanics (4)
- Electives—24 credits in technical agriculture

#### *Professional Education Courses* (minimum 33 credits)

- AgEd 5-049—Agricultural Education for Adults (5)

### Vocational Horticulture Specialization

In addition to the common requirements listed above, those choosing this option will complete:

## Curricula

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### Related Course Requirements

Biol 1-011—General Biology (5) (and) Biol 3-012 (or) Bot 1-012

### Major Courses (minimum 79 credits)

AgEc 1-020—Principles of Macroeconomics (5)  
AgEc 1-030—Principles of Microeconomics (4)  
Soil 1-222—Introduction to Soil Science (4)  
PIPa 1-001—Introduction to Plant Pathology (5)  
Ent 1-005—Economic Entomology (4) (or) Ent 5-050—Forest Entomology (4)  
Hort 1-001—Fundamentals of Horticulture (4)  
Hort 1-016—Greenhouse Management (3)  
Hort 1-036—Plant Propagation (4)  
AgEn 3-205—Power and Power Use (4)  
PIPh 3-131—Survey of Plant Physiology (3)  
PIPh 3-132—Laboratory (2)  
Electives—18 credits in horticulture and 19 credits in technical agriculture

### Professional Education Courses (minimum 31 credits)

AgEd 5-049—Agricultural Education for Adults (5) (or) Educ 5-104—Adult Education (3)

## Supporting Fields

**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*.

**Supporting Field in Agricultural Education for College of Agriculture 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 be completed before entering the supporting sequence. A minimum of 18 credits may be selected from AgEd 1-010, 3-028, 5-032, 5-034, 5-049, 5-051, 5-061, 5-070, 5-071.

## 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 of 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 for 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 to 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.

### Distributive Education

Chairman: Warren G. Meyer, 249 Peik Hall  
Undergraduate Program Coordinators: Richard D. Ashmun and Mary K. Klaurens,  
270 Peik Hall

The following curriculum, leading to the B.S. degree, prepares teachers of distributive education (sales and marketing) in the secondary and post-secondary schools. Although not required, a minor may be completed through careful selection of electives. Students normally enter the College of Education upon completion of at least 45 credits in a liberal arts area. 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.

The student who has 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. Those who have had previous typewriting instruction may be exempt from SeEd 1-501.

A student preparing for vocational certification in distributive education may be exempt from part of DE 3-100 if he has had practical business experience or has 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.

Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. For a major in distributive education, the courses listed as related and major courses may be used toward these requirements.

#### Related Course Requirements

Mathematics—3 credits from Math 1-001, 1-005, 1-008, 1-111, or GC 1-533

#### Major Courses (minimum 47 credits)

Jour 5-251(4) (or) Psy 5-751—Psychology of Advertising (4)

Econ 1-001—Principles of Macroeconomics (4) (and) Econ 1-002—Principles of Microeconomics (4) (and) 3 credits to be elected

GC 1-454—Statistics (5) (or) Soc 3-801 or 3-802—Sociological Methods I: Descriptive Statistics (4)

GC 1-534—Practical Law (5) (or) BLaw 3-058—Law, Contracts (3)

GC 1-537—Salesmanship (3)

Acct 1-024, 1-025, 1-026—Principles of Accounting (3 cr each) (or) GC 1-540, 1-541, 1-542, 1-543—Accounting Fundamentals (2 cr each)

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) (and) 3 credits in marketing to be elected

SeEd 1-501—Beginning Typewriting (2)

Also recommended HE 1-521—Color (3) (and) HE 1-541—Costume Design I (3) (and) Ind 1-540—Graphic Arts I (3)

#### Professional Education Courses (minimum 57 credits)

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

DE 3-100—Distributive Occupational Experience (0-15)

## Curricula

- DE 3-301, 3-302, 3-303—Methods: Distributive Education (3 cr each)  
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 (2)  
DE 5-106—Coordination Techniques: Cooperative Distributive Education (2)  
DE 5-110—Cooperative Vocational Education Programs (2)  
DE 5-111—Curriculum: Cooperative Distributive Education (2)  
DE 5-305—Teaching Merchandise Display (3)  
SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)  
HEd 3-090—The School and Society (3)  
CSPP 5-101—Foundations of Career Development (3)  
Ind 3-330—Fundamentals of Vocational Education (3) (or) Ind 5-325—Philosophy and Practice of Industrial Education (3)  
Ind 3-340—Analysis and Course Organization (3) (or) Ind 5-330—Industrial Course Construction (3)

*Special Requirements for All Students* (See Section I of this Bulletin)

- PubH 3-004—Basic Concepts in Personal and Community Health (4)  
Physical Education—3 credits

Electives to complete 186 credits should be selected in consultation with an adviser. Recommended are advanced courses in 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, or 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; Act 1-026 (or) GC 1-542 and 1-543; IR 3-002; Mktg 3-000, 3-065 (or) GC 1-553; Psy 5-751 (or) Jour 5-251; GC 1-537; DE 3-303; DE 5-100; DE 5-105; DE 5-106; DE 5-305; Ind 3-340 (or) Ind 5-330

### Minor in Distributive Education

*Minor Courses* (minimum 39 credits)

- Econ 1-001, 1-002—Principles of Economics (4 cr each) (or) Econ 1-104, 1-105 (4 cr each) (or) Econ 3-001, 3-002 (5 cr each) (or) AgEc 1-020 (5) (and) AgEc 1-030 (4)  
GC 1-537—Salesmanship (3)  
Mktg 3-000—Principles of Marketing (3) (or) AgEc 1-400—Agricultural Marketing (4)  
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 (0-15)  
DE 3-302—Methods: Distributive Education (3)  
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

### Home Economics Education

Acting Chairman: Roxana R. Ford, 200 McNeal Hall

Students intending to major in home economics education will register for the first two years in a program in the home economics area, and may apply for admission to the College of Education early in the quarter in which they will have completed 90 credits of specified courses at the designated level. For fall admission, applications must be received in the Office of Admissions and Records no later than the end of the first week of the previous spring quarter; applications for winter admission, no later than the end of the first week of fall quarter. No students are admitted for spring quarter or summer terms. Information about

courses and procedures for joint registration in the College of Home Economics and the College of Education may be obtained at 109 McNeal Hall.

At the time of entry a student will choose one of three curricula to be followed: consumer-homemaking education, family life education, or occupational home economics education. The student who completes the requirements of one of these three curricula will qualify for recommendation for certification to teach home economics in junior and senior high schools including federally-aided programs.

Departmentally-approved alternates may be substituted for specified courses. Lists of suggested electives are available in 109 McNeal Hall. Students are expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate related and major courses may be used toward those requirements.

### COMMON REQUIREMENTS FOR ALL HOME ECONOMICS EDUCATION CURRICULA

#### *Related Course Requirements*

- Rhet 1-101, 1-102—Communications (4 cr each)
- Rhet 1-222—Public Speaking (4)
- Rhet 3-351—Professional Writing (3)
- Soc 1-001—Introduction to Sociology (4)
- AgEc 1-020—Principles of Macroeconomics (5) (and) AgEc 1-020—Principles of Microeconomics (4)

#### *Professional Education Courses* (minimum 31 credits)

- SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)
- HEd 3-090—The School and Society (3)
- HEEd 1-500—Introduction to Home Economics Teaching (2)
- HEEd 1-510—Knowledge and Values in Teaching (4)
- HEEd 3-520—Home Economics Curriculum and Instruction: Cognitive Learning (5)
- HEEd 3-530—Home Economics Curriculum and Instruction: Affective Learning (4)
- HEEd 3-620—Curriculum Management (3)

#### *Special Requirements for All Students* (See Section I of this Bulletin)

- PubH 3-004—Basic Concepts in Personal and Community Health (4)
- Physical Education—3 credits

#### *Electives to complete 186 credits*

In addition to the Common Requirements, the student will complete one of the three options listed below:

### *Consumer-Homemaking Option*

#### *Related Course Requirements*

- Anth 1-002—Introduction to Anthropology: Cultural Anthropology (5)
- Chem 1-004, 1-005—Principles of Chemistry (5 cr each) (or) NSci 1-004, 1-005—The Physical World (4 cr each)
- GC 1-132—Biological Science: The Human Body (5)
- 1 course from FSci 1-020, MicB 3-103, Biol 3-051, PubH 3-151
- 2 courses from CBS 3-002, SSci 3-402, Anth 5-321, Jour 5-251
- 9 credits in child psychology including CPsy 3-301—Child Psychology (4)

#### *Major Courses* (minimum 72 credits)

- HE 1-301—Food Preparation (5)
- HE 1-311—Food Management and Marketing (5)
- HE 1-381—Principles of Nutrition (3)
- HE 1-382—Socio-Cultural Aspects of Nutrition (3)
- Dsgn 1-551—Housing: Selection of Dwelling and Furnishings (4)
- FSoS 1-401—Household Equipment (3-4)
- FSoS 5-200—Family Relationships (3)
- TexC 1-601—Basic Clothing Construction (3)
- TexC 1-602—Pattern Fitting and Alteration (3)

## Curricula

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TexC 1-661—Aesthetic Principles in Clothing Selection (3)

TexC 3-621—Textiles (5)

1 course from TexC 1-661, 1-662, 3-623, 3-602

1 course from FSoS 5-202, 5-210, Soc 5-515, GCB 3-002

1 course from HE 3-558, 3-568, 5-409

23 credits from consumer decision-making and management courses including Econ 1-041—Consumer Economics (5), FSoS 3-260—Home Management Principles (3), and AgEc 5-580—Economic Organization of the Household (3-4)

### Professional Education Courses

HEEd 3-601—Clinical Experience: Teaching Consumer-Homemaking (9)

HEEd 3-611—Field Work: Consumer-Homemaking Education (3)

## Family Life Option

### Related Course Requirements

Anth 1-002—Introduction to Anthropology: Cultural Anthropology (5)

Biol 1-011—General Biology (5)

### Major Courses (minimum of 60 credits)

Minimum of 6 credits from each of the following areas: anthropology, family social science, psychology, sociology, and one other area relating to the family excluding home economics

15 credits in human growth and development

15 credits in home economics courses other than family social science

### Professional Education Courses

HEEd 3-602—Clinical Experience: Teaching Family Life (9)

HEEd 3-612—Field Work: Family Life Education (3)

## Home Economics Occupational Education Option

To qualify for certification as a teacher in a high school home economics occupational education program in Minnesota, a student must select one or more subject matter clusters: food service, child development and care, or textiles and clothing services. In addition to the subject matter preparation, certification requirements include a specified number of hours of occupational experience in the subject matter cluster.

### Related Course Requirements

FScI 1-020—Introduction to Microbiology (4)

GC 1-132—Biological Science: The Human Body (5)

NSci 1-004, 1-005—Physical World (4 cr each) (or) Chem 1-004, 1-005—General Principles of Chemistry (5 cr each)

GC 1-163—Principles of Physics (5)

9 credits in human growth and development including CPsy 3-301—Child Psychology (4)

### Major Courses (minimum 43 credits)

FSoS 1-401—Household Equipment (3-4)

FSoS 3-260—Home Management Principles (3)

FSoS 5-200—Family Relationships (5)

HE 1-301—Food Preparation (5)

HE 1-381—Principles of Nutrition (3)

Complete one or more of the following subject matter clusters:

#### Food Service Cluster

24 credits in home economics with a minimum of 18 credits in food service courses, including HE 3-351—Quantity Food Purchasing and Production (5) and HE 3-352—Food Service Organization and Management (3)

#### Child Development and Care Cluster

25 credits including 6 credits in home economics and a minimum of 19 credits in courses selected in consultation with the adviser from child psychology, elementary education, and special education

#### Textiles and Clothing Services Cluster

35 credits in textiles and clothing courses selected in consultation with the adviser

### *Professional Education Courses (minimum 23 credits)*

- HEED 3-330—Home Economics Occupational Experience (3-9)
- HEED 3-540—Home Economics Curriculum and Instruction: Psychomotor Learning (2)
- HEED 3-603—Clinical Experience: Teaching Home Economics Occupations (9)
- HEED 3-613—Field Work: Home Economics Occupations (3)
- CSPP 5-101—Foundations of Career Development (3)
- CSPP 5-130—Introduction to Guidance (3)

### *Optional Program for Teacher-Coordinator Certification*

A student completing the home economics occupational education option is encouraged to prepare for vocational certification as a home economics teacher-coordinator by completing the following:

- DE 5-105—Coordination Techniques (2) concurrently with  
HEED 5-106—Coordination Techniques in Home Economics Occupational Education (2)
- DE 5-110—Curricula in Cooperative Vocational Education (2) concurrently with  
HEED 5-111—Curricula in Home Economics Occupational Education (2)
- DE 5-300—Materials and Methods in Cooperative Vocational Education (2) concurrently with  
HEED 5-301—Materials and Methods in Home Economics Occupational Education (2)
- DE 5-100—Organization and Administration of Distributive Education (3)

### **Industrial Education**

Chairman: David C. Bjorkquist, 125 Peik Hall  
Undergraduate Program Coordinator: Lloyd Scholer, 125 Peik Hall

A student applying for admission to the industrial education undergraduate program must have completed 45 quarter credits including courses in mathematics, physical science, and English with at least a C (2.00) average.

On completion of the specified undergraduate curriculum, the student will be granted the B.S. degree and recommended for the standard special certificate to teach industrial arts in Minnesota public schools. Preparation for later graduate study in the field is included.

Certain departmental courses are also acceptable for vocational certification leading to service in vocation-technical schools and programs (day, evening, and part-time). On completion of specified requirements for teachers, 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. 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, which are 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; however, 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.

## Curricula

A student is expected to complete the Liberal Education Distribution Requirements as detailed in Section I of this bulletin. Appropriate related and major courses may be used toward those requirements.

### Related Course Requirements

80 credits from mathematics, science, language, speech, social science, philosophy, history, sociology, psychology, and child psychology, including Math 1-008—Trigonometry (3) (and) Math 1-111—College Algebra, Analytic Geometry (5). These should be selected with the consent of an adviser.

### Major Courses (minimum 45 credits)

Ind 3-750—Industrial Practices and Processes (3) (and) 42 credits including 6 in each of 2 blocks and 15 in each of 2 other blocks from:

#### Block A

- Ind 1-492—Craftwork (3)
- Ind 1-510, 1-511, 1-512—Wood Processing (3 cr each)
- Ind 1-530—Small Gas Engines (3)
- Ind 1-532—Automotive Mechanics I (3)
- Ind 3-630, 3-632—Power Mechanics-Technical Specialty (3 cr each)

#### Block B

- Ind 1-500—Drafting (3)
- Ind 1-502—Building Construction Drafting (3)
- Ind 1-504—Advanced Drafting (3)
- Ind 1-506—Design (3)
- Ind 1-540, 1-542—Graphic Arts (3 cr each)
- Ind 3-600, 3-602—Drafting-Technical Specialty (3 cr each)
- Ind 3-640, 3-642—Graphic Arts-Technical Specialty (3 cr each)

#### Block C

- Ind 1-520—Electricity and Electronics (3)
- Ind 1-522—Communication Electronics (3)
- Ind 1-524—Industrial Electronics (3)
- Ind 1-526, 1-528—Applied Electronics (3 cr each)
- Ind 3-620, 3-622—Electronics-Technical Specialty (3 cr each)

#### Block D

- Ind 1-560, 1-562, 1-564, 1-566, 1-568—Metal Processing (3 cr each)
- Ind 3-660, 3-662—Metals-Technical Specialty (3 cr each)
- AgEn 1-020—Agricultural Shop-Metalwork (4)

### Professional Education Courses (minimum 48 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 3-900—Independent Study (3)
- Ind 5-301—Tests in Industrial Subjects (3)
- Ind 5-320—Vocational Guidance (3)
- Ind 3-360—Teaching Industrial Arts (3)
- Ind 3-700, 3-702, 3-704—Student Teaching (3 cr each)
- Minimum of 1 credit from Ind 3-701, 3-703, 3-705, 3-707—Student Teaching Seminar (1-3 cr each)
- SeEd 3-150, 3-155—Introduction to Secondary School Teaching (5 cr each)
- HEd 3-090—The School and Society (3)
- Hlth 1-500—American Red Cross First Aid: Standard, Advanced (2)

### Special Requirements for All Students (See Section I of this Bulletin)

- PubH 3-004—Basic Concepts in Personal and Community Health (4)
- Physical Education—3 credits

All students will complete, in addition, 9 credits to be elected from Ind 3-344, 3-706, 3-901, 3-902, 5-303, SeEd 5-105 or Blocks A,B,C,D.

Electives to complete 186 credits.

Prerequisites for student teaching are:

1. Advanced junior or senior status
2. Completion of at least 30 of the 42 laboratory credits in Block A, B, C, or D as required for the major
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 the 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 through 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*

## 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.
- △ Consent of department offering course is required.

## ART EDUCATION (ArEd)

- 1-207. 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. EXPERIENCES WITH DESIGN AND MATERIALS. (3 cr)**  
Projects in invention, arrangement, and decoration; color, lettering, posters, bulletin board displays.
- 1-209. 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. 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. SURVEY OF ART ACTIVITIES. (4 cr)**  
Introduction to pictorial expression, design, and the function of art in the social environment.
- 3-009. WEAVING WITHOUT A LOOM. (4 cr)**  
Developing fundamental weaving skills employing inexpensive equipment and techniques without use of the floor loom.
- 3-010. INTRODUCTION TO WEAVING. (3 cr)**  
Equipment, design, setting up and operation of floor and table looms.
- 3-011. ADVANCED WEAVING. (3 cr)**  
Multiharness floor looms, warp beams, draft studies, design, finishes.
- 3-020. CONTEMPORARY CRAFTS. (3 cr)**  
Materials, equipment, design criteria and techniques for textile, wood, metal and ceramics.

- 3-030. **PUPPETRY.** (3 cr)  
Construction, manipulation, and stage technique for basic puppet types.
- 3-306, 3-307, 3-308.† **PRINCIPLES AND EXPERIENCES IN ART EDUCATION.** (4 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.
- 3-414. **TEACHING ART IN ELEMENTARY SCHOOL.** (2 cr; prereq 3-001 or 6 cr from 1-207, 1-208, 1-209)  
Place and content of art in the curriculum.
- 3-424. **TEACHING ART IN THE ELEMENTARY SCHOOL.** (3 cr; prereq elementary post-baccalaureate student only)  
Materials, projects, and methods for students without previous background in art.
- 3-450. **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.†. **TEACHING AND SUPERVISION OF ART.** (2 cr ea; max 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.
- 3-606, 3-607, 3-608.†. **STUDENT TEACHING AND SUPERVISION OF ART.** (3 cr per qtr, max 9; prereq sr art education, 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.
- 5-001. **ART MEDIA TECHNIQUES.** (2 cr per qtr, max 12 cr; prereq #)  
Lectures, demonstrations, discussions, critique sessions, exploring and learning various techniques and processes in creativity; handling specific media with each offering focusing on a single topic.
- 5-020. **ADVANCED CONTEMPORARY CRAFTS.** (4 cr; prereq 3-020)  
In-depth experiences in techniques of metal jewelry with emphasis on design criteria, equipment, materials, and process.
- 5-302. **CURRICULUM BUILDING IN ART EDUCATION: INNOVATIONS.** (4 cr)  
Selection, evaluation, and organization of material for teaching units and projects.
- 5-303. **CURRICULUM BUILDING IN ART EDUCATION: PROGRAMS FOR EXCEPTIONAL CHILDREN.** (3 cr)  
Selection, evaluation, and organization of material for teaching units and projects.
- 5-316. **INTERCULTURAL EDUCATION THROUGH ART.** (3 cr)  
Approaches to international understanding through recognition of aesthetic contributions of diverse peoples to American life.
- 5-318. **ART EDUCATION IN EUROPE.** (3 cr)  
Current practices, problems, and achievements in art education in Western Europe compared with practices in American art education.
- 5-386. **IMPROVING ART PROGRAMS IN THE SCHOOLS.** (4 cr; prereq tchg experience or #)  
For teachers of art: critical examination of present art programs in the schools.
- 5-389. **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. **INTERNSHIP.** (3-9 cr; prereq #)  
Professional assignment for degree candidates under joint supervision of departments and cooperative agency.
- 5-605. **PRACTICUM.** (3-9 cr; prereq #)  
Independent project under direction; will include gathering data, developing proposals, experimenting with evaluating innovative practices.
- 5-900. **PROFESSIONAL PROBLEMS.** (3 cr; prereq MEd student)  
Independent study for MEd candidates integrating learning from art education, art, and education.

## Description of Courses

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### FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

8-300. RESEARCH IN ART EDUCATION

8-306. SEMINAR: ART EDUCATION

8-900°. PROBLEMS: ART EDUCATION

### CHILD PSYCHOLOGY (CPsy)

- 1-970. **DIRECTED READINGS IN CHILD PSYCHOLOGY.** (Cr ar; prereq #)  
Reading in area of special interest in child psychology.
- 3-301. **CHILD PSYCHOLOGY.** (4 cr; prereq 5 cr intro psychology)  
Introduction to the science of child behavior; emphasis on critical review of theories and research.
- 3-301. **HONORS COURSE: CHILD PSYCHOLOGY.** (4 cr; prereq 5 cr intro psychology 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.** (4 cr; prereq 3-301 and #)  
Broad coverage of child psychology research; special attention to methodology.
- 3-361. **HONORS COURSE: SENIOR SEMINAR.** (4 cr; prereq 3-301 and #)  
Systems, theories and methods of child psychology; design and conduct of experiments with children.
- 3-980. **DIRECTED INSTRUCTION.** (1-4 cr, max 4 cr; prereq #; S-N only)  
Undergraduates serve as teaching assistants in courses they have successfully completed for credit.
- 5-303. **ADOLESCENT PSYCHOLOGY.** (4 cr; prereq 5 cr intro psychology)  
Physical, cognitive, and social development during adolescence.
- 5-311. **BEHAVIOR PROBLEMS.** (4 cr; prereq 3-301 or equiv)  
Types, origin, development, and treatment of behavior difficulties in normal children.
- 5-313. **PSYCHOLOGY OF ATYPICAL CHILDREN.** (4 cr; prereq 3-301 or equiv)  
Problems of research, assessment, and behavior associated with atypicality; evaluation of research in areas of major concern for sensory, language, intellectual, and physical deviation.
- 5-315. **INTRODUCTION TO MENTAL RETARDATION.** (4 cr, §SpEd 5-120; prereq 3-301 or equiv)  
Psychological and educational problems related to the mentally retarded.
- 5-319. **CLINICAL PROCEDURES WITH CHILDREN.** (4 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.
- 5-330. **DIRECTED EXPERIENCES WITH CHILDREN.** (4 cr; prereq 3-301 and #; S-N only)  
Intellectual and/or social development of children as individuals or members of peer groups. Quarter experiences offered in case study, social behavior, cognitive stimulation of children.
- 5-331. **PROCESSES OF SOCIALIZATION OF CHILDREN.** (4 cr; prereq 3-301 or grad)  
Processes of social learning; identification, imitation, reward and punishment, internalization, and object choice.
- 5-333. **PERSONALITY DEVELOPMENT.** (4 cr; prereq 5-331)  
Psychoanalytic and behavior theory formulations and related research literature in content areas (e.g., attachment, dependency, aggression, and sex typing).
- 5-335. **PEER RELATIONS.** (4 cr; prereq 5-331)  
Peer influences; social interactions and social relations; developmental changes.
- 5-339. **PARENT-CHILD RELATIONS.** (4 cr; prereq 5-331)  
Discussion of parent-child relationships and evaluation of relevant research literature.
- 5-341. **PERCEPTUAL DEVELOPMENT.** (4 cr; prereq 3-301)  
Perceptual learning and the development of sensory and perceptual processes.

- 5-343. **COGNITIVE DEVELOPMENT.** (4 cr; prereq 3-301)  
Development of cognitive processes; discussion of relevant theory, research literature, and methodology.
- 5-345. **LANGUAGE DEVELOPMENT.** (4 cr; prereq 3-301)  
Development of structure and function of language; factors influencing development; methodological problems, language scales, theories.
- 5-347. **LEARNING IN CHILDREN.** (4 cr; prereq 3-301)  
Introduction to current research on learning and problem solving in children; application to practical contexts.
- 5-970. **DIRECTED READINGS IN CHILD PSYCHOLOGY.** (Cr ar; prereq #)  
Independent reading.
- 5-990. **DIRECTED RESEARCH IN CHILD PSYCHOLOGY.** (Cr ar; prereq #)  
Individual empirical investigation.

**FOR GRADUATE STUDENTS ONLY**

(Description in the Graduate School Bulletin)

- 8-301. **ADVANCED CHILD PSYCHOLOGY**
- 8-304. **RESEARCH METHODS IN CHILD PSYCHOLOGY**
- 8-310. **SEMINAR: CURRENT ISSUES IN CHILD PSYCHOLOGY I**
- 8-320. **SEMINAR: CURRENT ISSUES IN CHILD PSYCHOLOGY II**
- 8-329. **GENETICS AND DEVELOPMENT**
- 8-333. **ADVANCED PERSONALITY DEVELOPMENT**
- 8-336. **ADVANCED SOCIAL DEVELOPMENT**
- 8-338. **DEVELOPMENTAL PSYCHOLOGY OF COMMUNICATION**
- 8-341. **ADVANCED PERCEPTION IN CHILDREN**
- 8-343. **ADVANCED COGNITIVE DEVELOPMENT**
- 8-345. **ADVANCED LANGUAGE DEVELOPMENT**
- 8-347. **ADVANCED LEARNING IN CHILDREN**
- 8-351. **THEORY AND PRACTICES IN THE PRESCHOOL**
- 8-355. **BEHAVIOR OF PRESCHOOL CHILDREN**
- 8-360. **SEMINAR: DEVELOPMENTAL PSYCHOLOGY**
- 8-605. **DEVELOPMENTAL PSYCHOPATHOLOGY**

**EDUCATION (Educ)**

- 5-104. **ADULT EDUCATION.** (3 cr)  
Agencies, programs, philosophies, history and trends. Each student will devote some time to a field of special interest.
- 5-105. **ADULT BASIC EDUCATION: INTRODUCTION.** (3 cr, §SpEd 5-182; prereq 12 cr in education or #)  
Survey of student characteristics, methods, materials, research, and evaluation in adult basic education.
- 5-106. **ADULT BASIC EDUCATION: CHARACTERISTICS OF ABE STUDENTS.** (3 cr, §SpEd 5-183; prereq 12 cr in education or #)  
Cultural, psychological, and social characteristics of the disadvantaged adult, general assessment, adult learning and adult development.
- 5-107. **ADULT BASIC EDUCATION: INSTRUCTIONAL METHODS AND MATERIALS.** (3 cr, §SpEd 5-184; prereq 12 cr in education or #)  
Specific educational assessment and research; methods and materials in reading, listening, arithmetic and consumer mathematics; writing and speaking; evaluating outcomes of instruction.
- 5-108. **ADULT BASIC EDUCATION: RESEARCH, EVALUATION, AND IMPLEMENTATION.** (3 cr, §SpEd 5-185; prereq 12 cr in education or #)  
Administration, funding and evaluation of ABE programs; staffing patterns and research.

## **Description of Courses**

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- 5-184. 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.

### **FOR GRADUATE STUDENTS ONLY**

(Description in the Graduate School Bulletin)

- 8-228°. PROBLEMS: HIGHER EDUCATION AND TEACHER EDUCATION  
8-229. SEMINAR: BASIC ISSUES IN HIGHER EDUCATION  
8-230. SEMINAR: DISSERTATION RESEARCH IN HIGHER EDUCATION  
8-250. HIGHER EDUCATION IN THE UNITED STATES  
8-251. CURRICULUM TRENDS IN AMERICAN COLLEGES  
8-252. EFFECTIVE COLLEGE TEACHING  
8-253. SEMINAR: IMPROVEMENT OF COLLEGE INSTRUCTION  
8-254. DIRECTED EXPERIENCE IN COLLEGE INSTRUCTION  
8-260. SEMINAR: MATERIALS AND METHODS IN MARRIAGE EDUCATION  
8-284°. PROBLEMS: TEACHER EDUCATION  
8-285, 8-286. PROFESSIONAL EDUCATION OF TEACHERS

## **EDUCATIONAL ADMINISTRATION (EdAd)**

- 5-101. PUBLIC SCHOOL ADMINISTRATION.** (3 cr; not open to majors in educational administration; prereq sr, 9 cr in education)  
Organization, administration, and general support of public schools in state and local school districts.
- 5-103. SUPERVISION AND ADMINISTRATION OF SPECIAL EDUCATION.** (3 cr; prereq §)  
Procedures in establishing and improving educational programs for exceptional children.
- 5-120. PRACTICUM: POST-SECONDARY ADMINISTRATION.** (3-6 cr; max 6)  
Intensive group and individual examination of current and pertinent administrative problems in post-secondary but non-baccalaureate institutions.
- 5-128. WORKSHOP: EDUCATIONAL ADMINISTRATION.** (1-6 cr; prereq practicing educational administrator or §)  
Laboratory approach provides opportunities for experienced administrators to concentrate their study on common administrative and supervisory problems.
- 5-130. ADMINISTRATOR DEVELOPMENT SEMINAR.** (3-9 cr; max 9)  
Assessment and development of skills required of the administrator in the areas of planning, decision-making, and human relations; introduction to contemporary issues in educational administration; initial course for student pursuing professional certification programs.
- 5-139. 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. 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. SEMINAR: ADMINISTRATION OF SPECIAL EDUCATION.** (3 cr, §SpEd 8-560 and 8-561)  
Problems of administration and organization of special education programs.
- 5-231. PRACTICUM: SCHOOL-COMMUNITY RELATIONS.** (1-4 cr)  
Practical experience in design and use of basic tools in a program such as conducting community analysis; preparing copy and news releases; meeting with material for the press, radio, and television; planning school publications; opinion polling and personal conferences.
- 5-233. PRACTICUM: JUNIOR HIGH SCHOOL ADMINISTRATION.** (1-4 cr)  
Projects such as articulation with elementary and senior high school; organizing to meet the needs of the preadolescent; activity programs; guidance functions.

5-990. SEMINAR: ADMINISTRATION OF INDIAN PROGRAMS. (1-9 cr; max 9, §AmIn 5-990)

Examination of various educational agencies dealing with Indian education and the development of research designs for the study and improvement of the administration of Indian educational programs.

