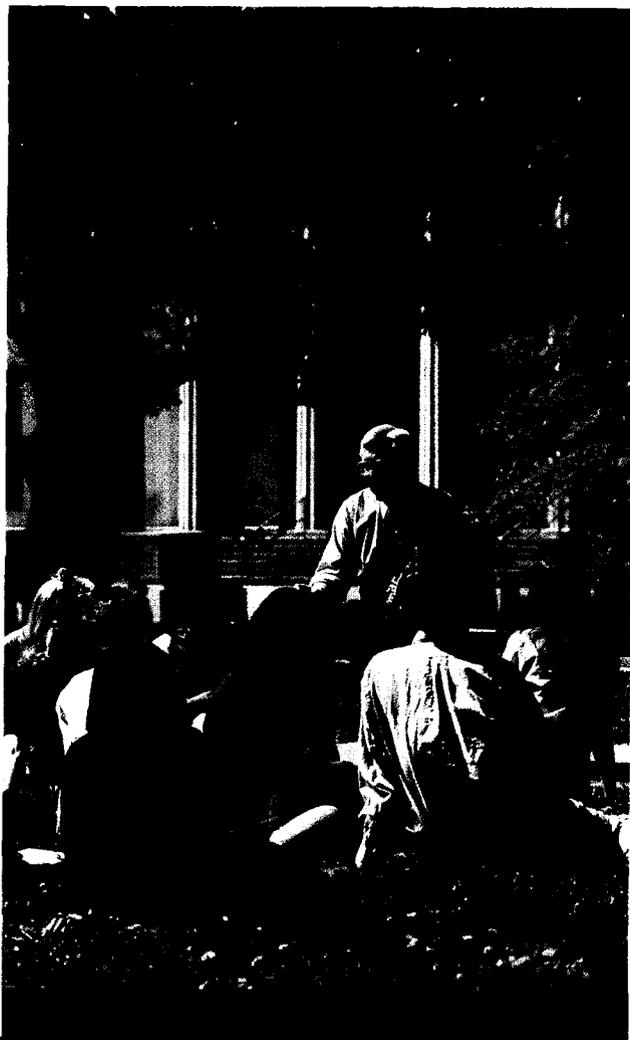


Education

University of Minnesota Bulletin

1988-90



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Introduction

The College of Education is located on the East Bank of the University of Minnesota's Twin Cities campus. Its main administrative offices are in 104 Burton Hall, 178 Pillsbury Drive S.E., Minneapolis, MN 55455 (612/625-6806). The Education Student Affairs Office (ESAO) is located at 1425 University Avenue S.E. (612/625-6501).

Detailed information on the campus and community can be obtained from the Office of Admissions, Prospective Student Services, 230 Williamson Hall, 231 Pillsbury Dr. S.E., University of Minnesota, Minneapolis, MN 55455 (612/624-5555) or Education Student Affairs Office.

Calendar

The regular academic year comprises three quarters, each about ten weeks long. Fall classes typically begin in late September; winter, early January; and spring, late March. Two five-week Summer Session terms run from about mid-June through mid-August. Detailed calendars are published in the *Class Schedule* each quarter.

Publications

Class Schedule—This quarterly publication lists University day school courses complete with hours, rooms, instructors, prerequisites, registration instructions, tuition and fees, maps, grading definitions, and other pertinent information. In addition, separate preliminary schedules allow long-term planning.

Other Bulletins—Separate bulletins are printed for Continuing Education and Extension, Summer Session, Graduate School, and other University units. Most may be obtained at the Information Center in Williamson Hall.

Policies

Bulletin Use—The contents of this bulletin and other University bulletins, publications, or announcements are subject to change without notice. University offices

can provide current information about possible changes.

Equal Opportunity—The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status, or sexual orientation. In adhering to this policy, the University abides by the requirements of Title IX of the Education Amendments of 1972; by Sections 503 and 504 of the Rehabilitation Act of 1973; by Executive Order 11246, as amended: 38 U.S.C. 2012; by the Vietnam Era Veterans Readjustment Assistance Act of 1972, as amended; and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be addressed to Patricia A. Mullen, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, University of Minnesota, 100 Church Street S.E., Minneapolis, MN 55455 (612/624-9547); to the Director of the Office of Civil Rights, Department of Education, Washington, DC 20202; or to the Director of the Office of Federal Contract Compliance Programs, Department of Labor, Washington, DC 20210.

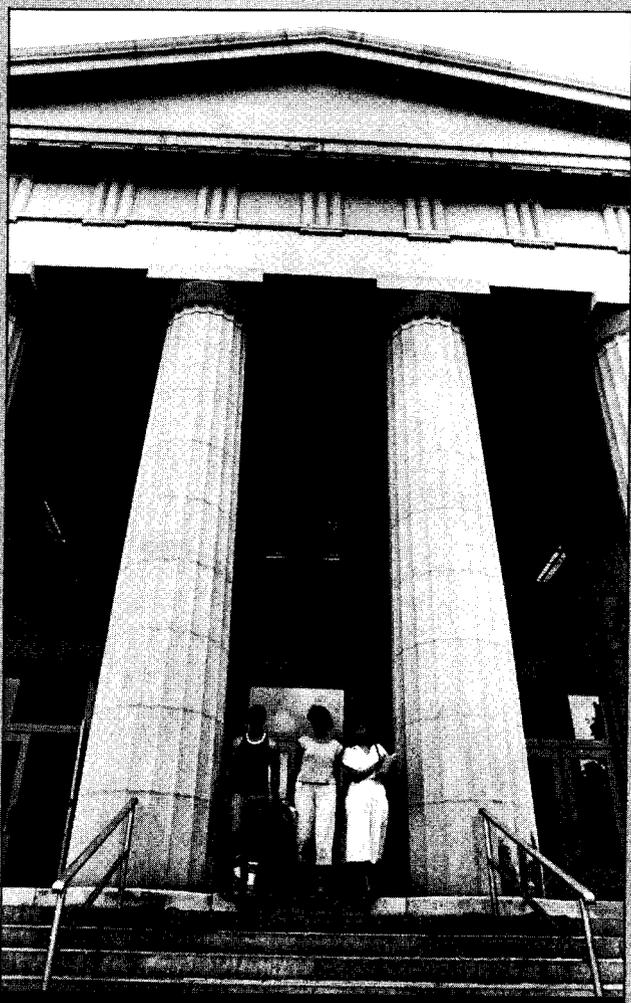
Postal Statement

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General Information



General Information

Education Student Affairs Office

Students seeking direction or information about College of Education programs can contact the Education Student Affairs Office (ESAO), 1425 University Avenue S.E., University of Minnesota, Minneapolis, MN 55414 (612/625-6501).

Student Organizations—Students assume a significant role in governing the college through the Education Undergraduate Student Association (EdUSA) and the Association of Graduate Education Students (AGES). Officers of these associations are elected from the departments of the college to represent student concerns and interests to the College of Education Senate and to college committees. For more information, contact EdUSA or AGES, Room 215, ESAO (612/625-9039).

Admissions—This unit of ESAO coordinates admission and orientation of undergraduate, postbaccalaureate, master of education (M.Ed.), and adult special students. Staff act on behalf of the faculty in coordinating preadmission information advising, interviewing students who wish to apply, and assembling required documentation for department decisions. Upon admission, each student is assigned a faculty adviser to assist with planning of programs, registration, and academic advising.

Registration and Student Progress—This unit of ESAO coordinates registration services for students admitted to programs in the College of Education, both during the academic year and summer. Staff monitor each student's academic progress on a quarterly basis, authorize variations from curricular or program requirements by petition, are responsible for clearance of degrees of graduating students, and plan commencement ceremonies.

Communication with Students—General information about the college is provided by ESAO through a quarterly

newsletter and other announcements. Brochures on college programs and pertinent University services are in the ESAO lobby. Also available are the biennial *College of Education Bulletin* and the quarterly *Class Schedule*.

Field Experiences—For information about field experiences, including practica and student teaching, contact ESAO or the major department.

Placement—The placement services of ESAO are available to all students, faculty, and alumni of the University of Minnesota who are seeking positions in schools, colleges, and universities. ESAO helps prepare and maintain individual placement files containing recommendations and sends this material to prospective employers at the applicant's request. A weekly *Vacancy Bulletin* lists positions open in educational institutions, government agencies, and private business. In addition, ESAO maintains a Career Center with information, publications, and other relevant materials to assist the applicant and offers workshops on job-seeking strategies, letter and résumé writing, and preparation for interviews. All graduating seniors from teacher licensure programs are required to register with ESAO's placement service or to secure an official exemption from ESAO. The placement fee entitles a registrant to placement services during a one-year period from October 1 through September 30.

Employment Outlook—In recent years there has been considerable publicity concerning the supply and employability of teachers. National reports indicate that there will be a shortage of elementary and secondary teachers in the 1990s. While an increased birthrate in the last decade in Minnesota has created an increase in demand for elementary teachers, enrollments in secondary schools are expected to continue to experience a decline into the mid-1990s. Some shortages of teachers with a combination of teaching fields exist, and a demand for minority teachers of diverse ethnic and cultural backgrounds will persist. However, the employment

situation for teaching positions in Minnesota, and particularly in the Twin Cities, is very competitive. Students considering teaching as a career are encouraged to investigate employment opportunities in regions of the United States which are experiencing rapid growth, such as the South and Southwest. While a majority of Education graduates secure employment in positions related to their field of study, graduates accepting employment outside of education professions are represented in a broad range of occupational fields. The annual placement report, *The Occupational Status Report of B.S. Graduates: How Their Careers Began*, is available from the Placement Office. For more information, contact the Placement Office, ESAO (612/625-5545).

College of Education Alumni Society—College of Education alumni may receive benefits from joint membership in the College of Education Alumni Society and the Minnesota Alumni Association. With over 3,100 members, the Society is organized to benefit graduates of the college and conducts a variety of professional and social activities each year. For information on membership, contact the College of Education Alumni Society, Minnesota Alumni Association, 100 Morrill Hall, University of Minnesota, 100 Church Street S.E., Minneapolis, MN 55455 (612/624-2323).

Library Resources

Walter Library houses the education, psychology, and library science collections and is the principal reference resource for students and faculty of the College of Education and the Department of Psychology. Its research collections, which include comprehensive retrospective journal holdings, monographs, and the complete ERIC microfiche file, are considered to be excellent in both quality and scope. The library's staff provides assistance to students in basic research methodology and offers formal instruction to groups and individuals. Computer literature searches are available in a wide range of

data bases in education and related subjects, including ERIC, Psychological Abstracts, the Comprehensive Dissertation Index, the National Technical Information Service (NTIS), and Exceptional Child Education Resources. A companion facility, the Walter Library Learning Resources Center, maintains class-assigned studies on audiotape, videotape, slides, and film.

Financial Aid

General Financial Assistance—Students seeking general financial assistance should direct inquiries to the Office of Student Financial Aid, 210 Fraser Hall, University of Minnesota, 106 Pleasant Street S.E., Minneapolis, MN 55455. To receive priority consideration for aid beginning in fall quarter, applications should be filed early in the preceding winter quarter. Graduate students should also consult the *Graduate School Bulletin* for information about assistantships, fellowships, and scholarships. Students who are interested in advanced graduate study in special education programs should request financial aid information from the special education office, 253 Burton Hall.

College of Education Scholarships—Prospective College of Education undergraduate and graduate students with strong academic records and promise for teaching in elementary and secondary schools may qualify for the Coffman Alumni Scholar Awards administered by the College of Education. Application materials and instructions may be obtained from the office of the department in which the student plans to enroll. Information about other scholarships available may be obtained from department offices or the Information Adviser in ESAO (612/625-6501).

Access to Student Educational Records

In accordance with regents' policy on access to student records, information about a student generally may not be released to

General Information

a third party without the student's permission. The policy also permits students to review their educational records and to challenge the contents of those records.

Some student information—name, address, telephone number, dates of enrollment and enrollment termination, college and class, major, adviser, academic awards and honors received, and degrees earned—is considered public or directory information. To prevent release of such information outside the University while in attendance at the University, students must notify the records office on their campus.

Students are notified annually of their right to review their educational records. The regents' policy, including a directory of student records, is available for review at the Williamson Hall Information Center, Minneapolis, and at records offices on other campuses of the University. Questions may be directed to the Office of the Registrar, 150 Williamson Hall (612/625-5333).

Programs



Programs

This section of the bulletin contains descriptions of undergraduate and postbaccalaureate licensure and nonlicensure programs offered in various units of the college. All students who wish to be recommended for teacher licensure in the state of Minnesota upon graduation from the University of Minnesota (Twin Cities campus) must apply for admission to a teacher education program in the College of Education and must complete the requirements of that program. (For information on graduate programs in the College of Education, see the Advanced Study section of the bulletin.)

The College of Education offers two initial teacher licensure programs. Students admitted to programs that award the degree of bachelor of science (B.S.) complete one or two years of preprofessional work in another college before transferring to the College of Education. Upon completion of their chosen degree program, students may be recommended by the college for teacher licensure. Students seeking admission to a postbaccalaureate program must have a completed bachelor's degree (B.A. or B.S.) in a major field related to the area in which they wish to teach. Postbaccalaureate programs lead to initial teacher licensure. Students who complete requirements in a postbaccalaureate program may apply some credits earned in the program toward a master of education (M.Ed.) degree. Enrollment in all programs is competitive, based upon academic performance and teacher-related experience.

All undergraduate and postbaccalaureate students seeking licensure will be required to pass the Pre-Professional Skills Test (PPST) before recommendation for teacher licensure by the College of Education. The PPST is a test of basic reading, writing, and mathematical knowledge. For more information, contact the Admissions Unit in ESAO.

Students in both programs participate in student teaching activities as an integral part of their program. For students in a baccalaureate program, orientation programs are sponsored by program area in

the spring quarter before the year in which the student will engage in student teaching activities. Students planning to student teach during winter or spring quarter must apply through their program area offices during the third week of the quarter prior to student teaching. Clinical experience for students enrolled in a postbaccalaureate program is sponsored by program area. Specific information regarding application and registration for student teaching for both programs may be obtained from the student's major department. Admission to student teaching is subject to final approval by the college Coordinator for Field Experiences.

Teaching licenses are awarded by the Minnesota State Board of Education, *not* by the University. After completion of an approved program, students are recommended by the college for licensure in their field and level of specialization. All licensure programs described in this bulletin are approved by the State Board of Teaching and are accredited by the National Council for the Accreditation of Teacher Education (NCATE).

During the next several years the College of Education will be changing most of its teacher licensure programs from undergraduate to postbaccalaureate programs. It is strongly recommended that applicants for both programs attend an Information Advising Session before applying. Specific information regarding these sessions may be obtained from the Education Student Affairs Office (ESAO), 1425 University Avenue S.E., Minneapolis, Minnesota 55414 (612/625-1550).

General Admission Guidelines

The faculty and staff of the College of Education welcome applications from all persons regardless of race, ethnic heritage, sex, creed, handicap, or age. It is the policy of the college to give equal consideration to students applying from within and from outside of the University.

Admission to the College of Education is granted on the basis of academic stan-

dards and an appraisal of other factors related to the preparation of teachers. Students who plan to enter the College of Education should read carefully the requirements for their chosen program in this section of the bulletin. Students who have not completed the work necessary for admission to a program in the College of Education generally will be expected to complete the prescribed work prior to admission. It is strongly recommended that students attend an Information Advising Session before applying to the college. For specific information call the admissions unit of ESAO, 612/625-1550.

The following general guidelines are in effect for admission to undergraduate and postbaccalaureate programs in the college:

- Students applying for admission must satisfactorily complete certain clearance procedures as specified in the instruction sheet issued at the time of application.

- Students applying for admission must present a record of success in previous academic work. Admission is competitive and preference is given to applicants who surpass minimum requirements or who have strong teaching-related experience. Specific admission criteria may be obtained from ESAO, 612/625-1550.

- Undergraduate B.S. programs admit students for initial enrollment in the fall quarter. A limited number of programs may accept applicants during winter and spring quarters.

- Postbaccalaureate programs admit students for initial enrollment during Summer Session.

The following admission procedures correspond to the various student categories for enrollment:

- (1) **Students applying for transfer to the College of Education from other divisions of the University** should apply at the Office of Admissions, 240 Williamson Hall, where they will receive a change of college

form. Exceptions include agricultural education majors and home economics education majors, who should apply at the Office of Admissions and Records, 130 Coffey Hall, St. Paul.

- (2) **Students applying for transfer from other colleges or universities** should write for an application for undergraduate admission to the Office of Admissions, 240 Williamson Hall, University of Minnesota, 231 Pillsbury Drive S. E., Minneapolis, MN 55455, and should have an official transcript of their previous college work sent to that office from each college they have attended. Students will be notified of the admission decision and receive further instructions by mail.

- (3) **Students who have completed a baccalaureate program** may enter the College of Education for work toward teacher licensure. Students seeking admission to an undergraduate program should write for an application for undergraduate admission to the Office of Admissions, 240 Williamson Hall, University of Minnesota, 231 Pillsbury Drive S.E., Minneapolis, MN 55455. Students seeking admission to a postbaccalaureate program should request an application for the master of education (M.Ed.) program from the above address.

- (4) **Individuals with experience in an educational role who wish to take specific courses in the college but are not candidates for degrees** should apply at the Education Student Affairs Office for admission to adult special status. An adult special student who wishes to become a candidate for a degree must follow the regular college admission procedures.

Undergraduate Programs Leading to Licensure

Undergraduate Liberal Education

The University of Minnesota believes that all of its students, whatever their majors

Programs

or professional goals, should hold in common the search for a liberal education. Toward this end, the College of Education, together with other units of the University, subscribes to an all-University policy that states the objectives of liberal education and describes the minimum distribution requirements to be completed by all students.

Listed below are the specific credit distributions required for all education students except those majoring in music education and agricultural education. These requirements are similar in nature to those established by the College of Liberal Arts for the B.A. degree and may be met by selection from a large number of College of Liberal Arts courses.

Writing Practice Requirement—College of Education students must complete the College of Liberal Arts lower level writing practice requirement (Comp 1011) or an approved equivalent. An upper division composition course selected in consultation with their adviser is also required for graduation.

Liberal Education Distribution Requirements—In addition, students must complete 48 credits distributed as follows in these four groups:

Group A. Language, Logic, Mathematics, and the Study of Argument—8 credits (history and structure of English, foreign language, communication skills, linguistics, rhetoric, logic, mathematics, philosophical analysis)

Group B. The Physical and Biological Universe—12 credits

Group C. The Individual and Society—16 credits including Psy 1001

Group D. Literary and Artistic Expression—12 credits (literature, humanities, art, music, dance, theatre)

Programs in Which Students Spend the Freshman Year in a College of Liberal Arts—Students apply for transfer to the following College of Education programs very early in the third quarter of their freshman year and should check ad-

mission requirements for their chosen major in this section of the bulletin.

Art Education
Business Education
Industrial Education
Marketing Education
Recreation, Park, and Leisure Studies
Vocational-Industrial Education

Programs in Which Students Spend Two Years in a College of Liberal Arts—Students apply for transfer to the following College of Education programs very early in the third quarter of their sophomore year and should check admission requirements for their chosen major in this section of the bulletin.

Agricultural Education
Early Childhood Education
Elementary Education
Music Education
Music Therapy
Physical Education
Secondary Education
Mathematics
Science with majors in earth science, physical science, life science, junior high and middle school science

Admission

Admission to all programs is competitive. To be considered for admission, a student must meet the minimum overall and major grade point average (GPA) requirement as established by each program within the college. Enrollment is limited and preference is given to applicants who surpass minimum requirements or who have strong teaching-related experience. Specific program admission requirements may be obtained from the Admissions Unit, Education Student Affairs Office.