**FOR GRADUATE STUDENTS ONLY**

(Description in the Graduate School Bulletin)

- 8-201. FOUNDATIONS OF EDUCATIONAL ADMINISTRATION
- 8-202. FOUNDATIONS OF EDUCATIONAL ADMINISTRATION
- 8-203. THE COMMUNITY SCHOOL
- 8-210. PUBLIC SCHOOL FINANCE
- 8-211. SCHOOL BUSINESS MANAGEMENT
- 8-215. THE ELEMENTARY SCHOOL PRINCIPALSHIP
- 8-216. RECENT RESEARCH IN ELEMENTARY SCHOOL ADMINISTRATION
- 8-217. SEMINAR: ELEMENTARY SCHOOL ADMINISTRATION
- 8-218. SEMINAR: THE SOCIAL ORGANIZATION OF SCHOOLS
- 8-220/8-221†. ANALYSIS OF ADMINISTRATIVE PROBLEMS
- 8-222. ADMINISTRATIVE INFORMATION SYSTEMS
- 8-224. LEGAL ASPECTS OF PUBLIC SCHOOL ADMINISTRATION
- 8-226. EDUCATIONAL FACILITIES PLANNING
- 8-227. PUBLIC SCHOOL PERSONNEL PROGRAMS
- 8-230. SCHOOL COMMUNITY RELATIONS
- 8-234. SEMINAR: EDUCATIONAL FINANCE
- 8-235. SEMINAR: HUMANISM IN SCHOOL ADMINISTRATION
- 8-236. SEMINAR: EDUCATIONAL FACILITIES PLANNING
- 8-237. SEMINAR: EDUCATIONAL LAW
- 8-238. SEMINAR: THEORY AND RESEARCH
- 8-240. SEMINAR: CLINICAL EXPERIENCES IN EDUCATIONAL ADMINISTRATION
- 8-241. SEMINAR: INTERNSHIP IN EDUCATIONAL ADMINISTRATION
- 8-242. ADMINISTRATIVE ORGANIZATION AND STAFFING OF SCHOOL SYSTEMS
- 8-244/8-245/8-246†. SEMINAR: ADMINISTERING PUBLIC EDUCATION IN METROPOLITAN AREAS
- 8-253. ADMINISTRATION IN HIGHER EDUCATION
- 8-264. THE SECONDARY SCHOOL PRINCIPALSHIP
- 8-265. ADMINISTERING THE HIGH SCHOOL PROGRAM
- 8-270°. PROBLEMS: ELEMENTARY SCHOOL ADMINISTRATION
- 8-271°. PROBLEMS: SECONDARY SCHOOL ADMINISTRATION
- 8-272°. PROBLEMS: EDUCATIONAL ADMINISTRATION
- 8-273. FIELD STUDY
- 8-274. THE TWO-YEAR COLLEGE
- 8-275. TWO-YEAR COLLEGE ADMINISTRATION
- 8-276. SEMINAR: ADMINISTRATION OF CURRICULUM IN THE TWO-YEAR COLLEGE
- 8-278. RECENT RESEARCH IN TWO-YEAR COLLEGE ADMINISTRATION
- 8-290. FINANCING HIGHER EDUCATION
- 8-291. PUBLIC RELATIONS FOR COLLEGES AND UNIVERSITIES

## EDUCATIONAL PSYCHOLOGY

### Counseling and Student Personnel Psychology (CSPP)

- 5-101. 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. 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. 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. GROUP PROCEDURES IN GUIDANCE.** (3 cr; prereq 9 cr in education, 5-130 or #)  
Content and materials for home room groups, occupation units, and other guidance courses in junior and senior high school.
- 5-300. WORKSHOP: COUNSELING PSYCHOLOGY.** (3-6 cr per qtr, max 12; prereq #)  
For experienced counselors who want to design and test applications of counseling concepts to specific problems related to the profession.
- 5-320. GROUP COUNSELING: PRINCIPLES AND PROCEDURES.** (3 cr; prereq counseling certification or #)  
Basic principles of group dynamics related to the group counseling process; emphasis on developing concepts, attitudes, and skills necessary; includes theory and laboratory experiences.
- 5-331, 5-332. CAREER DEVELOPMENT: PRINCIPLES AND PRACTICE I, II.** (3 cr each)  
Principles of career development with focus on world of work, theories, vocational information and appraisal techniques, vocational guidance and programs and practices to meet needs.
- 5-505. SEMINAR: INTERNATIONAL AND INTERCULTURAL DIMENSIONS OF COUNSELING.** (2 cr; prereq #)  
Discussion of the effect cross-cultural and cross-national differences have in the counseling process in a selection of cultural settings.
- 5-620. PRACTICUM: GROUP COUNSELING.** (1-6 cr; max 6; prereq counseling certification and #)  
Supervised practice in counseling several groups, preferably in the setting in which the student intends to work; emphasis on systematic evaluation of progress through direct observations and tapes, and on developing skills in interpersonal perception, communication, and research.
- 5-900. INDEPENDENT STUDY: GUIDANCE AND COUNSELING.** (Cr ar; prereq #)  
Independent study of areas of special interest to students.

#### **FOR GRADUATE STUDENTS ONLY**

(Description in the Graduate School Bulletin)

- 8-140. COLLEGE STUDENT PERSONNEL WORK—FOUNDATIONS AND SCOPE
- 8-150°. PSYCHOLOGICAL ASPECTS OF COUNSELING SUPERVISION
- 8-302/8-303/8-304†. COUNSELING THEORY AND PROCEDURES I, II, III
- 8-305/8-306/8-307†. FIELD PLACEMENT IN COUNSELING AND STUDENT PERSONNEL PSYCHOLOGY
- 8-341. DIAGNOSIS AND TREATMENT OF COLLEGE LEARNING DIFFICULTIES
- 8-500. MASTER'S SEMINAR: COUNSELING AND STUDENT PERSONNEL PSYCHOLOGY
- 8-501. PROFESSIONAL SEMINAR
- 8-502. DOCTORAL SEMINAR: COUNSELING AND STUDENT DEVELOPMENT PSYCHOLOGY
- 8-510°. SEMINAR: ADVANCED COUNSELING THEORY
- 8-511°. SEMINAR: ADVANCED COUNSELING RESEARCH

- 8-520°. SEMINAR: RESEARCH IN GROUP COUNSELING  
8-530. RESEARCH SEMINAR  
8-540. SEMINAR: THE COLLEGE STUDENT  
8-541. COLLEGE STUDENT PERSONNEL WORK—HOUSING  
8-542. COLLEGE STUDENT PERSONNEL WORK—STUDENT ACTIVITIES  
8-543. COLLEGE STUDENT PERSONNEL WORK—DISCIPLINE AND ADMINISTRATION  
8-602/8-603/8-604†. COUNSELING PRACTICUM I, II, III  
8-612. COUNSELING PRACTICUM: ADVANCED  
8-613/8-614/8-615. COUNSELING PRACTICUM: STUDENT COUNSELING BUREAU  
8-640. PRACTICE IN STUDENT PERSONNEL WORK  
8-641. CLINICAL PRACTICE IN DIAGNOSIS AND TREATMENT OF COLLEGE LEARNING DIFFICULTIES  
8-701. INTERNSHIP: COUNSELING AND STUDENT PERSONNEL PSYCHOLOGY  
8-900°. RESEARCH METHODS IN COUNSELING AND STUDENT PERSONNEL PSYCHOLOGY  
8-905°. PROBLEMS: COUNSELING AND STUDENT PERSONNEL PSYCHOLOGY

### Psychological Foundations (PsyF)

- 3-102. **INTRODUCTION TO MEASUREMENT AND STATISTICS.** (2-3 cr; prereq 5 cr into psychology)  
Measures of central tendency, variability, and correlation; principles of test construction.
- 3-370. **HUMAN RELATIONS AND GROUP DYNAMICS.** (4 cr, §3-670)  
Based on small-group training theory and methods, designed to help the student develop an understanding of his own behavior, the behavior of other individuals, and group and organizational behavior.
- 5-110. **INTRODUCTORY STATISTICAL METHODS.** (3 cr)  
Basic statistical techniques; comprehension of literature using elementary concepts and methods.
- 5-120. **EDUCATIONAL MEASUREMENT IN THE CLASSROOM.** (3 cr)  
Principles and methods for construction, evaluation, and improvement of classroom measures; techniques for describing results statistically; use of measurement in evaluating instruction and student performance; assignment of grades.
- 5-121. **BASIC PRINCIPLES OF MEASUREMENT.** (3 cr; prereq 5-110 or 8-110 or Psy 3-801 or equiv)  
Fundamental concepts, principles, and methods in educational and psychological measurement; educationally useful properties of tests; types and uses of derived scores; factors influencing reliability and validity.
- 5-125. **PRINCIPLES AND METHODS OF EVALUATION.** (3 cr)  
Nature of inquiry in education (evaluation vs elucidation); internal and external validity of designs; analytical operations on data; overview of models.
- 5-141. **PSYCHOLOGY OF SCHOOL LEARNING.** (3 cr)  
Survey of psychological conceptions of the learner, the schooling process and the implications of these conceptions for education.
- 5-144. **LEARNING: THEORY AND PRACTICE.** (4 cr; prereq 5-342 or #)  
Methodologies of applied psychology; critical examination of psychological variables which support learning through instruction; procedures for interpretation of data.
- 5-147. **PSYCHOLOGY OF THE INTELLECT.** (4 cr, §5-150; prereq 5-342 or 5-141 or equiv)  
Examination of theories of intelligence and patterns of concept development with implications for educational practices (e.g. measurement practices and curriculum techniques).
- 5-148. **PSYCHOLOGY AND PEDAGOGY OF READING.** (3 cr)  
Psychological, psychological, and linguistic factors influencing beginning and fluent reading and their implications for instruction.

## **Description of Courses**

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- 5-149. **BEHAVIOR ANALYSIS IN EDUCATION.** (4 cr, §5-142 or 5-143; prereq 5-342)  
Focus on practical applications of reinforcement theory, behavior analysis, precision teaching, programmed instruction.
- 5-162. **PERSONALITY AND SOCIAL DEVELOPMENT.** (3 cr, §5-160; prereq 5 cr intro psychology)  
Major concepts and research findings in adjustment and development, with special emphasis on educational implications.
- 5-170. **SOCIAL PSYCHOLOGY OF EDUCATION.** (4 cr)  
Concepts and theories in the field applied to educational problems and settings; laboratory sessions to make applications and develop skills in group behavior.
- 5-330. **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
- 5-342. **EXPERIMENTAL PSYCHOLOGY OF SCHOOL LEARNING.** (5 cr, §5-140)  
History, models and theories, research methods of educational psychology; conditioning, learning and cognition; collection and analysis of data in the laboratory setting.
- 5-581. **INDIVIDUAL DIFFERENCES AND EDUCATIONAL PRACTICE.** (4 cr, §5-100; 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.
- 5-621. **PRACTICUM: INSTRUMENTS AND PROCEDURES FOR EVALUATION.** (3 cr, §8-621; prereq 5-125, 5-121 or equiv)  
Developing curriculum evaluation instruments and procedures; introduction to methods and theories; focus on identifying evaluation problems; developing and implementing techniques for their solution.
- 5-641. **PRACTICUM: PRECISION TEACHING AND BEHAVIOR MODIFICATION.** (1-3 cr; max 12; §5-640; prereq §)  
Supervised experimentation with practical emphasis.
- 5-681. **INSTRUCTIONAL USES OF COMPUTERS.** (3 cr, §5-630; prereq 5-141 or 5-342 or equiv)  
Analysis and evaluation of computer uses in teaching and learning; drill and practice, tutorial, learner controlled sequences, simulation and games, evaluation, instructional management and learning research; laboratory experience.
- 5-900. **DIRECTED STUDY.** (Cr ar; prereq §)

### **FOR GRADUATE STUDENTS ONLY**

(Description in the Graduate School Bulletin)

- 8-110, 8-111, 8-112. **STATISTICAL METHODS**
- 8-113. **DESIGN AND ANALYSIS OF EXPERIMENTS**
- 8-114. **MULTIPLE REGRESSION AND FACTOR ANALYSIS**
- 8-120\*. **METHODS IN EDUCATIONAL RESEARCH**
- 8-130. **COMPUTER APPLICATION TO STATISTICAL ANALYSES**
- 8-520. **SEMINAR: RESEARCH PLANNING**
- 8-522. **ADVANCED THEORY OF MEASUREMENT**
- 8-523. **THEORY OF PSYCHOLOGICAL SCALING**
- 8-524. **MEASUREMENT AND EVALUATION OF COGNITIVE DEVELOPMENT**
- 8-525. **SEMINAR: SPECIAL TOPICS IN EDUCATIONAL EVALUATION**
- 8-530. **SEMINAR: DEVELOPING COMPUTER APPLICATIONS**
- 8-544. **SEMINAR: PSYCHOLOGY OF KNOWLEDGE ACQUISITION**
- 8-547. **SEMINAR: COGNITIVE PROCESSES OF THE ADOLESCENT AND EDUCATIONAL IMPLICATIONS**
- 8-548. **PSYCHOLOGICAL ANALYSIS OF VERBAL LEARNING AND READING**
- 8-562. **PERSONALITY DEVELOPMENT AND SOCIALIZATION**

- 8-565. DEVELOPMENT OF MORAL-POLITICAL JUDGMENT AND PROGRAMS IN VALUE EDUCATION
- 8-571. PSYCHOLOGY OF CONFLICT RESOLUTION
- 8-572. ORGANIZATIONAL DEVELOPMENT AND CHANGE
- 8-573. SMALL GROUP PROCEDURES USED FOR PERSONAL AND ORGANIZATIONAL CHANGE
- 8-581. PEDAGOGICAL PRINCIPLES IN INSTRUCTIONAL DESIGN AND DEVELOPMENT
- 8-670. PRACTICUM IN GROUP LEADERSHIP
- 8-681. SYSTEMS PRINCIPLES IN INSTRUCTIONAL DESIGN AND DEVELOPMENT
- 8-721. INTERNSHIP: EVALUATION
- 8-900°. RESEARCH PROBLEMS
- 8-910°. PROBLEMS: STATISTICS FOR STUDENTS IN EDUCATION AND PSYCHOLOGY
- 8-920°. PROBLEMS: MEASUREMENT
- 8-921. PROBLEMS: CURRICULUM EVALUATION
- 8-930. RESEARCH PROBLEMS: COMPUTER APPLICATIONS
- 8-940. RESEARCH PROBLEMS: LEARNING AND COGNITION
- 8-960. RESEARCH PROBLEMS: PERSONALITY
- 8-970. RESEARCH PROBLEMS: SOCIAL PSYCHOLOGY
- 8-980. RESEARCH PROBLEMS: INSTRUCTIONAL SYSTEMS

### School Psychology Training Program (SchP)

#### **FOR GRADUATE STUDENTS ONLY**

(Descriptions in the Graduate School Bulletin)

- 8-100. INTRODUCTION TO SCHOOL PSYCHOLOGICAL SERVICES
- 8-310. TECHNIQUES OF PSYCHOEDUCATIONAL ASSESSMENT
- 8-311. TECHNIQUES OF PSYCHOEDUCATIONAL ASSESSMENT: SPECIAL POPULATIONS
- 8-312. PERSONALITY APPRAISAL IN CHILDREN AND ADOLESCENTS
- 8-510. SEMINAR: SCHOOL PSYCHOLOGY
- 8-513. THEORIES AND METHODS OF INTERVENTION: INDIVIDUALS
- 8-514. THEORIES AND METHODS OF INTERVENTION: GROUPS
- 8-515. THEORIES AND METHODS OF INSTRUCTIONAL INTERVENTION
- 8-520. SEMINAR: RESEARCH IN SCHOOL PSYCHOLOGY
- 8-600. CLINICAL PRACTICE IN SCHOOL PSYCHOLOGY
- 8-610. PRACTICUM: SCHOOL PSYCHOLOGICAL SERVICES
- 8-700. INTERNSHIP: SCHOOL PSYCHOLOGICAL SERVICES
- 8-900°. RESEARCH PROBLEMS
- 8-910. DIRECTED STUDY IN SCHOOL PSYCHOLOGY

### Special Education (SpEd)

- 3-600. JUNIOR PRACTICUM IN SPECIAL EDUCATION. (3 cr; prereq #)  
Supervised observation and participation in classroom and related school activities for exceptional children; a pre-student teacher exploratory experience.
- 3-601, 3-602. 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.

## *Description of Courses*

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- 5-100. 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. EDUCATION OF EXCEPTIONAL CHILDREN.** (3 cr)  
Introduction to field of special education for classroom teachers and other school personnel.
- 5-110. DIAGNOSIS AND REMEDIATION OF LEARNING DISABILITY I.** (3 cr; prereq #)  
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. 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. 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. INTRODUCTION TO MENTAL RETARDATION.** (4 cr, §CPsy 5-315; prereq 5-101)  
Issues which relate to educational practices; community planning; educational philosophy, administration and organization, and programming.
- 5-123. METHODS AND MATERIALS FOR SEVERELY RETARDED PRESCHOOL AND SCHOOL AGE PUPILS.** (4 cr; prereq 5-101 or equiv)  
Issues and problems in curriculum development; pupil assessment and evaluation techniques; materials and teaching strategies.
- 5-130. 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. EDUCATIONAL PROBLEMS OF THE NEUROLOGICALLY IMPAIRED.** (3 cr; prereq 5-101 or #)  
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. PSYCHO-SOCIAL AND EDUCATIONAL ASPECTS OF DEAFNESS.** (3 cr)  
Historical and current societal perceptions of the deaf; analysis of effects and patterns of auditory impairment on children and adults; intelligence, personal and social adjustment, effect of the psychological processes on acquisition of language, speech, and speech-reading.
- 5-141. METHODS OF TEACHING SCHOOL SUBJECTS TO THE HEARING IMPAIRED.** (3 cr; prereq CDis 5-708 or #)  
Adaptation of materials and teaching methods for hearing-impaired children in reading, mathematics, social studies, and science.
- 5-142. 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. TEACHING LANGUAGE TO THE HEARING IMPAIRED I.** (3 cr; prereq 5-140)  
Survey of the language curricula and teaching techniques in infant, nursery, preschool and beginning primary programs for the deaf; overview of language development in the deaf and hearing child in the primary years.
- 5-144. TEACHING LANGUAGE TO THE HEARING IMPAIRED II.** (3 cr; prereq #)  
Devising language curricula and teaching techniques in primary, intermediate and advanced programs for the deaf; comparative study of the language development of the deaf and hearing in these years.
- 5-145, 5-146. TEACHING SPEECH TO THE HEARING IMPAIRED I, II.** (3 cr each; prereq #)  
Survey of speech methodologies employed in teaching auditorially-impaired children; major emphasis on techniques in teaching specific sounds, articulation, voice and sentence rhythm stressing intelligibility of speech. Demonstration and practice are provided with individual and groups of auditorially-impaired children.

- 5-150. EDUCATION OF EMOTIONALLY DISTURBED AND SOCIALLY MALADJUSTED CHILDREN.** (3 cr; prereq grad or #)  
Discussion and evaluation of curricula, materials, and methods for instruction of disturbed and delinquent children in hospital, training school, and public school settings.
- 5-170. 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. 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. 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. 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. 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. 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, film, observations.
- 5-180. 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.
- 5-190. OUTSTANDING ABILITIES AND THE EDUCATIONAL PROCESS.** (3 cr)  
Critical analysis of the origin and development of terms such as giftedness, creativity, genius, talent, and intelligence; implications for educational practice; current issues and trends.
- 5-301. CONTINGENCY MANAGEMENT IN SPECIAL EDUCATION SYSTEMS.** (3 cr)  
Designing special instructional systems based on an experimental analysis of academic and social behavior.
- 5-302. WORKSHOP: SPECIAL EDUCATION.** (Cr ar; prereq #)  
Laboratory approach provides opportunities for school personnel to study specific problems related to special education.
- 5-320. WORKSHOP: EDUCATION OF TRAINABLE RETARDED CHILDREN.** (6 cr; prereq #)  
Curriculum and materials for teaching trainable mentally retarded children.
- 5-321. WORKSHOP: EDUCATION OF EDUCABLE RETARDED STUDENTS.** (6 cr; prereq #)  
Curriculum and materials for teaching educable mentally retarded students.
- 5-340. CLINICAL AND EDUCATIONAL PROCEDURES FOR PRESCHOOL AND PRIMARY HEARING-IMPAIRED CHILDREN.** (6 cr; prereq teacher 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. 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.

## **Description of Courses**

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- 5-611. 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. PSYCHOLOGICAL THEORY AND RESEARCH IN MENTAL RETARDATION  
8-121. FUNCTIONAL ANALYSIS OF BEHAVIOR IN MENTAL RETARDATES  
8-122. DESIGN AND INTERPRETATION OF BEHAVIORAL RESEARCH WITH MENTALLY RETARDED  
8-150. ADVANCED COURSE: EDUCATION OF EMOTIONALLY DISTURBED AND SOCIALLY MALADJUSTED CHILDREN  
8-151. THEORIES OF EDUCATING DISTURBED CHILDREN  
8-152. RESEARCH IN EDUCATION OF DISTURBED CHILDREN  
8-153. RESEARCH DESIGNS IN EDUCATION OF DISTURBED CHILDREN  
8-500. SURVEY OF SPECIAL EDUCATION PROBLEMS  
8-501. RESEARCH IN SPECIAL EDUCATION  
8-502. SEMINAR: SPECIAL EDUCATION  
8-520. EDUCATIONAL AND SOCIO-CULTURAL THEORY AND RESEARCH IN MENTAL RETARDATION  
8-540. LANGUAGE ACQUISITION AND LEARNING THEORY  
8-560, 8-561. SEMINAR: ADMINISTRATION OF SPECIAL EDUCATION  
8-580. SEMINAR: THE DISADVANTAGED  
8-601. ADVANCED PRACTICUM  
8-602. RESEARCH PRACTICUM  
8-900\*. PROBLEMS

## **ELEMENTARY EDUCATION (Elem)**

- 3-100. PSYCHOLOGICAL FOUNDATIONS OF ELEMENTARY EDUCATION. (5 cr; prereq 5 cr intro psychology)  
Educational psychology, learning, retention, transfer, intelligence, measurement, behavioral management and modification applied to elementary education; lecture, laboratory section, school or community agency participation.
- 3-101. INTRODUCTION TO ELEMENTARY SCHOOL TEACHING. (3 cr; prereq 3-100, §student teaching and §)  
Curriculum and organizational patterns; unit instruction; reporting, promotion and nonpromotion classroom management; control and support of public education.
- 3-102. ORIENTATION TO TEACHING IN THE ELEMENTARY SCHOOL. (1 cr, §3-101; prereq 3-100)  
Role of the teacher, role of the school, community, career planning.
- 3-103. THE TEACHER AND THE ELEMENTARY SCHOOL. (2 cr, §3-101; prereq elem ed major)  
Contemporary issues, curriculum, and organization of the elementary school.
- 3-300. CHILDREN'S LITERATURE. (3 cr)  
Materials for children's reading in the elementary school program.
- 3-316. TEACHING ENGLISH IN THE ELEMENTARY SCHOOL. (3 cr; prereq 3-100 and Engl 3-851)  
Development of language power in elementary school in relation to all activities of the school day.
- 3-331. TEACHING READING IN THE 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.

## Elementary Education

- 3-346. 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. 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. 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. 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. SOCIAL LEARNING IN EARLY CHILDHOOD EDUCATION.** (3 cr; prereq CPsy 3-301)  
Directed observations of nursery school children and procedures.
- 3-391. 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. STUDENT TEACHING IN THE ELEMENTARY SCHOOL: HALF DAY.** (6 cr; prereq  $\Delta$ ; S-U grading only)  
Five half days a week of supervised teaching and observing in elementary school.
- 3-601. STUDENT TEACHING IN THE ELEMENTARY SCHOOL: HALF DAY.** (6 cr; prereq 6 cr elem student tchg and  $\Delta$ ; S-U grading only)  
Five half days a week of supervised teaching and observing in the elementary school with special attention to individual needs recognized in previous student teaching.
- 3-602. TEACHING IN INNER CITY SCHOOLS.** (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. STUDENT TEACHING IN THE KINDERGARTEN.** (3 cr; prereq 6 cr elem student tchg and  $\Delta$ ; S-U grading only)  
Five half days each week in supervised teaching and observation in public or private schools.
- 3-604. STUDENT TEACHING IN THE NURSERY SCHOOL.** (6 cr [Summer 3 cr]; prereq approval of major adviser and director student tchg; S-U grading only)  
Twelve hours each week in supervised classroom participation.
- 3-605. STUDENT TEACHING IN ELEMENTARY SCHOOL: HALF DAYS AND FULL DAYS.** (9 cr; prereq  $\Delta$ ; S-U grading only)  
Five half days and two full days each week in supervised teaching and observing in the elementary school.
- 3-606. STUDENT TEACHING IN THE INNER CITY ELEMENTARY SCHOOL.** (9 cr; prereq  $\Delta$ ; S-U grading only)  
Five half days and two full days each week in supervised teaching and observing in elementary school in the inner city.
- 3-607. STUDENT TEACHING IN ELEMENTARY SCHOOL: FULL DAYS.** (10 cr; prereq  $\Delta$ ; S-U grading only)  
Five full days each week teaching and observing in elementary school.
- 3-610. STUDENT TEACHING: ORIENTATION IN ELEMENTARY SCHOOL.** (3 cr; prereq  $\Delta$ ; S-U grading only)  
Observing and teaching during the beginning of the school year; begins with fall semester opening of public schools and continues until University classes begin.
- 3-630. STUDENT TEACHING IN ELEMENTARY SCHOOL LITERATURE.** (3 cr; prereq 6 cr in elem student tchg and  $\Delta$ ; S-U grading only)  
Minimum of 3 hours weekly of supervised teaching and observation in elementary school.
- 3-631. STUDENT TEACHING IN ELEMENTARY SCHOOL ENGLISH.** (3 cr; prereq 6 cr in elem student tchg and  $\Delta$ ; S-U grading only)  
Minimum of 3 hours weekly of supervised teaching and observation in elementary school.

## *Description of Courses*

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- 3-633. STUDENT TEACHING IN ELEMENTARY SCHOOL READING.** (3 cr; prereq 6 cr in elem student tchg and  $\Delta$ ; S-U grading only)  
Minimum of 3 hours weekly of supervised teaching and observation in elementary school.
- 3-634. STUDENT TEACHING IN ELEMENTARY SCHOOL SCIENCE.** (3 cr; prereq 6 cr in elem student tchg and  $\Delta$ ; S-U grading only)  
Minimum of 3 hours weekly of supervised teaching and observation in elementary school.
- 3-636. STUDENT TEACHING IN ELEMENTARY SCHOOL SOCIAL STUDIES.** (3 cr; prereq 6 cr in elem student tchg and  $\Delta$ ; S-U grading only)  
Minimum of 3 hours weekly of supervised teaching and observation in elementary school.
- 3-639. STUDENT TEACHING IN ELEMENTARY SCHOOL MATHEMATICS.** (3 cr; prereq 6 cr in elem student tchg and  $\Delta$ ; S-U grading only)  
Minimum of 3 hours weekly of supervised teaching and observation in elementary school.
- 5-100. 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. 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. 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. WORKSHOP: CURRICULUM LABORATORY PRACTICE.** (0-3 cr; prereq 5-100 or SeEd 5-113 and #)  
Analysis and construction of units, courses of study and curricula according to needs, interests, level, and specialization.
- 5-104. PRACTICUM: LABORATORY SCHOOL TEACHING (K-6).** (Cr ar; prereq elem student tchg or elem school tchg exper and #)  
Experience in teaching and/or research.
- 5-105. 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. 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. 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. SUPERVISION AND IMPROVEMENT OF INSTRUCTION.** (3 cr; prereq 9 cr in education)  
Functions and duties of a supervisor; techniques; analysis of classroom activities.
- 5-109. SUPERVISORY STRATEGIES IN PLANNING, OBSERVING, CONFERENCING.** (3 cr; prereq #)  
Overview of the responsibilities of the supervising teacher; material development and practice in basic supervisory skills and functions.
- 5-300. 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. TEACHING AND SUPERVISION OF ENGLISH IN THE ELEMENTARY SCHOOLS.** (3 cr; prereq 3-316 or elem tchg exper)  
Improvement of instruction, study of trends in English education.
- 5-317. 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.

- 5-318. **CREATIVE WRITING FOR AND BY CHILDREN.** (3-6 cr, max 6 cr; prereq 3-300 or 3-336 or elem tchg exper and #)  
Language arts in the elementary school for experienced teachers, supervisors, graduate students, and college instructors; emphasis on creative aspects of the writing of children's literature and the children's own writing.
- 5-331. **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.
- 5-333. **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. **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. **CLINICAL DIAGNOSIS OF READING DIFFICULTIES.** (3 cr; prereq 5-334)  
Relationship to psychological factors and clinical remedial correction.
- 5-336. **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.
- 5-337. **BEGINNING READING INSTRUCTION.** (3 cr; prereq 3-331 and #)  
For teachers and specialists interested in initial teaching procedures; compares alternative methods of beginning instruction; emphasis on readiness programs, test grouping patterns, language factors, and intensive instruction procedures to prevent reading failure.
- 5-338. **TEACHING READING IN THE INTERMEDIATE GRADES.** (3 cr; prereq 3-331 and #)  
For teachers and specialists interested in problems of teaching reading beyond the decoding stage; emphasis on comprehension strategies, basic study skills, and reading in the content areas.
- 5-346. **TEACHING SCIENCE IN THE ELEMENTARY SCHOOL.** (3 cr; prereq elem tchg exper or #)  
Materials, resources and methods of teaching science at the elementary level.
- 5-347. **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. **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, and stargazing.
- 5-349. **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. **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. **TEACHING SOCIAL STUDIES IN THE ELEMENTARY SCHOOL.** (3 cr; prereq 3-101 or equiv)  
Content and organization of social studies programs; programs of understanding, improving the learning situation, and effective use of materials.
- 5-362. **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.
- 5-363. **WORKSHOP: CURRICULUM IMPLEMENTATION IN ELEMENTARY SCHOOL SOCIAL STUDIES.** (Cr ar; max 9; prereq elem tchg exper and #)  
Analysis of new instructional materials and recent curriculum developments in the field; training in innovative instructional procedures.

## ***Description of Courses***

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- 5-376. 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.
- 5-377. KINDERGARTEN: MATERIALS AND RESOURCES.** (3 cr; prereq 3-377 or 5-376 and tchg exper)  
Experience in the selection and use of commercial and teacher-made educational materials and media common to teaching in the kindergarten.

### **FOR GRADUATE STUDENTS ONLY**

(Description in the Graduate School Bulletin)

- 8-300. SPECIAL COLLECTIONS OF CHILDREN'S LITERATURE
- 8-316. RESEARCH IN ENGLISH COMPOSITION IN ELEMENTARY SCHOOLS
- 8-317. RESEARCH IN SKILL DEVELOPMENT IN SPELLING, HANDWRITING, AND LISTENING
- 8-331. RESEARCH FOUNDATIONS FOR READING INSTRUCTION
- 8-332. RECENT RESEARCH IN READING
- 8-333. SEMINAR: READING INSTRUCTION
- 8-346\*. RESEARCH FOUNDATIONS OF ELEMENTARY SCHOOL SCIENCE TEACHING
- 8-347. THE ELEMENTARY SCHOOL SCIENCE PROGRAM: ARTICULATION AND COORDINATION
- 8-361. CURRICULUM CONSTRUCTION IN ELEMENTARY SOCIAL STUDIES
- 8-362. RESEARCH IN ELEMENTARY SOCIAL STUDIES
- 8-363. SEMINAR: ELEMENTARY SOCIAL STUDIES EDUCATION
- 8-364. SEMINAR: ELEMENTARY SCHOOL SOCIAL STUDIES AND THE SOCIAL SCIENCES
- 8-391. SEMINAR: ELEMENTARY SCHOOL PROBLEMS
- 8-392. WORKSHOP: IMPROVEMENT OF INSTRUCTION
- 8-916\*. PROBLEMS: TEACHING ENGLISH
- 8-931\*. PROBLEMS: READING
- 8-961\*. PROBLEMS: TEACHING SOCIAL STUDIES
- 8-976. PROBLEMS: TEACHING KINDERGARTEN
- 8-991\*. PROBLEMS: IMPROVEMENT OF INSTRUCTION
- 8-992. RESEARCH IN EDUCATIONAL DIAGNOSIS

## **MUSIC EDUCATION (MuEd)**

- 1-201. INTRODUCTION TO PUBLIC SCHOOL MUSIC TEACHING.** (2 cr)  
Orientation to the various areas of public school music and courses of study leading to certification.
- 1-504. STRING TECHNIQUES I.** (4 cr)  
Playing experience on violin and viola; basic concepts of teaching with study of methods and materials.
- 1-505. STRING TECHNIQUES II.** (4 cr)  
Playing experience on cello and bass; basic concepts of teaching with study of methods and materials.
- 1-515. WOODWIND TECHNIQUES.** (4 cr)  
Playing experience on all woodwind instruments; basic concepts of teaching with study of methods and materials.
- 1-525. BRASS TECHNIQUES.** (4 cr; prereq music education major or #)  
Theory and technical development of instruments, elementary instruction in performing, special attention to routine class instruction.
- 1-535. PERCUSSION TECHNIQUES.** (4 cr; prereq music education major or #)  
Theory and technical development of instruments, elementary instruction in performing, special attention to routine class instruction.

- 3-001. MUSIC FOR RECREATIONAL LEADERSHIP.** (4 cr; prereq Mus 1-001)  
Directing and working with students in musical performing groups, rhythmic activities, singing, musical instruments, and listening.
- 3-011. TEACHING MUSIC IN THE ELEMENTARY SCHOOL.** (4 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. TEACHING MUSIC IN GRADES K-3.** (4 cr; prereq #)  
For music education majors: music methods and materials; the child voice, selection and presentation of songs, music reading, music history and appreciation, classroom instruments, creativity, rhythm, and basic conducting techniques.
- 3-302. TEACHING MUSIC IN GRADES 4-6.** (4 cr; prereq 3-301, #)  
For music education majors: music methods and materials; note reading, part-singing, music history and appreciation, rhythm, classroom instruments, creativity, and advanced conducting techniques.
- 3-304. 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.
- 3-311. TEACHING MUSIC IN THE SECONDARY SCHOOL I.** (4 cr)  
Music in the general education of junior high and high school students; content, methods and materials.
- 3-312. TEACHING MUSIC IN THE SECONDARY SCHOOL II.** (4 cr)  
Music in the general education of junior high and high school students; content, methods and materials.
- 3-320. SEMINAR: GENERAL MUSIC.** (4 cr per qtr, max 16 cr)  
Curriculum development for the general music program in secondary schools.
- 3-322. TECHNIQUES OF CLASSROOM INSTRUMENTS.** (5 cr; prereq Mus 1-001 or equiv or music or music education major)  
Beginning and intermediate class and small group recorder instructions; methods and materials for teaching recorders, capped and uncapped Renaissance reed instruments and the Studio 49 (Orff-Schulwerk) melodic and percussion instruments and bowed, fretted instruments; factors in combining these instruments with voices and keyboard instruments.
- 3-331. TEACHING CHORAL AND INSTRUMENTAL MUSIC IN THE PUBLIC SCHOOLS.** (4 cr; prereq 3-416 or 3-516; †SeEd 3-150 and 3-155)  
School-centered experience applying methods and materials of teaching choral and instrumental music in the public schools.
- 3-415. CHORAL LABORATORY I.** (5 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. CHORAL LABORATORY II.** (5 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.
- 3-431. THE ADOLESCENT SINGING VOICE.** (4 cr; prereq upper div clearance in voice for voice majors or 12 cr of applied voice for non-voice majors)  
Principles of voice pedagogy in teaching adolescent singers; survey of resource materials for the teacher and opportunity to apply principles and techniques in a directed teaching setting.
- 3-515, 3-516. INSTRUMENTAL LABORATORY I AND II.** (5 cr each)  
Fundamentals of conducting with emphasis on orchestration, rehearsal techniques for bands and orchestras, study of literature and materials suitable for school use; practical study of all instruments, transposition, arranging, transcribing.
- 3-571. LITERATURE FOR TEACHING WIND MUSIC.** (4 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.

## *Description of Courses*

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- 3-650. 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. BIBLIOGRAPHY.** (4 cr)  
Sources, materials, and techniques.
- 5-112. RESEARCH TECHNIQUES.** (4 cr)  
Methods and techniques employed in investigating and reporting of music education problems; review of significant research.
- 5-115. TESTS AND MEASUREMENTS.** (4 cr; prereq #)  
Principles of music aptitude and achievement testing; current status of music testing; survey of existing published tests in music.
- 5-211. PHILOSOPHIES OF MUSIC EDUCATION.** (4 cr)  
Analysis and interpretation of philosophies in music and education; objectives, trends, curriculum, evaluation.
- 5-212. COMPARATIVE MUSIC EDUCATION.** (4 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. PSYCHOLOGICAL FOUNDATIONS.** (5 cr; prereq #)  
Analysis and interpretation of psychologies of music and education as applied to the teaching of music.
- 5-217. HISTORICAL FOUNDATIONS OF MUSIC EDUCATION.** (4 cr; prereq #)  
Analysis and interpretation of important elements in modern music teaching derived from the past.
- 5-221. MUSIC AND THE HUMANITIES IN THE SECONDARY SCHOOLS.** (4 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. SUPERVISION AND ADMINISTRATION OF ELEMENTARY MUSIC.** (4 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. SUPERVISION AND ADMINISTRATION OF SECONDARY SCHOOL MUSIC.** (4 cr; prereq major or minor in music or music education)  
Evaluation of materials, scheduling and teaching of required and elective courses; individual and group lessons, ensembles; extracurricular activities.
- 5-305. GENERAL MUSIC IN ELEMENTARY AND JUNIOR HIGH SCHOOLS.** (4 cr; prereq 3-011 or #)  
Open to music education and non-music majors. Methods, materials, and problems in teaching general music classes; emphasis on music literature.
- 5-306. TEACHING MUSIC LITERATURE.** (4 cr; prereq 3-011 or 3-302 or #)  
Principles, methods and materials for teaching music history (appreciation) in grades K-12.
- 5-308. TEACHING MUSIC READING.** (4 cr; prereq 3-011, 3-302 or #)  
Objectives, materials, research, teaching procedures and evaluation; class and individual projects; emphasis on general music class approach.
- 5-311. MUSIC FOR EXCEPTIONAL CHILDREN.** (4 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.
- 5-322. INSTRUMENTAL MUSIC IN THE GENERAL MUSIC CLASSROOM.** (4 cr; prereq Mus 1-001 or equiv; music or music education major)  
Beginning and intermediate class and small group recorder instruction; methods and materials for teaching recorder, capped and uncapped Renaissance reed instruments and Studio 49 (Orff-Schulwerk) melodic and percussion instruments; factors in combining these instruments with voices and keyboard instruments.
- 5-421. SELECTION, CONDUCTING OF CHORAL MATERIALS.** (4 cr; prereq sr)  
Student conducting with class as performing ensemble; criteria for selecting choral and combined choral and instrumental materials; rehearsal techniques.
- 5-431. ADVANCED TOPICS: VOCAL MUSIC.** (4 cr; prereq #)  
Empirical research and literature on voice development in individual, class, and choral work; individual surveys of performance practices and organizations of school vocal groups; selection of vocal music.

## *Physical Education and Recreation*

- 5-441. **READING AND STYLISTIC INTERPRETATION OF CHORAL MUSIC.** (4 cr; pre-req 5-431 or #)  
Defining means of teaching choristers to read and interpret music of representative periods and styles of compositions.
- 5-504. **ADVANCED STRING INSTRUMENT TECHNIQUES.** (4 cr; prereq BS in music education or #)  
Research reports, lecture-demonstrations; performance by class members and by school-age laboratory groups.
- 5-505. **STRING TEACHING SEMINAR.** (4 cr; prereq 3-650 or #)  
Survey and evaluation, through group and individual projects, of recently developed string teaching techniques.
- 5-514. **ADVANCED WIND AND PERCUSSION TECHNIQUES.** (4 cr; prereq BS in music education or #)  
Research reports, practical performances and lectures.
- 5-534. **ADVANCED PERCUSSION TECHNIQUES.** (4 cr)  
Contemporary approaches to teaching percussion in the elementary, junior high, and high school; emphasis on performing techniques; playing of teaching materials, solo and ensemble repertoire.
- 5-581. **SELECTION OF INSTRUMENTAL MATERIAL I.** (4 cr)  
Analytical survey of solo and smaller wind chamber music and its use in the teaching of instrumental music on the precollegiate level.
- 5-582. **SELECTION OF INSTRUMENTAL MATERIAL II.** (4 cr)  
Analytical survey of larger wind chamber and band music and its use in the teaching of instrumental music on the precollegiate level.
- 5-591. **NEW DIMENSIONS IN INSTRUMENTAL MUSIC EDUCATION.** (4 cr)  
Study of instrumental music through analysis, performance, listening, and composition; evaluative procedures; curriculum structure and design; scheduling.
- 5-801. **INFLUENCE OF MUSIC ON BEHAVIOR.** (4 cr)  
Methods and principles of the behavioral and biological sciences as they relate to the art of music.
- 5-804. **MUSIC IN THERAPY.** (4 cr; prereq 5-801)  
Application of methods and principles of music therapy through observation, research, and case studies.
- 5-970. **INDEPENDENT STUDY.** (1-4 cr; prereq # of adviser and of department)  
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. SEMINAR: CURRICULUM DEVELOPMENT

8-990\*. 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

## *Description of Courses*

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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 for which enrollment is limited 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. S-N option is available for all nonprofessional courses (those numbered through 1-499).

### *Nonprofessional Courses*

("A.R." stands for "Activity Rating")

- 1-001. **ACTIVITIES FOR THE HANDICAPPED.** (1 cr; men, women; prereq women #; A.R. 4)
- 1-004. **DIVING, SPRINGBOARD.** (1 cr; men, women; prereq men 1-007, women 1-308; A.R. 1)
- 1-007. **SWIMMING.** (1 cr; men, women; A.R. 1)
- 1-014. **CONDITIONING.** (1 cr; men, women; A.R. 1,2)
- 1-015. **WEIGHT TRAINING.** (1 cr; men only; A.R. 1,2)
- 1-016. **POSTURE AND INDIVIDUAL EXERCISE.** (1 cr; women only; A.R.1,2,3)
- 1-017. **RHYTHMIC GYMNASTICS.** (1 cr; coed; A.R. 1,2)  
Rhythmic exercises following the natural movements of the body.
- 1-020. **FUNDAMENTALS, MOVEMENT.** (1 cr; coed; A.R. 1,2)
- 1-022. **BALLROOM DANCE.** (1 cr; coed; A.R. 1,2,3)
- 1-023. **FOLK AND SQUARE DANCE.** (1 cr; coed; A.R. 1,2)
- 1-024. **MODERN DANCE.** (1 cr; coed; A.R. 1,2)
- 1-032. **BADMINTON.** (1 cr; men, women, coed; A.R. 1,2)
- 1-033. **FENCING.** (1 cr; coed; A.R. 1,2)
- 1-034. **JUDO.** (1 cr; men, women; A.R. 1,2)
- 1-035. **KARATE.** (1 cr; men, women; A.R. 1,2)
- 1-036. **PADDLEBALL-HANDBALL.** (1 cr; men only; A.R. 1,2)
- 1-037. **SQUASH RACQUETS.** (1 cr; men, women; A.R. 1,2)
- 1-038. **TENNIS.** (1 cr; men, women, coed; A.R. 1,2)
- 1-039. **WRESTLING.** (1 cr; men only; A.R. 1,2)
- 1-045. **ANGLING.** (1 cr; coed; A.R. 1,2,3)
- 1-046. **APPARATUS.** (1 cr; men, women; A.R. 1,2)
- 1-047. **ARCHERY.** (1 cr; men, women; A.R. 1,2,3)
- 1-048. **BOWLING.** (1 cr; men, women, coed; A.R. 1,2,3)
- 1-049. **CAMPING.** (1 cr; coed; A.R. 1,2,3)
- 1-050. **GOLF.** (1 cr; men, women; A.R. 1,2,3)
- 1-051. **HUNTING.** (1 cr; coed; A.R. 1,2,3)
- 1-052. **RIFLEMARKSMANSHIP.** (1 cr; women only; A.R. 1,2,3)
- 1-053. **ICE SKATING.** (1 cr; coed; A.R. 1,2)
- 1-055. **FOUNDATIONS OF PHYSICAL ACTIVITY.** (2 cr; coed; A.R. 1,2)
- 1-057. **SKIING.** (1 cr; coed; A.R. 1,2)
- 1-058. **PHYSICAL EDUCATION FOR FAMILY LIVING.** (1 cr; coed; A.R. 1,2,3)
- 1-059. **TRACK AND FIELD.** (1 cr; men, women; A.R. 1,2)
- 1-060. **TUMBLING, FLOOR EXERCISE AND TRAMPOLINE.** (1 cr; men, women; A.R. 1,2)

## *Physical Education and Recreation*

- 1-067. BASKETBALL. (1 cr; men, women; A.R. 1,2)
- 1-068. CURLING. (1 cr; coed; A.R. 1,2,3)
- 1-069. FIELD HOCKEY. (1 cr; men, women; A.R. 1,2)
- 1-070. HOCKEY, ICE. (1 cr; men only; prereq 1-053 or equiv; A.R. 1,2)
- 1-071. LACROSSE. (1 cr; women only; A.R. 1,2)
- 1-072. SOCCER. (1 cr; men only; A.R. 1,2)
- 1-073. SOFTBALL. (1 cr; men, women; A.R. 1,2)
- 1-074. VOLLEYBALL. (1 cr; men, women; A.R. 1,2)
- 1-080. OFFICIATING, FOOTBALL-BASKETBALL. (1 cr; men only; A.R. 1,2)
- 1-081. OFFICIATING BASKETBALL-VOLLEYBALL. (1 cr; women only; prereq 1-067, 1-074; A.R. 1,2)
- 1-082. OFFICIATING: HOCKEY-BASKETBALL-VOLLEYBALL. (1 cr; men only; A.R. 1,2)
- 1-083. OFFICIATING, SWIMMING-WRESTLING-SOFTBALL-TRACK. (1 cr; men only; A.R. 1,2)
- 1-101. ACTIVITIES FOR THE HANDICAPPED. (1 cr; men, women; prereq women ♀; A.R. 4)
- 1-104. DIVING, SPRINGBOARD. (1 cr; men only; prereq 1-007 or equiv; A.R. 1)
- 1-107. SWIMMING. (1 cr; men, women; prereq men ability to swim 100 yds; prereq women 1-007 or equiv; A.R. 1)
- 1-121. RHYTHMIC ANALYSIS. (1 cr; prereq 1-020 or ♀; coed; A.R. 1,2)
- 1-122. BALLROOM DANCE. (1 cr; prereq 1-022 or equiv; coed; A.R. 1,2,3)
- 1-123. FOLK AND SQUARE DANCE. (1 cr; coed; prereq 1-023 or equiv; A.R. 1,2)
- 1-124. MODERN DANCE. (1 cr; coed; prereq 1-024 or equiv; A.R. 1,2)
- 1-132. BADMINTON. (1 cr; men, women, coed; prereq 1-032 or equiv; A.R. 1,2)
- 1-133. FENCING. (1 cr; coed; prereq 1-033 or equiv; A.R. 1,2)
- 1-134. JUDO. (1 cr; men only; prereq 1-034 or equiv; A.R. 1,2)
- 1-135. KARATE. (1 cr; men only; prereq 1-035 or equiv; A.R. 1,2)
- 1-138. TENNIS. (1 cr; men, women, coed; prereq 1-038 or equiv; A.R. 1,2)
- 1-139. WRESTLING. (1 cr; men only; prereq 1-039 or equiv; A.R. 1,2)
- 1-145. ANGLING. (1 cr; coed; prereq 1-045 or equiv; A.R. 1,2,3)
- 1-146. APPARATUS-GYMNASTICS. (1 cr; men, women; prereq 1-046 or equiv; A.R. 1,2)
- 1-147. ARCHERY. (1 cr; women only; prereq 1-047 or equiv; A.R. 1,2,3)
- 1-148. BOWLING. (1 cr; men, women, coed; prereq men 1-048 and 125 average; prereq women, 120 average; A.R. 1,2,3)
- 1-150. GOLF. (1 cr; men, women; prereq women 1-050 or equiv; A.R. 1,2,3)
- 1-154. FIGURE SKATING. (1 cr; coed; prereq 1-053 or equiv; A.R. 1,2)
- 1-157. SKIING. (1 cr; coed; prereq 1-057 or equiv; A.R. 1,2)
- 1-159. TRACK AND FIELD. (1 cr; men, women; prereq 1-059 or equiv; A.R. 1,2)
- 1-160. TUMBLING, FLOOR EXERCISES AND TRAMPOLINE. (1 cr; men, women; prereq women 1-060 or equiv; A.R. 1,2)
- 1-167. BASKETBALL. (1 cr; men, women; prereq 1-067 or equiv; A.R. 1,2)
- 1-172. SOCCER. (1 cr; men only; prereq 1-072 or equiv; A.R. 1,2)
- 1-173. SOFTBALL. (1 cr; men only; prereq 1-073 or equiv; A.R. 1,2)
- 1-174. VOLLEYBALL. (1 cr; men, women; prereq 1-074 or equiv; A.R. 1,2)
- 1-201. ACTIVITIES FOR THE HANDICAPPED. (1 cr; men, women; prereq women ♀; A.R. 4)
- 1-204. DIVING, SPRINGBOARD. (1 cr; men only; prereq 1-007 or equiv; A.R. 1)
- 1-205. SCUBA AND SKIN DIVING. (1 cr; men, women; prereq men 1-107 or equiv; women 1-207 or equiv; A.R. 1)

## *Description of Courses*

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- 1-207. SWIMMING. (1 cr; women only; prereq 1-107 or equiv; A.R. 1)
- 1-224. MODERN DANCE. (1 cr; coed; prereq 1-124 or equiv; A.R. 1,2)
- 1-238. TENNIS. (1 cr; men, women, coed; prereq 1-138; A.R. 1,2)
- 1-246. APPARATUS-GYMNASTICS. (1 cr; women only; prereq 1-146 or equiv; A.R. 1,2)
- 1-248. BOWLING. (1 cr; men, women, coed; prereq 160 average; A.R. 1,2,3)
- 1-250. GOLF. (1 cr; men, women; prereq 1-150 for women; A.R. 1,2,3)
- 1-254. FIGURE SKATING. (1 cr; coed; prereq 1-154 or equiv; A.R. 1,2)
- 1-256. SKATING, ICE DANCING. (1 cr; coed; prereq 1-154 or equiv; A.R. 1,2)
- 1-260. TUMBLING, FLOOR EXERCISE AND TRAMPOLINE. (1 cr; women only; prereq 1-060 or equiv; A.R. 1,2)
- 1-306. SENIOR LIFESAVING. (1 cr; men, women; prereq ability to swim 440 yards; A.R. 1)
- 1-307. SWIMMING. (1 cr; women only; prereq 1-207 or equiv; A.R. 1)
- 1-308. SWIMMING AND DIVING. (1 cr; women only; prereq 1-207 or equiv; A.R. 1)
- 1-309. SYNCHRONIZED SWIMMING. (1 cr; women only; prereq 1-207 or equiv; A.R. 1)
- 1-324. MODERN DANCE. (1 cr; coed; prereq 1-224 or equiv; A.R. 1,2)
- 1-325. MODERN DANCE, COMPOSITION. (2 cr; coed; prereq 1-224 or equiv; A.R. 1,2)
- 1-386. FRESHMAN BASEBALL. (1 cr; men only; prereq #; A.R. 1,2)
- 1-387. FRESHMAN BASKETBALL. (1 cr; men only; prereq #; A.R. 1,2)
- 1-388. FRESHMAN CROSS COUNTRY. (1 cr; men only; prereq #; A.R. 1,2)
- 1-389. FRESHMAN FOOTBALL. (1 cr; men only; prereq #; A.R. 1,2)
- 1-390. FRESHMAN GOLF. (1 cr; men only; prereq #; A.R. 1,2)
- 1-391. FRESHMAN GYMNASTICS. (1 cr; men only; prereq #; A.R. 1,2)
- 1-392. FRESHMAN HOCKEY. (1 cr; men only; prereq #; A.R. 1,2)
- 1-393. FRESHMAN SWIMMING. (1 cr; men only; prereq #; A.R. 1)
- 1-394. FRESHMAN TENNIS. (1 cr; men only; prereq #; A.R. 1,2)
- 1-395. FRESHMAN TRACK AND FIELD. (1 cr; men only; prereq #; A.R. 1,2)
- 1-396. FRESHMAN WRESTLING. (1 cr; men only; prereq #; A.R. 1,2)
- 1-410. WATER SAFETY INSTRUCTOR. (2 cr; men, women; prereq current American Red Cross Senior Lifesaving Certificate; A.R. 1)
- 1-425. MODERN DANCE, COMPOSITION. (2 cr; coed; prereq 1-325 or equiv; A.R. 1,2)
- 1-426. MODERN DANCE, PRODUCTION. (3 cr; coed; prereq 1-224 or #; A.R. 1,2)
- 1-486. VARSITY BASEBALL. (1 cr; men only; prereq #; A.R. 1,2)
- 1-487. VARSITY BASKETBALL. (1 cr; men only; prereq #; A.R. 1,2)
- 1-488. VARSITY CROSS COUNTRY. (1 cr; men only; prereq #; A.R. 1,2)
- 1-489. VARSITY FOOTBALL. (1 cr; men only; prereq #; A.R. 1,2)
- 1-490. VARSITY GOLF. (1 cr; men only; prereq #; A.R. 1,2)
- 1-491. VARSITY GYMNASTICS. (1 cr; men only; prereq #; A.R. 1,2)
- 1-492. VARSITY HOCKEY. (1 cr; men only; prereq #; A.R. 1,2)
- 1-493. VARSITY SWIMMING. (1 cr; men only; prereq #; A.R. 1)
- 1-494. VARSITY TENNIS. (1 cr; men only; prereq #; A.R. 1,2)
- 1-495. VARSITY TRACK AND FIELD. (1 cr; men only; prereq #; A.R. 1,2)
- 1-496. VARSITY WRESTLING. (1 cr; men only; prereq #; A.R. 1,2)
- 1-497. INDEPENDENT STUDY. (1-6 cr; prereq 3 cr in physical education,  $\Delta$ )  
For the non-professional student who wishes to study a topic or problem under tutorial guidance.

*Professional Courses*

- 1-500. **BEGINNING AQUATICS.** (1 cr; women only)
- 1-510. **FUNDAMENTAL MOVEMENT.** (1 cr; coed)  
Basic steps and folk dances.
- 1-511. **RHYTHMIC ANALYSIS.** (1 cr; coed; prereq 1-510)
- 1-512. **FOLK DANCE.** (1 cr; coed)  
Instruction in circle, line, square, mixer, and couple dances; square dance calling.
- 1-513. **MODERN DANCE.** (1 cr; coed)
- 1-515. **MODERN DANCE TECHNIQUE AND IMPROVISATION I.** (2 cr; coed; prereq physical education major or dance minor)  
Basic technique of modern dance and its relationship to form, design and exploration of movement; for dance minors.
- 1-518. **BALLET I.** (2 cr)  
Instruction in the fundamental technique of classical ballet.
- 1-520. **POSTURE AND FUNCTIONAL EXERCISE.** (1 cr; women only)
- 1-521. **GYMNASTICS.** (1 cr; coed)
- 1-522. **GYMNASTICS.** (1 cr; coed; prereq 1-521)
- 1-523. **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.
- 1-524. **GYMNASTICS COMPOSITION.** (1 cr; coed; prereq 1-521, 1-522)  
Competition of routines on the balance beam and uneven parallel bar at intermediate and advanced levels of skill and in floor exercise at all skill levels; judging points related to composition.
- 1-530. **GOLF.** (1 cr; women only)
- 1-540. **BADMINTON.** (1 cr; women only)
- 1-541. **TENNIS.** (1 cr; women only)
- 1-550. **FIELD HOCKEY-VOLLEYBALL.** (1 cr; women only)
- 1-551. **BASKETBALL.** (1 cr; women only)
- 1-552. **SPEEDAWAY-SOFTBALL.** (1 cr; women only)
- 1-553. **BASEBALL.** (1 cr; men only)
- 1-554. **FOOTBALL.** (1 cr; men only)  
Demonstrations and practice in fundamentals for all positions on a team.
- 1-555. **SOCCER.** (1 cr; men only)
- 1-561. **PHYSICAL EDUCATION ACTIVITIES FOR THE ELEMENTARY SCHOOL.** (3 cr; coed; prereq physical education major, soph)  
Analysis of basic skills, observations and laboratory experience in teaching activities.
- 1-562. **GAMES AND ELEMENTARY SCHOOL ACTIVITIES.** (1 cr; men only)  
Types of games, guided movement experiences, movement education content; public school observation included.
- 1-563. **GAMES, SPORTS, TRACK AND FIELD FOR THE ELEMENTARY SCHOOL CHILD.** (2 cr; coed; prereq physical education major, 1-870, 1-875)  
Elementary school games and sports programs emphasizing use for leisure time.
- 1-564. **EDUCATIONAL GYMNASTICS FOR CHILDREN.** (2 cr; coed; prereq physical education major, 1-870, 1-875)  
Elementary school gymnastics programs emphasizing skill analysis and progression.
- 1-565. **DANCE FOR THE ELEMENTARY SCHOOL CHILD.** (2 cr; coed; prereq physical education major, 1-870, 1-875)  
Overview of the broad program of dance for children; guided laboratory experience emphasizing a creative and correlated teaching approach.
- 1-580. **ORIENTATION AND APPRAISAL.** (1 cr; coed)  
Rationale underlying the course of study, advising procedures, Minnesota Credential requirements; vocational considerations; philosophical and professional aspects; sports competency and physical fitness testing.

## Description of Courses

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- 1-600. **AQUATICS.** (1 cr; men only; prereq swim 50 yds in 45 sec)  
Advanced swimming, diving, lifesaving.
- 1-601. **ADVANCED AQUATICS.** (1 cr; women only)
- 1-615. **MODERN DANCE TECHNIQUE AND IMPROVISATION II.** (2 cr; coed; prereq 1-515 or #)  
Basic technique of modern dance and its relationship to form, design and exploration of movement; for dance minors.
- 1-620. **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. **GOLF.** (1 cr; men only; prereq 1-050 or equiv)
- 1-640. **WRESTLING.** (1 cr; men only; prereq 1-039 or equiv)
- 1-641. **RACQUET SPORTS.** (1 cr; men only; prereq 1-032 or 1-038 or equiv)
- 1-650. **OFFICIATING FIELD HOCKEY-VOLLEYBALL.** (1 cr; women only; prereq 1-550)
- 1-651. **OFFICIATING BASKETBALL.** (1 cr; women only; prereq 1-551)
- 1-652. **BASKETBALL.** (1 cr; men only; prereq 1-067 or equiv)  
Demonstrations and practice, individual and team offensive and defensive tactics.
- 1-653. **VOLLEYBALL.** (1 cr; men only)
- 1-654. **TRACK AND FIELD.** (1 cr; men only; prereq 1-059 or equiv)  
Demonstrations and practice in all events.
- 1-655. **ICE HOCKEY.** (1 cr; men only; prereq 1-053 or equiv)
- 1-656. **OFFICIATING SOFTBALL.** (1 cr; coed; prereq 1-073 or 1-552 or #)  
Teaching officiating techniques; opportunity to practice skills for the national official's examination.
- 1-700. **SENIOR LIFE SAVING.** (1 cr; women only; prereq 1-601)
- 1-715. **MODERN DANCE TECHNIQUE AND IMPROVISATION III.** (2 cr; coed; prereq 1-615 or #)  
Basic technique of modern dance and its relationship to form, design and exploration of movement; for dance minors.
- 1-800. **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.
- 1-801. **AQUATIC ADMINISTRATION.** (2 cr; coed; prereq current water safety instructor's certificate and #)  
Provides students with skills needed to administer an aquatic program in a school or community setting.
- 1-870. **ORIENTATION TO MOVEMENT.** (3 cr; coed; prereq physical education major)  
Introduction to mechanics of movement: basic locomotor and axial movements, movement patterns; exercise, conditioning, and relaxation techniques.
- 1-875. **ORIENTATION TO TEACHING PHYSICAL EDUCATION.** (1 cr; coed; prereq physical education major)  
Develops beginning teaching skills and processes through selected classroom activities and directed observations.
- 1-980. **PHYSICAL EDUCATION ACTIVITIES.** (1-6 cr; coed; prereq physical education major; S-N only)  
Demonstration of competencies at the beginning level in a variety of activities.
- 1-981. **PHYSICAL EDUCATION ACTIVITIES: ADVANCED.** (1-3 cr; coed; prereq physical education major; S-N only)  
Demonstration of competencies at the advanced level in a variety of activities.
- 1-990. **INDEPENDENT STUDY.** (1-6 cr; prereq  $\Delta$ )  
For students majoring or minoring in physical education who wish to study a topic or problem under tutorial guidance.
- 3-100. **ADAPTED PHYSICAL EDUCATION.** (3 cr; coed; prereq 3-111, Anat 1-027)  
Philosophy, principles, and techniques of adapting the program to meet the needs of handicapped pupils.

## *Physical Education and Recreation*

- 3-110. **HUMAN ANATOMY.** (3 cr; coed)  
Emphasizes bones, nerves, and muscles and their significance in physical education.
- 3-111. **MECHANICS OF MOVEMENT.** (3 cr; coed; prereq Anat 1-027)  
Structure of the body, principles and mechanics of bodily movements.
- 3-113. **MOTOR LEARNING AND MOTOR DEVELOPMENT.** (4 cr; coed)  
Examination of the motor growth and development of children, adolescents, and adults with emphasis on socio-psychological factors.
- 3-114. **PREVENTION AND CARE OF INJURIES.** (3 cr; coed; prereq 3-110 or Anat 1-027)  
Policies for conditioning athletes in interscholastic and intercollegiate sports; safety controls.
- 3-115. **PHYSIOLOGICAL APPLICATION TO SPORTS.** (3 cr; coed; §PubH 3-385, 3-386)  
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 athletes. Required for the physical education minor and the Minnesota Coaching Certificate.
- 3-120. **CURRICULUM AND ADMINISTRATION.** (5 cr; coed; prereq physical education major or minor, sr)  
Objectives, content, organization, evaluation, and trends in curriculum and administration for the elementary and secondary school.
- 3-130. **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. **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. **ADMINISTRATION.** (3 cr; men only)  
Problems of organization and supervision in the instructional program, intramural sports and interscholastic athletics.
- 3-150. **INTRODUCTION TO EVALUATION.** (4 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. **PROGRAMMING INTRAMURAL-EXTRAMURAL SPORTS.** (3 cr; coed)  
Study of the basic ingredients required for administering intramural-extramural sports programs.
- 3-161. **COACHING WOMEN IN COMPETITIVE SPORTS.** (3 cr; prereq upper div)  
Psychological, sociological and physiological aspects of coaching women in competitive sports.
- 3-170. **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.
- 3-171. **BASKETBALL COACHING.** (2 cr; men only; prereq 1-652)  
Techniques, styles of offense and defense, conditioning and handling of players.
- 3-172. **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. **GOLF COACHING.** (2 cr; coed; prereq 1-630 or 1-530 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. **GYMNASTICS COACHING.** (2 cr; coed; prereq 1-620 or 1-522 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 gymnastics gymnasiums.
- 3-175. **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.

## *Description of Courses*

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- 3-176. SWIMMING AND DIVING COACHING.** (2 cr; coed; prereq 1-600 or 1-800 or #)  
Instruction in and practice of the basic techniques used in competitive swimming and diving; rules and regulations governing staging of competition.
- 3-177. TENNIS COACHING.** (2 cr; coed; prereq 1-641 or 1-541 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. TRACK AND FIELD COACHING.** (2 cr; coed; prereq 1-654 or 1-059 or #)  
Technique of performance in all standard events; methods of coaching; organization of track meets; study of rules; officiating methods and practice.
- 3-179. WRESTLING COACHING.** (2 cr; men only; prereq 1-640 or #)  
Analysis of the moves, combinations, and sequences; training, safety, and health features; administrative responsibilities of the coach; review of the literature.
- 3-180. HISTORY AND TRENDS IN DANCE.** (3 cr; coed; prereq #)  
History and philosophy of dance; relation to allied arts.
- 3-270. 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. ATHLETIC TRAINING LABORATORY.** (1 cr; men only; prereq 3-114)  
Thirty hours of practical experience in the training room under supervision.
- 3-320. TEACHING INDIVIDUAL AND TEAM SPORTS.** (3 cr; women only; prereq 1-540, 1-550, 1-551, 1-530, 1-541, 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. TEACHING OF FOLK DANCE AND SOCIAL FORMS.** (4 cr; coed; prereq 1-022, 1-023)  
Methods and materials for teaching folk dance and basic ballroom dance skills through observation, teaching experience, and lectures.
- 3-322. TEACHING OF POSTURE, EXERCISE AND GYMNASTICS.** (3 cr; women only; prereq 1-520, 1-521, 1-522)  
Experiences include observations, unit 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.
- 3-323. TEACHING PHYSICAL EDUCATION.** (4 cr; coed; prereq physical education major, jr, #3-607)  
Planning, application of general teaching methods; use of multisensory teaching aids to physical education.
- 3-324. TEACHING PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL.** (4 cr; coed; prereq physical education major, jr, 4 cr in elementary activity courses)  
Methods of teaching elementary physical education; emphasizing the problem-solving approach; microteaching, video-taping, observations.
- 3-326. TEACHING OF MODERN DANCE.** (4 cr; coed; prereq 1-024, 1-124, 1-224 or 1-515, 1-615 or #)  
Study and experimentation of methods, principles and techniques; emphasis on observation, microteaching, assisting with class instruction under supervision, and workshop experiences.
- 3-327. TEACHING PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL.** (3 cr, §PE 1-560, 3-325, or Hlth 3-325; prereq elementary education major)  
An overview of the elementary physical education program; primarily a laboratory course, with participation in representative physical education activities for children; opportunities for observation of children, microteaching, skill analysis, and group discussion.
- 3-360. 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. COACHING BASKETBALL AND VOLLEYBALL.** (2 cr; coed; prereq 1-550 and 1-551 or 1-652 or #)  
Emphasis on strategy in coaching; theoretical and practical experience.