Application deadlines for admission to undergraduate programs in the College of Education are:

Winter Quarter 1989:	October 15, 1988
Spring Quarter 1989:	January 15, 1989
Fall Quarter 1989:	April 15, 1989
Winter Quarter 1990:	October 15, 1989
Spring Quarter 1990:	January 15, 1990

Procedures and Policies

Readmission Policy—A student previously admitted to one of the undergraduate degree programs in the College of

Education whose day school registration has been discontinued for two or more consecutive calendar years must apply for readmission at the Education Student Affairs Office. Applicants will be considered according to the admission criteria in effect at the time of reapplication. Students who are readmitted must meet the graduation requirements in effect at the time of readmission. Readmission may be granted for any quarter, as appropriate to individual program planning.

Examination for Credit—Credit for studies completed before admission or outside of class may sometimes be obtained by special examination. Students who believe that they are as well prepared in the subject matter as students successfully completing a particular course should apply to the Student Progress Subcouncil, 1425 University Avenue S.E., for a special examination. If the request is approved, the department offering the course will appoint a special faculty committee to administer the examination. The fee is \$30 for each examination.

Registration Procedures—Dates for registration in the college and the specific procedures to be followed are announced each quarter in the Official Daily Bulletin column in the *Minnesota Daily*. Students registering in the College of Education for the first time should obtain their admission certificates, registration materials, and instructions at the Education Student Affairs Office, 1425 University Avenue S.E.

Change of Registration—Students who find it necessary to make program changes should obtain a Course Request form at the registration desk in the Education Student Affairs Office. Students may add courses or change to different courses through the second week of the quarter. After this time, written consent of the instructor and approval of the Student Progress Subcouncil are required to add a course. Before the end of the sixth week of a quarter, students may cancel their registration in any course. After the

sixth week, students must obtain written permission from the instructor and the Student Progress Committee.

Students are not permitted to change the grading system for which they have registered in a course after the second week of classes.

Change in Major—Students who wish to change from one major to another or add a major within the College of Education should apply through the Education Student Affairs Office.

Unsatisfactory Progress—Students who are not making satisfactory progress in their curriculum may be placed on probation by the Student Progress Subcouncil, which reviews the overall academic performance of students as well as their performance in major courses. Student Progress staff members in the Education Student Affairs Office, 1425 University Avenue S.E., help students assess their academic status and advise students with respect to their academic progress.

Teaching Licensure—Students who plan to teach in Minnesota are expected to apply for teaching licensure when they register for the final quarter of their program. They should obtain an application from the Education Student Affairs Office, attach a money order for the fee (payable to the Commissioner of Education, State of Minnesota), and submit the application and money order to the Student Relations unit, 150 Williamson Hall. All other details are handled by the University, and at the time the degree is awarded, qualified graduates are recommended for the appropriate license to teach in Minnesota schools.

Students completing a vocational licensure program in agricultural education, business, marketing, home economics, and industrial or vocational education should obtain an application and instructions from the Vocational Licensure department of the State Department of Education (296-2046) and submit this to the state in accordance with their instructions.

Graduation Requirements

Students who complete the following requirements graduate from the College of Education with a bachelor of science (B.S.) degree and receive, upon application, the recommendation for an appropriate Minnesota teaching license.

Amount and Quality of Work—Completion of a minimum of 186 credits (in some specialized curricula, the number of credits is more than 186) with a C (2.00) average, including the specified coursework in physical education and public health, is required for graduation. All GPA requirements for student teaching, internships, and graduation are computed using University of Minnesota, Twin Cities coursework only. Contact ESAO or the major department for specific requirements.

S-N Grading—The use of S-N grading is strictly limited by the College of Education. All major coursework must be taken A-F.

Professional Requirements—Professional education courses are reserved for students admitted to approved licensure programs. The requirements for these programs are outlined in the curricula section of the bulletin.

Special Requirements—State law requires that all candidates for licensure complete coursework in public health and drug education. In addition, the college requires that students in the College of Education must complete these requirements before graduation but need *not* complete them before applying for transfer to the college.

A State Board of Teaching regulation requires that all applicants for teacher licensure complete a program in human relations prior to graduation. Undergraduate students in the College of Education meet a portion of this requirement through methods courses and other experiences and the balance by completing EPsy 3131, Introduction to Human Relations (3 credits). The state's requirement for coursework in methods of teaching

handicapped and gifted students in regular school settings is met by including a 2-credit professional education course, EPsy 3606, in each of the teaching majors.

Residence Requirements—A minimum of 45 credits in all types of courses 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 the degree and recommendation for teaching licensure.

Degrees with Distinction—College of Education graduates receive the bachelor of science degree upon completion of their undergraduate program. If they qualify, they may earn their degree with distinction.

Eligibility for graduation with distinction is computed at the time of application for graduation; students need not file a separate application to be considered. To graduate with distinction, a minimum grade average of 3.50 is required for all coursework completed at the University and 3.60 for all coursework completed at the University in the junior and senior years.

Application for a Degree—Students should file their application for a degree at 150 Williamson Hall one full year before they expect to graduate. In addition, students whose major or minor fields are art education, English education, music education, recreation, park, and leisure studies, industrial education, or the sport and exercise science program in physical education must file with the Student Progress Subcouncil in ESAO a program approved by their adviser.

Senior Balance Sheet—The senior balance sheet is mailed to students by the degree clearance staff in the Registration/Student Progress unit of ESAO approximately one quarter after they apply for a degree. It lists the required courses completed, the total number of credits earned, and any deficiencies that must be removed before a student may graduate. It

is to be used by students and their advisers as a checklist of completed requirements.

Postbaccalaureate Programs Leading to Licensure

The College of Education is currently revising its teacher education programs. The major goal is to improve the licensure programs to reflect current thinking and research in teacher education. As a part of this revision process the college will be changing the teacher licensure programs from undergraduate programs to postbaccalaureate on an experimental basis. Only those programs presented are currently at the postbaccalaureate level.

Admission to a postbaccalaureate program in the College of Education requires an earned bachelor's degree (B.A. or B.S.) in a major field related to the area in which the student wishes to teach. Postbaccalaureate programs admit students for initial enrollment during Summer Session only. This is a full-time program of study, and students are expected to complete the program within the scheduled 15 months.

Programs in Which Students Have Completed a Baccalaureate Degree—

Students must have earned a baccalaureate degree (B.A. or B.S.) in a major field related to the area in which they wish to teach before entering the following programs in the College of Education:

- Agricultural Education (1989)
- Secondary Education
 - Bilingual Education
 - English Education (1989)
- Second languages and cultures with majors in
 - Chinese, ESL, French, German, Hebrew, Japanese, Latin, Russian, Spanish
- Social Studies with emphases in anthropology, economics, geography, history, political science, psychology, sociology

A postbaccalaureate option also is available in Elementary Education.

Admission

Admission to all programs is competitive. To be considered for admission a student

must have an earned B.A. or B.S. degree with a minimum overall grade point average of 2.80 and a minimum 3.00 grade point average in the major. Enrollment is limited and preference is given to students who surpass the minimum standards or who have strong teaching-related experience.

Students seeking admission to a postbaccalaureate program must complete the Miller Analogies Test (MAT) as part of the admissions process. Applicants for the second languages and cultures program must also complete the Modern Languages Association (MLA) language proficiency exam.

Application deadlines for admission to postbaccalaureate programs in the College of Education are:

- Summer Session I 1989: February 1, 1989
- Summer Session I 1990: February 1, 1990

For specific information regarding admission criteria and entrance exams, contact the Admissions Unit, Education Student Affairs Office, 1425 University Avenue S.E., 612/625-1550.

Requirements for the Completion of the Postbaccalaureate Program

Students who complete the following requirements receive, upon application, the recommendation for an appropriate Minnesota teaching license from the College of Education.

Amount and Quality of Work—Completion of a minimum of 60 credits (in some curricula, the number of credits is more than 60) is required for completion of a postbaccalaureate program. Contact ESAO or the major department for specific requirements.

S-N Grading—The use of S-N grading is strictly limited by the College of Education. See the quarterly *Class Schedule* to determine grading options for each course.

Professional Requirements—Professional education courses are reserved for students admitted to approved licensure

Programs

programs. The requirements for these programs are outlined in the curricula section of the bulletin.

Special Requirements—State law requires that all candidates for licensure complete coursework in public health and drug education. A State Board of Teaching regulation also requires that all applicants for teacher licensure complete a program in human relations. Students in the College of Education must complete these requirements before being recommended for teacher licensure. Contact the major program department for details regarding the fulfillment of these requirements.

Residence Requirements—A minimum of 45 credits in all types of courses must be earned while in residence in the College of Education. These are minimum residence requirements for recommendation for teaching licensure.

Procedures and Policies

College procedures are described generally in the following paragraphs; further details and help may be obtained at the information desk of the Education Student Affairs Office, 1425 University Avenue S.E.

Examination for Credit—Credit for studies completed prior to admission or outside of class may sometimes be obtained by special examination. Students who believe that they are as well prepared in the subject matter as students successfully completing a particular course should apply to the Student Progress Subcouncil, 1425 University Avenue S.E., for a special examination. If the request is approved, the department offering the course will appoint a special faculty committee to administer the examination. The fee is \$30 for each examination.

Registration Procedures—Dates for registration in the college and the specific procedures to be followed are announced each quarter in the Official Daily Bulletin column in the *Minnesota Daily*. Students

registering in the College of Education for the first time should obtain their admission certificates, registration materials, and instructions at the Education Student Affairs Office, 1425 University Avenue S.E.

Change of Registration—Students who find it necessary to make program changes should obtain a Course Request form at the registration desk in the Education Students Affairs Office. Students may add courses or change to different courses through the second week of the quarter. After this time, written consent of the instructor and approval of the Student Progress Subcouncil are required to add a course. Before the end of the sixth week of a quarter, students may cancel their registration in any course. After the sixth week, students must obtain written permission from the instructor and the Student Progress Committee.

Students are not permitted to change the grading system for which they have registered in a course after the second week of classes.

Change in Major—Students who wish to change from one major to another within the College of Education should see a counselor in the Education Student Affairs Office.

Unsatisfactory Progress—Students who are not making satisfactory progress in their curriculum may be placed on probation by the Student Progress Subcouncil, which reviews the overall academic performance of students as well as their performance in major courses. Student Progress staff members in the Education Student Affairs Office, 1425 University Avenue S.E., help students assess their academic status and advise students with respect to their academic progress. In addition to the required grade average, the percentage of I, W, N, and D grades is also considered in making decisions.

Teaching Licensure—Students who plan to teach in Minnesota are expected to apply for teaching licensure when they register for the final quarter of their pro-

gram. They should obtain an application from the Education Student Affairs Office, attach a money order for the fee (payable to the Commissioner of Education, State of Minnesota), and submit the application and money order to the Student Relations unit, 150 Williamson Hall. All other details are handled by the University, and at the time the degree is awarded, qualified graduates are recommended for the appropriate license to teach in Minnesota schools.

Students completing a vocational licensure program in agricultural education, business, marketing, home economics, and industrial or vocational education should obtain an application and instructions from the Vocational Licensure department of the State Department of Education (296-2046) and submit this to the state in accordance with their instructions.

Curricula

Child Psychology

W. Andrew Collins, Director, 196 Child Development

Majors in child psychology are offered through the College of Liberal Arts. Students interested in the B.A. or B.S. degree in this area should consult the *College of Liberal Arts Bulletin*. The College of Education offers programs in prekindergarten and kindergarten education. For information, see Elementary Education in this section of the bulletin. Students interested in a postbaccalaureate program in child psychology should see the description for that field under Advanced Study in this bulletin and consult the *Graduate School Bulletin*.

Curriculum and Instruction

Dianne Monson, Chair, 145 Peik Hall

Art Education

The curriculum in art education prepares students for Minnesota licensure for teaching art in elementary and secondary schools. The curriculum includes basic training in art; an opportunity to special-

ize, through selection of electives, in an area of particular interest in art; a balanced general education; and professional preparation for teaching.

Students register for courses in liberal arts areas for the first year and apply for admission early in the quarter in which they will have completed 45 credits, 15 of which must be in studio art, design, and art history.

The criteria for consideration for admission are (a) completion of clearance procedures; (b) completion of 45 credits; (c) a minimum grade average of C+ (2.50) in the major and C (2.00) overall; and (d) faculty review of a portfolio with representative samples of the applicant's work. In addition, the nature and scope of the applicant's prior work with children and assessment of personal characteristics are considered.

In the major, a C+ average (which is also required for admission to the college, admission to student teaching, and graduation) must be earned in all art and art education courses. Students are expected to complete the liberal education distribution requirements as detailed at the beginning of this section of the bulletin. Appropriate related and major courses may be applied toward these requirements. A minor in a teaching subject, as listed in this bulletin, is recommended. As an alternative, 15 credits in 3xxx and 5xxx courses outside both the major field and professional education courses may be chosen. In either case, a C average is required for this part of the program.

Students who major or minor in art education must file an approved program with the art education adviser at least two full quarters prior to their expected date of graduation.

Major in Art Education

Major Courses (minimum 56 credits)

Courses chosen to meet this requirement will be selected with department approval to meet the needs of the individual student. A minimum of 12 credits in studio art coursework must be taken in residence.

Art History and Theory—minimum 16 credits

Programs

Studio Courses—minimum 40 credits including basic courses in drawing, painting, and sculpture. A well-balanced program with 12 credits in one area of emphasis is recommended. Suggested are:

- ArEd 3009—Weaving Without a Loom (4)
- ArEd 3010—Introduction to Weaving (4)
- ArEd 3020—Contemporary Crafts (4)
- ArtS 1101—Drawing I (4)
- ArtS 1301—Sculpture (4)
- ArtS 1520—Printmaking: Lithography (4)
- ArtS 1701—Photo Medium (4)
- ArtS 1811—Ceramics: Handbuilding (4)
- Dsgn 1525—Design Process: Two-Dimensional Design (4)
- Dsgn 1533—Metalsmithing: Introduction to Techniques (4)

Professional Education Courses (minimum 53 credits)

- ArEd 3000—Art of Children (3)
- ArEd 3110—Curriculum Development in Art (3)
- ArEd 3120—Newer Media in Art Curriculum (3)
- ArEd 3130—Community and School Resources in Art Curriculum (3)
- 6 credits in ArEd 3200—Field Experiences in Art Education (3-9)
- 12 credits in ArEd 3600—Student Teaching and Supervision of Art (3, 6, or 12)
- ArEd 3610—Teaching Art in the Schools (3)
- ArEd 3800—Current Trends in Art Education (3)
- Elem 3100—Psychological Foundations of Elementary Education (4) or SeEd 3155—Psychological Foundations of Secondary Education (5)
- Phil 3502—Introduction to Aesthetics (4) or ArEd 5389—Application of Aesthetic Theory in Education (3)
- EPsy 3606—Exceptional Students in Regular Classes (2)
- SeEd 3150—Introduction to Secondary School Teaching (5)
- SPFE 5090—The School and Society (3)

Special Requirements for All Students

- EPsy 3131—Introduction to Human Relations (3)
- PubH 3004—Basic Concepts in Personal and Community Health (5)

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 minimum requirements.

Minor in Elementary School Art (minimum 29 credits)

Minor Courses

- ArEd 3001—Survey of Art Activities (4)
- ArEd 3020—Contemporary Crafts (4)
- 12 credits from studio art, art history, or design

Professional Courses

- ArEd 3000—Art of Children (3)
- ArEd 3110—Curriculum Development in Art (3)
- 3 cr in ArEd 3200—Field Experiences in Art Education (3-9)

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, but will NOT qualify students for licensure to teach art.

Minor in Secondary School Art (minimum 29 credits)

Minor Courses

- ArEd 3020—Contemporary Crafts (4)
- 4 credits in art history and theory
- Electives—12 credits including a minimum of 8 in drawing and design

Professional Courses

- ArEd 3000—Art of Children (3)
- ArEd 3110—Curriculum Development in Art (3)
- 3 credits in ArEd 3200—Field Experiences in Art Education (3-9)

The state of Minnesota no longer recognizes an art minor for teaching licensure at the secondary level; a number of other states do.

Early Childhood Education

This curriculum prepares students for recommendation for licensure to teach in prekindergarten programs through a broad-based early childhood education major. See page 10 for application deadlines. Students seeking admission should inquire at the Education Student Affairs Office, 1425 University Avenue S.E., for current information on admission procedures. After admission to the College of Education, students are assigned an adviser in the area of early childhood education.

Major in Early Childhood Education

Students should take liberal arts course work for the first two years and apply for admission early in the quarter that they will complete 90 quarter credits. The program may be entered during any quarter. The criteria for consideration for admission are:

- Completion of the College of Liberal Arts lower division writing practice requirement, or an approved equivalent, and the general psychology requirement;
- Completion of 90 quarter credits with a grade average of C + (2.50);

● Completion of all but 12 or fewer credits of items 1 through 7 of the Related Course Requirements below.

The nature and scope of the applicant's prior work with children and an assessment of personal characteristics are also considered. Students should complete the liberal education distribution requirements as detailed at the beginning of this section of the bulletin and under Related Course Requirements below, prior to admission. Appropriate major courses may also be applied toward these requirements. Any electives should be chosen in consultation with an adviser.

Related Course Requirements

Spch 1101—Fundamentals of Speech Communication: Oral Communication (4)

or Spch 1102—Fundamentals of Speech Communication: Communication Process (4)

Math 1005—Introduction to Elementary Mathematics (4)

12 credits in science including courses in physical, biological, and earth science

12 credits chosen from at least two of the following areas: anthropology, economics, geography, history, political science, social science, and sociology

Mus 1001—Fundamentals of Music (4)

CPsy 1301—Introductory Child Psychology (4)

Psy 3801—Introduction to Measurement and Statistical Methods (4) or equivalent

A concentration of 30 credits in any College of Liberal Arts major, which may include courses in items 1 through 5 above.

Major and Professional Courses

Child Growth and Development (minimum 27 credits):

CPsy 3331—Processes of Socialization of Children (4)

CPsy 5335—Peer Relations (4)

CPsy 5345—Language Development (4)

4 credits in CPsy 3330—Directed Experiences (1-4)

PE 5134—Perceptual-Motor Development in Childhood (3)

4 credits in intelligence, learning, or genetics

4 credits in child psychology

Child and the Family:

8 credits in family social science or child psychology

Professional Education (minimum 34 credits):

Elem 3376—Nursery-Kindergarten Curriculum I (3)

Elem 3378—Social Learning in Early Childhood Education (3)

Elem 3379—Cognitive and Creative Learning in Early Childhood Education (3)

6 credits in Elem 3604—Student Teaching in the Nursery School (3-6)

EPsy 3606—Exceptional Students in Regular Classrooms (2)

EPsy 5713—Assessment in Infancy and Early Childhood (3)

SFFE 5090—School and Society (3)

CISy 5003—Introduction to Computers and Their Uses (1)

EdAd 5140—Administration of Early Education Programs (3)

4 credits in special education

3 credits in art education, music education, or physical education

Special Requirements for All Students:

EPsy 3131—Introduction to Human Relations (3)

PubH 3004—Basic Concepts of Personal and Community Health (5)

3 credits in physical education

Electives

To graduate, students must complete 186 credits with an overall grade average of 2.50 and an average of 3.00 in both major and professional courses.