## *Physical Education and Recreation*

- 3-390. DANCE COMPOSITION.** (2 cr; coed; prereq adv modern dance or equiv)  
Principles of composition with practical application.
- 3-391. DANCE COMPOSITION.** (2 cr; coed; prereq 3-390 or equiv)  
Advanced theory and practice including various approaches to dance composition.
- 3-392. DANCE PRODUCTION.** (3 cr; coed; prereq #)  
Culmination of dance composition with a dance production including experience in stagecraft and costuming.
- 3-394. CREATIVE DANCE FOR CHILDREN.** (4 cr; coed; prereq 1-024, 1-510, 1-511, 1-512 or #)  
Emphasis on creatively teaching basic skills and techniques of dance to children; observations and teaching experiences.
- 3-395. ADVANCED IMPROVISATION.** (1 cr; coed; prereq 1-515, 1-615, 1-715 or #)  
Emphasis on exploration and spontaneous invention through greater awareness of space, movement, and the community environment.
- 3-420. 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. 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. PRE-FALL STUDENT TEACHING.** (3 cr; coed; prereq #)  
Program and problems of organization and management; begins with fall semester opening of public schools.
- 3-601. STUDENT TEACHING: ELEMENTARY SCHOOL.** (6 cr; S-U option; women only; prereq SeEd 3-150 and 3-155, physical education major)
- 3-602. STUDENT TEACHING: JUNIOR HIGH SCHOOL.** (3 cr; S-U option; women only; prereq ¶3-603, SeEd 3-150 and 3-155, major in physical education)
- 3-603. STUDENT TEACHING: SENIOR HIGH SCHOOL.** (3 cr; S-U option; women only; prereq ¶3-602, SeEd 3-150 and 3-155, major in physical education)
- 3-604. ADVANCED STUDENT TEACHING.** (3 cr; coed; prereq #)  
Optional for those who have done superior work in 3-601, 3-602, 3-603.
- 3-605. STUDENT TEACHING: PHYSICAL EDUCATION FOR MINORS.** (3 cr; S-U option; women only; prereq SeEd 3-150 and 3-155, physical education major)
- 3-606. STUDENT TEACHING: PHYSICAL EDUCATION FOR MINORS.** (3 cr; prereq SeEd 3-150 and 3-155 and #)  
Observation, participation, and directed teaching under supervising teacher.
- 3-607. STUDENT TEACHING: COLLEGE.** (1 cr; coed; prereq ¶3-323, physical education major)  
Observation and practical experience in teaching at the college level under guidance.
- 3-621. STUDENT TEACHING: ELEMENTARY.** (4-6 cr; coed; prereq SeEd 3-150, 3-155 or Elem 3-100, physical education major)  
Student teaching in physical education in grades 1-6 in public schools.
- 3-622. STUDENT TEACHING: SECONDARY.** (4-6 cr; coed; prereq SeEd 3-150, 3-155 or Elem 3-100, physical education major)  
Student teaching in physical education in grades 7-12 in public schools.
- 3-624. STUDENT TEACHING: COACHING.** (3 cr; coed; prereq SeEd 3-150, 3-155)  
May be elected by physical education majors and minors; required of candidates for coaching credential only for men and women without public school coaching experience.
- 3-625. SUPERVISED PRACTICAL EXPERIENCE.** (3 cr; coed; prereq Δ)  
On-the-job experience under a specialist in the particular area of study.
- 3-900. INDEPENDENT STUDY.** (1-9 cr; men only; prereq Δ)  
Self-directed study preceded by classroom study and possession of basic competence.
- 5-100. TEACHING PHYSICAL EDUCATION FOR THE HANDICAPPED.** (3 cr; prereq #)  
Introduction to the role of physical education in the education of the handicapped individual, emphasizing understandings, principles of organization, administration, curriculum, supervision, and evaluation.

## *Description of Courses*

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- 5-101. PHYSICAL EDUCATION ACTIVITIES FOR THE HANDICAPPED.** (3 cr; prereq 5-100 or SpEd 5-101)  
Adaptation of methods, materials and physical activities to meet the needs of the physically, mentally, or emotionally atypical student applied to specific handicaps in selected activity areas.
- 5-102. PRACTICUM: PHYSICAL EDUCATION FOR THE HANDICAPPED.** (3 cr; prereq 5-101 or #)  
Opportunity for teaching in public school or community organization providing instruction for atypical individuals; includes seminar for review of current theory and exchange of ideas and problems.
- 5-110. 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. 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. PHYSICAL EDUCATION EQUIPMENT.** (3 cr)  
Selection, purchase and maintenance of athletic equipment and supplies with opportunity to investigate selected equipment in depth.
- 5-120. 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. CONTRIBUTIONS OF BASIC SCIENCE TO PHYSICAL EDUCATION.** (3 cr; prereq #)  
Recent research in related physical sciences; applications in selected areas.
- 5-122. 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. 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.
- 5-130. MOTOR LEARNING AND HUMAN PERFORMANCE.** (3 cr; prereq 3-113 or #)  
Mechanisms of human motor skill learning; emphasis on theories of motor learning and control of movement, motor memory, and individual differences.
- 5-150. TEACHING ELEMENTARY SCHOOL PHYSICAL EDUCATION.** (3 cr; prereq tchg cert or #)  
Principles, techniques and procedures in developing basic motor skills, physical fitness and sports skills.
- 5-151. CURRICULUM.** (3 cr; prereq sr)  
For students without previous experience in curriculum; objectives, content, organization, evaluation, and trends.
- 5-152. 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. 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. FOUNDATIONS OF PHYSICAL EDUCATION.** (3 cr; prereq grad or MEd)  
Establishment of guidelines for individual and group professional action; examination of pertinent social forces, educational philosophies, and general ethics.
- 5-255. INTRAMURALS-EXTRAMURALS.** (4 cr)  
Analysis and interpretation of philosophies of men's and women's programs; principles, objectives, and techniques of program development.
- 5-350. SEMINAR: TEACHING PHYSICAL EDUCATION IN COLLEGES AND UNIVERSITIES.** (1 cr per qtr, max 3; prereq #)  
Required of physical education teaching associates, assistants, part-time instructors and open to graduate students having college teaching as their goal; emphasis on improvement of instruction.

## Physical Education and Recreation

- 5-620. 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 use of instruments for athletic rehabilitation.
- 5-695. PRACTICUM: INTRAMURALS-EXTRAMURALS.** (3-5 cr; prereq 5-255)  
Theory and application of principles in developing programs including supervised experiences in program operation.
- 5-700. WORKSHOP: DANCE IN EDUCATION.** (2 or 4 cr per qtr, max 12 cr)  
History, principles, instructional techniques, and materials for teaching dance in schools and recreational agencies. Topic and credit will vary with each offering.
- 5-980. INTRODUCTION TO RESEARCH.** (3 cr; prereq #)  
Methods and design for research in health, physical education, and recreation.
- 5-981. PROBLEMS.** (Cr ar; prereq MEd candidate, #)  
Focus on teaching of physical education.
- 5-982. 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. 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. ADMINISTRATION: GENERAL PRINCIPLES AND PROCEDURES
- 8-111. INTERSCHOLASTIC ATHLETICS ADMINISTRATION
- 8-112. INTERCOLLEGIATE ATHLETICS ADMINISTRATION
- 8-113. COLLEGE PHYSICAL EDUCATION ADMINISTRATION
- 8-120. KINESIOLOGY: PHOTOGRAPHIC AND CINEMATOGRAPHIC ANALYSES
- 8-121. KINESIOLOGY: ELECTROMYOGRAPHIC ANALYSIS
- 8-150. PROFESSIONAL PREPARATION OF PHYSICAL EDUCATION TEACHERS
- 8-310. SEMINAR: PHYSICAL EDUCATION
- 8-320. SEMINAR: KINESIOLOGY
- 8-330. SEMINAR: MOTOR LEARNING AND HUMAN PERFORMANCE
- 8-381. LABORATORY RESEARCH TECHNIQUES
- 8-980\*. RESEARCH PROBLEMS
- 8-981\*. RESEARCH PROBLEMS
- 8-985. SEMINAR: CONTEMPORARY PROBLEMS

### Recreation and Park Administration (Rec)

- 1-500. 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.
- 1-510. 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. ORIENTATION TO LEISURE AND RECREATION.** (5 cr; prereq recreation major or minor)  
Examination of the history and development of the park and recreation movement; sociological, economical, psychological, and political considerations of leisure and recreation in contemporary societies; professional and service organizations and their interrelationship; orientation to the professional field.
- 1-525. FIELD OBSERVATION.** (1-4 cr; prereq 1-520 and #)  
Independent observation and participation under supervision.

## *Description of Courses*

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- 1-530. CAMP AQUATICS.** (2 cr)  
Administration of waterfront program, basic skills in handling small craft.
- 1-540. CAMP COUNSELING.** (4 cr)  
Practical experience in all phases of camping; introduction to camping and outdoor education for prospective counselors.
- 1-600. LEADERSHIP IN SOCIAL ACTIVITIES.** (3 cr)  
Technique of leadership in social games, parties, dances, outings.
- 1-650. SOCIAL ASPECTS OF LEISURE.** (3 cr; prereq non-major only)  
Sociological consideration of leisure and recreation as parts of our total socio-economic structure.
- 1-700. 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. LEADERSHIP IN NATURE RECREATION.** (3 cr; prereq 10 cr in physical and biological sciences)  
Identity and scope of nature recreation field; classwork and field trips.
- 3-700. SENIOR INTERNSHIP.** (1-12 cr; prereq 1-525, sr, recreation major or minor, ¶3-701 and #)  
Supervised experiences in selected agencies.
- 3-701. SENIOR SEMINAR.** (3 cr; prereq 1-525, ¶3-700, sr recreation major or minor and #)  
Guided individual and group conferences.
- 5-130. RECREATION AND PARK AREAS AND FACILITIES.** (5 cr; prereq 1-520 or #)  
Introduction to the basic principles of planning community facilities; effective application of standards in facility planning, design, and construction.
- 5-140. RECREATION PROGRAMMING.** (5 cr; prereq 1-520 or #)  
Principles of program planning and leadership in all aspects of recreation.
- 5-150. PRINCIPLES AND PRACTICES OF RECREATION ADMINISTRATION.** (5 cr; prereq 5-130, 5-140, or #)  
Introduction to the basic principles of administration and their application to successful administrative practices in the various recreation settings.
- 5-160. CONSERVATION OF NATURAL RESOURCES.** (2 cr; prereq 3-150)  
Importance and relation to recreation and outdoor education.
- 5-170. CAMP ADMINISTRATION.** (3 cr; prereq 1-540 and #)  
Prepares qualified personnel for responsibilities.
- 5-180. INDUSTRIAL RECREATION.** (3 cr; prereq #)  
History, scope, place and relationship of management-employee recreation.
- 5-190. 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. SCHOOL RECREATION.** (3 cr)  
Principles of organizing and conducting school-sponsored recreation programs.
- 5-210. INTRODUCTION TO THERAPEUTIC RECREATION.** (3 cr; prereq #)  
General field as background for the recreation leader; hospital administrator and other personnel.
- 5-220. PROGRAMMING: THERAPEUTIC RECREATION.** (5 cr; prereq #)  
Planning programs for hospital patients.
- 5-230. 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. 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. FINANCING PUBLIC RECREATION.** (3 cr)  
Overview of the methods of financing public recreation, including the legal basis, current practices and procedures, and fiscal policies.

## *Physical Education and Recreation*

- 5-550. COLLEGE UNIONS.** (3 cr, §8-150; prereq 5-150, #)  
Administration, organization, and programming in college unions.
- 5-980. 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. PROBLEMS.** (Cr ar; prereq MEd candidate, #)  
Focus on conduct of recreation programs.
- 5-983. 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. FOUNDATIONS OF RECREATION**
- 8-310. SEMINAR: RECREATION AND PARK ADMINISTRATION**
- 8-370. SEMINAR: ADMINISTRATIVE PROBLEMS IN THERAPEUTIC RECREATION**
- 8-380. SEMINAR: ADMINISTRATIVE PROBLEMS IN RECREATION AND PARKS**
- 8-620. PRACTICUM: COLLEGE UNIONS**
- 8-630. PRACTICUM: THERAPEUTIC RECREATION**
- 8-640. PRACTICUM: PUBLIC RECREATION AND PARKS**
- 8-980°. RESEARCH PROBLEMS**
- 8-981°. RESEARCH PROBLEMS**

### **School Health Education (Hlth)**

- 1-500. AMERICAN RED CROSS FIRST AID: STANDARD, ADVANCED.** (2 cr)  
Lectures, demonstrations and practice in emergencies and first aid treatment. ARC Standard, Advanced Certificate in First Aid received upon successful completion of course.
- 3-100. 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. 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. 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.
- 3-330. TEACHING HEALTH IN THE ELEMENTARY SCHOOL.** (3 cr; prereq elementary education major; §3-325, PE 3-325)  
Content (including critical health issues) and methods of instruction in health education for the elementary school.
- 3-600. PRE-FALL STUDENT TEACHING.** (3 cr; prereq #)  
Program and problems of organization and management in health education; begins with fall semester opening of public schools.
- 3-601. 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. STUDENT TEACHING: JUNIOR HIGH SCHOOL.** (3-6 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. STUDENT TEACHING: SENIOR HIGH SCHOOL.** (3-6 cr; prereq 3-320, SeEd 3-150 and 3-155, major or minor in school health education)  
Observation, participation, and teaching under supervision.
- 5-100. DRIVER EDUCATION I.** (4 cr, §SeEd 5-100; prereq Δ)  
Materials and methods for driver education, building a plan for driver education for a specific school; behind-the-wheel training. Valid Minnesota driver's license required.

## **Description of Courses**

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- 5-101. DRIVER EDUCATION II.** (4 cr, §SeEd 5-101; prereq 5-100 and Δ)  
Second of 3 courses to meet Minnesota certification requirements after September 1, 1966.
- 5-110. 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. ROLE OF THE SCHOOL HEALTH EDUCATOR IN HEALTH APPRAISAL.** (3 cr)  
Role of school medical and dental advisers, nurse, teachers, and other school personnel in protection and maintenance phases.
- 5-130. 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. ADMINISTRATION OF THE SCHOOL HEALTH PROGRAM.** (3 cr)  
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.
- 5-150. CURRICULUM: FAMILY LIFE AND SEX EDUCATION IN THE SECONDARY SCHOOLS.** (3 cr)  
An in-depth study of concepts and appropriate materials for teaching in the junior and senior high schools.
- 5-300. CONTEMPORARY PROBLEMS IN SCHOOL HEALTH EDUCATION.** (3 cr)  
Instructional and individual problems.
- 5-350. 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.
- 5-400. TOPICS: EDUCATIONAL ASPECTS OF DRUG USE AND ABUSE.** (3 cr, §PubH 5-032; prereq education sr, cert tchr, school nurse)  
Basic background information on alcohol and other drugs and chemicals with emphasis on curriculum concepts, teaching methodology, materials and referral procedures appropriate for elementary, junior, and senior high school.
- 5-402. DEATH EDUCATION IN CONTEMPORARY SOCIETY.** (3 cr, §PubH 5-040; prereq education sr, cert tchr, school nurse, mortuary science major, #)  
Basic background information on concepts and attitudes toward death, grief, and bereavement with emphasis on instructional aspects for the elementary and secondary schools; role of the school in suicide prevention.
- 5-602. THE DRIVER SIMULATOR.** (4 cr, §SeEd 5-602; prereq tchr in service, 5-100 and #)  
Working with the simulator program to improve, expand, and reduce the cost of conventional driver education.
- 5-981. PROBLEMS.** (Cr ar; prereq #)  
Focus on teaching of school health education.
- 5-982. INTEGRATING PAPER.** (3 cr, §PE 5-982; prereq MED only)  
Independent paper integrating learnings from a course or courses in education with learnings in school health education.
- 5-983. READINGS: HEALTH EDUCATION.** (1-3 cr; prereq sr honor, grad, #)  
Independent study under tutorial guidance.

### **FOR GRADUATE STUDENTS ONLY**

(Description in the Graduate School Bulletin)

- 8-310. SEMINAR: SCHOOL HEALTH EDUCATION**
- 8-980\*. RESEARCH PROBLEMS**
- 8-981\*. RESEARCH PROBLEMS**

## **SECONDARY, BUSINESS, AND MATHEMATICS EDUCATION**

### **Secondary Education (SeEd)**

- 1-501. BEGINNING TYPEWRITING.** (2 cr)  
Emphasis on correct typewriting techniques; letter styles; manuscripts; simple tabulation; proofreading.

## *Secondary, Business, Mathematics Education*

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- 1-502. INTERMEDIATE TYPEWRITING.** (2 cr; prereq 1-501 or proficiency exam)  
Speed and accuracy building; carbons, tabulations, simple manuscripts, rough drafts, additional letter styles, interoffice memoranda, office forms, outlines and enumerations.
- 1-503. ADVANCED TYPEWRITING.** (2 cr; prereq 1-502 or proficiency exam)  
Proficiency in typing; complex manuscripts, footnotes, bibliographies, additional letter styles, complex tabulations.
- 1-505. 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. INTERMEDIATE SHORTHAND.** (3 cr; prereq 1-502, 1-505 or proficiency examination)  
Emphasis on building speed on new matter dictation and typewritten transcription.
- 1-507. ADVANCED SHORTHAND.** (3 cr; prereq 1-502, 1-506 or proficiency examination)  
Continued emphasis on speed building, using new matter dictation; emphasis on transcription of mailable letters.
- 1-508. OFFICE PROCEDURES AND MACHINES.** (2-5 cr; prereq 1-502 or equiv)  
Office organization, communications, systems and workflow, records management, office machines.
- 3-100. OFFICE OCCUPATIONAL EXPERIENCE.** (3-9 cr; prereq jr, business education major, #)  
Observation and practice in business offices; weekly seminars on application to teaching and guidance of high school and post-high school students.
- 3-150. INTRODUCTION TO SECONDARY SCHOOL TEACHING.** (5 cr; prereq 5 cr intro psychology)  
Secondary education; purposes, history, organization, curriculum, pupils; organization of instructional units; teaching profession; lecture, discussion section; individual youth leadership project.
- 3-151. DIRECTED STUDY.** (1-9 cr; prereq  $\Delta$ )  
Analysis of specific instruction, curricular, organizational, and operational situations or problems in secondary education.
- 3-155. INTRODUCTION TO SECONDARY SCHOOL TEACHING.** (5 cr; prereq 5 cr intro psychology)  
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.
- 3-160/3-161. COMMUNITY FIELD STUDY IN THE INNER CITY.** (2 cr ea, max 4 cr; S-N only)  
On-site seminar and field work in the inner city; discussion of experience, social welfare, school-community resources, role relationships, the "disadvantaged."
- 3-300. TEACHING TYPEWRITING AND OFFICE PROCEDURES.** (3 cr; prereq 3-155 or ¶, 1-502 or ¶ or equiv, 1-508 or ¶ or equiv)  
Methods of teaching typewriting and office machines; organization and operation of office procedures courses.
- 3-301. TEACHING SHORTHAND AND TRANSCRIPTION.** (2 cr; prereq 3-155 or ¶ and 1-506 or ¶ or equiv)  
Classroom methods in developing shorthand and transcription skills.
- 3-302. TEACHING BASIC BUSINESS SUBJECTS.** (2 cr; prereq 3-155 or ¶3-155)  
Developments in content and method of teaching nonvocational business subjects.
- 3-303. TEACHING ACCOUNTING AND DATA PROCESSING.** (2 cr; prereq jr, 3-155 or ¶3-155)  
Methods, materials, curriculum, and principles of learning pertinent to accounting and data processing.
- 3-323. 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 teaching of speech and coordinating co-curricular activities.
- 3-324. TEACHING LANGUAGE ARTS IN SECONDARY SCHOOLS: INSTRUCTIONAL PROBLEMS AND PRACTICE.** (3 cr; prereq 3-150, 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.

## *Description of Courses*

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- 3-325. 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. CURRICULUM PROBLEMS AND ISSUES IN TEACHING LITERATURE 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 literature.
- 3-327. CURRICULUM PROBLEMS AND ISSUES IN TEACHING LANGUAGE AND COMPOSITION 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 language and composition.
- 3-328. 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. 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.
- 3-330. METHODS AND MATERIALS FOR STUDY OF AMERICAN CIVILIZATION.** (3 cr)  
Design and implementation of courses for the interdisciplinary study of American culture.
- 3-334. TEACHING FOREIGN LANGUAGES.** (6 cr; prereq sr or foreign lang minor)
- 3-335. TEACHING FOREIGN LANGUAGES.** (3 cr; prereq sr and ¶3-631)
- 3-342. TEACHING SOCIAL STUDIES IN SECONDARY SCHOOL.** (3 cr; prereq minor only)
- 3-348, 3-349. 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. TEACHING SECONDARY SCHOOL SCIENCE.** (3 cr; prereq minor only)
- 3-356. TEACHING SECONDARY SCHOOL SCIENCE.** (1 cr; prereq jr, 5 cr intro psychology, ¶3-155)  
Procedures in selecting and organizing materials and in teaching secondary school science.
- 3-357. TEACHING SECONDARY SCHOOL SCIENCE.** (3 cr; prereq sr, 3-155, 3-356, admission to student teaching)
- 3-358. TEACHING SECONDARY SCHOOL SCIENCE.** (1 cr; prereq sr, 3-357)
- 3-362. TEACHING SECONDARY SCHOOL MATHEMATICS.** (3 cr; prereq minor only)
- 3-365, 3-366, 3-367. TEACHING SECONDARY SCHOOL MATHEMATICS.** (3 cr fall, 1 cr wtr, 1 cr sp, max 5 cr; prereq sr, ¶3-661 for 2 qtr)  
Methods, materials, curricula, and principles of learning, pertinent to secondary school mathematics.
- 3-600. STUDENT TEACHING.** (Cr ar; prereq  $\Delta$ )  
Supervised teaching for students wishing to elect credits in student teaching in addition to regular requirements.
- 3-601. STUDENT TEACHING IN BUSINESS SUBJECTS.** (3-9 cr; 9 cr for majors, 3 cr for minors; prereq 3-155 and #)  
Required of all students majoring or minoring in business education.
- 3-606. STUDENT TEACHING IN LIBRARY SCIENCE.** (2-6 cr; prereq sr, Lib 5-201, 5-202, 5-102, 5-302, 5-303, 5-205 or #)  
For both liberal arts college graduates and college of education undergrads intending to become school librarians.
- 3-621. DIRECTED EXPERIENCES IN TEACHING IN ENGLISH, SPEECH, LANGUAGE ARTS.** (6-9 cr; prereq 3-324, 3-325, #)
- 3-631. STUDENT TEACHING IN FOREIGN LANGUAGES.** (3, 6, 9, or 12 cr; prereq sr and 3-335 during same yr)
- 3-640. STUDENT TEACHING: SOCIAL STUDIES JUNIORS.** (1 cr; prereq 3-150 or ¶3-150)

## *Secondary, Business, Mathematics Education*

- 3-641. **STUDENT TEACHING IN SOCIAL STUDIES.** (3 or 6 or 9 cr, max 12 cr; prereq sr, ¶3-348, 3-349; satis completion of ea qtr nec for continuation)
- 3-651. **STUDENT TEACHING IN SCIENCE.** (1 or 3 or 6 or 9 cr; prereq sr, 3-357 or ¶3-357)
- 3-661. **STUDENT TEACHING IN MATHEMATICS.** (1 or 3 or 6 cr; prereq sr, Math 3-160 or ¶Math 3-160 and 3-365, 3-366, 3-367 during same yr; satis completion of ea qtr nec for continuation)
- 3-671. **STUDENT TEACHING IN AMERICAN STUDIES.** (3-9 cr; prereq sr, 3-330 or ¶3-330) Supervised teaching in high school American Studies program.
- 5-105. **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. **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. **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. **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. **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. **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. **FAMILY LIFE EDUCATION.** (3 cr)  
Sources and types of materials available; techniques of family life education, preparation and evaluation of instructional materials.
- 5-113. **PRINCIPLES OF SECONDARY SCHOOL CURRICULUM.** (3 cr; prereq 3-155 or equiv)  
Concepts and basic principles; forces influencing curricular objectives, organization and construction; evaluation and trends.
- 5-114. **INTERDISCIPLINARY APPROACHES TO CURRICULUM.** (3 cr)  
Rationale, status and trends, design and operation of curriculum of an interdisciplinary nature.
- 5-129. **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. **INSTRUCTIONAL SIMULATIONS AND LEARNING GAMES: DEVELOPMENT AND CLASSROOM USE.** (3 cr)  
Background, development factors, subject-matter models, procedures for use of materials; analysis of the value of such material.
- 5-150. **INTRODUCTION TO SOCIAL STUDIES EDUCATION.** (3 cr)  
Advanced methods for social studies teachers; prerequisite to other graduate level courses in social studies education.
- 5-152. **TECHNIQUES OF INSTRUCTION IN SOCIAL STUDIES.** (3 cr; prereq 5-150)  
Analysis of teaching strategies and contemporary curriculum materials in the social studies; techniques of instruction useful in inquiry strategies of analysis classroom behavior and evaluation; required of MA, MEd and PhD candidates.
- 5-153. **NEW PERSPECTIVES IN THE SOCIAL STUDIES.** (1-3 cr, max 12)  
Issues, materials, and instructional techniques related to current topics of particular relevance to social studies teachers.

## Description of Courses

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- 5-154. SOCIAL STUDIES WORKSHOP.** (3-9 cr)  
A workshop on the Minnesota Project Social Studies curriculum.
- 5-155. MATERIALS LABORATORY FOR SOCIAL STUDIES TEACHERS.** (3 cr; prereq 5-150, 5-152)  
Locating, developing, and using audio-visual materials, learning programs, and simulations for use in social studies classes.
- 5-156. PRACTICUM IN SOCIAL STUDIES INSTRUCTIONAL TECHNIQUES.** (1 cr; prereq 5-150, 5-152)  
Includes production of videotape episodes to demonstrate competency in the use of materials and techniques of instruction; required for all MA, MEd, and PhD candidates.
- 5-167. 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.
- 5-169. 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. 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.
- 5-171. TEACHER SELF-APPRAISAL OBSERVATION SYSTEMS.** (3 cr)  
Analyzing videotapes in classrooms using a variety of interaction analysis coding instruments as a means of understanding, selecting, and broadening classroom behavior; dimensions and directions of coding.
- 5-172. 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. PREPARATION OF CURRICULUM MATERIALS.** (1-12 cr)  
Principles and procedures for the selection, development and organization of curriculum materials including learning packages, teacher-made games and simulations, units, courses of study, and curriculum guides.
- 5-177. DIRECTING SECONDARY SCHOOL SPEECH ACTIVITIES.** (3 cr; prereq Spch 1-101 or 1-102, 1-106 or #)  
Philosophy, organization and administration of extemporaneous speaking, oratory, interpretive reading, and debate.
- 5-189. 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.
- 5-191. WORKSHOP: TEACHING OF FOREIGN LANGUAGES.** (1-10 cr, max 10 cr)  
Related specifically to the needs of the in-service teacher, topics, location, and duration will be highly flexible.
- 5-192. FOREIGN LANGUAGE WORKSHOP: DEVELOPMENT OF MATERIALS AND SHORT COURSES FOR INDIVIDUALIZED INSTRUCTION.** (3-12 cr)  
For foreign language teachers to develop and test new types of curriculum materials in French, German, Russian, or Spanish including independent study units, learning packages, minicourses, quarter courses, small group projects and enrichment materials to be tried out with high school students, revised, and published for the benefit of teachers of the state.
- 5-194. 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. 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. 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.

## Secondary, Business, Mathematics Education

- 5-322. 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.
- 5-323. 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. 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. TEACHING READING IN SECONDARY SCHOOLS.** (3 cr; prereq 9 cr in education)  
Procedures, objectives, and materials for teaching reading in subject-matter fields.
- 5-347. LINGUISTICS AND READING.** (3 cr)  
Nature of linguistic inquiry, investigation of the contributions made to reading and programs resulting from linguistic input; potential contributions of current linguistic research to reading instruction.
- 5-349. WORKSHOP: SECONDARY READING INSTRUCTION.** (1-12 cr, max 12; prereq #)  
Principles, instructional techniques, and materials for teaching reading in secondary schools. Each offering will focus on a single topic.
- 5-350. CURRENT DEVELOPMENTS IN ENGLISH AND SPEECH EDUCATION.** (1-6 cr, max 6 cr)  
New instructional approaches, new materials, current issues and problems in English and language arts education focusing on a single topic or issue with each offering.
- 5-371. 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. TOPICS IN THE TEACHING OF FOREIGN LANGUAGES.** (3 cr)  
Classroom procedure for individualized instruction, new curricula, teaching of culture and literature, use of media, evaluation of teaching.
- 5-390. 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. 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. 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 applications to classroom use.
- 5-393. 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.
- 5-394. WORKSHOP: SCIENCE EDUCATION.** (1-12 cr, max 12 cr)  
Analysis of issues, materials, and instructional techniques on current topics of relevance to secondary school and college science teachers; each offering to focus on a single topic for varying credit.
- 5-396. 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.

## Description of Courses

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- 5-404. LANGUAGE, CULTURE, AND EDUCATION.** (3 cr, §Spch 5-404)  
Psychological and social-psychological perspectives for the study of language-communication; dimensions of language variation (dialects, codes, registers); implications for program development and instructional practices.
- 5-609. INTERNSHIP.** (Cr ar; prereq #)
- 5-670/5-671†. INTERNSHIP: SUPERVISION OF SOCIAL STUDIES STUDENT TEACHERS.** (2 cr for 5-670, 1 cr for 5-671; prereq #)  
On-the-job supervision of social studies student teachers; coordinating seminar.
- 5-673. INTERNSHIP: COLLEGE TEACHING IN SOCIAL STUDIES EDUCATION.** (1-3 cr; prereq 5-150, 5-152, 5-155, 5-156, 8-104, 8-801 and/or #)  
Individual and group experience in planning, teaching, and evaluating a college course in social studies education.
- 5-674, 5-675, 5-676. CLINICAL METHODS AND PRACTICES IN SPEECH PATHOLOGY.** (Cr ar; prereq CDis 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. 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. CURRICULUM DEVELOPMENT IN THE SOCIAL STUDIES
- 8-188°. SEMINAR: RESEARCH IN SECOND LANGUAGE LEARNING AND TEACHING
- 8-194. STRATEGIES AND PROBLEMS OF INSTRUCTION IN ENGLISH
- 8-322. SEMINAR: SECONDARY CURRICULUM AND INSTRUCTION
- 8-340. WORKSHOP: IMPROVEMENT OF INSTRUCTION
- 8-341. SEMINAR: ADVANCED STUDY IN SUPERVISION AND CURRICULUM DEVELOPMENT
- 8-362. RESEARCH IN SOCIAL STUDIES
- 8-364. SEMINAR: SOCIAL STUDIES EDUCATION
- 8-387. SEMINAR: FOREIGN LANGUAGE EDUCATION
- 8-642. FIELD PRACTICUM: SUPERVISION AND CURRICULUM DEVELOPMENT
- 8-801°. PROBLEMS: TEACHING SOCIAL STUDIES
- 8-805°. PROBLEMS: AUDIO-VISUAL EDUCATION
- 8-807°. PROBLEMS: RADIO-TELEVISION EDUCATION
- 8-825°. 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°. PROBLEMS: CURRICULUM CONSTRUCTION
- 8-887°. RESEARCH FOUNDATIONS OF SECONDARY SCHOOL SCIENCE TEACHING
- 8-892. INTRODUCTION TO RESEARCH IN ENGLISH AND SPEECH EDUCATION
- 8-895. READINGS IN ENGLISH AND MODERN LANGUAGE EDUCATION
- 8-896°. PROBLEMS: TEACHING ENGLISH
- 8-897. RESEARCH IN ENGLISH AND SPEECH EDUCATION
- 8-936. FIELD STUDY IN GENERAL CURRICULUM

### Business Education (BsEd)

- 5-100. RESEARCH AND METHODS IN TEACHING ACCOUNTING AND BUSINESS DATA PROCESSING.** (3 cr)  
Recent trends and developments.

## *Secondary, Business, Mathematics Education*

- 5-101. RESEARCH AND METHODS IN TEACHING TYPEWRITING AND SHORTHAND.** (3 cr)  
Application of research findings to classroom methodology.
- 5-102. 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. CONSUMER EDUCATION IN SCHOOLS.** (3 cr)  
Objectives, content, and curriculum organization at elementary and secondary levels.
- 5-104. OFFICE COORDINATION TECHNIQUES.** (3 cr, §DE 5-105)  
Problems in the cooperative program; guidance and selection; placing students in offices; job adjustments; developing and evaluation of the training program.
- 5-106. 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. 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. 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.
- 5-111. MATERIALS AND METHODS FOR A SIMULATED OFFICE COURSE.** (3 cr; prereq sr)  
Course organization; methods; development and evaluation of objectives and materials.
- 5-112. PROGRAM DEVELOPMENTS IN BUSINESS EDUCATION.** (1-12 cr; max 12 cr)  
Developments emerging from research and local, state, and national programs and projects.
- 5-113. PHILOSOPHY OF VOCATIONAL BUSINESS AND OFFICE EDUCATION.** (3 cr)  
Philosophy, objectives, history, developments and current practices.