Prekindergarten Teacher Licensure

Students wishing to prepare at the University of Minnesota for careers in early childhood education can meet state licensure requirements through completion of the Prekindergarten Teacher Licensure Program. This is a *licensure* program, not a degree program. It consists of both didactic and practicum training in child development and early childhood education.

Junior or senior undergraduate students from any program within the University, or students who have a four-year degree recognized by the University, may apply for admission to this program. It may be completed in conjunction with a student's undergraduate or graduate program or under adult special status. For more information, contact Lynn Galle, Program Coordinator, 134c Child Development Building, University of Minnesota, 51 East River Road, Minneapolis, MN 55455 (612/624-5283).

Early Childhood Education (12-15 credits)

Elem 3376—Nursery School-Kindergarten Curriculum I (3)

or Elem 5376—Current Trends in Early Childhood Education (3)

Elem 3378—Social Learning in Early Childhood Education (3)

Elem 3379—Cognitive and Creative Learning in Early Childhood Education (3)

Programs

Elem 3604—Student Teaching in the Nursery School (3-6) (Credit requirement based on student's previous prekindergarten teaching experience)

Child Psychology (15 credits)

CPsy 1301—Introductory Child Psychology (4)
or CPsy 5301—Advanced Child Development (4)
4 credits in CPsy 3330—Directed Experiences (1-4)
CPsy 3343—Introduction to Cognitive Development (4)
or CPsy 5345—Language Development (4)
or CPsy 5349—Children's Learning and Intellectual Skills (4)

CPsy 3331 or 5331—Processes of Socialization of Children (4) (if undergraduate)

CPsy 5339—Parent-Child Relations (4)

Guided Electives (minimum 3 credits)

CPsy 3302—Infancy (4)

EPsy 5625—Education of Handicapped Infants and Pre-School Children (4)

Students must also meet, or have met as part of their undergraduate program, these Minnesota Department of Education requirements:

EPsy 3131—Introduction to Human Relations (3)

PubH 3004—Basic Concepts in Personal and Community Health (5)

One physical education activity course

Elementary Education

The curricula outlined below prepare students for recommendation for licensure to teach in elementary schools. Two basic programs are offered for persons of differing backgrounds in education, training, and experience: 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 licensure to teach grades 1 through 6 in the state of Minnesota. Pre-elementary programs are offered for those who wish to add these endorsements to an elementary teaching license.

Elementary education programs have a limited enrollment and accept applications for fall and winter quarters only. Students seeking admission should attend an Information Advisory Session at ESAO, 1425 University Avenue S.E., for current information on admission procedures and assistance in choosing a curriculum. After admission to the College of Education, students will be assigned an adviser in the area of elementary education.

Major in Elementary Education for Undergraduate Students

Students should take liberal arts coursework for the first two years and apply for admission to the program early in the quarter in which they will have completed 90 quarter credits. See page 10 for application deadlines. Students are not admitted for the spring quarter or summer terms. The criteria for consideration for admission are:

- Completion of CLA writing practice and general psychology requirement;
- Completion of 90 quarter credits with a grade average of C+ (2.50). Preference will be given to applicants with a grade average above 2.50;
- Completion of all but 12 or fewer credits of items 1 through 5 of the Related Course Requirements below.

The nature and scope of the applicant's prior work with children and an assessment of personal characteristics and academic skills are also considered. Students must complete the liberal education distribution requirements as detailed at the beginning of this section of the bulletin and under Related Course Requirements below. Appropriate major courses may also be applied toward these requirements.

General College students should note the transfer information in the *General College Bulletin*.

For admission to student teaching and for graduation, students must earn a C (2.00) average for the total program and a C+ (2.50) average separately for the major and professional education courses.

Related Course Requirements

1. Spch 1101—Fundamentals of Speech Communication: Oral Communication (4)
or Spch 1102—Fundamentals of Speech Communication: Communication Process (4)
2. 12 credits in mathematics. Select one of the following: Math 1008—Trigonometry (4), Math 1111—College Algebra and Analytical Geometry (5), Math 1131—Finite Mathematics (5), Math 1142—Short Calculus (5), Math 1201—Pre-Calculus (5), Math 1211—Calculus I (5), and Math 1005-1006—Introduction to Elementary Mathematics (4 cr each). *Note:* 1005-1006 should be taken after completion of course from first group.

3. 13 credits in science including courses in physical and biological sciences
4. 12 credits chosen from at least two of the following areas: anthropology, economics, geography, history, political science, social science, and sociology
5. Mus 1001—Fundamentals of Music (4)
6. 18 credits in 3xxx and 5xxx courses including Engl 3851—The English Language (4). (Students may also apply PubH 3004, any credits in 1xxx courses in physical and biological sciences in excess of the 13-credit requirement, and credits in mathematics courses numbered 1142 or above toward this requirement.)
7. A concentration of 30 credits in any one of the following fields: anthropology, art, economics, English, a second language, geography, history, humanities, mathematics, music, philosophy, political science, psychology, science, sociology, speech. Courses from items 1 through 6 may be included.
8. ArEd 3001—Survey of Art Activities (4)
9. Comp 3027—Advanced Expository Writing (4)

Major and Professional Courses

- Elem 3100—Psychological Foundations of Elementary Education (4)
- Elem 3101—Introduction to Elementary School Teaching (3)
- Basic Methods Courses: (Students may apply only two basic methods courses taken outside of the College of Education. Students must complete a minimum of 12 credits of the methods courses prior to the first quarter of student teaching.)
- Elem 3300—Children's Literature (3)
- Elem 3316—Teaching English in the Elementary School (3)
- Elem 3331—Teaching Reading in the Elementary School (3)
- Elem 3346—Teaching Science in the Elementary School (3)
- Elem 3361—Teaching Social Studies in the Elementary School (3)
- Elem 3391—Teaching Mathematics in the Elementary School (3)

6 credits in Elem 3621—Junior Practicum in Elementary Education (1 or 2)

Minimum of 12 credits in student teaching from Elem 3600, 3601, 3603, 3605, 3606, 3607, 3610

ArEd 3000—Art of Children (3)

Hlth 3330—Teaching Health in the Elementary School (3)

MuEd 3011—Teaching Music in the Elementary School (4)

EPsy 3606—Exceptional Students in Regular Classes (2)

SPFE 5090—The School and Society (3)

Special Requirements for All Students

PE 3327—Teaching Physical Education in the Elementary School (3), which completes the physical education requirement

EPsy 3131—Introduction to Human Relations (3)

PubH 3004—Basic Concepts in Personal and Community Health (5)

Electives to complete 186 credits

Major in Elementary Education for Postbaccalaureate Students

Satisfactory completion of this program will culminate in a B.S. degree with a major in elementary education and recommendation by the college for licensure to teach grades 1 through 6 in the state of Minnesota.

A limited number of students are accepted into the program each academic year. Applications are considered for fall and winter quarter admission only. Students seeking admission should attend an Information Advising session at ESAO. Criteria for consideration for admission include a baccalaureate degree from an accredited institution with a minimum overall grade average of C + (2.50).

The content of the baccalaureate program must meet the minimum liberal education distribution requirements (listed at the beginning of this section of the bulletin) and must include the liberal arts prerequisites for professional education courses; or the student must complete these deficiencies during the summer terms before the fall quarter in which he or she enters the program. The liberal arts prerequisites entail completion of one course each in general psychology, foundations of arithmetic, fundamentals of music, and linguistics, as well as one course in public health that will satisfy the licensure requirement of the State Board of Teaching.

Students admitted to this program are required to attend full time and to complete a minimum of 12 credits per quarter with a minimum grade average of C + (2.50).

Major and Professional Courses (minimum 47 credits)

- Elem 3100—Psychological Foundations of Elementary Education (4)
- Elem 3101—Introduction to Elementary School Teaching (3)
- Elem 3300—Children's Literature (3)
- Elem 3316—Teaching English in the Elementary School (3)
- Elem 3331—Teaching Reading in the Elementary School (3)
- Elem 3346—Teaching Science in the Elementary School (3)
- Elem 3361—Teaching Social Studies in the Elementary School (3)

Programs

- Elem 3391—Teaching Mathematics in the Elementary School (3)
Minimum of 12 credits in student teaching from Elem 3600, 3601, 3603, 3605, 3606, 3607, 3610
MuEd 3011—Teaching Music in the Elementary School (4)
PE 3327—Teaching Physical Education in the Elementary School (3)
EPsy 3131—Introduction to Human Relations (3)
EPsy 3606—Exceptional Students in Regular Classes (2)

Kindergarten Endorsement Program

Students who wish to be licensed for kindergarten teaching are required to complete the following courses with a grade average of C+ (2.50) in addition to the major for undergraduate students or the major for postbaccalaureate students as outlined above:

For all students:

Elem 3603—Student Teaching in the Kindergarten (6)

CPsy 1301—Introductory Child Psychology (4)

For persons without valid Minnesota teaching license:

Elem 3376—Nursery School-Kindergarten Curriculum I (3)

Elem 3377—Nursery School-Kindergarten Curriculum II (3)

For persons with valid Minnesota teaching license:

Elem 5376—Current Trends in Early Childhood Education (3)

Elem 5377—Early Childhood Education: Materials and Resources (3)

Secondary Education

Admission to Secondary Education—Students planning to teach in mathematics or science must complete two years of pre-professional work in liberal education areas before transferring to the College of Education. It is recommended that students attend an Information Advising Session at ESAO before applying. Criteria for admission include:

- Completion of 90 quarter credits, including 25 credits in the major, or 15 credits in the major and 10 credits in a teaching minor;
- A minimum grade average of C (2.00) overall, C+ (2.50) in major courses, and C (2.00) in minor courses;
- Completion of lower level writing practice course or an approved equivalent.

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

Persons presently holding a teaching minor who wish to upgrade the minor to a major, or persons seeking to add a new teaching major, should contact an appropriate secondary education adviser in one of the following areas: English education, science education, mathematics education, second language education, or social studies education. The faculty member will help the student to develop a program of study that qualifies for licensure in the major.

English

Beginning Fall Quarter 1989, the English education program will begin an experimental postbaccalaureate program in English and will discontinue its current B.S. program. The new program will require a B.A. degree in English for admission. Further information regarding this new program is provided below.

Major in English: Candidates for the B.S. Degree (through Fall 1989)

Students intending to major in English should take coursework for the first two years in liberal education areas. During this time they must complete a minimum of 16 credits in English courses beyond the undergraduate composition requirement, including Comp 1027. Requirements for admission to a secondary education program are listed in this subsection.

English majors have the option of completing a presently defined minor or declaring a supporting area of study. The

minimum number of credits for a supporting area is 24, with no more than half (12 credits) in 1xxx and 3xxx courses. Only supporting fields directly related to English education, based on prior consultation with and recommendation of the adviser, will be considered for approval by the Student Progress Subcouncil.

Students are expected to complete the liberal education distribution requirements as detailed at the beginning of this section of the bulletin. Appropriate related and major courses may be applied toward these requirements.

Students who major in English must file an approved program with the English education adviser at least two full quarters before their expected date of graduation.

Postbaccalaureate English Major Program

Students enrolled in the postbaccalaureate program will begin coursework Fall Quarter 1989. On completion of the program, students will be recommended for Secondary English certification and will receive credits towards a master's degree.

Candidates for this degree will be required to meet all of the major requirements listed below. It is recommended that prospective candidates complete as many as possible of these major course requirements within their B.A. program. (English B.A. candidates at the University of Minnesota should consult with the English Advising Office, Lind Hall, regarding these requirements.)

To satisfy the professional education requirements listed below, the majority of the courses completed within the program will consist of education courses. However, several courses in language, advanced composition, and speech—coursework frequently not included in English B.A. programs—will be built into the program schedule.

Application deadline for the program is February 1. (See Admissions.)

To be considered, applicants should provide information indicating:

- Completion of a B.A. degree in English from an accredited institution, with a

minimum overall GPA of 2.80, and a minimum GPA in the major of 3.00;

- Results of the Miller Analogies Test.

Major Courses (minimum 52 credits)

- 8 credits of English literature: 4 credits in a survey course and 4 credits in another English literature course
- 12 credits of American literature: 4 credits in a survey course and 8 credits in other American literature courses, to include study of women and minority writers
- 4 credits in the study of Shakespeare
- 4 credits in the English language: Engl 3851—The English Language (4)
- 12 credits in advanced composition: Comp 1027 and 3027 and one course from Comp 3011, 3012, Engl 1101, 1104, 3101, 3104, 5101, 5104, 5108, or Comp 1027 or 3027 and two of the other courses listed above
- 4 credits in speech: Spch 3411 or 5411—Conference Methods
- Electives—8 credits in 3xxx and 5xxx courses chosen from English and Humanities, to include work in continental and non-Western authors

Professional Education Courses: B.S. Candidates (minimum 38 credits)

- SeEd 3150—Introduction to Secondary School Teaching (5)
- SeEd 3155—Psychological Foundations of Secondary Education (5)
- SeEd 3320—Basis for Instruction in Language in Secondary English Curricula (3)
- SeEd 3325—Instructional Practice in English, Speech, and Theatre Arts (4)
- SeEd 3326—Teaching Adolescent Literature (3)
- SeEd 3327—Teaching of Writing in the Secondary School (3)
- SeEd 3331—Introduction to Teaching Reading in Content Areas (3)
- 9 credits in SeEd 3621—Directed Experience in Teaching English, Speech, and Theatre Arts (6-9)
- EPsy 3606—Exceptional Students in Regular Classes (2)
- SPFE 5090—The School and Society (3)
- Electives—one course from SeEd 5175, 5176, 5320, 5323, 5324, 5325, 5326, 5340, 5404

Special Requirements for All Students

- EPsy 3131—Introduction to Human Relations (3)
- PubH 3004—Basic Concepts in Personal and Community Health (5)

Professional Education Courses: Post-BA Program

To be arranged; please consult your adviser for course requirements.

Supporting Field in Reading

Students majoring in English may complete a supporting field in reading in lieu of a traditional minor. The supporting field is designed to assist persons who may be teaching slow readers in remedial

Programs

classes or below-average, average, and above-average readers in content classes.

The supporting field requires a minimum of 24 credits in reading and related areas. The following required courses are listed in the optimal order for taking them.

SeEd 3331—Introduction to Teaching Reading in Content Areas (3)

Elem 5331—Teaching and Supervision of Reading in the Elementary School (3)

Elem 5334—Reading Difficulties (3)

SeEd 5175—Secondary Remedial Reading Instruction (3)

SeEd 5344—Teaching Reading in Content Areas (3)

Elem 5335—Clinical Diagnosis of Reading Difficulties (3)

Elem 5336—Clinical Practice in Remedial Teaching (3)

Elective—One course from SeEd 5176, 5404, CPsy 3303, 3343, 5341, 5345

Correct sequencing of the courses requires students to plan their supporting field program carefully when they enter the College of Education.

Supporting Field in Writing

English majors may complete a supporting field in writing in lieu of a traditional minor. The supporting field is available to students who wish to extend their own background and preparation in the teaching of writing.

The supporting field should be carefully planned with the student's adviser at the time of admission to the College of Education. It requires a minimum of 23 credits selected from courses listed below:

Required course

SeEd 5323—Practicum in Diagnosing, Assessing, and Teaching Writing in Secondary School (3)

Additional courses

Comp 3011—Writing About Literature (4)

Comp 3012—Writing in the Humanities: Writing About Nonfiction Texts (4)

Comp 3050—Topics in Advanced Composition: Feminist Scholarly Writing (4)

Spch 5611—Classical Rhetoric (4)

Engl 1101—Introduction to Fiction Writing (4)

Engl 1104—Introduction to Poetry Writing (4)

Engl 3101—Intermediate Fiction Writing (4)

Engl 3104—Intermediate Poetry Writing (4)

Engl 5100—Advanced Nonfiction Writing (4)

Engl 5101, 5102, 5103—Advanced Fiction Writing (4 cr each)

Engl 5104, 5105, 5106—Advanced Poetry Writing (4 cr each)

Engl 5109—Memoir Writing (4)

Engl 5970—Directed Study in Writing (1-4)

Mathematics

Major in Mathematics

A minimum of three years of high school mathematics that includes a foundation in solid geometry is a prerequisite for both majors and minors in mathematics. Four years of high school mathematics are recommended. Students take coursework for the first two years in liberal education areas and meet the requirements for admission to a secondary education major. To be considered for admission to the Mathematics education program, applicants must have completed, with at least a 2.50 average, one full year of Calculus (Math 1211-1221-1231 or equivalents) and at least *two* of the following courses: Multi-variable Calculus (Math 3211 or equivalent), Linear Algebra (Math 3142 or equivalent), and Differential Equations (Math 3066 or equivalent). The sequence Math 3212-3213, Vector and Linear Analysis I-II, can be substituted for Math 3142-3066. Mathematics courses prerequisite to Math 1211, Calculus I, cannot be applied toward the major. Students must select one or more minors from those subjects commonly taught in the high school or a supporting field chosen with the approval of the mathematics education adviser. Requirements for admission to a secondary education program are listed in this subsection.

Students are expected to complete the liberal education distribution requirements as specified at the beginning of this section of the bulletin. Appropriate major courses may be applied toward these requirements.

Because of the sequential nature of the professional education courses, students ordinarily complete the program in a minimum of five quarters.

Major Courses (minimum 52 credits)

One of the following series:

Math 1211-1221-1231—Calculus I-II-III (5 each)

Math 1211—Calculus I, 1321-1331—Calculus: Computer Option II-III (5 each)

Math 1511H-1521H-1531H—Honors Calculus I-II-III (5 each)

Math 1611-1621—Accelerated Calculus I-II (5 each)

One of the following series:

- Math 3211—Multivariable Calculus (5)
and Math 3212, 3213—Vector and Linear
Analysis I-II (5, 4)
- Math 3211—Multivariable Calculus (5)
and Math 3142—Introduction to Linear Alge-
bra (4)
and Math 3066—Elementary Differential
Equations (4)
- Math 3511-3521-3531—Linear Analysis I-II-III (5
each)

Math 3161—Geometric Structures and Transformations (4)

Math 5081—Fundamental Topics in Analysis (4)

Math 5082—Foundations of Algebra (4)

Math 5083—Foundations of Geometry (4)

SeEd 3366—Computer-Assisted Mathematics Instruc-
tion (4)

One of the following: Stat 3091, 5121, 5131, Math
5679, 5681, 5701

Professional Education Courses (minimum 44 credits)

SeEd 3150—Introduction to Secondary School Teach-
ing (5)

SeEd 3155—Psychological Foundations of Secondary
Education (5)

SeEd 3365—Teaching Secondary School Mathematics
(4)

SeEd 3368—Teaching Secondary School Mathematics
(3)

MthE 5081—Teaching Arithmetic (2)

MthE 5082—Fundamentals of Algebra (2)

MthE 5083—Fundamentals of Geometry (2)

12 credits in SeEd 3661—Student Teaching in Mathe-
matics (3-6-9-12)

4 credits in SeEd 3152—Practicum: Secondary Educa-
tion (1-7) (1 credit taken concurrently with each of
SeEd 3150 and 3155; 2 credits taken concurrently
with SeEd 3365)

EPsy 3606—Exceptional Students in Regular Classes
(2)

SPFE 5090—The School and Society (3)

Special Requirements for All Students

EPsy 3131—Introduction to Human Relations (3)

PubH 3004—Basic Concepts in Personal and Commu-
nity Health (5)

Minor in Mathematics

Minor Courses (minimum 40 credits)

One of the following series:

- Math 1211-1221-1231—Calculus I-II-III (5 each)
- Math 1211—Calculus I, 1321-1331—Calculus:
Computer Option II-III (5 each)
- Math 1511H-1521H-1531H—Honors Calculus I-
II-III (5 each)
- Math 1611-1621—Accelerated Calculus I-II (5
each)
- Math 3211—Multivariable Calculus (5) or Math
3511—Linear Analysis I (5) or Math 3611—
Multivariable Calculus (5)

Math 3161—Geometric Structures and Transformations (4)

Math 5081—Fundamentals of Analysis (4)

Math 5082—Foundations of Algebra (4)

Math 5083—Foundations of Geometry (4)

One other 4-credit course selected from the require-
ments for the mathematics major; note that a linear
algebra course is a prerequisite for Math 5082

Professional Education Courses

SeEd 3365—Teaching Secondary School Mathematics
(4)

6 credits in SeEd 3661—Student Teaching in Mathe-
matics (3-6-9-12)

2 credits in SeEd 3152—Practicum: Secondary Educa-
tion (1-7) (to be taken concurrently with SeEd
3365)

MthE 5081—Teaching Arithmetic (2)

MthE 5082—Teaching Algebra (2)

MthE 5083—Teaching Geometry (2)

Science

Students planning to teach science in Minnesota secondary schools will be recommended for appropriate licensure upon completion of a major program for junior and senior high school teaching (grades 7-12) in life science, earth science, or physical science; or a major program for middle and junior high school science teaching (grades 5-9 only); or a minor in life science, earth science, chemistry, or physics. Combinations of majors and/or minors are possible through completion of the requirements of the programs involved. The life science-junior high and middle school science major is one such combination.

Admission to all science education majors and minors is on a competitive basis. Minimum GPA requirements are given as part of the description of each major and minor. Preference for admission will be given to students who have completed a bachelor's degree in an appropriate scientific or engineering field, to students with higher GPAs, and to those who have experience with middle school or high school students. Preference among students without degrees will be based on the number of credits completed in their science area, GPA, and experience with students. Early consultation with an undergraduate program coordinator is strongly recommended because required education methods and student teaching courses may not be offered every quarter.

Students are expected to complete the liberal education distribution requirements detailed at the beginning of this

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section of the bulletin. Appropriate science courses may be applied to meet both these requirements and those of the major or licensure program.

See the section Required of All Science Majors following the description of the majors and minors for a listing of additional courses required for the major programs.

Major in Earth Science (Grades 7-12)

Students completing this program will be recommended for Minnesota licensure to teach earth sciences full time in the junior and senior high schools. A course in the history of science is recommended for group C of the liberal education distribution requirements. Grade averages of C + (2.50) in the earth science courses and C + (2.50) in the broad base science courses are required.

Broad Base Science Course Requirements (minimum 38 credits)

One course in general biology and two additional courses in biological science

Two courses in general chemistry

Two courses in general physics with laboratory. A three-quarter sequence of courses is recommended for students planning to elect further work in earth science.

One elective course in either chemistry or physics

Earth Science Courses (minimum 40 credits)

One course in each of the following areas selected with consent of an adviser: physical and historical geology, oceanography or limnology, environmental or human-oriented geology, astronomy, soil science, meteorology, plus electives to total 40 credits

Professional Education Courses and Special Requirements for All Students are listed at the end of the major and minor requirements.

Minor in Earth Science (Grades 7-12)

Students completing this program together with another College of Education licensure program or major will be recommended to teach junior and senior high school earth science part time. Grade averages of C + (2.50) in the earth science courses and C + (2.50) in the broad base science courses are required.

Broad Base Science Course Requirements (minimum 29 credits)

One course in general biology and one additional course in biological science

Two courses in general physics with laboratory

Two courses in general chemistry

Earth Science Courses (minimum 22 credits)

One course in each of the areas of physical and historical geology, astronomy, meteorology; and one course selected from soil science, limnology, or oceanography

Professional Education Courses (minimum 10 credits)

SeEd 3357—Teaching Secondary School Science (4)
(science majors exempt)

6 credits in SeEd 3651—Student Teaching in Science
(1-3-6-9-12)

Major in Life Science (Grades 7-12)

Students completing this program will be recommended for Minnesota licensure to teach senior high school life science (biology) full time and junior high school life science full time. It is recommended that a course in the history of biology be included in group C of the liberal education distribution requirements. Grade averages of C + (2.50) in the life science courses and C + (2.50) in the broad base science courses are required.

Broad Base Science Course Requirements (minimum 30 credits)

Two courses in general physics with laboratory

Two courses in general chemistry

One course in geology

One course in astronomy

Life Science Courses (minimum 50 credits)

50 credits selected with the consent of an adviser, to include two courses in biochemistry or organic chemistry and at least one course in each of the following fields: ecology, general biology, general botany or plant biology, general zoology or animal biology, genetics, history of biology, microbiology, and physiology

Professional Education Courses and Special Requirements for All Students are listed at the end of the major and minor requirements.

Minor in Life Science (Grades 7-12)

Students completing this program together with another College of Education licensure program or major will be recommended to teach junior and senior high school life science part time. Grade averages of C + (2.50) in the life science courses and C + (2.50) in the broad base science courses are required.

Broad Base Science Course Requirements (minimum 30 credits)

Two courses in general chemistry and two courses in general physics with laboratory

One course in geology and one course in astronomy

Life Science Courses (minimum 29 credits)

29 credits selected with the consent of an adviser from the following fields: general biology, general botany or plant biology, general zoology or animal biology, ecology, physiology, and microbiology

Professional Education Courses (minimum 10 credits)

SeEd 3357—Teaching Secondary School Science (4)
(science majors exempt)

6 credits in SeEd 3651—Student Teaching in Science
(1-3-6-9-12)

Major in Physical Science (Grades 7-12)

Students completing this program will be recommended for Minnesota licensure to teach senior high school physical science, including chemistry and physics full time and physical science full time in the junior high school. It is recommended that a course in the history of science or, preferably, the history of physics be included in group C of the liberal education distribution requirements. Grade averages of C + (2.50) in the physics courses and C + (2.50) in the chemistry courses are required.

A combined total of 77 credits is needed in physics and chemistry, with at least 27 credits earned in each.

Physical Science Courses (minimum 77 credits)

A three- or four-quarter sequence in calculus-based physics with laboratory

A three-quarter sequence in modern physics or three courses, selected with the consent of an adviser, including modern physics

Two courses in general chemistry

Courses selected from the following areas: solution chemistry, analytical chemistry, organic chemistry, and physical chemistry

Electives in chemistry and physics selected with the consent of an adviser

Professional Education Courses and Special Requirements for All Students are listed at the end of the major and minor requirements.

Minor in Chemistry (Grades 7-12)

Students completing this program together with another College of Education licensure program or major will be recommended to teach chemistry part time in senior high schools. Grade averages of C + (2.50) in the chemistry courses and C + (2.50) in the physics courses are required.

Chemistry Courses (minimum 28 credits)

Two courses in general chemistry

At least one course in organic chemistry

At least two courses selected from solution, analytical, or physical chemistry

Physics Courses (minimum 10 credits)

At least two quarters of physics

Professional Education Courses (minimum 10 credits)

SeEd 3357—Teaching Secondary School Science (4)
(science majors exempt)

6 credits in SeEd 3651—Student Teaching in Science
(1-3-6-9-12)

Minor in Physics (Grades 7-12)

Students completing this program together with another College of Education licensure program or major will be recommended to teach physics part time in senior high schools. Grade averages of C + (2.50) in the physics courses and C + (2.50) in the chemistry courses are required.

Physics Courses (minimum 28 credits)

A three- or four-quarter sequence in calculus-based physics with laboratory

A three-quarter sequence in modern physics or three courses, selected with the consent of an adviser, including modern physics

Chemistry Courses (minimum 10 credits)

Two courses in general chemistry

Professional Education Courses (minimum 10 credits)

SeEd 3357—Teaching Secondary School Science (4)
(science majors exempt)

6 credits in SeEd 3651—Student Teaching in Science
(1-3-6-9-12)

Major in Junior High and Middle School Science (Grades 5-9 only)

(This program does not prepare students for senior high school teaching in this area.)

Students completing this program will be recommended for Minnesota licensure to teach middle school and junior high science (e.g., biology, physical science, earth science). It is recommended that a course in the history of science be included in group C of the liberal education distribution requirements. Grade averages of C + (2.50) in the courses for each of the three fields (life science, earth science, and physical science) are required.

Life Science Course Requirements

(minimum 24 credits)

At least one course selected with consent of an adviser in each of the following: ecology, general biology, general botany or plant biology, general zoology or animal biology, microbiology

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Earth Science Course Requirements (minimum 22 credits)

At least one course selected with consent of an adviser in each of the following: astronomy, physical and historical geology, meteorology; and one course selected from soil science, limnology, or oceanography

Physical Science Course Requirements (minimum 30 credits)

Courses selected with consent of an adviser, including two courses in general chemistry and one elective course in chemistry, two courses in general physics with laboratory and one elective course in physics

History of Science Course Requirement One course in history of science

Professional Education Courses and Special Requirements for All Students are listed at the end of the major and minor requirements

Required of All Science Majors

In addition to those courses listed in the science majors above, students must complete:

Professional Education Courses (minimum 37 credits)
SeEd 3150—Introduction to Secondary School Teaching (5)

SeEd 3155—Psychological Foundations of Secondary Education (5)

SeEd 3356, 3357—Teaching Secondary School Science (2, 4)

12 credits in SeEd 3651—Student Teaching in Science (1-3-6-9-12)

4 credits in SeEd 3152—Practicum: Secondary Education (1-7)

EPsy 3606—Exceptional Students in Regular Classes (2)

SPFE 5090—The School and Society (3)

Special Requirements for All Students

EPsy 3131—Introduction to Human Relations (3)

PubH 3004—Basic Concepts in Personal and Community Health (5)

Second Languages and Cultures

The College of Education and the language departments of the College of Liberal Arts offer programs of study for teaching majors in Chinese, French, German, Hebrew, Japanese, Latin, Russian, and Spanish and teaching minors in Chinese, French, German, Hebrew, Japanese, Russian, Spanish, English as a Second Language, and Bilingual Education.

The Second Languages and Cultures Education program is an experimental postbaccalaureate program that requires for admission a B.A. degree or equivalent in one foreign language area listed above. One or more minors must be selected from

those subjects commonly taught in the high school; double majors are suggested when possible to increase employment possibilities. On completion of the program, students will be recommended for certification and will receive credits towards a master's degree. All students will meet the minimum qualifications in language skills as required by the state of Minnesota licensure requirements for modern foreign language teachers.

Candidates for this degree will be required to meet major requirements as outlined by the faculty in the program area. It is recommended that prospective candidates complete as many as possible of these major course requirements in their B.A. program.

To satisfy the professional education requirements, the majority of the courses completed within the program will consist of education courses. Application deadline for the program is February 1. (See Admissions.)

To be considered, applicants should provide information indicating:

- Completion of a B.A. degree in a language from an accredited institution, with a minimum overall GPA of 2.80, and a minimum GPA of 3.00 in the major;
- Results of the Miller Analogies Test.

Because of the experimental nature of this program, individuals interested in Second Languages and Cultures Education should contact the program area faculty for a description of professional education courses required for completion of the program.

Social Studies

The Social Studies Education program is an experimental postbaccalaureate program that requires a B.A. degree in one of the social sciences for admission. On completion of the program, students will be recommended for certification and will receive credit towards a master's degree.

Candidates for this degree will be required to meet major requirements as outlined by faculty in the program area. To satisfy the professional education require-

ments, the majority of the courses completed within the program will consist of education courses. Application deadline for the program is February 1. (See Admissions.)

To be considered, applicants should provide information indicating:

- Completion of a B.A. degree in one of the social sciences from an accredited institution, with a minimum overall GPA of 2.80, and a minimum GPA of 3.00 in the major;
- Results of the Miller Analogies Test.

Individuals seeking an area of emphasis in one of the social sciences must meet the general requirements for each area listed below:

Anthropology Emphasis

Major Courses (minimum 60 credits)

Area Requirement

A course in anthropology or in any of the other social sciences in one of the following areas: the Soviet Union, Asia, or Africa. The course may count toward credit requirements listed below.

Anthropology—minimum 28 credits including:

- Anth 1102—Introduction to Social and Cultural Anthropology (5)
- Anth 3301—Methods and Theory in Archaeology (5)
- or Anth 5145—Anthropology and Education (4)
- Anth 5151—Cultural Change and Development (4)

- One course in cross-cultural studies
- One course in human institutions: past, present, and future
- One additional 3xxx or 5xxx course

Supporting Fields (minimum 29 credits)

- Hist 1301, 1302—American History (4 each)
- Pol 1001—American Government and Politics (5)
- One course in each of the areas of economics, geography, history, and sociology. No additional course in psychology is required since one is required of all education students.
- One additional 3xxx or 5xxx course
- One additional course to meet major requirement of 60 credits

Economics Emphasis

Major Courses (minimum 60 credits)

Area Requirement

A course in economics or in any of the other social sciences in one of the following areas: the Soviet Union, Asia, or Africa. The course may count toward credit requirements listed below.

Economics (minimum 32 credits)

- Econ 1001—Principles of Macroeconomics (4)
- Econ 1002—Principles of Microeconomics (4)
- Econ 3101—Microeconomic Theory (4)
- Econ 3102—Macroeconomic Theory (4)

One course in each of the following areas as designated in economics listing in *CLA Bulletin*: economic development, international economics, and industrial organization, public finance, or money and banking.

Supporting Fields (minimum 26 credits)

- Hist 1301, 1302—American History (4 each)
- Pol 1001—American Government and Politics (5)
- One course in each of the areas of anthropology, geography, and sociology. No additional course in psychology is required since one is required of all education majors.
- One additional 3xxx or 5xxx course
- One additional course taken in economics or one of the supporting fields to meet the major requirement of 60 credits

Geography Emphasis

Major Courses (minimum 65 credits)

Area Requirement

A course in geography or in any of the other social sciences in one of the following areas: the Soviet Union, Asia, or Africa. The course may count toward credit requirements listed below.

Geography (minimum 35 credits)

- Geog 1301—Human Geography (5)
- Geog 1401—Physical Geography (5)
- Geog 3001—Introduction to Geographic Inquiry (4)
- One regional course (4); one course in geographic techniques (4); one additional topic study (4); and two additional 3xxx and 5xxx courses

Supporting Fields (minimum 30 credits)

- Hist 1301, 1302—American History (4 each)
- Pol 1001—American Government and Politics (5)
- One course in each of the areas of anthropology, economics, and sociology. No additional course required in psychology since one already is required of all education majors.

History Emphasis

Major Courses (minimum 61 credits)

Area Requirement

A course in history or in any of the other social sciences in one of the following areas: the Soviet Union, Asia, or Africa. The course may count toward credit requirements listed below.

History (minimum 35 credits)

- Hist 1001, 1002, 1003—Introduction to Modern European History Since the Middle Ages (4 each)
- Hist 1301, 1302—American History (4 each)

Supporting Fields (minimum 26 credits)

- Pol 1001—American Government and Politics (5)
- One course in each of the areas of anthropology, economics, geography, and sociology. No additional course required in psychology since one already is required of all education majors.

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Political Science Emphasis

Major Courses (minimum 60 credits)

Area Requirement

A course in political science or in any of the other social sciences in one of the following areas: the Soviet Union, Asia, or Africa. The course may count toward credit requirements listed below.

Political Science (minimum 30 credits)

Pol 1001—American Government and Politics (5)

Pol 1025—World Politics (4)

21 credits in 3xxx and 5xxx courses, including one in each of the following areas as designated in political science listing in *CLA Bulletin*: political theory, comparative government and politics, international relations, politics and behavior, and American governmental systems and processes

Supporting Fields (minimum 29 credits)

Hist 1301, 1302—American History (4 each)

One course in each of the areas of anthropology, economics, geography, and sociology. No additional course required in psychology since one already is required of all education majors.

Additional social science course to meet major requirement of 60 credits

Psychology Emphasis

Major Courses (minimum 60 credits)

Area Requirement

A course in one of the social sciences in one of the following areas: the Soviet Union, Asia, or Africa. The course may count toward credit requirements listed below.

Psychology (minimum 34 credits)

Psy 1004, 1005—Introductory Laboratory Psychology (4 each)

Psy 3011—Introduction to Psychology of Learning (4)

Psy 3101—Introduction to Personality (4)
or Psy 3604—Introduction to Abnormal Psychology (4)

Psy 3124—Psychology of Individual Differences (4)

Psy 3201—Introduction to Social Psychology (4)

Psy 3801—Introduction to Measurement and Statistical Methods (4)

CPsy 5303—Adolescent Psychology (4)

Supporting Fields (minimum 26 credits)

Hist 1301, 1302—American History (4 each)

Pol 1001—American Government and Politics (5)

One course in each of the areas of anthropology, economics, geography, and sociology

Sociology Emphasis

Major Courses (minimum 60 credits)

Area Requirement

A course in sociology or in any of the other social sciences in one of the following areas: the Soviet Union, Asia, or Africa. The course may count toward credit requirements listed below.

Sociology (minimum 32 credits)

Soc 1001—Introduction to Sociology (4)

One course in each of the following areas as designated in the *CLA Bulletin*: criminology and deviance, social psychology, social change and social movements, social organization, family sociology, and urban or rural sociology

One additional 3xxx or 5xxx course

Supporting Fields (minimum 26 credits)

Hist 1301, 1302—American History (4 each)

One course in each of the areas of anthropology, economics, geography, and political science. No additional course required in psychology since one is required of all education majors.

One additional 3xxx or 5xxx course

One additional course in sociology or one of the social sciences to meet the major requirement of 60 credits

Because of the experimental nature of this program, individuals interested in Social Studies Education should contact the program area faculty for a description of professional education courses required for completion of the program.

Educational Policy and Administration

Shirley M. Clark, Chair, 275 Peik Hall

This department offers postbaccalaureate degree work, but undergraduates may use appropriate courses in the curriculum as part of their professional preparation. See *Advanced Study* in this bulletin or the *Graduate School Bulletin* for information on higher education programs, foundation of education programs, and programs for the preparation of elementary and secondary school principals, supervisors, and administrative personnel. Some courses of particular relevance might be:

EdAd 5101—Public School Administration

EdAd 5224—Legal Implications of Acts by School Boards, Administrators, and Teachers

EdAd 5280—Introduction to the Economics of Education

EdPA 5260—Introduction to Educational Planning

EdPA 5281—Cost Analysis in Educational Evaluation

The area of social and philosophical foundations of education does not currently offer undergraduate degree programs, but does contribute professional education courses basic to teacher preparation programs. Junior and senior students are encouraged to enroll in appropriate

foundations courses as part of their professional preparation or in fulfillment of program electives. Courses listed below would be particularly appropriate and useful to students in light of current standards for teacher accreditation.

- SPFE 5090—School and Society
- SPFE 5101—Historical Foundations of Modern Education
- SPFE 5102—Education Imagery in Europe and America
- SPFE 5125—Youth in Modern Society (same as Soc 5952)
- SPFE 5141—Critical Issues in Contemporary Education
- SPFE 5171—Anthropology and Education (same as Anth 5145)
- SPFE 5172—Anthropology of American Education (same as Anth 5144)
- SPFE 5190—Sociology of Education (same as Soc 5953)
- SPFE 5209—Education in Future Social Systems

Educational Psychology

Jack C. Merwin, Chair, 204 Burton Hall

This department does not offer undergraduate teacher education programs, but junior and senior students are invited to use appropriate courses as part of their professional preparation or in fulfillment of program electives. Several courses in special education listed below would be particularly appropriate and useful to students majoring in elementary or secondary education in light of legislation mandating universal educational opportunities for the handicapped and emphasis on mainstreaming approaches to special education.