### **FOR GRADUATE STUDENTS ONLY**

(Description in the Graduate School Bulletin)

- 8-100. RESEARCH PROCEDURES IN BUSINESS EDUCATION**
- 8-300. SEMINAR: RESEARCH IN BUSINESS, DISTRIBUTIVE AND ECONOMIC EDUCATION**
- 8-600. INTERNSHIP: BUSINESS EDUCATION**
- 8-900°. PROBLEMS: BUSINESS EDUCATION**

### **Mathematics Education (MthE)**

- 5-101. WORKSHOP: ELEMENTARY SCHOOL MATHEMATICS.** (3 cr; prereq #; not open to mathematics education majors)  
Modern trends, methods, and materials used to convey mathematical ideas.
- 5-102. WORKSHOP: MATHEMATICS EDUCATION.** (1-9 cr; max 9 cr)  
Analyses issues, materials, and instructional techniques focusing on a single current topic of particular relevance to secondary school and college mathematics teachers.
- 5-301. 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. 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.

## *Description of Courses*

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- 5-312. 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. 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. 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. 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. 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. 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. 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.
- 5-366. 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. THEORY AND CLASSICAL RESEARCH IN MATHEMATICS EDUCATION  
8-570. RESEARCH IN MATHEMATICS EDUCATION  
8-590. SEMINAR: MATHEMATICS EDUCATION  
8-680. INTERNSHIP: MATHEMATICS EDUCATION  
8-980\*. PROBLEMS: MATHEMATICS EDUCATION

## **SOCIAL AND PHILOSOPHIC FOUNDATIONS OF EDUCATION**

### **History and Philosophy of Education (HEd)**

- 3-090. 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 HEd faculty.
- 5-080. EDUCATION IN CHINA.** (3 cr)  
Analysis of the nature and scope of the educational system in China emphasizing discussions on education and nation-building; historical, economic, political, and social factors involved in educational policy; emphasis on the Peoples Republic of China.
- 5-101. 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.

## *Social and Philosophic Foundations of Education*

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- 5-110. 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-focused courses on educational problems of particular minority populations in the United States.
- 5-112. INTERCULTURAL EDUCATION: SPANISH-SPEAKING 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. 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. ANALYSIS IN EDUCATIONAL PHILOSOPHY.** (3 cr)  
Application of philosophical analysis of educational theories and philosophies.
- 5-125. 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. COMPARATIVE EDUCATION.** (3 cr)  
European, Asiatic, and American systems and philosophies of education; possibilities of international education.
- 5-132. 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. CRITICAL ISSUES IN CONTEMPORARY EDUCATION.** (3 cr)  
Introduces graduate students to ideas involved in current theory and practice.
- 5-149,5-150,5-151. SOCIAL HISTORY OF AMERICAN EDUCATION.** (3 cr per qtr, max 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. HISTORY OF WESTERN EDUCATIONAL THOUGHT.** (3 cr)  
Examination of the major educational classics of western civilization: Plato, Aristotle, Cicero, Quintilian, Montaigne, Locke, Rousseau, and others.
- 5-156. HISTORY OF IDEAS IN AMERICAN EDUCATION.** (3 cr)  
Readings in American political, economic, and social development related to education; reference to the emerging system of public education. Recommended as background for 5-170 but not a prerequisite.
- 5-170. 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.
- 5-171. 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. COMPARATIVE PHILOSOPHIES OF EDUCATION.** (3 cr)  
Examination of competing philosophies of education.
- 5-190. 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.
- 5-192. SOCIOLOGICAL STUDIES IN HIGHER EDUCATION.** (3 cr)  
Advanced studies in social aspects of higher education; socialization of students, comparative institutional organization, role structure; emphasis on theory and empirical research.
- 5-200,5-201,5-202. INTERCULTURAL EDUCATION: INDIAN AMERICANS.** (3 cr ea; 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 development of an integrated approach to college

## **Description of Courses**

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and public school curriculum redesign in Indian history and culture; preparation for consultative work with in-service teachers in the development of teaching materials.

### **5-205. 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. APPLIED SOCIAL SCIENCE AND EDUCATIONAL FUTURES.** (3 cr)

Application of social sciences in their academic and applied dimensions to formal education, including a social-scientific and systems orientation toward communities; emphasis on short-range social and educational planning—near-present to a few years hence.

### **5-211. SOCIAL PLANNING AND EDUCATIONAL FUTURES.** (3 cr)

Medium range interdisciplinary approach to community design and analysis emphasizing formal education systems in community context; focus upon new neighborhoods, towns, experimental cities and subcultural enclaves in rural and urban settings emphasizing time period from several years to three decades hence.

### **5-212. EDUCATION IN FUTURE SOCIAL SYSTEMS.** (3 cr)

Interdisciplinary inquiry into problems of social specialization and generalization; projections and analysis of long range (thirty years or more) social and technologic trends related to education.

### **FOR GRADUATE STUDENTS ONLY**

(Description in the Graduate School Bulletin)

8-221, 8-222, 8-223. SEMINAR: TWENTIETH CENTURY EUROPE

8-231. SEMINAR: COMPARATIVE AND INTERNATIONAL EDUCATION

8-232. SEMINAR IN COMPARATIVE EDUCATION: EDUCATION AND NATIONAL DEVELOPMENT

8-241\*. PROBLEMS: HISTORY AND PHILOSOPHY OF EDUCATION

8-242. SEMINAR: EDUCATIONAL PHILOSOPHY

8-255. SEMINAR: EUROPEAN AND AMERICAN EDUCATIONAL THOUGHT: 16th AND 17th CENTURIES

8-256. SEMINAR: EUROPEAN AND AMERICAN EDUCATIONAL THOUGHT: 17th CENTURY

8-257. SEMINAR: EUROPEAN AND AMERICAN EDUCATIONAL THOUGHT, LATE 17th AND 18th CENTURIES

8-290. ADVANCED SOCIOLOGY OF EDUCATION

8-296, 8-297, 8-298†. SEMINAR: AMERICAN SOCIAL AND EDUCATIONAL HISTORY

## **VOCATIONAL-TECHNICAL EDUCATION**

### **Agricultural Education (AgEd)**

#### **1-001. 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. 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.

#### **3-021. EDUCATION THROUGH EXTENSION METHODS.** (4 cr; prereq soph)

Role of nonschool agencies in rural and agricultural education; methods and techniques of formal and informal instruction in school and nonschool educational programs.

#### **3-029. 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.

#### **3-031. STUDENT TEACHING IN AGRICULTURE.** (8 cr; prereq jr, 5-028, SeEd 3-155, #)

Instruction in developing individual farming programs, contacting parents, program analysis of community needs, conducting classes, community activities, Future Farmers, and case studies.

## Vocational-Technical Education

- 3-041. PRACTICUM: AGRICULTURAL EDUCATION TECHNOLOGY.** (1-3 cr per qtr, max 5 cr)  
Individualized study packages of 1 credit each of technology in agriculture, horticulture, off-farm agriculture, agricultural mechanics, adult and beginning farmer programs, youth organizations, program evaluation, and visual aids.
- 5-010. 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.
- 5-021. EDUCATION THROUGH EXTENSION METHODS.** (4 cr; prereq grad or §)  
Role of nonschool agencies in rural and agricultural education; methods and techniques of formal and informal instruction in school and nonschool educational programs.
- 5-023. EXTENSION METHODS FOR AGRICULTURAL PRODUCTION IN DEVELOPING COUNTRIES.** (2 cr)  
Extension methods to promote the rapid adoption of improved agricultural practices.
- 5-028. AGRICULTURAL EDUCATION IN THE SECONDARY SCHOOLS.** (5 cr; prereq SeEd 3-155 or §)  
Fundamentals for teaching production agriculture and agri-business to secondary school students; use of the home, farms, and businesses and community in structuring and implementing educational programs; FFA, orientation to careers, records of planning and performance; developing and utilizing teaching units.
- 5-032. 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. TECHNIQUES OF INSTRUCTION IN RURAL ELECTRIFICATION.** (3 cr; prereq AgEn 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. PROCEDURES IN TEACHING AGRICULTURE.** (3 cr; prereq §)  
New developments in methodology; assessment of innovations and procedures; consideration of various levels of instruction.
- 5-035. 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.
- 5-049. AGRICULTURAL EDUCATION FOR ADULTS.** (5 cr)  
Methods, organization and implementation of systematic education programs for beginning and established farmers; organization of local programs to meet needs of production agriculture in areas of enterprises, agricultural mechanics and management; developing a continuing program, observations.
- 5-051. 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. FARM BUSINESS MANAGEMENT EDUCATION.** (3 cr; prereq 5-049 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.
- 5-061. PROGRAM PLANNING AND EVALUATION.** (4 cr; prereq sr)  
Developing a program of agricultural education in a community school, integration with total school program, administrative relationships, techniques and use of program evaluation in planning.
- 5-065. EVALUATION OF LOCAL VOCATIONAL EDUCATION PROGRAMS.** (3 cr)  
Procedures and instruments for assessing the effectiveness of programs for employment-bound youth and adults.
- 5-066. POLICY AND PROGRAM DEVELOPMENT IN AGRICULTURAL EDUCATION.** (3 cr)  
Appraisal of the situation in local schools and development of plans for improving the program development process.

## **Description of Courses**

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- 5-070. SUPERVISED FARM PRACTICE IN VOCATIONAL AGRICULTURE.** (3 cr per qtr, max 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, adults.
- 5-071. 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. 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. ORGANIZATION AND MANAGEMENT.** (3 cr; prereq #)  
Administrative structure and function of subcollegiate programs.
- 5-084. CURRICULA FOR CAREER EXPLORATION IN AGRICULTURAL OCCUPATIONS.** (3 cr)  
Analysis and evaluation of material; criteria for selection of material; content, organization, resource activities and teaching techniques.
- 5-085. CAREER DEVELOPMENT IN AGRICULTURAL EMPLOYMENT.** (3 cr)  
Methods and materials in teaching career development for agricultural industries.
- 5-090. 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. INDEPENDENT STUDY.** (3 cr; prereq MEd student in AgEd)  
Preparation of a paper dealing with learnings in agricultural education applied to professional responsibilities.
- 5-128. METHODS OF TEACHING.** (3 cr; prereq non-ag ed major and/or #)  
Methods of teaching agriculture or related subjects; developing competencies in planning, organizing, implementing, and evaluating instruction with practice in instructional techniques.
- 5-129. CURRICULUM PLANNING.** (3 cr; prereq 5-128 or ¶5-128...non-ag ed major and/or #)  
Methods and procedures in planning a curriculum to teach within a specific subject matter area; curriculum construction in the subject matter field for use in native country setting.

### **FOR GRADUATE STUDENTS ONLY**

(Description in the Graduate School Bulletin)

- 8-001.\* RESEARCH IN AGRICULTURAL EDUCATION
- 8-010. CURRENT ISSUES IN AGRICULTURAL EDUCATION
- 8-020. SEMINAR: AGRICULTURAL EDUCATION
- 8-081. SUPERVISION OF VOCATIONAL AGRICULTURE
- 8-082. ORGANIZATION AND ADMINISTRATION OF EDUCATIONAL PROGRAMS IN AGRICULTURE
- 8-091. FIELD PROBLEMS
- 8-303. SEMINAR: GRADUATE STUDIES REVIEW

### **Distributive Education (DE)**

- 1-100. INTRODUCTION TO BUSINESS AND DISTRIBUTIVE EDUCATION.** (3 cr)  
Survey of the field at the secondary, junior college, and adult levels; emphasis on the roles of teacher-coordinators; 20 hours of observation in a distributive education classroom.
- 3-100. DISTRIBUTIVE OCCUPATIONAL EXPERIENCE.** (1-15 cr; prereq jr, sr, DE 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. METHODS: DISTRIBUTIVE EDUCATION.** (3 cr ea; prereq #)

## Vocational-Technical Education

- 3-601. STUDENT TEACHING IN DISTRIBUTIVE EDUCATION.** (3-12 cr; max 12; prereq SeEd 3-155 or #)  
Required of all students majoring in distributive education.
- 5-100. ORGANIZATION AND ADMINISTRATION OF DISTRIBUTIVE EDUCATION.** (3 cr)  
Principles, practices and legislation followed in developing cooperative vocational and adult programs under federal vocational acts; basic course for teacher-coordinators and vocational administrators.
- 5-105. COORDINATION TECHNIQUES.** (2 cr)  
Problems of coordinators in cooperative vocational education; guidance and selection; placing students in work stations, assisting job adjustments, developing the training program.
- 5-106. COORDINATION TECHNIQUES IN COOPERATIVE DISTRIBUTIVE EDUCATION.** (2 cr; prereq 5-105 or ¶)  
Application in secondary and post-secondary cooperative and project plan programs; certification course for distributive education teacher-coordinators.
- 5-110. CURRICULA IN COOPERATIVE VOCATIONAL EDUCATION.** (2 cr)  
Planning, organizing, implementing and evaluating cooperative vocational education curricula.
- 5-111. CURRICULA IN COOPERATIVE DISTRIBUTIVE EDUCATION.** (2 cr; prereq 5-110 or ¶)  
Application in secondary and post-secondary distributive education; certification course for distributive education teacher-coordinators.
- 5-115. 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.
- 5-116. MATERIALS LABORATORY: POST-SECONDARY DISTRIBUTIVE EDUCATION.** (3 cr; prereq #)  
New methods of instruction; development of materials for distributive education programs in junior colleges and area vocational-technical schools.
- 5-120. 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. 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. MATERIALS AND METHODS IN COOPERATIVE VOCATIONAL EDUCATION.** (2 cr)  
Basic course for teacher-coordinators of cooperative vocational education programs.
- 5-301. MATERIALS AND METHODS IN COOPERATIVE DISTRIBUTIVE EDUCATION.** (2 cr; prereq 5-300 or ¶)  
For teacher-coordinators of cooperative and project plan distributive education; certification course for distributive education teacher-coordinators.
- 5-305. TEACHING MERCHANDISE DISPLAY.** (3 cr; prereq #)  
Materials and methods; practice in using equipment.
- 5-310. MATERIALS LABORATORY: DISTRIBUTIVE EDUCATION.** (3 cr; prereq 3-303 or 5-300 or #)  
Development of specific related vocational materials for distributive occupations, cooperative vocational education classes.
- 5-315. MATERIALS LABORATORY: OCCUPATIONAL ADJUSTMENT.** (3 cr; prereq 3-303, 5-300 or #)  
Development of general related vocational materials for all types of cooperative vocational education classes.
- 5-320. 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. TEACHING SUPERVISORY TRAINING.** (3 cr)  
Conducting short unit courses for store and office supervisors and improving on-the-job training in cooperative vocational education programs.

## Description of Courses

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- 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.
- 5-400. PROGRAM DEVELOPMENTS IN DISTRIBUTIVE EDUCATION.** (1-12 cr; max 12 cr; prereq #)  
Problems, practices, methodology, and relationships on topics of concern to distributive education personnel.

### FOR GRADUATE STUDENTS ONLY

(Description in the Graduate School Bulletin)

- 8-300. SEMINAR: RESEARCH IN BUSINESS, DISTRIBUTIVE, AND ECONOMIC EDUCATION**
- 8-600. INTERNSHIP: DISTRIBUTIVE EDUCATION**
- 8-900\*. PROBLEMS: DISTRIBUTIVE EDUCATION**

## Home Economics Education (HEEd)

- 1-500. INTRODUCTION TO HOME ECONOMICS EDUCATION.** (2 cr; prereq soph)  
Structure and function of teaching; nature of home economics teachers' work, emphasis on specific teaching options; impact of schooling on growth and development of pupils.
- 1-510. KNOWLEDGE AND VALUES IN TEACHING.** (4 cr; prereq 1-500 or #)  
Roles of the home economics teacher in creating and using knowledge and in weighing and fostering values.
- 3-300. 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. METHODS OF TEACHING HOME ECONOMICS.** (3 cr; prereq 3-300, ¶3-310)  
Teaching procedures; materials of instruction.
- 3-310. EVALUATION IN HOME ECONOMICS.** (3 cr; prereq 3-300, ¶3-305)  
Process of evaluation applied to appraisal of learning in home economics.
- 3-315. ADULT EDUCATION IN HOME ECONOMICS.** (3 cr; prereq 3-520 or #)  
Objectives; problems affecting community and family life; methods of helping adults and out-of-school youth in solving problems in home living.
- 3-325. 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 the home economics program.
- 3-330. HOME ECONOMICS OCCUPATIONAL EXPERIENCE.** (3-9 cr; prereq jr, sr, home economics education major only and #)  
Observation and experience in the chosen occupational cluster; weekly seminars with application to guidance and teaching of students.
- 3-520. HOME ECONOMICS CURRICULUM AND INSTRUCTION: COGNITIVE LEARNING.** (5 cr; prereq 1-510)  
Broad overview of elements of curriculum; objectives, assessment and strategies related to cognitive learning.
- 3-530. HOME ECONOMICS CURRICULUM AND INSTRUCTION: AFFECTIVE LEARNING.** (4 cr; prereq 3-520 or #, SeEd 3-150, 3-155 or ¶)  
Objectives, assessment, and strategies related to affective learning.
- 3-540. HOME ECONOMICS CURRICULUM AND INSTRUCTION: PSYCHOMOTOR LEARNING.** (2 cr; prereq 3-520)  
Objectives, assessment, and strategies related to psychomotor learning.
- 3-600. SUPERVISED TEACHING IN HOME ECONOMICS.** (9 cr; prereq 3-305, 3-310 and Δ)  
Observation, participation, and teaching under supervision.
- 3-601. CLINICAL EXPERIENCE: TEACHING CONSUMER-HOMEMAKING.** (9 cr; prereq ¶3-611, 3-620; Δ; S-U only)  
Classroom teaching in selected Minnesota school.
- 3-602. CLINICAL EXPERIENCE: TEACHING FAMILY LIFE.** (9 cr; prereq ¶3-612, 3-620; Δ; S-U only)  
Classroom teaching in selected Minnesota school

- 3-603. CLINICAL EXPERIENCE: TEACHING HOME ECONOMICS OCCUPATIONS.** (9 cr; prereq ¶3-603, 3-620; Δ; S-U only)  
Classroom teaching in selected Minnesota school.
- 3-605. 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.
- 3-611. FIELD WORK: CONSUMER-HOMEMAKING EDUCATION.** (3 cr; prereq ¶3-601, 3-620; Δ; S-U only)  
Individualized instruction conducted in selected programs in the field and on campus.
- 3-612. FIELD WORK: FAMILY LIFE EDUCATION.** (3 cr; prereq ¶3-602, 3-620; Δ; S-U only)  
Individualized instruction conducted in selected programs in the field and on campus.
- 3-613. FIELD WORK: HOME ECONOMICS OCCUPATIONAL EDUCATION.** (3 cr; prereq ¶3-603, 3-620; Δ; S-U only)  
Individualized instruction conducted in selected programs in the field and on campus.
- 3-620. CURRICULUM MANAGEMENT.** (3 cr; prereq ¶3-601 or 3-602, ¶3-611 or 3-612; Δ)  
Classroom activities including laboratory.
- 5-106. COORDINATION TECHNIQUES IN HOME ECONOMICS OCCUPATIONAL EDUCATION.** (2 cr; prereq DE 5-105 or ¶)  
Application in secondary and post-secondary cooperative and project plan programs; certification course for home economics teacher coordinators.
- 5-111. CURRICULA IN HOME ECONOMICS OCCUPATIONAL EDUCATION.** (2 cr; prereq DE 5-110 or ¶)  
Application in secondary and post-secondary home economics education; certification course for home economics teacher-coordinators.
- 5-300. HOME ECONOMICS CURRICULUM.** (3 cr; prereq 3-530, #)  
Examination of research and literature; development of units of study and programs at elementary and secondary level; production and evaluation of materials.
- 5-301. MATERIALS AND METHODS IN HOME ECONOMICS OCCUPATIONAL EDUCATION.** (2 cr; prereq DE 5-300 or ¶)  
For teacher-coordinators of cooperative and project plan home economics education; certification course for home economics teacher-coordinators.
- 5-305. 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. METHOD IN TEACHING HOME ECONOMICS: THEORY AND TECHNOLOGY.** (3 cr; prereq 3-530, #)  
Derivation of theory for educational method from relevant research; application to the educational objectives; analysis of technology related to teaching method.
- 5-315. EVALUATION: THEORETICAL AND TECHNICAL ASPECTS.** (3 cr; prereq 3-530 and #)  
Collecting and interpreting evidence related to achievement of objectives, emphasizing higher levels of cognition and affective behaviors.
- 5-320. 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. 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. 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. 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.

## **Description of Courses**

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- 5-400. 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. 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. 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. 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.
- 5-420. 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. 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. WORKSHOP: CONTEMPORARY PROBLEMS IN HOME ECONOMICS EDUCATION.** (4 cr; prereq #)  
Integration of PHA experiences into on-going home economics education programs; group and individual problems of experienced teachers.
- 5-500. 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. PRACTICUM: ADULT EDUCATION.** (3 cr; prereq #)  
Individual field assignments under supervision.
- 5-900. 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. RESEARCH METHODS
- 8-305. RESEARCH METHODS
- 8-500. SEMINAR: CURRICULUM DEVELOPMENT
- 8-505. SEMINAR: SUPERVISION OF STUDENT TEACHING
- 8-510. SEMINAR: IMPROVEMENT OF INSTRUCTION IN ADULT EDUCATION
- 8-515. SEMINAR: TEACHER EDUCATION
- 8-520. SEMINAR: HISTORY AND PHILOSOPHY OF HOME ECONOMICS EDUCATION
- 8-525. SEMINAR: ADMINISTRATION AND SUPERVISION OF HOME ECONOMICS PROGRAMS
- 8-530\*. SEMINAR: HOME ECONOMICS EDUCATION
- 8-900\*. PROBLEMS: HOME ECONOMICS EDUCATION

## **Industrial Education (Ind)**

- 1-300. 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. ELEMENTARY HANDCRAFTS.** (3 cr)  
For majors in elementary, art, special and recreational education.

- 1-492. **CRAFTWORK (A).** (3 cr)  
Projects in mediums suitable for industrial arts, plastics, art metal, lapidary, and leather-work.
- 1-500. **DRAFTING (B).** (3 cr)  
Sketching, lettering, use of instruments, orthographic projection, pictorial representation and blue print reading.
- 1-502. **BUILDING CONSTRUCTION DRAFTING (B).** (3 cr; prereq 1-500)  
Principles of orthographic and pictorial representation applied to building construction.
- 1-504. **ADVANCED DRAFTING (B).** (3 cr; prereq  $\Delta$ )
- 1-506. **DESIGN I (B).** (3 cr; prereq 1-500 or #)  
Laboratory: creative design as a process of solving problems with tools and materials.
- 1-510. **WOOD PROCESSING I (A).** (3 cr)  
Use of common hand and machine tools, materials and finishing principles.
- 1-511. **WOOD PROCESSING II (A).** (3 cr; prereq 1-510 or #)  
Use and maintenance of power equipment; laboratory production experiences.
- 1-512. **WOOD PROCESSING III (A).** (3 cr; prereq  $\Delta$ )  
Building construction practices; requirement may be satisfied by taking Dunwoody carpentry or MeAg 1-600.
- 1-520. **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. **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. **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. **APPLIED ELECTRONICS I (C).** (3 cr; prereq  $\Delta$ )
- 1-528. **APPLIED ELECTRONICS II (C).** (3 cr; prereq  $\Delta$ )
- 1-530. **SMALL GAS ENGINES (A).** (3 cr; prereq  $\Delta$ )  
Operating principles, maintenance and adjustment of 2 and 4 cycle gas engines; may be satisfied by Dunwoody Institute course of same title.
- 1-532. **AUTOMOTIVE MECHANICS I (A).** (3 cr; prereq  $\Delta$ )
- 1-534. **AUTOMOTIVE MECHANICS II (A).** (3 cr; prereq  $\Delta$ )
- 1-540. **GRAPHIC ARTS I (A).** (3 cr)  
Typesetting and presswork, photography, silk-screen printing, and general duplicating.
- 1-542. **GRAPHIC ARTS II (A).** (3 cr)  
Letterpress, dry point etching, bookbinding, photography, and offset printing.
- 1-560. **METAL PROCESSING I (D).** (3 cr; prereq  $\Delta$ )  
General metalwork.
- 1-562. **METAL PROCESSING II (D).** (3 cr; prereq  $\Delta$ )  
Machine shop practices.
- 1-564. **METAL PROCESSING III (D).** (3 cr; prereq  $\Delta$ )  
General metalwork, welding.
- 1-566. **METAL PROCESSING IV (D).** (3 cr; prereq  $\Delta$ )  
General metalwork, sheet metal fabrication.
- 1-568. **METAL PROCESSING V (D).** (3 cr; prereq  $\Delta$ )  
Advanced metalwork.
- 3-330. **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. **ANALYSIS AND COURSE ORGANIZATION.** (3 cr)  
Need for and types of instructional analysis; objectives; course organization in selected fields.

## *Description of Courses*

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- 3-344. 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. TEACHING INDUSTRIAL ARTS.** (3 cr; prereq SeEd 3-150 or ¶3-150)  
Laboratory in study and practice.
- 3-600. DRAFTING-TECHNICAL SPECIALTY I (B).** (3 cr; prereq Δ)
- 3-602. DRAFTING-TECHNICAL SPECIALTY II (B).** (3 cr; prereq Δ)
- 3-620. ELECTRONICS-TECHNICAL SPECIALTY I (C).** (3 cr; prereq Δ)
- 3-622. ELECTRONICS-TECHNICAL SPECIALTY II (C).** (3 cr; prereq Δ)
- 3-630. POWER MECHANICS-TECHNICAL SPECIALTY I (A).** (3 cr; prereq Δ)
- 3-632. POWER MECHANICS-TECHNICAL SPECIALTY II (A).** (3 cr; prereq Δ)
- 3-640. GRAPHIC ARTS-TECHNICAL SPECIALTY I (B).** (3 cr; prereq Δ)
- 3-642. GRAPHIC ARTS-TECHNICAL SPECIALTY II (B).** (3 cr; prereq Δ)
- 3-660. METALS-TECHNICAL SPECIALTY I (D).** (3 cr; prereq Δ)
- 3-662. METALS-TECHNICAL SPECIALTY II (D).** (3 cr; prereq Δ)
- 3-700, 3-702, 3-704, 3-706. 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...For 3-706: Elective course; 3 cr; prereq Δ)
- 3-701, 3-703, 3-705, 3-707. STUDENT TEACHING SEMINAR.** (1-3 cr; prereq ¶3-700, 3-702, 3-704, 3-706)
- 3-750. 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. INDEPENDENT STUDY.** (3 cr per qtr, prereq jr or #)  
Self-directed study, preceded by classroom instruction in basic research procedures.
- 5-300. 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. TESTS IN INDUSTRIAL SUBJECTS.** (3 cr; prereq SeEd 3-155)  
Application of principles of evaluation to shop and drawing subjects.
- 5-302. 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. INSTRUCTIONAL AIDS.** (3 cr; prereq 3-360 or 5-360 or equiv)  
Planning, construction, use.
- 5-305. CRITICAL ISSUES IN INDUSTRIAL EDUCATION.** (3 cr)  
Identification, analysis, and discussion of major current problems in the field.
- 5-306. INDUSTRIAL EDUCATION WORKSHOP.** (3 or 6 cr; prereq tchg experience and #)  
Areas of concentration vary with each offering.
- 5-309. 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. 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. SUPERVISION OF INDUSTRIAL EDUCATION.** (3 cr; prereq 3-330 or 5-314)  
Principles of creative supervision; duties, organization for supervision.
- 5-314. ADMINISTRATION OF INDUSTRIAL EDUCATION.** (3 cr; prereq 3-330 or #)  
General and vocational phases; objectives, programs and practices; laws, ruling, and standards for aid; significant literature.
- 5-320. 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.

## Vocational-Technical Education

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- 5-325. PHILOSOPHY AND PRACTICE OF INDUSTRIAL EDUCATION.** (3 cr, §3-330)  
History, objectives, development, and current practices of the field.
- 5-330. INDUSTRIAL COURSE CONSTRUCTION.** (3 cr, §3-340)  
Principles and techniques; experience in planning, organizing and building a teaching guide.
- 5-360. INDUSTRIAL INSTRUCTION.** (3 cr; prereq 3-340, ScEd 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. INSTRUCTIONAL MATERIALS LABORATORY FOR NONMAJORS.** (3 cr; prereq tchg experience or #)  
For students needing manipulative skills and craftwork activities in their teaching; individual and group projects.
- 5-401. 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. INSTRUCTIONAL MATERIALS LABORATORY.** (3-6-9 cr; prereq major, tchg experience 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. LITERATURE OF INDUSTRIAL EDUCATION
- 8-310. RESEARCH
- 8-700. SEMINAR: INDUSTRIAL EDUCATION
- 8-900, 8-901, 8-902\*. RESEARCH PROBLEMS

## Vocational Education (VoEd)

### **FOR GRADUATE STUDENTS ONLY**

(Description in the Graduate School Bulletin)

- 8-100. VOCATIONAL EDUCATION TUTORIAL

# Departmental and Faculty Index

## ART EDUCATION

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# INDEX

	Page		Page
Admission		Consulting Resource	
Admission Procedures . . . . .	10, 11	Teacher Program . . . . .	21
Admission to Academic		Continuing Education . . . . .	14
Secondary Curriculum . . . . .	43	Counseling and Student	
Admission from Colleges		Personnel Psychology . . . . .	20, 82
Outside the University . . . . .	11	Crippled Children, <i>see</i> Special Education	
Admission with 3 or More Years		Curricula (Section II) . . . . .	17
of College . . . . .	11	Dance Education . . . . .	36
Admission Requirements . . . . .	10	Degrees and Honors . . . . .	15
Admission as an Adult Special		Application for Degree . . . . .	13
Student . . . . .	12	Description of Courses	
Admission with		(Section III) . . . . .	76
Advanced Standing . . . . .	11	Disadvantaged Children and Youth . . . . .	21
Guidelines for Admission to		Distribution Requirements,	
All Fields . . . . .	10	Liberal Education . . . . .	9, 10
Advanced Standing,		Distributive Education . . . . .	69, 120
Examination for . . . . .	17	Earth Science . . . . .	58
Agricultural Education . . . . .	66, 118	Economics . . . . .	62
Air Science, <i>see</i> ROTC Bulletin		Education Library and Instructional	
American Studies . . . . .	44	Materials Center . . . . .	5
Amount and Quality of Work . . . . .	14	Education Student Assembly . . . . .	4
Anthropology . . . . .	62	Educational Administration . . . . .	17, 80
Application for a Degree . . . . .	13	Educational Psychology . . . . .	20, 82-88
Art Education . . . . .	17, 76-78	Educational Research and	
Athletic Coaching Certification . . . . .	35, 36	Development Council . . . . .	5
Awards and Scholarships . . . . .	15	Educationally Disadvantaged Children,	
Balance Sheet, Senior . . . . .	13	Elementary ( <i>see</i> Special Education)	
Biological Science . . . . .	59	Elementary Education . . . . .	24-28, 88-91
Bureau of Field Studies		English, Language Arts, Speech-	
and Surveys . . . . .	5	Communication, Theatre Arts . . . . .	47
Bureau of Recommendations . . . . .	4	Equal Opportunity . . . . .	6
Business Education . . . . .	45, 114	Evening Courses, <i>see</i> Continuing Educa-	
Certification for Teaching . . . . .	14	tion	
Change of Major . . . . .	12	Examination for Advanced	
Change of Registration . . . . .	12	Standing Credit . . . . .	12
Chemistry . . . . .	59	Examination for Credit . . . . .	12
Child Psychology . . . . .	19, 78	Extension Courses, <i>see</i> Continuing Educa-	
Children with Hearing Impairments . . . . .	22	tion	
Children with Severe Learning		Faculty Advisers . . . . .	4
and Behavior Problems . . . . .	22	Faculty and Departmental Index . . . . .	129
Class Schedule . . . . .	76	Fees, <i>see</i> <i>General Information Bulletin</i>	
Clinical Experiences,		Field Studies and Surveys,	
Department of . . . . .	4	Bureau of . . . . .	5
Coaching Certification, Men . . . . .	35	Financial Assistance, <i>see</i> Scholarships	
Coaching Certification, Women . . . . .	36	Foreign Languages . . . . .	51-55
College of Education Senate . . . . .	3	French . . . . .	52
Combined Programs with IT . . . . .	7	General Information (Section I) . . . . .	3
Combined Programs in Science . . . . .	61	Geography . . . . .	63
Committee on Student Scholastic		Geology, <i>see</i> Earth Science	
Standing . . . . .	4	German . . . . .	52

	Page		Page
Gifted Children .....	23	Military Science, <i>see</i> ROTC Bulletin	
Governance of the College .....	3	Music Education .....	28-32, 92-95
Grades .....	9, 14	Naval Science, <i>see</i> ROTC bulletin	
Graduate Study in Education .....	9	NCATE .....	7
Graduation Requirements .....	14	Nursery School Certification .....	27
Guidelines for Admission to All Fields .....	10	Nursery School, University .....	5
Handicapped Children, <i>see</i> Special Educa- tion		Office of Educational Research, Planning and Development .....	6
Health Education, <i>see</i> School Health Edu- cation		Organization of the College .....	3
Hearing-Impaired Children .....	22	Orientation-Registration Program ...	4
Higher Education .....	28, 79	P-N Grading .....	9
History .....	64	Physical Education and Recreation .....	32-43, 95-107
History and Philosophy of Education .....	66, 116	Physical Education Requirement ..	14
Home Economics Education ...	70, 122	Physical Examination .....	13
Honors, <i>see</i> Degrees		Physically Handicapped Children ..	23
Independent Study .....	14	Physics .....	60
Industrial Education .....	73, 124	Placement Service .....	4
Information Desk .....	4	Political Science .....	64
Institute of Child Development ....	5	Probation .....	13
Instructional Materials Center .....	5	Procedures and Practices in the College .....	11
Italian .....	53	Professional Requirements .....	14
Journalism .....	55	Programs of the College .....	6
Junior Year, Admission to .....	13	Psycho-Educational Center .....	6
Kindergarten Endorsement, <i>see</i> Elementary Education		Psychological Foundations .....	20, 83
Laboratory Schools .....	5	Quality of Work .....	14
Language Arts .....	48	Readmission Policy .....	12
Latin .....	53	Recommendations, Bureau of .....	4
Learning Disabilities, Children with ( <i>see</i> Special Education)		Recreation and Park Administration .....	37, 105-107
Leisure Education ( <i>see</i> Recreation and Park Administration)		Registration Procedures .....	12
Liberal Education		Requirements, Special .....	14
Distribution Requirements ....	9, 10	Requirements for Admission .....	10
Library Science .....	55	Requirements for Graduation .....	14
Limited Enrollment .....	10	Reserve Officers Training Crops ...	8
Manual Arts Therapy .....	75	Residence Requirements .....	15
Marshall-University High School ...	5	Romance Languages, <i>see</i> Foreign Lan- guages	
Master of Education Degree .....	8	Russian .....	54
( <i>also see</i> individual programs)		S-N Grading .....	9
Mathematics .....	56	Scholarships .....	15
Mathematics Education .....	57, 115	Scholastic Standing, <i>see</i> Committee on Student Scholastic Standing	
Mentally Retarded Children, <i>see</i> Special Education		School and Community Health Education .....	40-42, 107
Methods and Student Teaching, <i>see</i> Clini- cal Experiences		School of Physical Education and Recreation .....	32-43, 95-108

	Page		Page
School Psychology		Student Personnel Office .....	4
Training Program .....	21, 85	Student Scholastic Standing,	
School Social Work .....	66	Committee on .....	4
Science .....	58	Student Services .....	4
Secondary Education ..	43-65, 108-114	Student Teaching, Application	
Senate, College of Education .....	3	and Registration for .....	13
Senior Balance Sheet .....	13	Student Teaching, Office of, <i>see</i> Clinical	
Senior Physical Examination .....	13	Experiences	
Severely Retarded		Supervision and Administration of	
(Trainable) Pupils .....	24	Special Education Programs .....	23
Social and Philosophic Foundations		Symbols in Course Descriptions .....	76
of Education .....	66, 116	Teaching Certification .....	14
Social Studies .....	61-65	Theatre, <i>see</i> Speech-Communication, and	
Sociology .....	65	Theatre Arts	
Spanish .....	54	Therapeutic Recreation .....	39
Special Agencies .....	5	Transfer Students .....	11
Special Education		Unsatisfactory Progress .....	13
Programs .....	21-24, 85-88	Vocational-Technical	
Special Requirements .....	14	Education .....	66, 118-127
Speech-Communication, and			
Theatre Arts .....	49		
Student Assembly .....	4		

**University of Minnesota**

**72  
73**

**Bulletin**

AUGUST 31, 1972

**college of education  
continuing education classes**

Late Afternoon, Saturday Morning, and Extension

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William E. Gardner, Associate Dean .....	104 Burton .....	373-9880
Wayne W. Welch, Assistant Dean .....	104 Burton .....	373-9880
Frank B. Wilderson, Assistant Dean .....	104 Burton .....	373-9880
William H. Edson, Director of Student Personnel .....	206 Burton .....	373-2257
Charles J. Glotzbach, Assistant Director of Student Personnel and Chairman, Student Scholastic Standing Committee .....	206 Burton .....	373-2257
Arnold Woestehoff, Director, Bureau of Recommendations .....	400 12th Ave. S.E. ....	373-2266

See list of graduate advisers on page 26.