- EPsy 3606 or 5606—Exceptional Students in Regular Classes
- EPsy 5601—Education of Exceptional Children
- EPsy 5607—Mainstreaming: Issues in Individualizing Instruction
- EPsy 5608—Parent and Professional Planning for Handicapped Students
- EPsy 5612—Education of Learning-Disabled Children
- EPsy 5620—Introduction to Mental Retardation
- EPsy 5625—Education of Handicapped Infants and Preschool Children
- EPsy 5690—Education of the Gifted and Talented
- EPsy 5700—Assessment and Decision Making in Special Education
- EPsy 5705—Behavior Analysis Procedures With Mildly and Moderately Handicapped People

Undergraduate students are reminded that whether or not they have completed

such courses as listed above, they may be admitted to a program *only* after they have completed the baccalaureate degree, submitted an application, and been formally accepted into a special education training sequence.

The counseling and student personnel psychology program area has planned a set of courses specifically for upper division undergraduates and nonmajors. These courses are designed to acquaint students with important general principles and counseling strategies. They focus on psychological concepts in areas relative to the helping process and on self-development and self-knowledge. The courses involve discussions, small group sessions, and individual laboratory experiences. The courses include:

- EPsy 5401—Counseling Procedures
- EPsy 5402—Counseling Procedures II
- EPsy 5422—Group Counseling: Principles and Procedures
- EPsy 5430—Foundations of Career Development

Also available are foundation courses basic to teacher preparation programs:

- EPsy 5260—Introductory Statistical Methods
- EPsy 5220—Educational Measurement in the Classroom
- EPsy 5221—Basic Principles of Measurement
- EPsy 5240—Principles and Methods of Evaluation
- EPsy 5112—Knowing, Learning, and Thinking
- EPsy 5130—Personality and Social Development
- EPsy 5150—Social Psychology of Education
- EPsy 5152—Issues in School Desegregation
- EPsy 5281—Introduction to Computer Operations: U of M Systems, SPSS

Music Education

Karen Wolff, Director, 200E Ferguson Hall

There are two undergraduate majors in music education: music education (instrumental or choral/general concentration) and music therapy. Students completing the undergraduate major in music education with the instrumental concentration will be awarded the B.S. degree and recommended for the standard special license to teach band grades K-12, orchestra grades K-12, and classroom music grades 5-12. Students completing the undergraduate major in music education with the choral/general concentration will be

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awarded the B.S. degree and recommended for the standard special license to teach vocal and classroom music grades K-9, and vocal and classroom music grades 5-12 in Minnesota public schools. Those completing the undergraduate program with a major in music therapy will be awarded the B.S. degree and recommended for certification under the provisions of the National Association for Music Therapy. Preparation for later graduate study in the field is included in both programs.

Admission—Students must complete two years of preprofessional work in music and liberal arts areas before transferring to the College of Education. Students are admitted only for fall quarter. See page 10 for application deadlines. Criteria for admission are:

- Completion of 90 quarter credits, including the following:

For Instrumental or Choral/General Program

24 credits in music theory and ear-training¹
18 credits in music history¹
12 credits in applied music, major level¹
6 credits in class piano¹
6 credits in music ensembles
5 credits in general psychology
MuEd 1201—Introduction to Music Education (1)

For Music Therapy Program

24 credits in music theory and ear-training¹
18 credits in music history¹
6 credits in applied music, major level¹
6 credits in class piano¹ or exemption
6 credits in music ensembles
5 credits in general psychology
4 credits in abnormal psychology
4 credits in anatomy
5 credits in biology
4 credits in physiology
MuEd 1801—Introduction to Music Therapy (1)

- A minimum grade average of C (2.00) for all courses taken before admission.
- Completion of an interview with a major adviser in music education or music therapy. The interview must be completed before the application can receive final consideration.
- For off-campus transfer students, completion of the applied music audition and the theory placement and piano placement examinations. The audition and examinations must be completed before

students can be considered for fall admission. Several audition and examination dates are set each winter and spring by the School of Music. Call the School of Music office for exact dates.

Applied Music—Courses in applied music carry 2 credits per quarter for a minimum of 10 private half-hour lessons, or 4 credits per quarter for a minimum of 10 private one-hour lessons. Students may not register for a course in applied music for credit until they have passed the required applied entrance examination. The examining committee will determine the mode for which a student may register. Consult the School of Music for information about procedures and audition dates. Specific applied music requirements are listed under each major program.

Students may register for applied music in 3xxx courses only after completing 12 credits in lxxx courses on the same instrument and passing a qualifying examination on that instrument. All students are required to complete a minimum of 6 credits in class piano lessons before admission to the major program.

Required of all Music Education and Music Therapy Majors

Students are expected to complete the liberal education distribution requirements as follows:

Undergraduate composition requirement, including upper division composition course selected in consultation with adviser. Additionally, a total of 28 credits in groups A, B, and C:

- A. Language, Logic, Mathematics, and the Study of Argument (minimum 8 credits)
- B. The Physical and Biological Universe (minimum 12 credits; no laboratory required)
- C. The Individual and Society (minimum 8 credits including Psy 1001)
- D. Literary and Artistic Expression (minimum 12 credits). Requirements in group D are satisfied by coursework in the major.

In addition, all music education and music therapy majors must complete the following requirements:

Mus 1531, 1532, 1533—Theory I, II, III (3 each)
Mus 3531, 3532, 3533—Theory IV, V, VI (3 each)

¹A C + (2.50) grade average is required for these music courses.

- Mus 1511, 1512, 1513—Ear-Training and Sight-Singing I, II, III (1 each)
 Mus 3511, 3512, 3513—Ear-Training and Sight-Singing IV, V, VI (1 each)
 Mus 1602—Music and Society (3 cr)
 Mus 1604-1605-1606—History of Western Music (5 each)

Two undergraduate curricula in music education and one in music therapy enable students to prepare for the field of teaching for which their training as performers is most suited. In addition to the common requirements for all majors, each student must complete one of the following programs in the major area of concentration.

Major in Music Education

Choral/General Music Education Concentration

This program is designed for vocalists or keyboard performers desiring to teach choral and classroom music in the elementary and secondary schools. Students completing this program meet licensure requirements to teach vocal and classroom music grades K-9 and vocal and classroom music grades 5-12 in Minnesota.

Precollege Music Preparation—An extensive background in high school choral ensembles is required. Voice lessons in high school are recommended, but not required. Students who are not pianists should have completed a minimum of two years of recent piano study. Students must meet the School of Music entrance requirements for performance in one of the following areas of applied music: voice, piano, organ, or classical guitar.

Music Courses (minimum 44 credits)

Major in voice, piano, organ, or guitar (minimum 22 credits):

- 12 credits in principal courses (2 or 4 each) from:
 MusA 1201—Piano
 MusA 1203—Organ
 MusA 1204—Voice
 MusA 1223—Guitar

- 10 credits in principal courses (2 or 4 each) from:
 MusA 3201—Piano
 MusA 3203—Organ
 MusA 3204—Voice
 MusA 3223—Guitar

Electives in applied music (minimum 6 credits)

For non-voice majors: MusA 1404—Voice: Secondary Required (2 or 4 each per quarter) or Mus 1160—Voice: Class Lessons (2)

- For non-keyboard majors: Mus 1151, 1152, 1153—Piano: Class Lessons (2 each)
 For keyboard majors: Mus 1521, 1522, 1523—Keyboard Harmony (2 each)
 Mus 5377—Adolescent Singing Voice (3)
 Ensemble experience, to be selected in consultation with the adviser, is required during every quarter of on-campus study (minimum 11 quarters)
 Mus 3331—Jazz Improvisation I (2)

Professional Education Courses (minimum 40 credits)
 MuEd 3301—Teaching Vocal and General Music, K-4 (4)

MuEd 3302—Teaching Vocal and General Music, Grades 5-12 (4)

MuEd 3322—Techniques of Classroom Instruments (4)

MuEd 3331—Practicum: Music Education (2)

MuEd 3415—Choral Laboratory (4)

12 credits in MuEd 3650—Student Teaching in Music (3-12)

SeEd 3150—Introduction to Secondary School Teaching (5) or Elem 3101—Introduction to Elementary School Teaching (3)

SeEd 3155—Psychological Foundations of Secondary Education (5) or Elem 3100—Psychological Foundations of Elementary Education (4)

EPsy 3606—Exceptional Students in Regular Classes (2)

SPFE 5090—The School and Society (3)

Special Requirements for All Students

EPsy 3131—Introduction to Human Relations (3)

PubH 3004—Basic Concepts in Personal and Community Health (5)

Admission to Student Teaching—Students should meet with their major adviser early in the spring quarter of their junior year to plan the student teaching experience. Each applicant must have completed all professional education courses (with the exception of SPFE 5090), all major courses in theory, ear-training, music history, elective piano or voice, the adolescent singing voice, and a minimum of 9 credits in ensembles with a grade average of C+ (2.50) in all major and professional education courses. Grades for ensemble courses are not counted in calculating the grade average. Twelve credits of applied music in 1xxx courses and a minimum of 6 credits in 3xxx courses must be completed in the study of the major instrument or voice.

Instrumental Music Education Concentration

This program is designed to prepare students to teach band, orchestra, and general music in the elementary and

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secondary schools. Students successfully completing the program will meet licensure requirements to teach band grades K-12, orchestra grades K-12, and classroom music grades 5-12 in Minnesota.

Precollege Music Preparation—An extensive background in at least one band or orchestral instrument, including private lessons on the instrument and performance experience in high school band or orchestra, is required. Study of the piano is recommended. Students must meet the School of Music entrance requirements for performance on a standard band or orchestral instrument.

Major Courses (minimum 44 credits)

Principal Instrument—Minimum 9 quarters of study (18 credits) in a standard band or orchestral instrument

12 credits in principal courses (2 or 4 each) from:

MusA 1205—Violin
MusA 1206—Viola
MusA 1207—Cello
MusA 1208—Double Bass
MusA 1209—Flute
MusA 1211—Oboe
MusA 1212—Clarinet
MusA 1213—Saxophone
MusA 1214—Bassoon
MusA 1215—French Horn
MusA 1216—Trumpet
MusA 1217—Trombone
MusA 1218—Baritone
MusA 1219—Tuba
MusA 1221—Percussion
MusA 1222—Harp

Minimum of 6 credits in principal courses (2 or 4 each) from:

MusA 3205—Violin
MusA 3206—Viola
MusA 3207—Cello
MusA 3208—Double Bass
MusA 3209—Flute
MusA 3211—Oboe
MusA 3212—Clarinet
MusA 3213—Saxophone
MusA 3214—Bassoon
MusA 3215—French Horn
MusA 3216—Trumpet
MusA 3217—Trombone
MusA 3218—Baritone
MusA 3219—Tuba
MusA 3221—Percussion
MusA 3222—Harp

Secondary Required Applied Music—Minimum 4 credits (2 to 4 each) from:

MusA 1409—Flute
MusA 1411—Oboe
MusA 1412—Clarinet
MusA 1413—Saxophone

MusA 1414—Bassoon
MusA 1415—French Horn
MusA 1416—Trumpet
MusA 1417—Trombone
MusA 1418—Baritone
MusA 1419—Tuba
MusA 1421—Percussion
MusA 1422—Harp

Students must select one woodwind and one brass instrument as a secondary instrument for group study for one quarter each (2 cr each quarter)

Mus 1151, 1152, 1153—Piano: Class Lessons (2 each)

Mus 3331—Jazz Improvisation I (2)

Large ensemble experience, to be selected in consultation with the adviser, is required during 11 quarters of on-campus study (minimum 11 credits). Marching band experience is required for students whose major performance instrument is brass, woodwind, or percussion (minimum 2 credits, which will count as part of the 11-credit large ensemble requirement). Chamber ensemble experience is required during three quarters of on-campus study (minimum 3 credits).

11 credits from Mus 1410 Concert Band, Mus 1480—Marching Band, or 5410—Band or Mus 1420 or 5420—Orchestra (1 each)

3 credits from Mus 5360—Woodwind Ensemble or Mus 5380—Brass Choir or Mus 5390—Percussion Ensemble or Mus 5440—Ensemble or Mus 5340—Jazz Ensemble (1 each)

Professional Education Courses (minimum 55 credits)

MuEd 3302—Teaching Vocal and General Music, Grades 5-12 (4)

MuEd 3500—String Techniques I (3)

MuEd 3501—String Techniques II (3)

MuEd 3503—Woodwind Techniques (4)

MuEd 3504—Brass Techniques (4)

MuEd 3505—Percussion Techniques (4)

MuEd 3515, 3516—Instrumental Laboratory I, II (4 each)

12 credits in MuEd 3650—Student Teaching in Music (3-12)

SeEd 3150—Introduction to Secondary School Teaching (5) or Elem 3101—Introduction to Elementary School Teaching (3)

SeEd 3155—Psychological Foundations of Secondary Education (5) or Elem 3100—Psychological Foundations of Elementary Education (4)

EPsy 3606—Exceptional Students in Regular Classes (2)

SPFE 5090—The School and Society (3)

Special Requirements for All Students

EPsy 3131—Introduction to Human Relations (3)

PubH 3004—Basic Concepts in Personal and Community Health (5)

3 credits in physical education

Admission to Student Teaching—Students should meet with their major ad-

viser early in the spring quarter of their junior year to plan the student teaching experience. Each applicant must have completed all professional education courses (with the exception of SPFE 5090), all major courses in theory, ear-training, music history, class piano, secondary instruments, and the required minimum credits in ensembles with a grade average of C+ (2.50) in all major and professional education courses. Grades for ensemble courses are not counted in calculating the grade average. Twelve credits of applied music in 1xxx courses and a minimum of 2 credits in 3xxx courses must be completed in the study of the major instrument.

Major in Music Therapy

The music therapy program is designed to prepare students to serve in educational and medical environments to influence changes in the behavior of children and adults through music. Upon successful completion of the course of study and the six-month internship, graduates are eligible to become registered music therapists through application to the National Association for Music Therapy (NAMT). The minimum number of credits required for registration in the NAMT is 201.

Precollege Music Preparation—An extensive background in instrumental or vocal music, including high school music ensembles, is required. Instrumental students should have taken private lessons on at least one band or orchestral instrument. It is recommended, but not required, that vocal students complete private voice lessons during high school. Study of the piano is recommended for all students. Students must meet the School of Music entrance requirements for performance in one of the following areas of applied music: voice, piano, organ, classical guitar, or standard band or orchestral instrument.

Related Course Requirements

- CBN 3001—Elementary Anatomy (5)
- Biol 1009—General Biology (5)
- Phsl 1001—Human Physiology (4)
- Psy 1001—Introduction to Psychology (5)
- Psy 3604—Introduction to Abnormal Psychology (4)

One course in special education

12 additional credits in the behavioral sciences, social sciences, health sciences, and special education, selected in consultation with the major adviser

Major Courses (minimum 18 credits in applied music or class lessons selected in consultation with the adviser)

Major in a standard band or orchestral instrument or voice, piano, organ, or guitar *and* minimum of 6 credits in principal courses (2 or 4 each) from:

- MusA 1201—Piano
- MusA 1202—Harpsichord
- MusA 1203—Organ
- MusA 1204—Voice
- MusA 1205—Violin
- MusA 1206—Viola
- MusA 1207—Cello
- MusA 1208—Double Bass
- MusA 1209—Flute
- MusA 1211—Oboe
- MusA 1212—Clarinet
- MusA 1213—Saxophone
- MusA 1214—Bassoon
- MusA 1215—French Horn
- MusA 1216—Trumpet
- MusA 1217—Trombone
- MusA 1218—Baritone
- MusA 1219—Tuba
- MusA 1221—Percussion
- MusA 1222—Harp
- MusA 1223—Guitar

Mus 1151, 1152, 1153—Piano: Class Lessons (2 each) or Mus 1521, 1522, 1523—Keyboard Harmony

Mus 1160—Voice: Class Lessons (2) or minimum of 4 credits in MusA 1404—Voice: Secondary Required (2 or 4) or voice major

Guitar proficiency

Music ensemble experience: Minimum 9 credits (1 credit per quarter for 9 quarters)

Professional Education Courses (minimum 67 credits)

- MuEd 1801—Introduction to Music Therapy (1)
- MuEd 3322—Techniques of Classroom Instruments (4)
- MuEd 3415—Choral Laboratory (4)
- MuEd 3501—String Techniques II (3) or 3500—String Techniques I (3)
- MuEd 3503—Woodwind Techniques (4)
- MuEd 3504—Brass Techniques (4)
- MuEd 3505—Percussion Techniques (4)
- MuEd 3515—Instrumental Laboratory I (4)
- MuEd 3800—Observation in Music Therapy (2)
- MuEd 3801, 3802—Psychology of Music I, II (4 each)
- MuEd 3804—Music Therapy Techniques I (4)
- MuEd 3805, 3806—Music Therapy Techniques II, III (3 each)

5 credits in MuEd 3850—Field Experiences: Music Therapy (1 or 2)

MuEd 3851, 3852—Internship: Music Therapy (6 each)

EPsy 3606—Exceptional Students in Regular Classes (2)

Special Requirements for All Students

EPsy 3131—Introduction to Human Relations (3)

PubH 3004—Basic Concepts in Personal and Community Health (5)

Courses in dance and dance therapy recommended

Admission to Internship—Students should meet with their major adviser early in the spring quarter of their junior year to plan the internship experience. Each applicant must have completed all coursework to be eligible to register for MuEd 3851, 3852. A grade average of C + (2.50) is required in all related courses and professional education courses, and the student must have satisfactorily completed all field experience requirements.

Physical Education and Recreation

Michael Wade, Director, 110 Cooke Hall

The School of Physical Education and Recreation offers professional programs of instruction in physical education; coaching; recreation, park, and leisure studies; and camping and outdoor education. Listed below are requirements for the B.S. degree, minors, and special licensure programs.

Activity courses in physical education numbered below 1500 are open to any University student who wishes to elect them for general education purposes in accordance with the regulations of the college in which she or he is enrolled. Many courses involve participation requiring a high energy expenditure level and are to be considered high intensity in nature unless otherwise indicated. It is therefore recommended that students know their health status and any limitations on their ability to participate safely in the activities involved in the courses. Students who have questions about their health status should seek advice from a personal physician. See Course Descriptions later in this bulletin and the *Class Schedule* for further information about each activity course.

Physical Education

Major in Physical Education

The curriculum in physical education includes a balanced general education, a physical education core with basic and applied science and theory of physical education and sport, basic training in motor skills, and emphases in education licensure or sport and exercise science. The education licensure emphasis prepares students for Minnesota licensure for teaching physical education in elementary and secondary schools; opportunity to pursue licensure in developmental/adapted physical education and coaching interscholastic sports is also offered. The curriculum in sport and exercise science includes a balanced general education, a core of basic and applied science, theory of sport and exercise, basic training in motor skills, related coursework to support individual professional goals, and practicum experience in various sports and exercise for educational settings. The program may be used to prepare for roles in sports and health clubs, corporate fitness centers, and exercise testing centers or to prepare for postbaccalaureate study in physical education or teacher licensure.

See page 10 for application deadlines for undergraduate programs.

Admissions requirements for both licensure and sport and exercise science programs include:

- A minimum overall grade point average of 2.50.
- Completion of at least 85 quarter credits overall to include the following liberal education coursework, which will partially fulfill the college liberal education requirements for graduation:

Composition 1101 or equivalent coursework

Category A: one-four credit course in speech required, one course in mathematics or statistics recommended

Category B: one course each in biology and chemistry

Category C: Psychology 1001 (5 credits) and one course (4 credits) from one of the following social sciences—anthropology, history, or sociology

• Completion of the following required major coursework:

- CBN 1027: Anatomy for physical education students
- Health 1500: American Red Cross Standard First Aid and Personal Safety
- Health 1502: Basic Life Support: CPR or current certification by American Red Cross or American Heart Association
- Five physical activity courses (1 credit each) chosen from at least four of the following areas: aquatics, conditioning/weight training, individual sports, team sports, or dance. Sport and exercise science applicants must include one activity course in winter sports.

• Completion of PE 1871: Introduction to Physical Education is preferred

Because of the strenuous activity component of the program, it is extremely important that applicants seek the advice of their personal physician in determining their health status and in identifying any limitations on their ability to participate safely in the activities.

Subsequent to admission, a C + (2.50) average in the major is required for graduation and for student teaching clearance for those in the education licensure emphasis. This average is computed for all courses and credits listed under Major Courses if they have been completed on the Twin Cities campus.

Students completing this curriculum receive the B.S. degree in physical education; those in the education licensure emphasis are recommended for Minnesota licensure in physical education (grades K-12). A total of 186 credits must be completed with a grade average of C + (2.50) in the major courses and C (2.00) in the teaching minor. Students must earn a B average in all activity courses numbered below 1500.

Students are required to complete the liberal education distribution requirements as detailed at the beginning of this section of the bulletin. Appropriate related and major courses may be applied toward these requirements.

See page 10 for application deadlines for undergraduate programs. Because the College of Education is making the transition to postbaccalaureate teacher licensure programs, **the last quarter for which applications for admission to the existing undergraduate licensure program will be accepted is WINTER QUARTER 1989.** After that time students may complete the sport and exercise science emphasis as undergraduate preparation for application to a post-baccalaureate teacher licensure program. Further information about this new licensure program will be available through the Education Student Affairs Office.

Common Requirements for All Physical Education Majors

Major Courses for All Students (35 credits)

- CBN 1027—Anatomy for Physical Education Students (4)
- PE 1871—Introduction to Physical Education (3)
- PE 3111—Mechanics of Movement (3)
- PE 3126—Psychological and Sociological Dimensions of Physical Activity (3)
- PE 3131—History and Philosophy of Physical Education and Sport (4)
- PE 3132—Motor Development (3 cr, §3112)
- PE 3135—Motor Learning and Human Performance (3 cr, §3113)
- PE 3150—Introduction to Evaluation (4)
- PE 3385—Exercise Physiology (4)
- PE 3386—Exercise Physiology (4)

Special Requirements for All Students

- EPsy 3131—Introduction to Human Relations (4)
- PubH 3004—Basic Concepts in Personal and Community Health (5)

Electives to complete 186 credits

Education Licensure Emphasis

In addition to the Common Requirements above, all students pursuing the licensure program will complete the following requirements:

Sport and Dance Activities (15 credits)

- PE 1521, 1522—Gymnastics (1 each)
- PE 1059—Track and Field (1)
or PE 1654—Track and Field (1)
- Aquatics (2)
- Dance—2 credits from ballroom, folk and square, or modern dance
- Individual Sports—3 credits from archery, badminton, conditioning, golf, tennis, combatives (wrestling, judo, karate, or fencing)

Programs

Team Sports—3 credits from basketball, field hockey, soccer, softball, touch football, volleyball
Electives (2)

Applied Physical Education (8 credits)
PE 3100—Adapted Physical Education (3)
PE 3144—Administration (2)
PE 5151—Curriculum (3)

Pedagogy in Physical Education (15 credits)
PE 1875—Orientation to Teaching Physical Education (4)
PE 3322—Teaching Physical Education: Elementary School (5)
PE 3323—Teaching Physical Education: Secondary School (5)
PE 3607—Student Teaching: College (1)
Professional Education Courses (27 credits)
PE 3621—Student Teaching: Elementary (6)
PE 3622—Student Teaching: Secondary (6)
SeEd 3150—Introduction to Secondary School Teaching (5)
SeEd 3155—Psychological Foundations of Secondary Education (5)
EPsy 3606—Exceptional Students in Regular Classes (2)
SPFE 5090—The School and Society (3)

Sport and Exercise Science Emphasis

In addition to the Common Requirements above, all students pursuing the sport and exercise science program will complete the following requirements:

- One research course in physical education (minimum 3 cr).
- Elective credits (32-42 cr) in physical education and related fields as designated by individual goals. At least 12 credits must be in 3xxx or 5xxx physical education classes.
- Practicum or directed study (15 cr) selected from PE 3624, 3625, 3900
- One 3 credit research practicum (3900) is required

Coaching Licensure and Minor

Two distinct coaching programs are offered: a Minnesota Public Secondary School Coaching licensure program and a coaching minor. Coaching licensure is available only to College of Education students who are enrolled in a degree program that leads to teaching licensure or to persons who already hold a valid Minnesota teaching license. Any College of Education student may apply for a coaching minor, which leads to licensure only for those persons who hold or are eligible for a Minnesota teaching license. Prospective students must apply to the Division of Physical Education for admission to either coaching program. Application to enroll in PE 3624, Student Teaching:

Coaching requires satisfactory completion of all coaching coursework with a minimum grade average of C + (2.50). Those who are eligible and successfully complete the courses outlined will be recommended for appropriate licensure for coaching both boys and girls interscholastic sports in Minnesota public secondary schools.

Minnesota Public Secondary School Coaching Licensure (18 credits required)

CBN 1027—Anatomy for Physical Education Students (4) or PE 3110—Human Anatomy (3)
1 credit in Hlth 1500—American Red Cross Standard First Aid and Personal Safety (1, 2)
PE 3111—Mechanics of Movement (3) or PE 3115—Physiological Application to Sports (3)
PE 3114—Prevention and Care of Injuries (3) or PE 5620—Practicum: Prevention and Care of Athletic Injuries (3)
PE 3143—Organization and Management of Sport (3)
PE 3624—Student Teaching: Coaching (3)
2 credits from:

- PE 3169—Volleyball Coaching (2)
- PE 3170—Baseball Coaching (2)
- PE 3171—Basketball Coaching (2)
- PE 3172—Football Coaching (2)
- PE 3173—Golf Coaching (2)
- PE 3174—Gymnastics Coaching (2)
- PE 3175—Ice Hockey Coaching (2)
- PE 3176—Swimming and Diving Coaching (2)
- PE 3177—Tennis Coaching (2)
- PE 3178—Track and Field Coaching (2)
- PE 3179—Wrestling Coaching (2)
- PE 3371—Soccer Coaching (2)

Coaching Minor (30 credits required)

CBN 1027—Anatomy for Physical Education Students (4) or PE 3110—Human Anatomy (3)
1 credit in Hlth 1500—American Red Cross Standard First Aid and Personal Safety (1, 2)
PE 3111—Mechanics of Movement (3)
PE 3114—Prevention and Care of Injuries (3) or PE 5620—Practicum: Prevention and Care of Athletic Injuries (3)
PE 3115—Physiological Application to Sports (3)
PE 3131—History and Philosophy of Physical Education and Sport (4)
PE 3135—Motor Learning and Human Performance (3)
PE 3143—Organization and Management of Sport (3)
PE 3624—Student Teaching: Coaching (3)
4 credits from:

- PE 3169—Volleyball Coaching (2)
- PE 3170—Baseball Coaching (2)
- PE 3171—Basketball Coaching (2)
- PE 3172—Football Coaching (2)
- PE 3173—Golf Coaching (2)
- PE 3174—Gymnastics Coaching (2)
- PE 3175—Ice Hockey Coaching (2)
- PE 3176—Swimming and Diving Coaching (2)
- PE 3177—Tennis Coaching (2)
- PE 3178—Track and Field Coaching (2)
- PE 3179—Wrestling Coaching (2)
- PE 3371—Soccer Coaching (2)

Developmental/Adapted Physical Education Licensure Program

This emphasis requires a minimum of 38 credits and is open only to undergraduate students preparing for teaching licensure in physical education. Students who complete the courses outlined are recommended for licensure in Minnesota as developmental/adapted physical education specialists in grades K-12.

Physical Education and Related Area (minimum 27 credits)

- PE 3100—Adapted Physical Education (3)
- 6 credits in PE 3625—Supervised Practical Experience (1-12)
- PE 5100—Teaching Physical Education for the Handicapped (3)
- PE 5101—Physical Education Activities for the Handicapped (3)
- PE 5131—Motor Development (3)
- PE 5120—Advanced Biomechanics/Kinesiology (4) or PE 5130—Motor Learning and Human Performance (3) or PE 5134—Perceptual-Motor Development in Childhood (3) or PE 5122—Applied Physiology (3)
- 3 credits in PE 5161—Practicum: Construction of Motor Performance Tests (3-6)
- EPsy 5622—Program Design for Learners with Severe Handicaps (3)

Special Education (minimum 11 credits)

- EPsy 5601—Education of Exceptional Children (4)
- EPsy 5608—Parent and Professional Planning for Handicapped Students (3)
- EPsy 5705—Behavior Analysis Procedures with Mildly and Moderately Handicapped People (4)

Recreation, Park, and Leisure Studies

Major in Recreation, Park, and Leisure Studies

This professional degree program prepares individuals to assume leadership, supervisory, or beginning administrative responsibilities in various park, recreation, and leisure service agencies.

Students should apply for admission to the College of Education early in the quarter in which they will meet admission requirements. Applications must be received by the Office of Admissions no later than the end of the first week of the quarter to assure consideration for admission the subsequent quarter. Students are not admitted for summer terms. Admission will be based on the following criteria:

- Completion of a minimum of one year of liberal education coursework (at least 45 quarter credits) including the CLA writing practice requirement.
- An overall grade average of at least C (2.00) with preference given to applicants with a higher average.
- Assessment of personal and professional characteristics through recommendations and interviews; preference is given on the basis of an evaluation of the nature and scope of previous recreation and/or related experience.

The curriculum leads to the B.S. degree. The student may elect one of three emphasis areas: 1) leisure services management; 2) therapeutic recreation; 3) outdoor recreation/education. Lists of suggested and required courses to help the student develop an individualized program are available in the divisional office. A preliminary program of coursework should be filed during the second quarter after admission. For graduation, the student must complete a minimum of 186 credits and earn a grade average of C + (2.50) in coursework with the Rec prefix. A minor is not required of majors in this program.

Related Course Requirements

Students are expected to complete the liberal education distribution requirements as detailed at the beginning of this section of the bulletin. In addition, Spch 1101 is required in group A, and Soc 1001 is required in group C. Students must complete a minimum of 22 credits in group C. Certain emphasis areas require specific courses to meet these distribution requirements; consult the divisional office for details. The special requirements for graduation from the college also must be completed (see Special Requirements for All Students listed after the major requirements). All majors in the curriculum must complete Hlth 1500 and a minimum of 6 credits in 3xxx or 5xxx courses in SPFE, CPsy, CISy, EdAd, Educ, EPsy, or SeEd courses.

Major Requirements (minimum 92 credits)

- Rec 1520—Orientation to Leisure and Recreation (5)
- 15 credits in Rec 3700—Senior Internship (1-15)
- Rec 3530—Recreation and Park Areas and Facilities (5)
- Rec 3540—Recreation Programming (5)
- Rec 3550—Park and Recreation Administration (5)
- 20 credits in recreation (Rec) courses selected with consent of adviser and related to emphasis area
- 37 credits selected in consultation with adviser and appropriate to emphasis area; no more than three 1xxx courses allowed

Programs

Special Requirements for All Students

EPsy 3131—Introduction to Human Relations (3)
PubH 3004—Basic Concepts in Personal and Community Health (5)
3 credits in physical education selected from PE 1001 through 1499

Electives to complete 186 credits

Minor in Camping and Outdoor Education

This minor is designed to prepare individuals for part-time and volunteer work in camping and outdoor education. It is a nonteaching minor and cannot be used to meet minor requirements in any curriculum. Enrollment is limited, and applications and proposed programs must be received by the Division of Recreation, Park, and Leisure Studies no later than May 15 of the year prior to anticipated admission. A student must be a junior to enter this program.

Thirty credits must be chosen in consultation with a minor adviser, and the program must be approved by the minor adviser, the major adviser, and the Division of Recreation, Park, and Leisure Studies. Required are a minimum of 18 credits in coursework with the Rec prefix and a minimum of 12 credits in related electives selected in consultation with the adviser. An example of a proposed minor is shown below:

Minor Courses (minimum 24 credits)
Rec 1540—Camp Counseling (4)
Rec 1600—Leadership in Social Activities (3)
Rec 3150—Leadership in Outdoor Recreation (3)
3 credits in Rec 3700—Senior Internship (1-15)
Rec 5170—Camp Administration (3)
Rec 5300—Foundations of Outdoor Education (3)
Electives—5 credits in Rec courses

Related Electives (minimum 12 credits)
CPsy 1301—Introductory Child Psychology (4)
EBB 3004—Fundamentals of Ecology (4)
2 credits in Hlth 1500—American Red Cross Standard First Aid and Personal Safety (1, 2)
Th 1101—Introduction to the Theatre (4)

Vocational and Technical Education

George Copa, Chair, 210A Vocational and Technical Education Building, St. Paul

The Department of Vocational and Technical Education offers programs leading

to undergraduate degrees in the following six major fields: agricultural education; business education; home economics education; industrial education; marketing education; and vocational-industrial education. See description of the major for specializations, options, and programs.

Undergraduate Focus in Training and Development

The department also offers a focus at the undergraduate level (as well as the continuing education and master's degree levels) in training and development in industry and business. Students pursuing a degree in any one of the six major fields may also elect to develop this focus by completing the following courses, in addition to or as a part of the requirements of their major field:

VoEd 5750—Training in Industry and Business (3 or 4 cr)

VoEd 5760—Organization Development in Industry and Business (3 or 4 cr)

6 credits in VoEd 5780—Internship: Training and Development (ar)

3 credits from: VoEd 5762, VoEd 5770, VoEd 5790, BME 5253, Ind 5300

Other courses to complete 20 credits, to be selected with approval of training and development advisers

Undergraduate students outside of the Department of Vocational and Technical Education will include courses in instructional methods and course development within the Department of Vocational and Technical Education to complete their 20 credits. A training and development professional certificate is awarded to major and nonmajor students completing these requirements.

Agricultural Education

Starting Fall Quarter 1988, the agricultural education program began an experimental postbaccalaureate program for teacher licensure in agricultural education. The agricultural education program will also have a revised B.S. program leading to teaching licensure and a revised nonlicensure option in agricultural development. Further information about these new or revised programs can be obtained from the agricultural education division, Department of Vocational and

Technical Education.

The major in agricultural education, offered jointly with the College of Agriculture, is designed for students who plan to teach agriculture or horticulture in public schools, area vocational-technical institutes, or community colleges in Minnesota; to work in educational roles in agriculture-related organizations; or to become entrepreneurs on farms or in agricultural businesses. The program provides comprehensive training in agriculture and permits emphasis in animal science, agronomy, agricultural economics, horticulture, soils, agricultural business, and mechanized agriculture.

The licensure options offer training in education necessary for recommendation for licensure as an instructor of agriculture or horticulture; the nonlicensure option provides special training in extension education and general education skills.

Students should apply for admission to the College of Education in the final quarter of their sophomore year and complete application requirements as directed by staff in the Division of Agricultural Education, 320 Vocational and Technical Education Building, St. Paul Campus. To be eligible for admission, students must have a grade average of C (2.00) for all courses taken at the University of Minnesota, Twin Cities campus.

Transfer students who have completed fewer than two years of college work should apply for admission to the College of Agriculture. These students will then apply to the College of Education in the quarter in which they complete their sophomore year.

Transfer students who have completed two or more years of college work should apply for joint admission to the College of Agriculture and the College of Education at the Office of Admissions and Records, 130 Coffey Hall, University of Minnesota, 1420 Eckles Avenue, St. Paul, MN 55108. The College of Agriculture will review the application. Upon acceptance into the College of Agriculture, these students will be accepted by the College of Education when the joint admission application has been processed.

To be eligible for student teaching, students must have a grade average for courses taken at the Twin Cities campus of at least 2.00 overall, and at least 2.30 in technical agriculture courses in their area of specialization as follows:

Vocational agricultural specialization: 2.30 grade average in courses in agricultural economics, agronomy, animal science, entomology, food science, forestry, horticulture, agricultural journalism, agricultural engineering technology, plant pathology, soils, veterinary medicine, and technical agriculture courses offered through agricultural education.

Vocational horticulture specialization: 2.30 grade average in entomology, plant physiology, horticulture, agricultural engineering technology, plant pathology, agricultural economics, soils, and technical agriculture courses offered through agricultural education.

Agricultural education nonlicensure specialization: 2.30 overall grade average; 80 credits minimum in technical agriculture and 192 credits total for graduation.

Students applying for the vocational agricultural education specialization must have a satisfactory background in agriculture. Those entering the vocational horticultural education specialization must have a satisfactory background in horticulture. The Division of Agricultural Education occupational experience committee evaluates student experience.

Students must complete liberal education distribution requirements as specified under Agricultural Science and Industries Curriculum Requirements in the *College of Agriculture Bulletin*.