College of Education  
Continuing Education Classes

Late Afternoon, Saturday Morning, and Extension

UNIVERSITY OF MINNESOTA

# Continuing Education Classes

## GENERAL INFORMATION

The College of Education offers a wide variety of classes to teachers at times convenient to them. Some courses are part of the day school schedule and are offered in late afternoon or on Saturday morning; others are offered through Continuing Education and Extension (formerly General Extension Division). Because registration procedures differ, teachers are cautioned to read the bulletin carefully.

### Late Afternoon and Saturday Morning Classes

**Admission** — Teachers who plan to register for late afternoon and Saturday morning classes must be admitted to the College of Education or the Graduate School. A teacher planning a program of study leading to a degree should file an application for admission and include with the application transcripts of all previous academic work.

*Teachers wishing to pursue work leading to the master of education degree apply for admission to the College of Education through the Office of Admissions and Records. Graduates of the College of Education apply at the Education Window, Morrill Hall; all others apply at the Student Personnel Office, 206 Burton Hall, for a description of these programs.*

*Teachers wishing to pursue work leading to the master of arts, specialist in education, doctor of education, or the doctor of philosophy apply for admission to the Graduate School in the Graduate School Office, 310 Johnston Hall. See the Graduate School Bulletin for a description of these programs.*

A teacher who wishes to take courses but who has not been formally admitted to a degree program in the College of Education or in the Graduate School may be admitted as an adult special student in the College of Education. Graduates of the College of Education need not apply for admission as an adult special student; they need only secure a permit to register at the Education Window in Morrill Hall. All others should secure the adult special application form in the Office of Admissions and Records, Morrill Hall, and return the application to that office as early as possible before registration. Only those credits earned *in the first quarter* of adult special registration may be transferred to a Graduate School record. Those who have been admitted as adult special students and wish to proceed in a degree program should apply for admission to the specific program early in the first quarter of registration as an adult special student. Courses numbered 8-000 or above are reserved for students who have been admitted to the Graduate School; adult special students are *not* permitted to register for these courses.

**Tuition and Fees** — Applicants for admission are required to pay the following fees for evaluation of credentials: \$10 for undergraduate, M.Ed., Adult Special students; \$15 for Graduate School students.

The fee for part-time registration in the College of Education is \$14 per credit for residents of the state and \$39.25 per credit for nonresidents. If 6 or more credits are taken, a student services fee of \$45.50 is required.

The fee for registration in the Graduate School for 6 credits (or two courses) or less, or thesis-only is \$100 for residents and \$253 for nonresidents. Graduate students taking more than 6 credits (or more than two courses) pay \$200 resident fees, and \$505 nonresident fees. The student services fee of \$45.50 is required of all students in the Graduate School except full-time elementary and secondary teachers-in-service taking fewer 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 the College of Education should be made to the Student Personnel Office (612) 373-2234; telephone requests for information about Graduate School should be made to (612) 373-2973.

**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 to attend 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 afternoon 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.

Adult special students who find it impossible to register during the regular registration period may register with the instructor on the first Saturday of classes; students in the Graduate School must register through an approved adviser during the regular registration period *before* the Saturday that classes begin if they wish to avoid a late fee.

### Continuing Education and Extension

**Admission** — Many courses are offered to teachers by the College of Education through Continuing Education and Extension. A teacher need not apply for admission to the College of Education or Graduate School to register for courses through Continuing Education and Extension unless the courses are to be used in a program of study leading to a degree. Entry to classes is limited only by the prerequisites listed. Courses numbered 5-000 or above may be taken for graduate credit; courses numbered 8-000 or above are open only to persons who have been admitted to a program in the Graduate School.

Upon the recommendation of the adviser, the Graduate School will accept on a degree program a maximum of 12 credits earned through Continuing Education and Extension. The student may select the 12 credits he wishes to transfer.

Students in master of education programs in the College of Education should consult their advisers to determine the number of credits earned in Continuing Education and Extension which may be transferred to their programs.

**Tuition and Fees** — The following tuition and fee schedule for courses offered through Continuing Education and Extension is in effect:

1-xxx and 3-xxx level courses .....	\$14 per credit
5-xxx level courses .....	\$15 per credit
8-xxx level courses .....	\$16 per credit

Special fees may be charged for use of a laboratory, extra materials, or audio-visual equipment.

A student who concurrently registers for a late afternoon or Saturday morning class and a Continuing Education class must register on separate forms and pay both day and extension tuition and fees.

For complete information on registration and fees, see the *Extension Classes Bulletin* or contact Extension Classes (612) 373-3195.

**Registration** — In-service teachers may register for courses offered through Continuing Education and Extension in 57 Nicholson Hall. Fall registration will begin on September 7 and conclude on September 15. Registration hours are from 12 noon to 8 p.m. For complete information about registration procedures, including mail registration, consult the 1972-73 *Extension Classes Bulletin*. A copy of the bulletin may be obtained by calling (612) 373-3195.

## TEACHER PLACEMENT SERVICE

The College of Education provides placement service for its qualified students and graduates for a nominal fee, helping them to secure the kinds of positions they desire. The fee entitles the student to placement service for a 1-year period ending October 1. All graduating seniors and candidates for the master of education degree are required to register with the Bureau of Recommendations, 400-12th Avenue S.E., or to secure an official exemption form from that office.

## EQUAL OPPORTUNITY

The Board of Regents has committed itself and the University of Minnesota to the policy that there shall be no discrimination in the treatment of any person because of race, creed, color, sex, or national origin. This is a guiding policy in the admission of students in all colleges and in their academic pursuits. It is also a governing principle in University-owned and University-approved housing, in food services, student unions, extracurricular activities, and all other student and staff services. This policy must be adhered to 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

See page 6 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.

## ART EDUCATION (ArEd)

### LATE AFTERNOON AND SATURDAY MORNING CLASSES

(See inside back cover for registration procedures)

#### FALL QUARTER, 1972

- 5-318. ART EDUCATION IN EUROPE. (3 cr; limited to 30 students) IX-X M, WuH 110, Slettehaugh
- 5-389. APPLICATION OF AESTHETIC THEORY IN EDUCATION. (3 cr; limited to 30 students) III-IV S, WuH 110, Slettehaugh
- 8-306. SEMINAR: ART EDUCATION. (1 cr; limited to 20 students) IX-X T, WuH 130, Olson

#### WINTER QUARTER, 1973

- 5-386. IMPROVING ART PROGRAMS IN THE SCHOOLS. (4 cr; limited to 30 students; prereq tchg exper or #) III-IV S, Olson
- 8-306. SEMINAR: ART EDUCATION. (1 cr; limited to 20 students) IX-X T, Kain

#### SPRING QUARTER, 1973

- 5-302. CURRICULUM BUILDING IN ART EDUCATION: INNOVATIONS. (4 cr) III-IV S, Kain
- 5-316. INTERCULTURAL EDUCATION THROUGH ART. (3 cr) IX-X M, Slettehaugh
- 8-306. SEMINAR: ART EDUCATION. (1 cr; limited to 20 students) IX-X T, Slettehaugh

### EXTENSION CLASSES

(See inside back cover for registration procedures)

#### FALL QUARTER, 1972

- 1-207. EXPERIENCES WITH PICTORIAL EXPRESSION. (3 cr; \$42 plus \$2 materials fee) 6:20-8:50 Th, WuH 240, Olson
- 3-009. WEAVING WITHOUT A LOOM. (4 cr; \$56) 6:20-8:50 T, WuH 340, Smits

- 3-020. CONTEMPORARY CRAFTS. (3 cr; limited to 30 students; \$42) 6:20-8:50 T, Kellogg HS 237, Kain
- 3-030. PUPPETRY. (3 cr; limited to 30 students; \$42) 6:20-8:50 T, WuH 220, Olson
- 5-020. ADVANCED CONTEMPORARY CRAFTS. (4 cr; prereq 3-020; \$60) 6:20-8:50 Th, WuH 210, Kain

#### WINTER QUARTER, 1973

- 1-208. EXPERIENCES WITH DESIGN AND MATERIALS. (3 cr; \$42 plus \$2 materials fee) 6:20-8:50 Th, WuH 240, Olson
- 3-001. SURVEY OF ART ACTIVITIES. (4 cr; \$56) 6:20-8:50 T, Richfield HS 215, Hiniker
- 3-009. WEAVING WITHOUT A LOOM. (4 cr; \$56) 6:20-8:50 Th, WuH 340, Smits
- 5-302. CURRICULUM BUILDING IN ART EDUCATION: INNOVATIONS. (4 cr; \$60) 6:20-8:50 W, WuH 110, Slettehaugh
- 5-316. INTERCULTURAL EDUCATION THROUGH ART. (3 cr; \$45) Special Term—February 9, 5:00-9:00 p.m.; February 10, 9:00 a.m.-6:00 p.m., 7:00 p.m.-9:00 p.m.; February 11, 1:00 p.m.-6:00 p.m. 135 WuH, (some off-campus trips); Slettehaugh

#### SPRING QUARTER, 1973

- 1-209. EXPERIENCES WITH FUNCTIONAL DESIGN AND CRAFTS. (3 cr; \$42 plus \$2 materials fee) 6:20-8:50 Th, WuH 220, Olson
- 3-001. SURVEY OF ART ACTIVITIES. (4 cr; \$56) 6:20-8:50 T, Sandburg JHS 204, Hiniker
- 3-009. WEAVING WITHOUT A LOOM. (4 cr; \$56) 6:20-8:50 T, WuH 340, Smits

## CHILD PSYCHOLOGY (CPsy)

### LATE AFTERNOON AND SATURDAY MORNING CLASSES

(See inside back cover for registration procedures)

#### FALL QUARTER, 1972

- 8-336. ADVANCED SOCIAL DEVELOPMENT. (3 cr; prereq #) 3:45-5:00 TTh, CD 218, Hartup
- 8-347. ADVANCED LEARNING IN CHILDREN. (3 cr; prereq Psy 5-013 or #) 3:45-5:00 MW, CD 218, Wozniak

#### WINTER QUARTER, 1973

- 5-319. CLINICAL PROCEDURES WITH CHILDREN. (4 cr; prereq 12 cr in psy, ed psy, soc or child psy) 9:00-11:30 S, Gross
- 8-333. ADVANCED PERSONALITY DEVELOPMENT. (3 cr; prereq #) 3:45-5:00 MW, Masters
- 8-343. ADVANCED COGNITIVE DEVELOPMENT. (3 cr; prereq 12 cr child psy or psy) 3:45-5:00 TTh, Flavell

#### SPRING QUARTER, 1973

- 8-341. ADVANCED PERCEPTION IN CHILDREN. (3 cr; prereq Psy 5-031 and #) 3:45-5:00 MW, Yonas
- 8-345. ADVANCED LANGUAGE DEVELOPMENT. (3 cr; prereq Ling 5-001 and 12 cr in child psy or psy and #) 3:45-5:00 TTh, Maratsos

## EXTENSION CLASSES

(See inside back cover for registration procedures)

### FALL QUARTER, 1972

- 3-301. CHILD PSYCHOLOGY. (4 cr; prereq 5 cr intro psy; \$56) Section 1 — 7:00-9:30 M, Sandburg JHS 204, Acredolo, Sawin (limited to 35 students); Section 2 — 6:20-8:50 T, CD 215, Dontas
- 5-311. BEHAVIOR PROBLEMS. (4 cr; prereq 3-301 or equiv; \$60) 6:20-8:50 M, Pt 215, Morris
- 5-319. CLINICAL PROCEDURES WITH CHILDREN. (4 cr; prereq 12 cr in psy, ed psy, soc or child psy; limited to 55 students; \$60) 6:20-8:50 T, Pt 215, Gross
- 5-331. PROCESSES OF SOCIALIZATION OF CHILDREN. (4 cr; prereq 3-301 or grad; limited to 35 students; \$60) 7:00-9:30 Th, Sandburg JHS 210, Anderson

### WINTER QUARTER, 1973

- 3-301. CHILD PSYCHOLOGY. (4 cr; prereq 5 cr intro psy; \$56) Section 1 — 4:00-6:30 T, CD 215, Potter; Section 2 — 7:00-9:30 W, Richfield HS 341, C Peterson
- 5-303. ADOLESCENT PSYCHOLOGY. (4 cr; prereq 5 cr intro psy; \$60) 6:20-8:50 T, Pt 214, R Peterson
- 5-311. BEHAVIOR PROBLEMS. (4 cr; prereq 3-301 or equiv; \$60) 6:20-8:50 W, Pt 215, Ireton
- 5-313. PSYCHOLOGY OF ATYPICAL CHILDREN. (4 cr; prereq 3-301 or equiv; limited to 60 students; \$60) 6:20-8:50 M, Pt 215, Brown
- 5-315. INTRODUCTION TO MENTAL RETARDATION. (4 cr, \$SpEd 5-120; prereq 3-301 or equiv; \$60) 6:20-8:50 Th, Pt 215, Danner

### SPRING QUARTER, 1973

- 3-301. CHILD PSYCHOLOGY. (4 cr; prereq 5 cr intro psy; \$56) 7:00-9:30 T, Kellogg HS 235, Maurer
- 5-303. ADOLESCENT PSYCHOLOGY. (4 cr; prereq 5 cr intro psy; \$60) 6:30-9:00 T, Harding HS 115-117, Tomlinson
- 5-311. BEHAVIOR PROBLEMS. (4 cr; prereq 3-301 or equiv; \$60) 7:30-10:00 M, Pt 215, Reed
- 5-331. PROCESSES OF SOCIALIZATION OF CHILDREN. (4 cr; prereq 3-301 or grad; \$60) 6:20-8:50 W, Pt 215, Mokros

## EDUCATIONAL ADMINISTRATION (EdAd)

### LATE AFTERNOON AND SATURDAY MORNING CLASSES

(See inside back cover for registration procedures)

### FALL QUARTER, 1972

- 8-201. FOUNDATIONS OF EDUCATIONAL ADMINISTRATION. (3 cr; limited to 25 students) IX-X M, GH 202, Ammentorp
- 8-202. FOUNDATIONS OF EDUCATIONAL ADMINISTRATION. (3 cr; limited to 25 students) IX-X W, GH 202, Jackson
- 8-210. PUBLIC SCHOOL FINANCE. (3 cr) IX-X Th, GH 202, Mueller
- 8-215. THE ELEMENTARY SCHOOL PRINCIPALSHIP. (3 cr; prereq 8-201 and 8-202, or #) IX-X T, GH 202, McGuire
- 8-218. SEMINAR: THE SOCIAL ORGANIZATION OF SCHOOLS. (3 cr; prereq ed ad major or #) IX-X Th, 154 DinC

- 8-224. LEGAL ASPECTS OF PUBLIC SCHOOL ADMINISTRATION. (3 cr; limited to 30 students) IX-X W, GH 211, Hooker
- 8-265. ADMINISTERING THE HIGH SCHOOL PROGRAM. (3 cr) IX-X T, GH 211, Nickerson
- 8-274. THE TWO-YEAR COLLEGE. (3 cr) IX-X M, GH 211, Morgan

**WINTER QUARTER, 1973**

- 8-201. FOUNDATIONS OF EDUCATIONAL ADMINISTRATION. (3 cr; limited to 25 students) IX-X W, Ammentorp
- 8-202. FOUNDATIONS OF EDUCATIONAL ADMINISTRATION. (3 cr; limited to 25 students) III-IV S, Jackson
- 8-216. RECENT RESEARCH IN ELEMENTARY SCHOOL ADMINISTRATION. (3 cr; prereq 8-215) IX-X T
- 8-226. EDUCATIONAL FACILITIES PLANNING. (3 cr) IX-X T, Alkire
- 8-227. PUBLIC SCHOOL PERSONNEL PROGRAMS. (3 cr) IX-X W, Stark
- 8-235. SEMINAR: HUMANISM IN SCHOOL ADMINISTRATION. (3 cr; prereq 8-218, ed ad major or #) 1:30-3:30 S, Popper
- 8-237. SEMINAR: EDUCATIONAL LAW. (1-3 cr; prereq 8-224 or #) IX-X M, Hooker
- 8-253. ADMINISTRATION IN HIGHER EDUCATION. (3 cr; prereq Educ 8-250) IX-X W, Wharton
- 8-264. THE SECONDARY SCHOOL PRINCIPALSHIP. (3 cr) IX-X W
- 8-275. TWO-YEAR COLLEGE ADMINISTRATION. (3 cr; prereq 8-274 or #) IX-X M, Morgan

**SPRING QUARTER, 1973**

- 5-103. SUPERVISION AND ADMINISTRATION OF SPECIAL EDUCATION. (3 cr; prereq #) IX-X M, Weatherman
- 8-201. FOUNDATIONS OF EDUCATIONAL ADMINISTRATION. (3 cr; limited to 25 students) IX-X W, Ammentorp
- 8-202. FOUNDATIONS OF EDUCATIONAL ADMINISTRATION. (3 cr; limited to 25 students) IX-X Th, Jackson
- 8-203. THE COMMUNITY SCHOOL. (3 cr) III-IV S, Popper
- 8-211. SCHOOL BUSINESS MANAGEMENT. (3 cr; prereq 8-210 or #) IX-X T, Sederberg
- 8-217. SEMINAR: ELEMENTARY SCHOOL ADMINISTRATION. (3 cr; prereq 8-216 or #) IX-X W, Lambert
- 8-222. ADMINISTRATIVE INFORMATION SYSTEMS. (3 cr; prereq 8-220, 8-221 and ed ad major or #) IX-X Th, Morris
- 8-224. LEGAL ASPECTS OF PUBLIC SCHOOL ADMINISTRATION. (3 cr; limited to 30 students) IX-X T, Hooker
- 8-234. SEMINAR: EDUCATIONAL FINANCE. (3 cr; limited to 25 students; prereq 8-210 or #) I-II S, Mueller
- 8-238. SEMINAR: THEORY AND RESEARCH. (3 cr; prereq 8-218, 8-235, ed ad major or #) IX-X T, Hendrix and Morris
- 8-242. ADMINISTRATIVE ORGANIZATION AND STAFFING OF SCHOOL SYSTEMS. (3 cr; prereq #) IX-X M, Stark
- 8-276. SEMINAR: ADMINISTRATION OF CURRICULUM IN THE TWO-YEAR COLLEGE. (3 cr; prereq 8-274) IX-X M, Morgan
- 8-290. FINANCING HIGHER EDUCATION. (3 cr; prereq #) IX-X T, Ammentorp

## EXTENSION CLASSES

(See inside back cover for registration procedures)

### FALL QUARTER, 1972

- 5-101. PUBLIC SCHOOL ADMINISTRATION. (3 cr; not open to majors in ed ad; pre-req senior, 9 cr in educ; \$45) 7:00-9:30 T, Sandburg JHS 204, Popper
- 5-128. WORKSHOP: EDUCATIONAL ADMINISTRATION. (3 cr; prereq practicing ed admin or #; \$45) 7:00-9:30 W, Richfield HS 215, Ammentorp, Christensen

## EDUCATIONAL PSYCHOLOGY

### Counseling and Student Personnel Psychology (CSPP)

#### LATE AFTERNOON AND SATURDAY MORNING CLASSES

(See inside back cover for registration procedures)

### FALL QUARTER, 1972

- 5-101. FOUNDATIONS OF CAREER DEVELOPMENT. (3 cr) IX-X W, Bu 123, Hansen
- 5-130. INTRODUCTION TO GUIDANCE. (3 cr; limited to 45 students; prereq 9 cr educ) IX-X T, Bu 123, Tennyson
- 8-602. COUNSELING PRACTICUM I. (3 cr, †8-602, †8-603, †8-604; limited to 25 students; prereq †8-302 and #) IX-X TTh, Bu 125, Staff

### WINTER QUARTER, 1973

- 8-603. COUNSELING PRACTICUM II. (3 cr, †8-602, †8-603, †8-604; limited to 25 students; prereq †8-303 and 8-602 and #) IX-X TTh, Staff

### SPRING QUARTER, 1973

- 8-604. COUNSELING PRACTICUM III. (3 cr, †8-602, †8-603, †8-604; limited to 25 students; prereq †8-304 and 8-603 and #) IX-X TTh, Staff

## EXTENSION CLASSES

(See inside back cover for registration procedures)

### FALL QUARTER, 1972

- 5-110. COUNSELING PROCEDURES. (3 cr; limited to 35 students; \$45) 7:00-9:30 M, Richfield HS 215, Shaffer
- 5-130. INTRODUCTION TO GUIDANCE. (3 cr; prereq 9 cr in education; \$45) Section 1—6:00-8:00 T, Richfield HS 215, Tennyson; Section 2—7:00-9:30 T, Sandburg JHS 211, Briskin

### WINTER QUARTER, 1973

- 5-110. COUNSELING PROCEDURES. (3 cr; limited to 35 students; \$45) 7:00-9:30 M, Bu 125, Shaffer
- 5-130. INTRODUCTION TO GUIDANCE. (3 cr; prereq 9 cr in education; \$45) 7:00-9:30 T, Sandburg JHS 211, Briskin
- 5-505. SEMINAR: INTERNATIONAL AND INTERCULTURAL DIMENSIONS OF COUNSELING. (2 cr; prereq #; \$30) 6:20-8:50 W, CD 105, Pedersen

### **SPRING QUARTER, 1973**

- 5-110. COUNSELING PROCEDURES. (3 cr; limited to 35 students; \$45) 7:00-9:30 M, Sandburg JHS 211, Shaffer
- 5-130. INTRODUCTION TO GUIDANCE. (3 cr; prereq 9 cr in education; \$45) 7:00-9:30 T, Sandburg JHS 211, Briskin

## **Psychological Foundations (PsyF)**

### **LATE AFTERNOON AND SATURDAY MORNING CLASSES**

(See inside back cover for registration procedures)

### **FALL QUARTER, 1972**

- 5-141. PSYCHOLOGY OF SCHOOL LEARNING. (3 cr) IX TTh, Jones 4, Bart
- 5-148. PSYCHOLOGY AND PEDAGOGY OF READING. (3 cr) 4:30-6:45 W, WuH 230, Samuels
- 8-520. SEMINAR: RESEARCH PLANNING. (1 cr per qtr) IX-X T, Bu 330, Hoyt

### **WINTER QUARTER, 1973**

- 5-120. EDUCATIONAL MEASUREMENT IN THE CLASSROOM. (3 cr) IX-X MW, Joselyn
- 5-162. PERSONALITY AND SOCIAL DEVELOPMENT. (3 cr, \$5-160; prereq 5 cr intro psy) 6:15-8:15 TTh, Rest
- 8-520. SEMINAR: RESEARCH PLANNING. (1 cr per qtr) IX-X T, Hoyt

### **SPRING QUARTER, 1973**

- 5-120. EDUCATIONAL MEASUREMENT IN THE CLASSROOM. (3 cr) IX-X MW, Stecklein
- 8-520. SEMINAR: RESEARCH PLANNING. (1 cr per qtr) IX-X T, Hoyt
- 8-565. DEVELOPMENT OF MORAL-POLITICAL JUDGMENT AND PROGRAMS IN VALUE EDUCATION. (2-4 cr; prereq #) 4:15-6:15 MW, Rest

### **EXTENSION CLASSES**

(See inside back cover for registration procedures)

### **FALL QUARTER, 1972**

- 5-110. INTRODUCTORY STATISTICAL METHODS. (3 cr; \$45) 6:20-8:50 Th, Bu 125, Hoyt
- 5-162. PERSONALITY AND SOCIAL DEVELOPMENT. (3 cr, \$5-160; prereq 5 cr intro psy; \$45) 6:20-8:50 M, Bu 120, Borow
- 5-170. SOCIAL PSYCHOLOGY OF EDUCATION. (4 cr; \$60) 6:20-8:50 T, Bu 123, Noonan
- 5-330. COMPUTER PROGRAMMING. (3 cr; prereq sr; \$45) 6:20-8:50 M, Bu 125, Anderson

### **WINTER QUARTER, 1973**

- 5-120. EDUCATIONAL MEASUREMENT IN THE CLASSROOM. (3 cr; \$45) 6:20-8:50 Th, Bu 120, Terwilliger
- 5-141. PSYCHOLOGY OF SCHOOL LEARNING. (3 cr; \$45) 4:30-7:00 W, Bu 123, Samuels
- 5-641. PRACTICUM: PRECISION TEACHING AND BEHAVIOR MODIFICATION. (1-3 cr [max 12 cr], \$5-640; prereq #; \$45) 6:20-8:50 W, Bu 125, Bland

### **SPRING QUARTER, 1973**

- 5-110. INTRODUCTORY STATISTICAL METHODS. (3 cr; \$45) 6:20-8:50 Th, Bu 125, Hoyt
- 5-162. PERSONALITY AND SOCIAL DEVELOPMENT. (3 cr, \$5-160; prereq 5 cr intro psy; \$45) 6:20-8:50 M, Bu 120, Borow
- 5-170. SOCIAL PSYCHOLOGY OF EDUCATION. (4 cr; \$60) 6:20-9:50 T, Bu 123, Noonan

## **Special Education (SpEd)**

### **LATE AFTERNOON AND SATURDAY MORNING CLASSES**

(See inside back cover for registration procedures)

#### **FALL QUARTER, 1972**

- 5-112. EDUCATION OF LEARNING-DISABLED CHILDREN. (3 cr; limited to 30 students) IX-X TTh, Pt 111
- 5-140. PSYCHO-SOCIAL AND EDUCATIONAL ASPECTS OF DEAFNESS. (3 cr) 4:00-6:00 W, Pt 111, Phillips

#### **WINTER QUARTER, 1973**

- 5-141. METHODS OF TEACHING SCHOOL SUBJECTS TO HEARING IMPAIRED. (3 cr; prereq CDis 5-708 or #) 4:00-6:00 T
- 5-143. TEACHING LANGUAGE TO HEARING IMPAIRED I. (3 cr; prereq 5-140) 4:00-6:00 Th, Phillips
- 5-145. TEACHING SPEECH TO THE HEARING IMPAIRED I. (3 cr; prereq #) 4:00-6:00 Th
- 5-150. EDUCATION OF EMOTIONALLY DISTURBED AND SOCIALLY MALADJUSTED CHILDREN. (3 cr; limited to 25 students; prereq grad or #) IX-X TTh, Wood
- 5-190. OUTSTANDING ABILITIES AID THE EDUCATIONAL PROCESS. (3 cr) IX-X T, Rubin

#### **SPRING QUARTER, 1973**

- 5-112. EDUCATION OF LEARNING-DISABLED CHILDREN. (3 cr; limited to 45 students) IX-X TTh, Phillips
- 5-144. TEACHING LANGUAGE TO HEARING IMPAIRED II. (3 cr; prereq #) 4:00-6:00 W
- 5-146. TEACHING SPEECH TO THE HEARING IMPAIRED II. (3 cr; prereq #) 4:00-6:00 Th

### **EXTENSION CLASSES**

(See inside back cover for registration procedures)

#### **FALL QUARTER, 1972**

- 5-150. EDUCATION OF EMOTIONALLY DISTURBED AND SOCIALLY MALADJUSTED CHILDREN. (3 cr; limited to 40 students; prereq grad or #; \$45) 6:20-8:50 T, Bu 125

#### **WINTER QUARTER, 1973**

- 5-150. EDUCATION OF EMOTIONALLY DISTURBED AND SOCIALLY MALADJUSTED CHILDREN. (3 cr; limited to 40 students; prereq grad or #; \$45) 6:30-9:00 W, Harding HS 182

# ELEMENTARY EDUCATION (Elem)

## LATE AFTERNOON AND SATURDAY MORNING CLASSES

(See inside back cover for registration procedures)