Common Requirements for All Agricultural Education Licensure Majors

Major Courses—see specialization chosen

Professional Education Courses for Vocational Specializations (minimum 36 credits)

AgEd 1001—Introduction to Agricultural Education (1)

AgEd 1010—History and Philosophy of Vocational and Community Education (3)

Programs

- AgEd 3010—Organization and Direction of FFA Activities (2)
AgEd 3031—Student Teaching in Agriculture (10)
AgEd 5028—Teaching Methods in Agricultural Education (5)
AgEd 5049—Agricultural Education for Adults (4)
AgEd 5061—Program Planning and Evaluation (3)
AgEd 5071—Supervised Occupational Experiences in Agriculture (3)
VoEd 5800—Working With Special Needs Students (3) or, with adviser's permission, EPsy 3606—Exceptional Students in Regular Classes (2)
SeEd 3155—Psychological Foundations of Secondary Education (5)

Special Requirements for All Students in Vocational Specializations

- EPsy 3131—Introduction to Human Relations (3)
PubH 3004—Basic Concepts in Personal and Community Health (5)

Vocational Agriculture Specialization

In addition to the Common Requirements listed above, those choosing this specialization must complete:

- Major Courses* (minimum 80 credits)
3 credits in AgEd 5072—Practicum: Agricultural Business and Industry (1-3)
AgEc 1020—Principles of Macroeconomics (5)
AgEc 1030—Principles of Microeconomics (4)
AgEc 3810—Farm Management Economics (4)
AgEc 3850—Farm Business and Enterprise Analysis (4)
Soil 1122—Introductory Soil Science (4)
Agro 1010—Principles of Agronomy (5)
Hort 1010—Home Horticulture (4)
Ent 1005—Economic Entomology (4)
AnSc 1100—Introductory Animal Science (5)
AnSc 3401—Principles of Animal Nutrition (3)
AnSc 3402—Feeding Farm Animals (2) or one course from the production series, AnSc 5601, 5602, 5603, 5604, 5605 (4 each)
AgET 1020—Agricultural Shop-Metalwork (3)
AgET 5020—Program Planning and Instructional Methods in Agricultural Mechanics (3)
Electives—24-26 credits in technical agriculture

Vocational Horticulture Specialization

In addition to the Common Requirements listed above, those choosing this specialization must complete:

- Major Courses* (minimum 80 credits)
3 credits in AgEd 3041—Practicum: Agricultural Education Technology (1-3)
3 credits in AgEd 5072—Practicum: Agricultural Business and Industry (1-3)
AgEc 1020—Principles of Macroeconomics (5)
AgEc 1030—Principles of Microeconomics (4)
Soil 1122—Introductory Soil Science (4)
PIPa 1001—Introductory Plant Pathology: Lecture and Introduction to Diagnostic Procedures and Laboratory (4)
Ent 1005—Economic Entomology (4) (or) Ent 5050—Forest Entomology (4)

- Hort 1100—Biology of Horticultural Production (4)
Hort 1016—Greenhouse Management (4)
Hort 1036—Plant Propagation (4)
AgET 5020—Program Planning and Instructional Methods in Agricultural Mechanics (3)
PIPh 3131—Survey of Plant Physiology (4)
Electives—including 14 credits in horticulture and 14 credits in technical agriculture

Agricultural Education Nonlicensure Specialization

Those choosing this specialization must complete:

- Major Courses* (minimum 80 credits)
AgEc 1020—Principles of Macroeconomics (5)
AgEc 1030—Principles of Microeconomics (4)
AgET 1020—Agricultural Shop-Metalwork (4)
Agro 1010—Principles of Agronomy (5)
Agro 1100—Morphology and Identification of Crops and Weeds (4)
AnSc 1100—Introductory Animal Science (5)
AnSc 3401—Principles of Animal Nutrition (3)
Ent 1005—Economic Entomology (4)
PIPa 1001—Introductory Plant Pathology: Lecture and Introduction to Diagnostic Procedures and Laboratory (4)
Soil 1122—Introduction to Soils (4)
Electives—38 credits chosen with consent of adviser

Professional Education Courses for Nonlicensure Specialization (minimum 23 credits)

- AgEd 1001—Introduction to Agricultural Education (1)
AgEd 1010—History and Philosophy of Vocational and Community Education (3)
AgEd 5021—Education through Extension Methods (3) or AgEd 5128—Methods of Teaching (3)
AgEd 5025—Extension Program Development (3) or AgEd 5061—Program Planning and Evaluation (3)
AgEd 3010—Organization and Direction of FFA Activities (2) or AgEd 5200—Seminar: Working with Youth Through Adults (1-3)
3 credits from one of the following courses:
AgEd 5072—Practicum: Agricultural Business and Industry (1-3)
AgEd 5027—Practicum: Placement for Extension Experiences (2-9)
AgEd 3029—Directed Experience in Agricultural Education (1-3)
Electives chosen with consent of adviser in education to meet the 23-credit minimum

Business Education

Three B.S. degree programs with a major in business education are available. Students may choose to meet the requirements for one or more programs.

1. A program emphasizing *public school teaching*, which leads to a recommendation for the standard license to teach business and office education in Minnesota public schools.

2. A program emphasizing *business training*, which leads to a professional certificate in training and development (but does *not* lead to a recommendation for the standard license to teach business and office education in Minnesota public schools).

3. A program emphasizing *office systems management* (which does *not* lead to a recommendation for the standard license to teach business and office education in Minnesota public schools).

Students preparing to major in one of the business education fields will normally register for the first year or two in a liberal arts or community college or in the General College. Application for admission to the major may be made in the quarter in which students will have completed 45 credits. Preference will be given to students who have completed 90 credits and who have overall grade point averages of 2.80 or higher. These credits should include courses to meet the liberal education distribution requirements and major course requirements. Students are encouraged to plan programs with a business education adviser.

Students who have had high school courses or experience in bookkeeping/accounting may be exempted from Acct 1024 and admitted to Acct 1025 by passing a placement test. Students who have had previous instruction or experience in typewriting, shorthand, or office procedures and machines may take proficiency examinations for credit or appropriate placement in the following courses: BME 1501, 1502, 1503, 1505, 1506, 1507, 1509 (see Examination for Credit at the beginning of this section of the bulletin). Students who have had related occupational experience sufficient for vocational licensure may have all the credits required in BME 5359 waived. This matter should be discussed with the major adviser during the first quarter of registration in the College of Education.

All students are expected to complete the liberal education distribution requirements as detailed at the beginning of this section of the bulletin. Appropriate related and major courses may be applied toward these requirements.

Common Requirements for All Business Education Majors

Related Course Requirements

3 credits of mathematics

Note: Office systems management students must take Math 1111—College Algebra and Analytical Geometry (5) or equivalent

Major Courses (minimum 49 credits)

Econ 1101—Microeconomics (4)

Econ 1102—Macroeconomics (4-5)

MSci 1010—Fundamentals of Computers and Information Technology in Organizations (4)

MSci 1020—Data Analysis and Statistical Inference for Managers (4)

MSci 3030—Information Systems and Information Management (4)

GC 3531—Writing for Business and the Professions

(4) or Comp 3032—Preprofessional Writing for Business (4)

Acct 1024, 1025—Principles of Financial Accounting I, II (3 each)

BLaw 3058—Introduction to Law, and the Law of Contracts and Sales Contracts (4)

Mgmt 3001—Fundamentals of Management (4)

Mktg 3000—Principles of Marketing (4)

BME 1504—Introduction to Business Education (4)

BME 5310—Introduction to Microcomputer Applications in Business and Marketing Education (3)

Special Requirements for All Students

EPsy 3131—Introduction to Human Relations (3)

PubH 3004—Basic Concepts in Personal and Community Health (5)

Licensure Program (with six options)—In addition to the Common Requirements for All Business Education Majors above and Professional Education Courses below, students must also complete one of the two comprehensive options or at least two of the specialized options below. They are encouraged to complete a comprehensive option to improve placement possibilities. Students should consult with an adviser to select the electives needed to complete 186 credits. Recommended are 3xxx or 5xxx courses in business administration, economics, instructional media, 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) grade average in all major and professional courses, except SeEd 3150 and 3155 and SPFE 5090, is required for admission to student teaching and for graduation.

Vocational Office Education Licensure—

In addition to the possession of a bachelor's degree in business education, the

Programs

state of Minnesota requires *special licensure* to teach in certain vocational programs at the secondary and postsecondary levels. Information about these specialized licenses should be obtained from the major adviser.

Professional Education Courses

- BME 3603, 3604, 3605—Student Teaching in Business or Marketing Education (4 each)
- BME 5353—Curriculum Construction in Business and Marketing Education (4)
- SeEd 3150—Introduction to Secondary School Teaching (5)
- SeEd 3155—Psychological Foundations of Secondary Education (5)
- VoEd 5800—Working With Special Needs Students (3) or, with permission of adviser, EPsy 3606—Exceptional Students in Regular Classes (2)
- SPFE 5090—The School and Society (3)

Accounting and Data Processing Option

Major Courses (minimum 24 credits)

- Acct 3101, 3102—Financial Accounting Theory and Practice I, II (4 each)
- Acct 3001—Managerial Accounting (4)
- MIS 3098—Elementary COBOL (2) or MIS 3099—Elementary FORTRAN (1)
- MIS 5102—Introduction to Information Systems Analysis (4)
- BFIn 3000—Finance Fundamentals (4)
- BME 5320—Business Programming Applications Using Microcomputers (3)

Professional Education Courses (minimum 6 credits)

- BME 3303—Teaching Accounting and Data Processing (3)
- VoEd 5300—Philosophy and Practice of Vocational Education (3)

Basic Business and/or Economics Option

Major Courses (minimum 24 credits)

- Econ 3101—Microeconomic Theory (4)
- Econ 3102—Macroeconomic Theory (4)
- Econ 3701—Money and Banking (4)
- BLaw 3088—Law of Personal Property, Real Property, and Wills and Estates (4)
- IR 3002—Personnel and Industrial Relations (4)
- Ins 3100—Risk Management and Insurance (4)

Professional Education Courses (minimum 6 credits)

- BME 3302—Teaching Basic Business Subjects (3)
- 3 credits in education courses

Secretarial Option

Major Courses (minimum 30 credits)

- BME 1503—Advanced Typewriting (3)
- BME 1505—Beginning Shorthand (3)
- BME 1506—Intermediate Shorthand (3)
- BME 1507—Advanced Shorthand (3)
- BME 1509—Office Procedures and Machines (3)
- BME 5158—Office Management Techniques and Technology (4)
- BME 5159—Word/Information Processing Concepts and Management (4)
- BME 5160—Word Processing Practicum (3)
- MIS 5102—Introduction to Information Systems Analysis (4)

Professional Education Courses (minimum 13 credits)

- BME 3300—Teaching Typewriting/Keyboarding (3)
- BME 5156—Teaching Shorthand and Transcription (3)
- BME 5157—Materials and Methods in Office Education (4)
- VoEd 5300—Philosophy and Practice in Vocational Education (3)

Clerical Option

Major courses (minimum 29 credits)

- BME 1503—Advanced Typewriting (3)
- BME 1509—Office Procedures and Machines (3)
- BME 5158—Office Management Techniques and Technology (4)
- BME 5159—Word/Information Processing Concepts and Management (4)
- BME 5160—Word Processing Practicum (3)
- Mgmt 3002—Psychology in Management (4)
- MIS 5102—Introduction to Information Systems Analysis (4)
- IR 3002—Personnel and Industrial Relations (4) or 4 credits in VoEd 5760—Organization Development in Industry and Business (3-4)

Professional Education Courses (minimum 10 credits)

- BME 3300—Teaching Typewriting/Keyboarding (3)
- BME 5157—Materials and Methods in Office Education (4)
- VoEd 5300—Philosophy and Practice in Vocational Education (3)

Comprehensive Business Option

Major Courses (minimum 40 credits)

- BME 1503—Advanced Typewriting (3)
- BME 1505—Beginning Shorthand (3)
- BME 1506—Intermediate Shorthand (3)
- BME 1507—Advanced Shorthand (3)
- BME 1509—Office Procedures and Machines (3)
- BME 5158—Office Management Techniques and Technology (4)
- BME 5320—Business Programming Applications Using Microcomputers (3)
- Mgmt 3002—Psychology in Management (4) or IR 3002—Personnel and Industrial Relations (4)
- One course from the basic business and/or economics option (4)
- 10 credits from economics, agricultural economics, business administration, technical business education, and technical training and development courses

Professional Education Courses (minimum 19 credits)

- BME 3300—Teaching Typewriting/Keyboarding (3)
- BME 3302—Teaching Basic Business Subjects (3)
- BME 3303—Teaching Accounting and Data Processing (3)
- BME 5156—Teaching Shorthand and Transcription (3)
- BME 5157—Materials and Methods in Office Education (4)
- VoEd 5300—Philosophy and Practice of Vocational Education (3)

Comprehensive Business (Except Shorthand) Option

Students take the same courses as specified for the comprehensive business option, substituting four courses, including BME 5159 and 5160, for BME 1505, 1506, 1507, and 5156.

Business Training Program

In addition to the Common Requirements for All Business Education Majors listed above, business training students must complete the following courses. A C+ (2.50) grade average in all Major and Professional Education Courses is required for admission to the internship and for graduation.

Major Courses (minimum 45 credits)

9 credits in technical business education from:

- BME 1503—Advanced Typewriting (3)
- BME 1509—Office Procedures and Machines (3)
- BME 5158—Office Management Techniques and Technology (4)
- BME 5159—Word/Information Processing Concepts and Management (4)
- BME 5160—Word Processing Practicum (3)
- BME 5161—Records Management (4)
- BME 5320—Business Programming Applications Using Microcomputers (3)
- BME 5330—Spreadsheet Analysis Using Microcomputers in Business and Marketing Education (3)
- BME 5335—Teaching Microcomputer Business Graphics (3)
- BME 5345—Data Base Microcomputer Applications (3)
- BME 5390—Special Topics in Technical Updating (1-6)

VoEd 5760—Organization Development in Industry and Business (3 or 4)

Minimum of 3 credits from VoEd 5762, VoEd 5770, VoEd 5790, or Ind 5300

IR 3002—Personnel and Industrial Relations (4)

MIS 5102—Introduction to Information Systems Analysis (4)

24 credits from industrial relations, speech-communication, additional technical business education, training and development in vocational education, management, and psychology

Professional Education Courses (minimum 30 credits)

- BME 5253—Supervisory Training (3)
- BME 5353—Curriculum Construction in Business and Marketing Education (4)
- BME 5355—Adult Business and Marketing Education Programs (3)

9 credits in VoEd 5780—Internship: Training and Development (ar)

VoEd 5750—Training in Industry and Business (3-4)

Electives selected in consultation with adviser, from business and marketing education, curriculum and instructional systems, adult education, vocational education, tests and measurements, internship (to complete 186-credit total)

Office Systems Management Program

In addition to the Common Requirements for All Business Education Majors listed above, office systems management students must complete the following courses. A C+ (2.50) grade average in all Major Courses is required for admission to occupational experience and for graduation.

Major Courses (minimum 75 credits)

- BME 1503—Advanced Typewriting (3)
- BME 1509—Office Procedures and Machines (3)
- BME 5158—Office Management Techniques and Technology (4)

BME 5159—Word/Information Processing Concepts and Management (4)

BME 5160—Word Processing Practicum (3)

BME 5161—Records Management (4)

BME 5253—Supervisory Training (3)

BME 5330—Spreadsheet Analysis Using the Microcomputer in Business and Marketing Education (3)

BME 5320—Business Programming Applications Using Microcomputers (3)

BME 5345—Data Base Microcomputer Applications (3)

6 credits in BME 5359—Occupational Experience (1-18)

BGS 3002—Business and Society (4)

MIS 5102—Introduction to Information Systems Analysis (4)

Mgmt 3002—Psychology in Management (4)

Three courses (12 credits) from:

Acct 3001—Managerial Accounting (4)

IR 3002—Industrial Relations Systems: Labor Markets and the Management of Human Resources (4)

IR 3010—The Individual in the Organization (4)

VoEd 5760—Organization Development In Industry and Business (3-4)

OM 3000—Introduction to Operations Management (4)

OM 3041—Project Management (4)

BFin 3000—Finance Fundamentals (4)

Electives—Selected in consultation with adviser, from business administration, economics, business and marketing education, vocational education, education (to complete 75-credit major course total)

Home Economics Education

Starting Summer Session 1989, the Division of Home Economics Education will begin an experimental postbaccalaureate consumer and family education licensure program and will discontinue that licensure program at the B.S. level. The new program will require for admission a baccalaureate degree with coursework in specified areas, including family studies, human development, family resource development and management, thinking processes, and social sciences. The program will prepare teachers for secondary schools and involve extensive internship experience in school settings. On completion of the program, students will receive credits towards the M.Ed. degree. Admission applications will be accepted beginning October, 1988. Application deadline for admission to the program beginning Summer 1989 is February 1, 1989, and will be February 1 each year thereafter. For further information, contact the division of home economics education.

Programs

The curricula in home economics education, offered jointly by the College of Home Economics and the College of Education, are designed for those who plan to become educators in school or community settings. Satisfactory completion of the Consumer and Family Education and/or Service Occupations Education baccalaureate degree curricular options qualifies students for vocational home economics teaching licensure required by federally aided schools. Satisfactory completion of the Education in Community and Work Settings baccalaureate degree curricular option qualifies students for educational roles in nonsecondary school settings that do not require standard or vocational secondary teacher licensure.

In addition, licensure or endorsement programs are offered to qualify students for state teaching licensure in parent education, family life education, or for instructor coordinator roles. These programs may be undertaken concurrently with degree programs.

Programs can be designed to include courses and practica such as those offered by the College of Education, the College of Home Economics, or Minnesota Studies in International Development. Students pursuing a major in home economics education register in the College of Home Economics. Early in the quarter in which they will complete 90 credits of specified courses, and after completion of HEEEd 1500, students apply for joint admission to the College of Education. To be eligible for admission to the College of Education, students must have a grade average of C (2.00) overall and C+ (2.50) in the major courses. The application form and information about admission procedures should be obtained at the Office of Admissions and Records, 130 Coffey Hall, St. Paul campus.

Students are expected to complete the liberal education distribution requirements as detailed at the beginning of this section of the bulletin. The curricular options in the major are designed to include appropriate courses to satisfy these distribution requirements.

For admission to clinical experiences students must have a grade average of

C+ (2.50) in all major courses, C+ (2.50) in all HEEEd courses, and C (2.00) overall.

Major in Home Economics Education

Common Requirements for Consumer and Family Education and Service Occupations Education Options

Related Course Requirements

- Rhet 1101—Writing to Inform and Persuade (4)
- Rhet 1104—Library Laboratory (1)
- Rhet 1151—Writing in your Major (4)
- Rhet 1222—Public Speaking (4)
- Rhet 3562—Writing in Your Profession (4)
- Psy 1001—Introduction to Psychology (5)
- Soc 1001—Introduction to Sociology (4)
- AgEc 1020—Principles of Macroeconomics (5),
and AgEc 1030—Principles of Microeconomics (4)
or Econ 1001—Principles of Macroeconomics (4),
and Econ 1002—Principles of Microeconomics (4)
- Chem 1001, 1002—Chemical Principles and Covalent Systems (5 each)
or Chem 1004, 1005—General Principles of Chemistry (5 each)
- GC 1132—Biological Science: The Human Body (5)
- FScN 1020—Introductory Microbiology (4)
- Dsgn 1501—Introduction to Design (3)
- 1 elective credit from courses in group A
- 9 elective credits from courses in group D

Professional Education Courses (minimum 34 credits)

- SeEd 3150—Introduction to Secondary School Teaching (5)
- SeEd 3155—Psychological Foundations of Secondary Education (5)
- SPFE 5090—The School and Society (3)
- HEEd 1500—Introduction to Home Economics Education (2)
- HEEd 1510—Knowledge and Values in Home Economics (4)
- HEEd 3520—Home Economics Curriculum and Instruction: Cognitive Learning (5)
- HEEd 3530—Home Economics Curriculum and Instruction: Affective Learning (4)
- HEEd 3620—Curriculum Management (3)
- VoEd 5300—Philosophy and Practice of Vocational Education (3)
- VoEd 5800—Working With Special Needs Students (3) or, with adviser's permission, EPsy 3606—Exceptional Students in Regular Classes (2)

Special Requirements for All Students

- EPsy 3131—Introduction to Human Relations (3)
- PubH 3004—Basic Concepts in Personal and Community Health (5)
- Electives to complete 186 credits—GC 1442 recommended

In addition to the above Common Requirements, students must complete one of the following options:

Consumer and Family Education Option

(Students completing this option are recommended for either vocational licensure or standard teacher licensure.)