### FALL QUARTER, 1972

- 3-103. THE TEACHER AND THE ELEMENTARY SCHOOL. (2 cr, §3-101; prereq elem ed major) IX-X M, NH 211
- 5-100. ELEMENTARY SCHOOL CURRICULUM. (3 cr; limited to 35 students; prereq 3-101) IX-X T, CD 105 (for elem ed majors only)
- 5-108. SUPERVISION AND IMPROVEMENT OF INSTRUCTION. (3 cr; limited to 25 students; prereq 9 cr in education) III-IV S, Bu 125, Lambert
- 5-316. TEACHING AND SUPERVISION OF ENGLISH IN THE ELEMENTARY SCHOOLS. (3 cr; limited to 35 students; prereq 3-316 or elem tchg experience) IX-X Th, CD 105, Chase
- 5-317. MATERIALS LABORATORY FOR TEACHING ENGLISH IN ELEMENTARY SCHOOLS. (3 cr; limited to 25 students; prereq 3-316 or elem tchg experience) III-IV S, Bu 123, Dykstra
- 5-331. TEACHING AND SUPERVISION OF READING IN ELEMENTARY SCHOOL. (3 cr; limited to 40 students; prereq 9 cr in education) IX-X M, Bu 120, Aulls
- 5-333. INSTRUCTIONAL LEADERSHIP IN ELEMENTARY READING. (3 cr; limited to 30 students; prereq 5-331 or #) IX-X M, Bu 123, Manning
- 5-334. READING DIFFICULTIES. (3 cr; limited to 40 students; prereq 5-331 or SeEd 5-344) IX-X Th, Bu 120, D Pearson
- 5-346. TEACHING SCIENCE IN THE ELEMENTARY SCHOOL. (3 cr; limited to 30 students; prereq elem tchg experience or #) IX-X M, Pt 102, R Johnson
- 5-361. TEACHING SOCIAL STUDIES IN THE ELEMENTARY SCHOOL. (3 cr; limited to 30 students; prereq 3-101 or equiv) IX-X M, Pt 214, Ellis
- 5-376. CURRENT TRENDS IN KINDERGARTEN EDUCATION. (3 cr; limited to 30 students; prereq tchg experience in kindergarten or primary or #) IX-X Th, Bu 123, Hansen
- 8-347. THE ELEMENTARY SCHOOL SCIENCE PROGRAM: ARTICULATION AND COORDINATION. (3 cr; limited to 15 students; prereq 5-350 or 8-346) IX-X T, Pt 102, Humphreys
- 8-361. CURRICULUM CONSTRUCTION IN ELEMENTARY SOCIAL STUDIES. (3 cr; limited to 15 students; prereq 3-361 or 5-361 or #) IX-X T, Pt 214, Cogan

### WINTER QUARTER, 1973

- 5-100. ELEMENTARY SCHOOL CURRICULUM. (3 cr; limited to 35 students; prereq 3-101) IX-X T
- 5-300. LITERATURE FOR THE ELEMENTARY SCHOOL. (3 cr) I-II S, Odland
- 5-316. TEACHING AND SUPERVISION OF ENGLISH IN THE ELEMENTARY SCHOOLS. (3 cr; limited to 35 students; prereq 3-316 or elem tchg experience) IX-X Th, Chase
- 5-334. READING DIFFICULTIES. (3 cr; limited to 40 students; prereq 5-331 or SeEd 5-344) IX-X M, Schreiner
- 5-337. BEGINNING READING INSTRUCTION. (3 cr; prereq 3-331 and #) IX-X M, Manning
- 5-338. TEACHING READING IN THE INTERMEDIATE GRADES. (3 cr; prereq 3-331 and #) IX-X W, Aulls
- 5-350. ELEMENTARY SCHOOL SCIENCE: MATERIALS AND RESOURCES. (3 cr; prereq 5-349) II-IV S, Humphreys
- 5-362. MATERIALS LABORATORY FOR ELEMENTARY SOCIAL STUDIES TEACHERS. (3 cr; prereq 3-361 or 5-361 or #) IX-X W, Cogan

### **SPRING QUARTER, 1973**

- 5-100. **ELEMENTARY SCHOOL CURRICULUM.** (3 cr; limited to 35 students; prereq 3-101) IX-X Th
- 5-107. **DIAGNOSIS AND TREATMENT OF LEARNING DIFFICULTIES.** (3 cr) I-II S, Aulls
- 5-108. **SUPERVISION AND IMPROVEMENT OF INSTRUCTION.** (3 cr; limited to 25 students; prereq 9 cr in education) III-IV S
- 5-300. **LITERATURE FOR THE ELEMENTARY SCHOOL.** (3 cr) IX-X T, Green
- 5-317. **MATERIALS LABORATORY FOR TEACHING ENGLISH IN ELEMENTARY SCHOOLS.** (3 cr; prereq 3-316 or elem tchg experience) IX-X Th, Dykstra
- 5-331. **TEACHING AND SUPERVISION OF READING IN THE ELEMENTARY SCHOOL.** (3 cr; limited to 40 students; prereq 9 cr in education) IX-X M, Pearson
- 5-334. **READING DIFFICULTIES.** (3 cr; limited to 40 students; prereq 5-331 or SeEd 5-344) IX-X W, Pearson
- 5-349. **ELEMENTARY SCHOOL SCIENCE: CURRICULUM AND SUPERVISION.** (3 cr; prereq 3-346 or 5-346) IX-X M, Humphreys
- 5-361. **TEACHING SOCIAL STUDIES IN THE ELEMENTARY SCHOOL.** (3 cr; limited to 30 students; prereq 3-101 or equiv) III-IV S, Ellis
- 5-363. **WORKSHOP: CURRICULUM IMPLEMENTATION IN ELEMENTARY SCHOOL SOCIAL STUDIES.** (Cr ar [max 9]; prereq elem tchg experience and #) IX-X T, Ryan
- 5-377. **KINDERGARTEN: MATERIALS AND RESOURCES.** (3 cr; prereq 3-377 or 5-376 and tchg experience) IX-X Th, Hansen
- 8-300. **SPECIAL COLLECTIONS OF CHILDREN'S LITERATURE.** (3 cr) IX-X W, Odland

### **EXTENSION CLASSES**

(See inside back cover for registration procedures)

### **FALL QUARTER, 1972**

- 5-346. **TEACHING SCIENCE IN THE ELEMENTARY SCHOOL.** (3 cr; limited to 30 students; prereq elem tchg experience or #; \$45) 7:00-9:30 W, Harding HS 121, Humphreys
- 5-363. **WORKSHOP: CURRICULUM IMPLEMENTATION IN ELEMENTARY SCHOOL SOCIAL STUDIES.** (3 cr; limited to 30 students; prereq elem tch experience and #; \$45) 7:00-9:15 Th, Sandburg JHS 213, Ryan

## **FOUNDATIONS OF EDUCATION**

### **Higher Education (Educ)**

#### **LATE AFTERNOON AND SATURDAY MORNING CLASSES**

(See inside back cover for registration procedures)

### **FALL QUARTER, 1972**

- 5-184. **SUPERVISION OF STUDENT TEACHING.** (3 cr; prereq 15 cr in education or #) III-IV S, CD 105, Mork
- 8-251. **CURRICULUM TRENDS IN AMERICAN COLLEGES.** (3 cr; prereq 8-250, 18 cr in education or 1 yr graduate study in any field) I-II S, Bu 125, Eckert, Moen

### **WINTER QUARTER, 1973**

- 8-285. **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

### **SPRING QUARTER, 1973**

- 5-104. ADULT EDUCATION. (3 cr) IX-X W, Woods  
5-184. SUPERVISION OF STUDENT TEACHING. (3 cr; prereq 15 cr in education or #)  
IX-X W, Mork  
8-286. PROFESSIONAL EDUCATION OF TEACHERS. (3 cr; prereq 8-285 or #) III-IV S,  
Mork, Woestehoff

## **History and Philosophy of Education (HEd)**

### **LATE AFTERNOON AND SATURDAY MORNING CLASSES**

(See inside back cover for registration procedures)

### **FALL QUARTER, 1972**

- 5-110. INTERCULTURAL EDUCATION: SOCIAL SCIENCE AND SYSTEMS PERSPEC-  
TIVES. (3 cr) IX-X M, Pt 215, Harkins  
5-141. CRITICAL ISSUES IN CONTEMPORARY EDUCATION. (3 cr) IX-X W, Bu 120,  
Beck  
5-155. HISTORY OF WESTERN EDUCATIONAL THOUGHT. (3 cr) IX-X T, Pt 215,  
Bagley  
5-190. SOCIOLOGY OF EDUCATION. (3 cr, §Soc 5-953) IX-X W, CD 105, Weidman  
5-191. PROFESSIONALIZATION AND TEACHING. (3 cr) IX-X T, CD 215, Clark  
5-212. EDUCATION IN FUTURE SOCIAL SYSTEMS. (3 cr) IX-X T, Arch 20, Harkins

### **WINTER QUARTER, 1973**

- 5-125. ADOLESCENCE IN CHANGING SOCIAL INSTITUTIONS. (3 cr) IX-X T, Clark  
5-131. COMPARATIVE EDUCATION. (3 cr) IX-X W, Beck  
5-156. HISTORY OF IDEAS IN AMERICAN EDUCATION. (3 cr) IX-X T, Bagley  
5-200. INTERCULTURAL EDUCATION: INDIAN AMERICANS. (3 cr) IX-X M, Harkins  
5-210. APPLIED SOCIAL SCIENCE AND EDUCATIONAL FUTURES. (3 cr) IX-X T,  
Harkins

### **SPRING QUARTER, 1973**

- 5-080. EDUCATION IN CHINA. (3 cr) IX-X Th, Wong  
5-170. AMERICAN PRACMATISM AND EDUCATION. (3 cr) IX-X T, Bagley  
5-182. COMPARATIVE PHILOSOPHIES OF EDUCATION. (3 cr) IX-X W, Beck  
5-201. INTERCULTURAL EDUCATION: AMERICAN INDIANS. (3 cr; prereq 5-200) IX-X  
M, Harkins  
5-211. SOCIAL PLANNING AND EDUCATIONAL FUTURES. (3 cr) IX-X T, Harkins

## **MUSIC EDUCATION (MuEd)**

### **LATE AFTERNOON AND SATURDAY MORNING CLASSES**

(See inside back cover for registration procedures)

### **FALL QUARTER, 1972**

- 5-217. HISTORICAL FOUNDATIONS OF MUSIC EDUCATION. (4 cr; prereq #) IX-X Th,  
ScH 103, Turrentine

- 5-306. TEACHING MUSIC LITERATURE. (4 cr; prereq 3-011 or 3-302 or #) IX-X M, ScH 103, Borg
- 5-421. SELECTION, CONDUCTING OF CHORAL MATERIALS. (4 cr; prereq sr) IX-X W, ScH 3, Caswell
- 8-281. SEMINAR: CURRICULUM DEVELOPMENT. (4 cr; prereq MA in mus or mus ed) IX-X T, ScH 103, Turrentine

#### WINTER QUARTER, 1973

- 5-111. BIBLIOGRAPHY. (4 cr) IX-X Th, Turrentine
- 5-214. PSYCHOLOGICAL FOUNDATIONS. (5 cr; prereq #) IX-X W, Caswell
- 5-308. TEACHING MUSIC READING. (4 cr; prereq 3-011, 3-302 or #) IX-X M, Borg
- 8-282. SEMINAR: CURRICULUM DEVELOPMENT. (4 cr; prereq 8-281) IX-X T, Borg

#### SPRING QUARTER, 1973

- 5-211. PHILOSOPHIES OF MUSIC EDUCATION. (4 cr) IX-X M, Borg
- 5-581. SELECTION OF INSTRUMENTAL MATERIALS I. (4 cr) IX-X Th, Turrentine
- 8-283. SEMINAR: CURRICULUM DEVELOPMENT. (4 cr; prereq 8-282) IX-X T, Caswell

## SCHOOL OF PHYSICAL EDUCATION

### Physical Education (PE)

#### LATE AFTERNOON AND SATURDAY MORNING CLASSES

(See inside back cover for registration procedures)

#### FALL QUARTER, 1972

- 5-100. TEACHING PHYSICAL EDUCATION FOR THE HANDICAPPED. (3 cr; prereq #) 4:15-6:00 T, CH 216, 1 hr ar, Cato
- 5-130. MOTOR LEARNING AND HUMAN PERFORMANCE. (3 cr; prereq 3-113 or #) I-II S, CH 214, 1 hr ar, Bole
- 5-152. CURRICULUM DEVELOPMENT. (3 cr; prereq 5-151 or equiv) 4:15-6:00 M, CD 206, 1 hr ar, Young
- 5-255. INTRAMURALS-EXTRAMURALS. (4 cr) 4:15-5:30 MW, CH 214, Anderson, Gunderson, Mueller
- 5-980. INTRODUCTION TO RESEARCH. (3 cr; prereq #) 4:15-5:30 TTh, CH 420
- 8-110. ADMINISTRATION: GENERAL PRINCIPLES AND PROCEDURES. (3 cr) 4:15-6:00 W, CH 206, 1 hr ar, Jaeger

#### WINTER QUARTER, 1973

- 5-101. PHYSICAL EDUCATION ACTIVITIES FOR THE HANDICAPPED. (3 cr; prereq 5-100 or SpEd 5-101) 4:15-6:00 M, Cato
- 5-121. CONTRIBUTIONS OF BASIC SCIENCE TO PHYSICAL EDUCATION. (3 cr; prereq #) I-II S, Wilson, Stoner
- 5-695. PRACTICUM: INTRAMURALS-EXTRAMURALS. (3-5 cr; prereq 5-255) 4:15-6:00 T, B Anderson
- 8-121. KINESIOLOGY: ELECTROMYOGRAPHIC ANALYSIS. (3 cr; prereq 5-120 and #) 4:15-6:00 T, Wilson, Stoner

### **SPRING QUARTER, 1973**

- 3-161. COACHING WOMEN IN COMPETITIVE SPORTS. (3 cr; prereq upper div) 4:15-6:00 W, Gunderson
- 5-102. PRACTICUM: PHYSICAL EDUCATION FOR THE HANDICAPPED. (3 cr; prereq 5-101 or #) 4:15-5:00 Th, Cato
- 5-110. SUPERVISION OF SCHOOL HEALTH AND PHYSICAL EDUCATION. (3 cr, §Hth 5-110; prereq #) III-IV S, 1 hr ar, Slocum
- 5-695. PRACTICUM: INTRAMURALS-EXTRAMURALS. (3-5 cr; prereq 5-255) 4:15-6:00 Th, B Anderson
- 8-113. COLLEGE PHYSICAL EDUCATION ADMINISTRATION. (3 cr; prereq 8-110) 4:15-6:00 T, Jaeger
- 8-150. PROFESSIONAL PREPARATION OF PHYSICAL EDUCATION TEACHERS. (3 cr; prereq 5-151 or equiv) 4:15-6:00 Th, Young

### **EXTENSION CLASSES**

(See inside back cover for registration procedures)

### **FALL QUARTER, 1972**

- 3-181. DANCE THERAPY. (2 cr; limited to 18 students; \$28 plus \$3 facility fee) 4:30-6:30 W, NGW Dance Studio, Taylor
- 5-700. WORKSHOP: DANCE IN EDUCATION. (2 or 4 cr per qtr [max 12 cr]; this offering 2 cr; limited to 25 students; \$30) Focus of this offering: modern dance for children at elementary level. Section 1—4:30-6:30 T, Portland Elementary School, Gym No. 2, 7201 4th Ave. So, Richfield, Schley; Section 2—6:30-8:30 T, Portland Elementary School, Gym No. 2, 7201 4th Ave So, Richfield, Schley
- 5-700. WORKSHOP: DANCE IN EDUCATION. (2 or 4 cr per qtr [max 12 cr]; this offering 2 cr; limited to 25 students; \$30) Focus of this offering: modern dance in the secondary school. Section 1—4:30-6:30 W, Lincoln Hills Elementary School, Gym, 75th and Penn Ave So, Richfield, Heitler; Section 2—4:30-8:30 W, Lincoln Hills Elementary School, Gym, 75th and Penn Ave So, Richfield, Heitler

### **WINTER QUARTER, 1973**

- 3-360. THE INTRAMURAL-EXTRAMURAL-INTERSCHOOL SPORTS PROGRAM. (3 cr; women only; limited to 25 students; prereq phy ed major or minor, junior; \$42) 6:00-8:00 M, NGW 3, 1 hr ar
- 3-370. COACHING BASKETBALL AND VOLLEYBALL. (2 cr; coed; limited to 25 students; prereq 1-550 and 1-551 or 1-652 or #; \$28 plus \$3 facility fee) 6:00-8:00 M, NGW 3, 153, Kramer
- 5-700. WORKSHOP: DANCE IN EDUCATION. (2 or 4 cr per qtr [max 12 cr]; this offering 2 cr; limited to 25 students; \$30) Focus of this offering: creative dance for children at elementary level. Section 1—4:30-6:30 T, Portland Elementary School, Gym No. 2, 7201 4th Ave So, Richfield, Schley; Section 2—6:30-8:30 T, Portland Elementary School, Gym No. 2, 7201 4th Ave So, Richfield, Schley
- 5-700. WORKSHOP: DANCE IN EDUCATION. (2 or 4 cr per qtr [max 12 cr]; this offering 2 cr; limited to 25 students; \$30) Focus of this offering: modern dance in the secondary school. Section 1—4:30-6:30 W, Lincoln Hills Elementary School, Gym, 75th and Penn Ave So, Richfield, Heitler; Section 2—6:30-8:30 W, Lincoln Hills Elementary School, Gym, 75th and Penn Ave So, Richfield, Heitler

### **SPRING QUARTER, 1973**

- 1-800. WATER SAFETY INSTRUCTOR'S COURSE. (2 cr; limited to 28 students; prereq current American Red Cross Senior Life Saving Certificate; \$56 plus \$3 facility fee) 5:30-8:30 T, NGW 58, Stoner
- 5-620. PRACTICUM: PREVENTION AND CARE OF ATHLETIC INJURIES. (3 cr; limited to 35 students; prereq #; \$45 plus \$5 facility fee) 7:00-9:30 W, CH, Stein

- 5-700. WORKSHOP: DANCE IN EDUCATION.** (2 or 4 cr per qtr [max 12 cr]; this offering 2 cr; limited to 25 students; \$30) Focus of this offering: creative dance for children at elementary level. Section 1—4:30-6:30 T, Portland Elementary School, Gym No. 2, 7201 4th Ave So, Richfield, Schley; Section 2—6:30-8:30 T, Portland Elementary School, Gym No. 2, 7201 4th Ave So, Richfield, Schley
- 5-700. WORKSHOP: DANCE IN EDUCATION.** (2 or 4 cr per qtr [max 12 cr]; this offering 2 cr; limited to 25 students; \$30) Focus of this offering: modern dance in the secondary school. Section 1—4:30-6:30 W, Lincoln Hills Elementary School, Gym, 75th and Penn Ave So, Richfield, Heitler; Section 2—6:30-8:30 W, Lincoln Hills Elementary School, Gym, 75th and Penn Ave So, Richfield, Heitler

## School Health Education (Hlth)

### LATE AFTERNOON AND SATURDAY MORNING CLASSES

(See inside back cover for registration procedures)

#### FALL QUARTER, 1972

- 5-150. CURRICULUM: FAMILY LIFE AND SEX EDUCATION IN THE SECONDARY SCHOOLS.** (3 cr; limited to 25 students) 4:15-6:00 M, NGW 3, 1 hr ar, Slocum

#### SPRING QUARTER, 1973

- 5-110. SUPERVISION OF SCHOOL HEALTH AND PHYSICAL EDUCATION.** (3 cr, §PE 5-110; prereq #) III-IV S, Slocum
- 5-140. ADMINISTRATION OF THE SCHOOL HEALTH PROGRAM.** (3 cr) 4:15-6:00 M, Slocum
- 5-350. FAMILY LIFE AND SEX EDUCATION IN ELEMENTARY SCHOOLS.** (3 cr) 4:15-6:00 W, Slocum

### EXTENSION CLASSES

(See inside back cover for registration procedures)

#### FALL QUARTER, 1972

- 5-100. DRIVER EDUCATION I.** (4 cr, §SeEd 5-100; prereq #; limited to 32 students; \$60 plus \$12 special fee) 7:00-10:00 W, Mounds View HS, Gebhard
- 5-350. FAMILY LIFE AND SEX EDUCATION IN THE ELEMENTARY SCHOOLS.** (3 cr; limited to 45 students; \$45) 4:00-6:30 M, Central Park Elementary School, 535 W Co Rd B2, Roseville, Peterson
- 5-602. THE DRIVER SIMULATOR.** (4 cr, §SeEd 5-602; prereq teacher in-service, 5-100 and #; limited to 20 students; \$60) 7:00-10:00 M, Richfield HS 116, Lewis

#### WINTER QUARTER, 1973

- 5-101. DRIVER EDUCATION II.** (4 cr, §SeEd 5-101; prereq 5-100 and #; limited to 32 students; \$60 plus \$12 special fee) 7:00-10:00 W, Mounds View HS, Gebhard

#### SPRING QUARTER, 1973

- 5-130. SAFETY EDUCATION.** (4 cr; limited to 32 students; prereq sr; \$60) 7:00-10:00 T, Harding HS 129, Thissen
- 5-350. FAMILY LIFE AND SEX EDUCATION IN THE ELEMENTARY SCHOOLS.** (3 cr; limited to 45 students; \$45) 4:15-6:30 W, Room 211A, Technical Education Center, West Anoka Hwy 10, Anoka, Peterson

# SECONDARY EDUCATION (SeEd)

## LATE AFTERNOON AND SATURDAY MORNING CLASSES

(See inside back cover for registration procedures)

### FALL QUARTER, 1972

- 5-105. AUDIO-VISUAL MATERIALS IN EDUCATION. (3 cr; prereq sr; lab chg req) I-II S, NH 211, 1 hr ar, Pearson
- 5-106. CO-ORDINATING AN AUDIO-VISUAL EDUCATION PROGRAM. (3 cr; prereq 5-105 or #; lab chg req) IX-X T, WeH 206, Shragg
- 5-108. NONPROJECTED AUDIO-VISUAL MATERIALS AND EQUIPMENT LABORATORY. (3 cr; limited to 15 students; prereq 5-105 or ¶5-105; lab chg req) Lect IX-X M, lab IX-X Th, WeH 206, Chang
- 5-110. APPLIED INSTRUCTIONAL MEDIA EVALUATION AND SELECTION. (3 cr; limited to 30 students; prereq 5-105) IX-X W, WeH 202, Chang
- 5-113. PRINCIPLES OF SECONDARY SCHOOL CURRICULUM. (3 cr; prereq 3-155) IX-X M, Bu 125, Speiker
- 5-129. TRENDS AND ISSUES IN SECONDARY CURRICULUM. (3 cr; prereq 5-113 or equiv) IX-X T, PeikH 355, Kimpston
- 5-152. TECHNIQUES OF INSTRUCTION IN SOCIAL STUDIES. (3 cr; prereq 5-150) IX-X T, PeikH 165, Mackey
- 5-323. TOPICS IN LANGUAGE AND THE TEACHING OF ENGLISH. (3 cr) IX-X TTh, PeikH 375, Shroyer
- 5-344. TEACHING READING IN SECONDARY SCHOOLS. (3 cr; limited to 25 students; prereq 9 cr in education) IX-X TTh, PeikH 155, Graves
- 5-385. TOPICS IN THE TEACHING OF FOREIGN LANGUAGES. (3 cr) I-II S, PeikH 225, 235, Birkmaier
- 5-404. LANGUAGE, CULTURE, AND EDUCATION. (3 cr, §Spch 5-404; limited to 35 students) IX-X TTh, FolH 201
- 8-322. SEMINAR: SECONDARY CURRICULUM AND INSTRUCTION. (1 cr per qtr [total 3 cr]; prereq 5-113) IX-X W, PeikH 225, Kimpston
- 8-387. SEMINAR: FOREIGN LANGUAGE EDUCATION. (1-3 cr; prereq #) IX-X F, PeikH 225, Birkmaier, Lange
- 8-642. FIELD PRACTICUM: SUPERVISION AND CURRICULUM DEVELOPMENT. (1-3 cr; prereq 5-113 and 5-170 or Elem 5-101) IX-X Th, PeikH 345, Kimpston
- 8-869\*. INFORMATION SOURCES IN FOREIGN LANGUAGE TEACHING AND RESEARCH. (3 cr) III-IV S, PeikH 215, Lange
- 8-897. RESEARCH IN ENGLISH AND SPEECH EDUCATION. (1-3 cr [total 6 cr]) IX-X M, PeikH 350, Piche

### WINTER QUARTER, 1973

- 5-105. AUDIO-VISUAL MATERIALS IN EDUCATION. (3 cr; prereq sr; lab chg req) I-II S, Pearson
- 5-109. PROJECTED AUDIO-VISUAL MATERIALS AND EQUIPMENT LABORATORY. (3 cr; limited to 15 students; prereq 5-105 or ¶5-105) Lect IX-X M, lab IX-X Th, Chang
- 5-110. APPLIED INSTRUCTIONAL MEDIA EVALUATION AND SELECTION. (3 cr; limited to 30 students; prereq 5-105) IX-X W, Chang
- 5-113. PRINCIPLES OF SECONDARY SCHOOL CURRICULUM. (3 cr; prereq 3-155 or equiv) IX-X W, Stockton
- 5-153. NEW PERSPECTIVES IN THE SOCIAL STUDIES. (1-3 cr [max 12 cr]) IX-X W, Mackey
- 5-155. MATERIALS LAB FOR SOCIAL STUDIES TEACHERS. (3 cr; prereq 5-150, 5-152) IX-X M, Glenn

- 5-170. PROGRAMS AND PROCEDURES OF CURRICULUM DEVELOPMENT. (3 cr; prereq 5-113 or Elem 5-100) III-IV S, Kimpston
- 5-172. SUPERVISION OF SECONDARY INSTRUCTION. (3 cr; prereq 5-113) I-II S, Kimpston
- 5-189. MATERIALS AND CURRICULUM CONSTRUCTION IN MODERN LANGUAGES. (3 cr; prereq 5-385 and #) I-II S, Birkmaier
- 5-190. FOREIGN LANGUAGE EDUCATION FOR THE CULTURALLY DIFFERENT. (2 cr; prereq 5-120 or BsEd 5-120 or ¶ or equiv) III-IV S, Lange
- 5-322. TEACHING RHETORIC AND COMPOSITION IN SECONDARY SCHOOLS. (3 cr) IX-X TTh, Shroyer
- 5-347. LINGUISTICS AND READING. (3 cr) IX-X MW, Graves
- 8-387. SEMINAR: FOREIGN LANGUAGE EDUCATION. (1-3 cr; prereq #) IX-X F, Birkmaier, Lange
- 8-870\*. SEMINAR: CURRICULUM, LEARNING AND TEACHING OF FOREIGN LANGUAGES IN ELEMENTARY AND SECONDARY SCHOOLS. (3 cr; prereq 8-869 and PsyF 5-110, MA student) III-IV S, Birkmaier, Lange
- 8-887\*. RESEARCH FOUNDATIONS OF SECONDARY SCHOOL SCIENCE TEACHING. (3 cr) I-II S, Boeck

### SPRING QUARTER, 1973

- 5-105. AUDIO-VISUAL MATERIALS IN EDUCATION. (3 cr; prereq sr; lab chg req) IX-X T, Pearson
- 5-107. RADIO AND TELEVISION IN EDUCATION. (3 cr; prereq 9 cr in education) IX-X M, Pearson, Shragg
- 5-110. APPLIED INSTRUCTIONAL MEDIA EVALUATION AND SELECTION. (3 cr; limited to 30 students; prereq 5-105) IX-X W, Chang
- 5-113. PRINCIPLES OF SECONDARY SCHOOL CURRICULUM. (3 cr; prereq 3-155 or equiv) IX-X M, Speiker
- 5-114. INTERDISCIPLINARY APPROACHES TO CURRICULUM. (3 cr) IX-X Th, Stockton
- 5-153. NEW PERSPECTIVES IN THE SOCIAL STUDIES. (1-3 cr [max 12 cr]) IX-X M, Glenn
- 5-173. PREPARATION OF CURRICULUM MATERIALS. (1-12 cr) IX-X T, Kimpston
- 5-194. CURRICULUM DEVELOPMENT IN SECONDARY ENGLISH AND SPEECH. (3 cr; prereq 3-326 or equiv) IX-X W, Piche
- 5-321. TEACHING LITERATURE IN SECONDARY SCHOOLS. (3 cr; prereq 3-155 or jr-sr HS tchg exper) IX-X M, Brunetti
- 5-382. TESTING AND EVALUATION IN FOREIGN LANGUAGE TEACHING AND LEARNING. (3 cr; prereq PsyF 5-120) III-IV S, Lange
- 5-390. CURRENT DEVELOPMENTS IN SECONDARY SCHOOL SCIENCE TEACHING. (3 cr; prereq 3-356, 3-357, 3-358 or 3-352 or equiv undergraduate courses or experience in tchg science) I-II S, Gennaro
- 8-104. CURRICULUM DEVELOPMENT IN THE SOCIAL STUDIES. (3 cr; prereq 5-150, 5-152) I-II S, Gardner
- 8-188\*. SEMINAR: RESEARCH IN SECONDARY LANGUAGE LEARNING AND TEACHING. (3 cr; prereq 5-385, 8-869; doctoral student) I-II S, Birkmaier
- 8-387. SEMINAR: FOREIGN LANGUAGE EDUCATION. (1-3 cr; prereq #) IX-X F, Birkmaier, Lange
- 8-892. INTRODUCTION TO RESEARCH IN ENGLISH AND SPEECH EDUCATION. (3 cr; prereq 15 hrs of graduate study incl 5-321 or 5-322, 5-194 or #) IX-X T, Graves

## EXTENSION CLASSES

(See inside back cover for registration procedures)

### FALL QUARTER, 1972

5-112. FAMILY LIFE EDUCATION. (3 cr; \$45) 6:20-8:50 M, Sandburg JHS 211, Latts

### WINTER QUARTER, 1973

5-112. FAMILY LIFE EDUCATION. (3 cr; \$45) 6:20-8:50 T, PeikH 335, Latts

### SPRING QUARTER, 1973

5-112. FAMILY LIFE EDUCATION. (3 cr; \$45) 6:20-8:50 M, Kellogg HS 235, Hey

## Business Education (BsEd)

### LATE AFTERNOON AND SATURDAY MORNING CLASSES

(See inside back cover for registration procedures)

#### FALL QUARTER, 1972

5-103. CONSUMER EDUCATION IN SCHOOLS. (3 cr) IX-X W, PeikH 235, Hopkins

5-106. ORGANIZATION AND SUPERVISION OF BUSINESS EDUCATION. (3 cr; prereq #) IX-X M, Ph 145

8-100. RESEARCH PROCEDURES IN BUSINESS EDUCATION. (3 cr; prereq #) IX-X Th, Pt 102, McLean

#### WINTER QUARTER, 1973

5-102. TEACHING THE BASIC BUSINESS SUBJECTS. (3 cr) IX-X T, Hopkins

5-104. OFFICE COORDINATION TECHNIQUES. (3 cr, \$DE 5-105) IX-X W

5-107. MATERIALS AND METHODS IN OFFICE AND STENOGRAPHIC PROCEDURES. (3 cr) IX-X M, McLean

#### SPRING QUARTER, 1973

5-110. BUSINESS EDUCATION PROGRAMS BEYOND HIGH SCHOOL. (3 cr) IX-X W, Hopkins

5-111. MATERIALS AND METHODS FOR A SIMULATED OFFICE COURSE. (3 cr; prereq sr) IX-X T, McLean

5-113. PHILOSOPHY OF VOCATIONAL BUSINESS AND OFFICE EDUCATION. (3 cr) IX-X M

## Mathematics Education (MthE)

### LATE AFTERNOON AND SATURDAY MORNING CLASSES

(See inside back cover for registration procedures)

#### FALL QUARTER, 1972

5-311. TEACHING AND SUPERVISION OF MATHEMATICS IN THE ELEMENTARY SCHOOL. (3 cr; prereq Elem 3-391 or #) IX-XI M, Pt 111, R Jackson

5-312. TEACHING AND SUPERVISION OF MATHEMATICS IN THE SECONDARY SCHOOL. (3 cr; prereq math tchg exper or #) IX-XI Th, PeikH 315, Donovan Johnson

- 5-321. MATERIALS LABORATORY FOR ELEMENTARY SCHOOL MATHEMATICS INSTRUCTION. (3 cr; prereq 5-311 or Elem 3-391 or #) II-IV S, Pt 111, Post
- 8-500. THEORY AND CLASSICAL RESEARCH IN MATHEMATICS EDUCATION. (3 cr; prereq 5-311 or 5-312 or #) IX-X Th, Peikh 335, David C Johnson
- 8-590. SEMINAR: MATHEMATICS EDUCATION. (0-3 cr; prereq #) IX-X T, Peikh 315, Post

#### WINTER QUARTER, 1973

- 5-322. MATERIALS LABORATORY FOR SECONDARY SCHOOL MATHEMATICS INSTRUCTION. (3 cr; prereq 5-312 or #) IX-XI M
- 5-331. CURRENT DEVELOPMENTS IN ELEMENTARY SCHOOL MATHEMATICS INSTRUCTION. (3 cr; prereq 5-311 or #) IX-XI M
- 5-355. MATHEMATICS FOR SLOW LEARNING CHILDREN. (3 cr; prereq 5-311 or Elem 3-391 or #) IX-XI W, Post
- 5-366. COMPUTER-ASSISTED MATHEMATICS INSTRUCTION. (3 cr; prereq 5-311 or 5-312 or SeEd 3-365 or #) IX-XI Th, DC Johnson
- 8-570. RESEARCH IN MATHEMATICS EDUCATION. (3 cr; prereq 8-500 or #) IX-X F, Stochl
- 8-590. SEMINAR: MATHEMATICS EDUCATION. (0-3 cr; prereq #) IX-X T, R Jackson

#### SPRING QUARTER, 1973

- 5-102. WORKSHOP: MATHEMATICS EDUCATION. (1-9 cr [max 9 cr]) IX-XI M, Donovan Johnson
- 8-590. SEMINAR: MATHEMATICS EDUCATION. (0-3 cr; prereq #) IX-X T, David C Johnson

## VOCATIONAL-TECHNICAL EDUCATION

### Agricultural Education (AgEd)

#### LATE AFTERNOON AND SATURDAY MORNING CLASSES

(See inside back cover for registration procedures)

#### FALL QUARTER, 1972

- 8-010. CURRENT ISSUES IN AGRICULTURAL EDUCATION. (Cr ar; prereq #) 8:00-10:00 pm Th, Hr 301, R Peterson, others

#### WINTER QUARTER, 1973

- 8-001. RESEARCH IN AGRICULTURAL EDUCATION. (Cr ar; prereq 15 cr in education) IX-X T, Swanson, Persons

#### SPRING QUARTER, 1973

- 8-303. SEMINAR: GRADUATE STUDIES REVIEW. (1-3 cr) IX-X Th, Marvin, others

## Distributive Education (DE)

#### LATE AFTERNOON AND SATURDAY MORNING CLASSES

(See inside back cover for registration procedures)

### **FALL QUARTER, 1972**

- 5-110. CURRICULA IN COOPERATIVE VOCATIONAL EDUCATION. (2 cr; limited to 30 students) 4:00-5:30 W, PeikH 275, Meyer, Whiteford
- 5-111. CURRICULA IN COOPERATIVE DISTRIBUTIVE EDUCATION. (2 cr; prereq 5-110 or ¶) 5:45-6:30 W and ar, PeikH 275, Meyer
- 5-305. TEACHING MERCHANDISE DISPLAY. (3 cr; limited to 25 students; prereq §) 4:00-6:30 M, PeikH 275, Klaurens

### **WINTER QUARTER, 1973**

- 5-105. COORDINATION TECHNIQUES. (2 cr) 4:00-5:30 W, Ashmun, Whiteford
- 5-106. COORDINATION TECHNIQUES IN COOPERATIVE DISTRIBUTIVE EDUCATION. (2 cr; prereq 5-105 or ¶) 5:45-6:30 W, Ashmun
- 5-125. ISSUES AND TRENDS IN DISTRIBUTIVE EDUCATION. (3 cr; prereq sr or graduate and §) 4:00-6:00 T, Meyer

### **SPRING QUARTER, 1973**

- 5-100. ORGANIZATION AND ADMINISTRATION OF DISTRIBUTIVE EDUCATION. (3 cr) 4:00-6:30 W, Meyer
- 5-120. BUSINESS AND DISTRIBUTIVE PROGRAMS FOR ADULTS. (3 cr) 4:00-6:30 M, Ashmun
- 5-300. MATERIALS AND METHODS IN COOPERATIVE VOCATIONAL EDUCATION. (2 cr) 4:00-5:30 T, Klaurens, Whiteford
- 5-301. MATERIALS AND METHODS IN COOPERATIVE DISTRIBUTIVE EDUCATION. (2 cr; prereq 5-300 or ¶) 5:45-6:30 T, Collins, Meyer

## **Home Economics Education (HEEd)**

### **LATE AFTERNOON AND SATURDAY MORNING CLASSES**

(See inside back cover for registration procedures)

### **FALL QUARTER, 1972**

- 5-111. CURRICULA IN HOME ECONOMICS OCCUPATIONAL EDUCATION. (2 cr; prereq DE 5-110 or ¶) 5:45-6:30 W and ar, Pt 214, Whiteford
- 5-315. EVALUATION: THEORETICAL AND TECHNICAL ASPECTS. (3 cr; prereq 3-530, §) 3:45-5:00 MWF, McNH 102, Brown
- 5-500. PROSEMINAR: HOME ECONOMICS EDUCATION. (2 cr; required of all new graduate students) 3:45-5:00 TTh, McNH 103, Brown

### **WINTER QUARTER, 1973**

- 5-106. COORDINATION TECHNIQUES IN HOME ECONOMICS OCCUPATIONAL EDUCATION. (2 cr; prereq DE 5-105 or ¶) 5:45-6:30 W, Whiteford
- 5-320. ADULT EDUCATION IN HOME ECONOMICS EDUCATION. (3 cr; prereq 3-315 or §) 3:45-5:00 TTh, Ford

### **SPRING QUARTER, 1973**

- 5-301. MATERIALS AND METHODS IN HOME ECONOMICS OCCUPATIONAL EDUCATION. (2 cr; prereq DE 5-300 or ¶) 5:45-6:30 M, Whiteford

# Industrial Education (Ind)

## LATE AFTERNOON AND SATURDAY MORNING CLASSES

(See inside back cover for registration procedures)

### FALL QUARTER, 1972

- 5-301. TESTS IN INDUSTRIAL SUBJECTS. (3 cr; limited to 50 students; prereq SeEd 3-155) IX-X W, Pt 102, Pucel
- 5-305. CRITICAL ISSUES IN INDUSTRIAL EDUCATION. (3 cr; limited to 40 students) IX-X T, PeikH 65, Kavanaugh
- 5-320. VOCATIONAL GUIDANCE. (3 cr; limited to 75 students; prereq SeEd 3-155) IX-X T, PeikH 335, Bjorkquist
- 5-330. INDUSTRIAL COURSE CONSTRUCTION. (3 cr, §3-340; limited to 40 students) IX-X Th, PeikH 65, Kavanaugh

### WINTER QUARTER, 1973

- 5-309. CONFERENCE LEADING FOR INDUSTRY. (3 cr; prereq #) IX-X W, Miletich
- 5-325. PHILOSOPHY AND PRACTICE OF INDUSTRIAL EDUCATION. (3 cr, §3-330; limited to 40 students) IX-X Th, Kavanaugh
- 5-360. INDUSTRIAL INSTRUCTION. (3 cr; limited to 40 students; prereq 3-340, SeEd 3-155 and #) IX-X M, Irvin
- 8-310. RESEARCH. (3 cr; prereq #) IX-X W, Pucel

### SPRING QUARTER, 1973

- 5-303. INSTRUCTIONAL AIDS. (3 cr; prereq 3-360 or 5-360 or equiv) IX-X Th, Kavanaugh
- 5-310. COORDINATION. (3 cr; prereq 3-330 or 5-325 or #) IX-X M, Miletich
- 5-314. ADMINISTRATION OF INDUSTRIAL EDUCATION. (3 cr; prereq 3-330 or #) IX-X W
- 5-325. PHILOSOPHY AND PRACTICE OF INDUSTRIAL EDUCATION. (3 cr, §3-330) IX-X T, Kavanaugh
- 5-360. INDUSTRIAL INSTRUCTION. (3 cr; prereq 3-340, SeEd 3-155 and #) IX-X M, Irvin

## 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 196 Child Development Building.

<i>Adviser</i>	<i>Field</i>	<i>Office</i>
Alexander, John F.	PE	220 Cooke
Alkire, Gary F.	EdAd (Elem)	300 H Serv, St. Paul
Ammentorp, William M.	EdAd and Higher Ed	205 H Serv, St. Paul
Anderson, Alan R.	EPsy (CSPP)	239 Burton
Anderson, Bruce D.	PE	203 Cooke
Anderson, Douglas H.	EPsy (PsyF)	330 Burton
Anderson, Eugene M.	Sec Ed (Clin Ex)	227 Burton
Ashmun, Richard D.	DE	270 Peik
Aulls, Mark W.	Elem (Reading)	136 Burton
Bagley, Ayers L.	Hist and Phil of Ed	203 Burton
Balow, Bruce E.	EPsy (SpEd)	5 Pattee
Bart, William M.	EPsy (PsyF)	330 Burton
Bear, W. Forrest	AgEd	222 Ag Eng, St. Paul
Beck, Robert H.	Hist and Phil of Ed	203 Burton
Biggs, Donald A.	EPsy (CSPP)	332 Walter Library
Birkmaier, Emma M.	Sec Ed (Lang)	224 Peik
Bjorkquist, David C.	Ind Ed	125 Peik
Blochler, Donald H.	EPsy (CSPP)	137 Burton
Boeck, Clarence H.	Sec Ed (Sci)	370 Peik
Bole, Ronald E.	PE	202 Cooke
Borg, Robert L.	MuEd	215 Scott
Borow, Henry	EPsy (CSPP)	30 Nicholson
Bracht, Glenn H.	EPsy (PsyF)	330 Burton
Briskin, Alan S.	EPsy (CSPP)	141 Burton
Brown, Marjorie M.	HEEd	121 McNeal, St. Paul
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	213 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	203 Burton
Cogan, John J.	Elem (Soc St)	243 Burton
Collier, Raymond O.	EPsy (PsyF)	330 Burton
Condie, James D.	EPsy (CSPP)	170 Wesbrook
Copa, George H.	AgEd	208 Horticulture, St. Paul
Corcoran, Mary E.	Higher Ed and Hist and Phil of Ed	211 Burton
Cross, W. Ray	EdAd (Elem)	213 H Serv, St. Paul
Crumpton, William D.	EPsy (CSPP)	139 Burton
Deno, Evelyn D.	EPsy (SpEd)	209 Pattee
Deno, Stanley L.	EPsy (SpEd)	108 Pattee
Dykstra, Robert	Elem (Lang Arts)	136 Burton
Eckert, Ruth E.	Higher Ed	226 Burton
Edson, William H.	EPsy (CSPP)	206 Burton
Ellis, Arthur K.	Elem (Soc St)	250 Burton
Erickson, Gerald M.	Sec Ed (Classics)	310 Folwell
Fiedler, Lois J.	EPsy (CSPP)	101 Eddy
Force, Dewey G., Jr.	EPsy (SpEd)	101 Pattee
Ford, Roxana R.	HEEd	211 McNeal, St. Paul

\*\*\* Undergraduate students may consult the graduate adviser appropriate for the major, or inquire in 206 Burton Hall.

<i>Adviser</i>	<i>Field</i>	<i>Office</i>
Gallistel, Elizabeth R.	EPsy (SpEd)	103 Pattee
Gardner, William E.	Sec Ed (Soc St)	104 Burton
Gennaro, Eugene D.	Sec Ed (Sci)	370 Peik
Giese, David L.	EPsy (PsyF)	106 Nicholson
Giles, H. Robert	Rec and Park Admin	St. Paul Gym
Glenn, Allen D.	Sec Ed (Soc St)	166 Peik
Glotzbach, Charles J.	EPsy (CSPP)	206 Burton
Goossen, Carl V.	Elem (Sci)	201 Pattee
Grismer, Rita M.	EPsy (SpEd)	108 Pattee
Hagenah, Theda	EPsy (CSPP)	200 Eddy
Hall, Marian D.	EPsy (School Psy)	226 Child Development
Hansen, Harlan S.	Elem and NKP	238 Burton
Hansen, Lorraine S.	EPsy (CSPP)	139 Burton
Harkins, Arthur M.	Hist and Phil of Ed	203 Burton
Hendrix, Vernon L.	EdAd	207 H Serv, St. Paul
Hively, Wells, Jr.	EPsy (PsyF)	330 Burton
Hooker, Clifford P.	EdAd (Gen)	218 H Serv, St. Paul
Hopkins, Charles R.	BsEd	270 Peik
Howey, Kenneth R.	Elem	227 Burton
Hoyt, Cyril J.	EPsy (PsyF)	330 Burton
Hummel, Thomas J.	EPsy (CSPP)	206 Burton
Humphreys, Alan H.	Elem (Sci)	105 Pattee
Jackson, Robert L.	Math Ed and Elem	115 Burton
Jackson, Thomas L.	EdAd	11 S.E. Oak St.
Jaeger, Eloise M.	PE	220 Cooke
Johnson, David C.	Sec Ed (Math)	330 Peik
Johnson, David W.	EPsy (PsyF)	330 Burton
Johnson, Donovan A.	Sec Ed (Math)	130 Peik
Johnson, Paul E.	EPsy (PsyF)	330 Burton
Johnson, Roger T.	Elem (Soc St)	242 Burton
Joselyn, E. Gary	EPsy (PsyF)	101 Eddy
Kain, Jay D.	Art Ed	135 Wulling
Kavanaugh, William A.	Ind Ed	125 Peik
Keller, Robert J.	EdAd and Higher Ed	211 Burton
Kimpston, Richard D.	Sec Ed (Curr)	345 Peik
Kingsley, G. Gordon	EPsy (CSPP)	10 Nicholson
Klaurens, Mary K.	DE and Vo-Tech Ed	270 Peik
Lambert, Ronald T.	Elem and EdAd (Elem)	250 Burton
Lange, Dale L.	Sec Ed (Lang)	148 Peik
Lewis, Darrell R.	Sec Ed (Econ Ed)	1169 B.A., West Bank
Loeffler, Dorothy R.	EPsy (CSPP)	101 Eddy
MacEachern, Donald	EPsy (PsyF)	330 Burton
Mackey, James D.	Sec Ed (Soc St)	152 Peik
Manning, John C.	Elem (Reading)	144 Burton
Marvin, R. Paul	AgEd	208 Horticulture, St. Paul
Mazzoni, Tim L.	EdAd	203 H Serv, St. Paul
McCauley, Robert W.	EPsy (SpEd)	109 Pattee
McFarland, Keith N.	AgEd	200 McNeal, St. Paul
McLean, Gary	Sec Ed (BsEd)	270 Peik
Merwin, Jack C.	EPsy (PsyF)	104 Burton
Meyer, Warren	DE	249 Peik
Moen, Norman W.	Higher Ed	116 Nicholson
Moore, Donald F.	EPsy (SpEd)	106 Pattee
Morgan, Don A.	EdAd (Higher Ed)	209 H Serv, St. Paul
Mork, Gordon M. A.	Teacher Ed	211 Burton
Morris, Jon R.	EdAd	236 H Serv, St. Paul
Moss, Jerome, Jr.	Ind Ed	125 Peik
Mueller, Clarence E.	Rec and Park Admin	203 Cooke
Mueller, Van Dyck	EdAd (Gen)	217 H Serv, St. Paul
Nelson, Howard F.	Ind Ed	125 Peik
Nickerson, Neal C.	EdAd (Sec)	211 H Serv, St. Paul
Norenberg, Curtis D.	AgEd	300 Coffey, St. Paul
Odland, R. Norine	Elem (Literature)	136 Burton
Olson, George K.	Art Ed	135 Wulling
Ostrander, Maurice E.	Rec and Park Admin	202 Cooke
Parker, Clyde A.	EPsy (CSPP)	139 Burton
Pearson, Neville P.	Sec Ed (A-V)	206 Westbrook

<i>Adviser</i>	<i>Field</i>	<i>Office</i>
Pearson, P. David	Elem (Reading)	138 Burton
Persons, Edgar A.	AgEd	216 Old Horticulture, St. Paul
Peterson, Milo J.	AgEd	208 Horticulture, St. Paul
Phillips, W. Desmond	EPsy (SpEd)	106 Pattee
Piché, Gene L.	Sec Ed (Lang Arts)	350 Peik
Popper, Samuel H.	EdAd (Gen and Sec)	210 H Serv, St. Paul
Post, Thomas R.	Math Ed and Elem	510 JohH
Pucel, David J.	Ind Ed	125 Peik
Randleman, Robert R.	Ind Ed	125 Peik
Raygor, Alton L.	EPsy (CSPP)	101 Eddy
Rest, James	EPsy (PsyF)	330 Burton
Reynolds, Maynard C.	EPsy (SpEd)	101 Pattee
Rhetts, John E.	EPsy (PsyF)	330 Burton
Rockwell, G. James	EPsy (School Psy)	226 Child Development
Rubin, Rosalyn	EPsy (SpEd)	12 Pattee
Ryan, Frank L.	Elem (Soc St)	258 Burton
Rynders, John E.	EPsy (SpEd)	104 Pattee
Samuels, S. Jay	EPsy (PsyF)	330 Burton
Scarr-Salapatek, Sandra W.	CPSy and EPsy (CSPP)	226 Child Development
Schreiner, Robert L.	Elem (Reading)	117 Burton
Schultz, Stephen W.	MuEd	322 Scott
Sederberg, Charles H.	EdAd (Gen)	300 H Serv, St. Paul
Serfass, Robert C.	PE	400 Cooke
Shaffer, Warren F.	EPsy (CSPP)	255 Burton
Shick, Jacqueline	PE	108 Norris Gym
Shrago, Morris I.	EPsy (SpEd)	210 Pattee
Shroyer, Thomas G.	Sec Ed (English)	230 Peik
Slettehaugh, Thomas C.	Art Ed	135 Wulling
Slocum, Helen M.	PE (School Hlth)	101 Norris Gym
Smith, Brandon B.	Ind Ed	145 Peik
Snoke, Martin L.	EPsy (CSPP)	16 Morrill
Sprinthall, Norman	EPsy (CSPP)	139 Burton
Stark, Thomas F.	EdAd (Gen)	223 H Serv, St. Paul
Stecklein, John E.	EPsy (PsyF)	330 Burton
Stedman, Louise A.	HEEd	220 McNeal, St. Paul
Stochl, James E.	Math Ed and Elem	530 Johnston
Stoner, Lela June	PE	165 Norris Gym
Sullivan, Allen R.	Sec (Curr) and EPsy (SpEd)	11 S.E. Oak St.
Swanson, Gordon I.	AgEd	208 Horticulture, St. Paul
Tennyson, W. Wesley	EPsy (CSPP)	259 Burton
Terwilliger, James S.	EPsy (PsyF)	330 Burton
Turnure, James E.	EPsy (SpEd)	14 Pattee
Turrentine, Edgar M.	MuEd	322 Scott
Wakefield, Wilbur L.	EdAd	Rochester Ext Center
Weatherman, Richard E.	EPsy (SpEd) and EdAd	108 Pattee
Weinberg, Richard A.	EPsy (School Psy)	226 Child Development
Weiss, Caroline R.	Rec and Park Admin	205 Cooke
Welch, Wayne W.	EPsy (PsyF)	104 Burton
West, Edith	Sec Ed (Soc St)	350 Peik
Wharton, W. Keith	EdAd	277 Coffey, St. Paul
Whiteford, Emma B.	HEEd	106 McNeal, St. Paul
Wilderson, Frank B.	EPsy (SpEd)	104 Burton
Wilk, Roger E.	EPsy (PsyF)	221 Burton
Williams, Howard Y.	Sec Ed and Higher Ed	130 Peik
Willie, Reynold	Sec Ed and Teacher Ed	101 Burton
Wilson, Marjorie U.	PE	221 Cooke
Woestehoff, Arnold S.	Teacher Ed	400 12th Avenue S.E.
Wood, Frank H.	EPsy (SpEd)	107 Pattee
Young, Mary L.	PE	106 Norris Gym
Zander, Donald R.	EPsy (CSPP)	16 Morrill

# CALENDAR 1972-73

## FALL QUARTER

### September

- 4 Holiday (Labor Day)
- 14 Fall quarter fees due for students registered through September 8
- 15 Last date to file application for fall quarter admission for adult special and new post-baccalaureate special students (except College of Education)\*
- 22 Last day for registration and payment of fees for undergraduate students including adult special students (except in-service teachers)
- 25 Fall quarter classes begin
- 28 Opening Convocation (IV hour classes excused)
- 29 Last day for registration and payment of fees for graduate students and in-service teachers

### October

- 21 Homecoming Day
- 26 Twin Cities Assembly meeting, 3:30 p.m.

### November

- 15 Last date to file application for winter quarter admission to the undergraduate colleges or for change of college within the University\*
- 23-24 Holiday (Thanksgiving Day)
- 24-25 Classes excused (except College of Medicine)
- 30 Senate meeting, 3:30 p.m.

### December

- 1 Deadline for application for admission to Graduate School for winter quarter
- 6 Study Day
- 7-13 Final examination period
- 13 Fall quarter closes (All-University Commencement (Twin Cities Campus))
- 15 Last date to file application for winter quarter admission for adult special or new post-baccalaureate special students (except College of Education)\*

## WINTER QUARTER

### December

- 19 Last day for payment of winter quarter fees for undergraduate students in residence fall quarter including adult special students (except in-service teachers)
- 25-26 Holiday (Christmas Day)

### January

- 1 Holiday (New Year's Day)
- 3 Winter quarter classes begin
- 5 Last day for registration and payment of fees for graduate students and in-service teachers

### February

- 1 Twin Cities Assembly meeting, 3:30 p.m.
- 15 Last date to file application for spring quarter admission to the undergraduate colleges or for change of college within the University\*
- 23 Deadline for application for admission to Graduate School for spring quarter

### March

- 8 Senate meeting, 3:30 p.m.
- 14 Study Day
- 15 Last date to file application for spring quarter admission for adult special and new post-baccalaureate special students (except College of Education)\*
- 15-21 Final examination period
- 20 Last day for payment of spring quarter fees for undergraduate students in residence winter quarter including adult special students (except in-service teachers)
- 21 Winter quarter closes  
No All-University Commencement scheduled

## SPRING QUARTER

### March

- 28 Spring quarter classes begin
- 30 Last day for registration and payment of fees for graduate students and in-service teachers

### April

- 23 Holiday (Easter Monday)
- 26 Twin Cities Assembly meeting

### May

- 21 Deadline for application for admission to Graduate School for First Term of Summer Session
- 24 Senate meeting, 3:30 p.m.
- 28 Holiday (Memorial Day)

### June

- 8 Study Day
- 9-15 Final examination period
- 16 Spring quarter closes  
All-University Commencement (Twin Cities Campus)

\* Students applying to or planning to transfer to colleges, schools, and programs should consult the appropriate college to determine the deadlines. Many of these are different from that indicated above.

## SUMMARY OF LATE AFTERNOON AND SATURDAY MORNING CLASSES

Mon.	Tues.	Wed.	Thurs.	Fri.	Sat. (I-II)	Sat. (III-IV)
<b>FALL QUARTER</b>						
ArEd 5-318	ArEd 8-306	CPsy 8-347	CPsy 8-336	SeEd 8-387	Educ 8-251	ArEd 5-389
CPsy 8-347	CPsy 8-336	EdAd 8-202	EdAd 8-210	HEEd 5-315	PE 5-130	Elem 5-108
EdAd 8-201	EdAd 8-215	EdAd 8-224	EdAd 8-218		SeEd 5-105	Elem 5-317
EdAd 8-274	EdAd 8-265	CSPP 5-101	CSPP 8-602		SeEd 5-385	Educ 5-184
Elem 3-103	CSPP 5-130	PsyF 5-148	PsyF 5-141		MthE 5-321	SeEd 8-869
Elem 5-331	CSPP 8-602	SpEd 5-140	SpEd 5-112		(II-IV)	
Elem 5-333	PsyF 5-141	HEd 5-141	Elem 5-316			
Elem 5-346	PsyF 8-520	HEd 5-190	Elem 5-334			
Elem 5-361	SpEd 5-112	MuEd 5-421	Elem 5-376			
HEd 5-110	Elem 5-100	PE 5-255	MuEd 5-217			
MuEd 5-306	Elem 8-347	PE 8-110	PE 5-980			
PE 5-152	Elem 8-361	SeEd 5-110	SeEd 5-323			
PE 5-255	HEd 5-155	SeEd 8-322	SeEd 5-344			
Hlth 5-150	HEd 5-191	BsEd 5-103	SeEd 5-404			
SeEd 5-108	HEd 5-212	DE 5-110	SeEd 8-642			
SeEd 5-113	MuEd 8-281	DE 5-111	BsEd 8-100			
SeEd 8-897	PE 5-100	HEEd 5-111	MthE 5-312			
BsEd 5-106	PE 5-980	HEEd 5-315	MthE 8-500			
MthE 5-311	SeEd 5-106	Ind 5-301	AgEd 8-101			
DE 5-305	SeEd 5-129		HEEd 5-500			
HEEd 5-315	SeEd 5-152		Ind 5-330			
	SeEd 5-323					
	SeEd 5-344					
	SeEd 5-404					
	MthE 8-590					
	HEEd 5-500					
	Ind 5-305					
	Ind 5-320					
<b>WINTER QUARTER</b>						
CPsy 8-333	ArEd 8-306	CPsy 8-333	CPsy 8-343	SeEd 8-387	CPsy 5-319	ArEd 5-386
EdAd 8-237	CPsy 8-343	EdAd 8-201	CSPP 8-603	MthE 8-570	(9-11:30)	EdAd 8-202
EdAd 8-275	EdAd 8-216	EdAd 8-227	PsyF 5-162		Elem 5-300	EdAd 8-235
PsyF 5-120	EdAd 8-226	EdAd 8-253	SpEd 5-143		Elem 5-350	(1:30-3:30)
Elem 5-334	CSPP 8-603	EdAd 8-264	SpEd 5-145		(II-IV)	Educ 8-285
Elem 5-337	PsyF 5-162	PsyF 5-120	SpEd 5-150		PE 5-121	SeEd 5-170
HEd 5-200	PsyF 8-520	Elem 5-338	Elem 5-316		SeEd 5-105	SeEd 5-190
MuEd 5-308	SpEd 5-141	Elem 5-362	MuEd 5-111		SeEd 5-172	SeEd 8-870
PE 5-101	SpEd 5-150	HEd 5-131	SeEd 5-322		SeEd 5-189	
SeEd 5-109	SpEd 5-190	MuEd 5-214	MthE 5-366		SeEd 8-887	
SeEd 5-155	Elem 5-100	SeEd 5-110	HEEd 5-320			
SeEd 5-347	HEd 5-125	SeEd 5-113	Ind 5-325			
BsEd 5-107	HEd 5-156	SeEd 5-153				
MthE 5-322	HEd 5-210	SeEd 5-347				
MthE 5-331	MuEd 8-282	BsEd 5-104				
Ind 5-360	PE 5-695	MthE 5-355				
	PE 8-121	DE 5-105				
	SeEd 5-322	DE 5-106				
	BsEd 5-102	HEEd 5-106				
	MthE 8-590	Ind 5-309				
	AgEd 8-001	Ind 8-310				
	DE 5-215					
	HEEd 5-320					
<b>SPRING QUARTER</b>						
ArEd 5-316	ArEd 8-306	CPsy 8-341	CPsy 8-345	SeEd 8-387	EdAd 8-234	ArEd 5-302
CPsy 8-341	CPsy 8-345	EdAd 8-201	EdAd 8-202		Elem 5-107	EdAd 8-203
EdAd 5-103	EdAd 8-211	EdAd 8-217	EdAd 8-222		SeEd 5-390	Elem 5-108
EdAd 8-242	EdAd 8-224	PsyF 5-120	CSPP 8-604		SeEd 8-104	Elem 5-361
EdAd 8-276	EdAd 8-238	PsyF 8-565	SpEd 5-112		SeEd 8-188	Educ 8-286
PsyF 5-120	EdAd 8-290	SpEd 5-144	SpEd 5-146			PE 5-110
PsyF 8-565	CSPP 8-604	Elem 5-334	Elem 5-100			Hlth 5-110
Elem 5-331	PsyF 8-520	Elem 8-300	Elem 5-317			SeEd 5-382
Elem 5-349	SpEd 5-112	Educ 5-104	Elem 5-377			
HEd 5-201	Elem 5-300	Educ 5-184	HEd 5-080			
MuEd 5-211	Elem 5-363	HEd 5-182	MuEd 5-581			
Hlth 5-140	HEd 5-170	PE 3-161	PE 5-102			
SeEd 5-107	HEd 5-211	Hlth 5-350	PE 5-695			
SeEd 5-113	MuEd 8-283	SeEd 5-110	PE 8-150			
SeEd 5-153	PE 8-113	SeEd 5-194	SeEd 5-114			
SeEd 5-321	SeEd 5-105	BsEd 5-110	AgEd 8-303			
BsEd 5-113	SeEd 5-173	DE 5-100	Ind 5-303			
MthE 5-102	SeEd 8-892	Ind 5-314				
DE 5-120	BsEd 5-111					
HEEd 5-301	MthE 8-590					
Ind 5-310	DE 5-300					
Ind 5-360	DE 5-301					
	Ind 5-325					

## SUMMARY OF EXTENSION CLASSES

Mon.	Tues.	Wed.	Thurs.	Fri.
<b>FALL QUARTER</b>				
CPsy 3-301	ArEd 3-009	EdAd 5-128	ArEd 1-207	
CPsy 5-311	ArEd 3-020	Elem 5-346	ArEd 5-020	
CSPP 5-110	ArEd 3-030	PE 3-181	CPsy 5-331	
PsyF 5-162	CPsy 3-301	PE 5-700	PsyF 5-110	
PsyF 5-330	CPsy 5-319	Hlth 5-100	Elem 5-363	
Hlth 5-350	EdAd 5-101			
Hlth 5-602	CSPP 5-130			
SeEd 5-112	PsyF 5-170			
	SpEd 5-150			
	PE 5-700			
<b>WINTER QUARTER</b>				
CPsy 5-313	ArEd 3-001	ArEd 5-302	ArEd 1-208	
CSPP 5-110	CPsy 3-301	CPsy 3-301	ArEd 3-009	
PE 3-360	CPsy 5-303	CPsy 5-311	CPsy 5-315	
PE 3-370	CSPP 5-130	CSPP 5-505	PsyF 5-120	
	PE 5-700	PsyF 5-141		
	SeEd 5-112	PsyF 5-641		
		SpEd 5-150		
		PE 5-700		
		Hlth 5-101		
<b>SPRING QUARTER</b>				
CPsy 5-311	ArEd 3-001	CPsy 5-331	ArEd 1-209	
CSPP 5-110	ArEd 3-009	PE 5-620	PsyF 5-110	
PsyF 5-162	CPsy 3-301	PE 5-700		
SeEd 5-112	CPsy 5-303	Hlth 5-350		
	CSPP 5-130			
	PsyF 5-170			
	PE 1-800			
	PE 5-700			
	Hlth 5-130			

## REGISTRATION PROCEDURES

### Late Afternoon and Saturday Morning Classes

#### *Adult Special Students*

- If not previously *admitted* as an adult special, apply in Room 6 Morrill Hall
- Obtain *permit to register* in Room 6 Morrill Hall, Window 2 Morrill Hall, or 206 Burton Hall

Those who personally return their adult special application forms to Room 6 Morrill Hall will receive a permit to register at the time they return the forms; those who return the forms by mail may obtain a permit to register in 206 Burton Hall approximately 2-3 weeks after returning the forms

Students who have been admitted to the College of Education as adult specials but did not register during the previous quarter may obtain the permit at Window 2 Morrill Hall; those who registered during the previous quarter may obtain the permit in 206 Burton Hall

- Obtain registration materials in 206 Burton Hall
- Secure approval from any adviser in the area in which you are taking courses (elementary, secondary, etc.)
- Return all forms to 206 Burton Hall for College of Education approval
- Secure fee statement at Window 2 Morrill Hall and pay fees

#### *Master of Education Degree Students (M.Ed.)*

Follow the same procedure as adult special students but secure approval from your assigned adviser

#### *Master of Arts, Doctor of Education, and*

#### *Doctor of Philosophy Degree Students (M.A., Ed.D., Ph.D.)*

- Obtain *application for admission* forms in 310 Johnston Hall and return completed forms to that office
- If registered during the previous quarter, obtain *registration* materials in your departmental office; all others obtain *registration* materials in 316 Johnston Hall
- Complete registration forms
- Secure adviser's approval
- Secure fee statement at Window 4 Morrill Hall and pay fees

### Extension Classes

- Register in 57 Nicholson Hall from 12 noon to 8 p.m., September 7 through 15