Related Course Requirements

- AgEc 5580—Economic Organization of the Household (3 or 4)
 or FSoS 5220—Family Economics (3)
 or GC 1534—Practical Law (5)
 or FSoS 3500—The Consumer and the Market System (3)
- CPsy 1301—Introductory Child Psychology (4)
 CPsy 3303—Adolescent Psychology (4)
 2 credits in CPsy 3330—Directed Experiences (1-4)

Major Courses (minimum 65 credits)

- HEEd 3331—Children and Parenting: Curriculum Methods and Materials (2)
 3 credits in HEEd 5407—Family Life Education (1-4)
 FScN 1212—Scientific Principles of Food Preparation (5)
 FScN 1612—Principles of Nutrition (4)
 FScN 3472—Principles of Food Purchasing (4)
 Hsg 1851—Consumer Aspects of Housing (4)
 TexC 3661—Cultural Perspectives on Dress (3)
 or TexC 5661—Clothing and Human Behavior (4)
 TexC 3603—Ready-to-Wear Analysis (3)
 or TexC 5622—Issues and Trends in Textile Consumer Protection (3)
 or TexC 3621—Textiles (5)
 or TexC 5662—Clothing Consumption Problems (3)
- Anth 3222—Peoples and Cultures of Mid-America (4)
 or FSoS 5202—Social Psychology of Close Relationships (5)
 or FSoS 5210—The Family in World Perspective (5)
 or Soc 5505—Family Development (5)
- Hsg 1801—Household Equipment (4)
 FSoS 3260—Family Resource Management (3)
 FSoS 5200—Family Relationships (5)
- Electives from an area within the major selected in consultation with an adviser to meet the 65-credit minimum
- Professional Education Courses* (minimum 12 credits)
 9 credits in HEEd 3601—Clinical Experience (3-18)
 HEEd 3611—Fieldwork (3)

Service Occupations Education Option

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

Related Course Requirements

- CPsy 1301—Introductory Child Psychology (4)
 CPsy 3303—Adolescent Psychology (4)
- Major Courses* (minimum 32 credits)
 FScN 1212—Scientific Principles of Food Preparation (5)
 FScN 1612—Principles of Nutrition (4)
 Hsg 1801—Residential Technology (4)
 FSoS 3260—Family Resource Management (3)
 FSoS 5200—Family Relationships (5)
 TexC 1602—Fitting the Human Subject (2)
 TexC 1603—Advanced Principles of Apparel Production (2)
 TexC 3621—Textiles (5)

Cluster Requirements

- Food Service Cluster**
 FScN 3472—Principles of Food Purchasing (4)
 FScN 3730—Quantity Food Production Management (5)
 FScN 5750—Principles of Food Service Management (4)
 3 credits in HEEd 5920—Directed Studies (1-6)
 Mgmt 3001—Fundamentals of Management (4)
- Child Development and Care Cluster**
 2 credits in CPsy 3330—Directed Experiences (1-4)
 CPsy 3311—Behavioral and Emotional Problems (4)
 or CPsy 5315—Introduction to Mental Retardation (4)
 CPsy 3331—Processes of Socialization of Children (4)
 CPsy 5339—Parent-Child Relations (4)
 Elem 3376—Nursery School-Kindergarten Curriculum (3)
 Elem 3378—Social Learning in Early Childhood Education (3)
- Textiles and Clothing Cluster**
 TexC 1641—Introduction to Merchandising (3)
 TexC 1643—Apparel Industries (4)
 TexC 3604—Flat Pattern Design (3)
 or TexC 3605—Draping Design and Construction (3)
 or Dsgn 1541—Costume Design I (3)
 Dsgn 3517—History of Costume: Primitive through 18th Century (3)
 Dsgn 5518—History of Costume: 19th and 20th Centuries (4)
 Electives selected in consultation with adviser

Professional Education Courses (minimum 18 credits)

- 9 credits in HEEd 3601—Clinical Experience (3-18)
 HEEd 3611—Fieldwork (3)
 HEEd 5100—Service Occupations Education (3)
 3 credits in HEEd 5102—Service Occupations Work Experience (3-6)

Education in Community and Work Settings Option

The Common Requirements at the beginning of this section do not apply to this option. This option does not result in recommendation for teacher licensure. With the exception of 6 elective credits, all courses must be selected from a list of approved courses available from pre-Home Economics Education or Home Economics Education advisers.

General Education Requirements (minimum 59 credits)

- A. Language, Logic, Mathematics, and Study of Argument** (18 credits)
 Rhet 1101—Writing to Inform and Persuade (4)
 Rhet 1104—Library Laboratory (1)
 Rhet 1151—Writing in Your Major (4)
 Rhet 1222—Public Speaking (4)
 Rhet 3562—Writing in Your Profession (4)
 Electives to meet 18 credit minimum
- B. Physical and Biological Universe** (12 credits)
- C. Individual and Society** (17 credits)
 Psy 1001—Introduction to Psychology (5)
 Soc 1001—Introduction to Sociology (4)

Programs

- One of these two sequences
AgEc 1020, 1030—Principles of Macro-Microeconomics (5, 4)
Econ 1001, 1002—Principles of Macro-Microeconomics (4 each)

D. Literary and Artistic Expression (12 credits)

Major Requirements (minimum 50 credits)

Common Requirements:

- FSoS 3260—Family Resource Management (3)
CPsy 1301—Introductory Child Psychology (4)
FSoS 5200—Family Relationships (5)

Choose one—FScN 1012, TexC 5661, Hsg 1851 (4 each)

Minimum of 34 credits in one of the following areas of emphasis in education: nutrition, family and parent, financial, international education, or cooperative extension education

Professional Education and Related Courses (minimum 56 credits)

A. Home Economics Education (35 credits)

HEED 1500—Introduction to Home Economics Education (2)

HEEd 1510—Knowledge and Values in Home Economics Education (4)

HEEd 3520—Curriculum and Instruction: Cognitive Learning (5)

HEED 3530—Curriculum and Instruction: Affective Learning (4)

HEED 3620—Curriculum Management
9 credits in a Home Economics Education Practicum

Electives—in HEED courses to meet minimum requirements

B. Learning, Instructional, and Education Theory Courses (6 credits)

Psychology of learning, psychology of instruction, cognitive and attitude development, sociology of education, or anthropology and education

C. Audience, Setting, Roles (15 credits)

Courses to be chosen in consultation with advisers

Electives (21 credits)

Minimum of 15 credits from above categories to fulfill degree requirement of 186 credits.

Family Life Endorsement

The Common Requirements at the beginning of this section do not apply. Applicants must hold a bachelor's degree and a valid license as a classroom teacher at the grade level where assignments may be made. With careful planning, students may complete coursework for initial licensure concurrently with this endorsement. Individuals who complete these requirements will be approved by the Minnesota Board of Teaching for endorsement as a Family Life Educator. Students complete 27 credits in the areas shown below, selected in consultation with an adviser:

Family Structure and Function—minimum 3 credits from FSoS 5202, 5210; Soc 3501, 5505, 5506, 5511

Parent Education—minimum 3 credits from FSoS 5025, CPsy 5339, HEEd 3331, 5405

Human Sexuality—minimum 3 credits from FSoS 1109, 1119, 5001, 5002, Soc 3503, 5524

Child Development—maximum 6 credits from CPsy 1301, 3331 or 5331, 5333

Family Relationships—minimum 3 credits—FSoS 5200 suggested

HEED 5407—Family Life Education (1-4)

Parent Education Licensure

Individuals wishing to prepare for careers in parent education can meet state licensure requirements through completion of one of the Parent Education Licensure programs described below. These are licensure programs, not degree programs. The Common Requirements at the beginning of this section do not apply. Applicants must be in a degree program or hold a completed degree. The licensure programs may be undertaken concurrently with undergraduate, M.Ed., graduate, or adult special status. For detailed information, contact the Division of Home Economics Education, 325 Vocational and Technical Building, St. Paul campus. General requirements are:

Adult Vocational Parent Education License

Applicants must be in a baccalaureate degree program or hold a completed baccalaureate degree in vocational home economics education, general home economics, family life, early childhood education, or other education field.

Family Life Core—15-27 credits, depending on the bachelor's degree field, with at least 3 credits in each of the following five areas: family structure and function, parent education, family relationships, child development, methods and materials of family life education

Adult Education Methods—3 credits

Philosophy of Vocational Education—3 credits

Completion of state requirements for training in human relations

3 credits in HEED 3910—Educational Methods for Home Economists and Related Professionals required of non-education majors

Family Education Parent Educator License

Applicants must be in a baccalaureate degree program or hold a completed baccalaureate degree.

Minimum of 24 credits in the following areas:

Child development—6 credits

Family development, systems, structure and functions, parent-child relations, parenting—6 credits

Adult education methods and materials, parent education curriculum and methods, group facilitation/process/dynamics—9 credits

Adult education practicum—3 credits

Introduction to early childhood education—1 credit

Completion of state requirements for training in human relations

Instructor-Coordinator Licensure Option

The Common Requirements at the beginning of this section do not apply to this option. Home economics teachers who wish to prepare themselves for positions as coordinators of home economics occupational programs in secondary schools may do so by completing additional occupational experience and 6 additional credits in the following courses:

VoEd 5330—Coordination Techniques in Cooperative Education (3-4)

HEEd 5104—Curricula, Methods, and Materials for Service Occupations (3)

Industrial Education

Two undergraduate majors are offered in industrial education: (1) *industrial education*, which allows two options: (a) a focus on public school teaching in industrial education and (b) a focus on industrial training; and (2) *vocational-industrial education*, which allows two options: (a) a focus on public school teaching in vocational-industrial education and (b) a focus on industrial training.

Students completing option (a) in industrial education with a focus on public school teaching are awarded the B.S. degree and recommended for the standard special license to teach industrial arts in grades 5-12 in Minnesota public schools. Students completing option (a) in vocational-industrial education are awarded the B.S. degree and recommended for licensure under the provisions of the Minnesota State Plan for Vocational Education to teach in secondary and postsecondary vocational schools in Minnesota. Students completing option (b) in either major are awarded the B.S. degree and a professional certificate in industrial training and development *but do not receive licensure to teach in Minnesota public secondary and postsecondary schools*. Both majors offer preparation for graduate study.

Students applying for admission to either major must have completed 45 quarter credits, including courses in mathematics, physical science, and English, with at least a C (2.00) grade average. Application for admission to the vocational-industrial education major also requires that students submit verification of occupational experience, which will be evaluated using the standards for licensure at the postsecondary level as stated in the Minnesota State Plan for Vocational Education. To be admitted, students must have sufficient occupational experience in the area in which they intend to teach to be eligible for licensure as

a vocational-industrial education teacher in a Minnesota technical institute.

Students may elect to pursue courses meeting the requirements for a combination of options. For example, vocational-industrial majors in option (a) may include a focus on training in industry as part of their degree, which would require the addition of selected industrial training courses and lead to a certificate in training and development.

In addition to the classes scheduled on the campus, industrial education courses are conducted at various centers throughout the state, planned in cooperation with the Minnesota State Board of Vocational Technical Education and local school authorities. Services are available to industrial groups, such as supervisors and other personnel with instructional responsibilities, and to public schools. Students may arrange to take a number of laboratory courses at the Dunwoody Institute and at metropolitan technical institutes without fees other than those paid at the University. Consent of the adviser must be secured before registration in any off-campus laboratory course.

Students are expected to complete the liberal education distribution requirements as detailed at the beginning of this section of the bulletin. Appropriate related and major courses may be applied toward those requirements.

Students who major in industrial education and in vocational-industrial education must file an approved program with an industrial education adviser at least two full quarters before their expected date of graduation.

Major in Industrial Education

Related Course Requirements

GC 1452—Trigonometry and Problem Solving (5)

or Math 1131—Finite Mathematics (5)

or Math 1111—College Algebra and Analytic Geometry (5)

Spch 1101—Fundamentals of Speech Communication: Oral Communication (4)

or GC 1461—Oral Communication: Basic Principles (5)

Rhet 3562—Writing in Your Profession (4)

Programs

Phys 1001—The Physical World (4)
and Chem 1008—The Physical World: Chemistry (4)

or GC 1163, 1166—Physical Science: Principles of Physics, Chemistry (5 each)

Minimum of 8 credits to be selected from Econ 1001, 1002, 3501; IR 3002; GC 1232, 1295; EPsy 5430

Major Courses (minimum 54 credits plus occupational experience)

Ind 1600—Drafting (3)

Ind 1602—Technical Design (3)

Ind 1604—Industrial Materials and Measurement (3)

Ind 1660—Industrial Service (3)

30 credits total from these areas:

Construction:

Ind 1610—Materials Processing: Nonmetallic (3)

Ind 1612—Construction (3)

Graphic Communication:

Ind 1620—Visual Communication Technology (3)

Ind 1622—Graphic Communication (3)

Manufacturing:

Ind 1630—Materials Processing: Metallic (3)

Ind 1632—Manufacturing (3)

Power and Energy:

Ind 1640—Electronics (3)

Ind 1642—Electronic Systems (3)

Ind 1650—Fundamentals of Power (3)

Ind 1655—Complex Power Systems (3)

Electives to complete the 54-credit minimum to be selected from: Ind 3110, 3111, 3120, 3121, 3130, 3131, 3140, 3141, 3150, 3151, 3655, 5100, 5101, 5102, 5103

9 additional credits must be completed in one of the areas above. Ind 5100, 5101, 5102, and 5103 may not be used to complete the 9-credit minimum.

Professional Education Course Requirements for All Students

Ind 1300—Introduction to Industrial Education Teaching (2)

Ind 3750—Industrial Practices and Processes (3)

Ind 5301—Tests in Industrial Subjects (3)

Ind 5303—Instructional Aids (3)

Ind 5320—Vocational Guidance (3)

Ind 5330—Industrial Course Construction (3)

Ind 5360—Industrial Instruction (3)

VoEd 5300—Philosophy and Practice of Vocational Education (3)

or Ind 5325—Foundations of Industrial Education (3)

2 credits in Hlth 1500—American Red Cross Standard First Aid and Personal Safety (1, 2)

Ind 1800, 1801, 1802—Career Planning Practicum (1 each)

Additional Requirements for Licensure Option

Ind 3700, 3702, 3704—Student Teaching (3 each)

and 1 credit in Ind 3701—Student Teaching Seminar (1-3)

VoEd 5800—Working With Special Needs Students (3) or, with adviser's permission, EPsy 3606—Exceptional Students in Regular Classes (2)

SeEd 3150—Introduction to Secondary School Teaching (5)

SeEd 3155—Psychological Foundations of Secondary Education (5)

SPFE 5090—The School and Society (3)

Additional Requirements for Training Option

VoEd 5760—Organization Development in Industry and Business (3-4)

9 credits in VoEd 5780—Internship: Training and Development (ar)

EPsy 5115—Adult Learning and Educational Practice (4)

or Educ 5301—Designing the Adult Education Program (3)

VoEd 5750—Training in Industry and Business (3-4)

Educ 5401—Adult Learning and Development Through the Lifespan (3)

or EPsy 5430—Foundations of Career Development (3)

3 credits in VoEd 5770—Training and Development (1-4)

Special Requirements for All Students

EPsy 3131—Introduction to Human Relations (3)

PubH 3004—Basic Concepts in Personal and Community Health (5)

Electives to be selected in consultation with adviser to complete 186 credits

Student Teaching and Internship Prerequisites

• Junior or senior status

• Completion of at least 30 of the 54 laboratory credits in the major

• For student teaching, completion of Ind 1300, 5360 and SeEd 3150, 3155. For internship, completion of Ind 5360 and VoEd 5750

• A grade average of C+ (2.50) for all work in industrial education, including the laboratory courses

Major in Vocational-Industrial Education

Related Course Requirements

77 credits in mathematics, science, language, speech, social science, philosophy, history, sociology, psychology, or child psychology selected with consent of the adviser; must include Math 1008—Trigonometry (4) and Math 1111—College Algebra and Analytic Geometry (5)

Major Courses (minimum 45 credits)

Students admitted to this program will be granted the 45 credits on the basis of demonstrated occupational competency. The 45 credits will be awarded after completion of all other degree requirements.

Professional Education Course Requirements for All Students

Ind 5301—Tests in Industrial Subjects (3)

Ind 5303—Instructional Aids (3)

Ind 5320—Vocational Guidance (3)

Ind 5325—Foundations of Industrial Education (3)

Ind 5330—Industrial Course Construction (3)

Ind 5360—Industrial Instruction (3)

2 credits in Hlth 1500—American Red Cross Standard First Aid and Personal Safety (1, 2)

12 credits to be selected from Ind 1300 or 1301 (3 max), 1302 (3 max), 3706, 3901, 3902, 5305, 5344; SeEd 3150, 3155, Educ 5104, 5301, 5401; EPsy 5115, 5430

Additional Requirements for Licensure Option
 Ind 3700, 3702, 3704—Student Teaching (3 each)
 Minimum of 1 credit from Ind 3701, 3703, 3705, 3707—Student Teaching Seminar (1-3 each)
 Ind 3900—Independent Study (3)
 SPFE 5090—The School and Society (3)
 VoEd 5800—Working With Special Needs Students (3) or, with permission of adviser, EPsy 3606—Exceptional Students in Regular Classes (2)

Additional Requirements for Training Option
 9 credits in VoEd 5780—Internship: Training and Development (ar)
 VoEd 5750—Training in Industry and Business (3-4)
 3 credits in VoEd 5770—Training and Development (1-4)
 VoEd 5760—Organization Development in Industry and Business (3-4)

Special Requirements for All Students
 EPsy 3131—Introduction to Human Relations (3)
 PubH 3004—Basic Concepts in Personal and Community Health (5)

Electives to be selected in consultation with adviser

- Student Teaching and Internship Prerequisites*
- Junior or senior status
 - Completion of Ind 5360
 - A grade average of C + (2.50) for all work in industrial education
 - For internship, completion of VoEd 5750

Marketing Education

Two programs, each leading to the B.S. degree, are available to marketing education majors: licensure and sales and marketing professional (nonlicensure). The licensure program is designed to prepare students to teach a variety of marketing topics, such as selling, merchandising, basic marketing, and management, in secondary and postsecondary schools.

Although not required, a minor may be completed through careful selection of electives. Students may enter the College of Education after completion of at least 45 credits in liberal education. Preference will be given to students who have completed 90 credits and who have overall grade point averages of 2.80 or higher. Major advisers should be consulted as early as possible.

Students preparing for vocational teaching licensure should have the equivalent of 4,000 hours of marketing-related occupational experience, which may be acquired before entering the program or completed as part of the degree requirements. Students who have had prior acceptable occupational experience or who

have completed a secondary or postsecondary marketing and distributive education program may be exempt from part or all of this requirement depending upon the quality, amount, and recency of such experience. Students are encouraged to work part time while enrolled in the program in positions related to marketing occupations. They are expected to participate in the student organization for marketing education licensure majors as part of their preparation for becoming advisers to secondary and postsecondary vocational student groups.

The sales and marketing professional (nonlicensure) program is designed for persons who wish to pursue business careers that will require marketing and training skills. Their responsibilities will usually require skill in one or more of the marketing functions along with the ability to train new and existing employees.

All students are expected to complete the liberal education distribution requirements as detailed at the beginning of this section of the bulletin. Appropriate related and major courses may be applied to these requirements.

For admission to student teaching (licensure program) and graduation, students must have a GPA of C + (2.50) in major courses and a C (2.00) overall.

Common Requirements for All Marketing Education Majors

Related Course Requirements

- 3 credits elected from mathematics courses or those including content in business, financial, or merchandise mathematics
 BLaw 3058—Introduction to Law, and the Law of Contracts and Sales Contracts (4)
 Acct 1024, 1025—Principles of Financial Accounting I, II (3 each)
 Comp 3032—Professional Writing for Business (4) or GC 3531 Writing for Business and the Professions (4)
 MSci 1010—Fundamentals of Computers and Information Technology in Organizations (4)
 MSci 1020—Data Analysis and Statistical Inference for Managers (4)
 MSci 3030—Information Systems and Information Management (4)

Major Courses (minimum 58 credits)

- Econ 1101, 1102—Principles of Microeconomics, Macroeconomics (4, 4-5)
 or AgEc 1020—Principles of Macroeconomics (5) and AgEc 1030—Principles of Microeconomics (4)

Programs

GC 1537—Professional Selling (3)
or equivalent course in principles of selling
Mgmt 3001—Fundamentals of Management (4)
Mktg 3000—Principles of Marketing (4)
Mktg 3010—Buyer Behavior and Marketing Analysis (4)
BME 1100—Introduction to Marketing Education (4)
BME 5304—Methods: Marketing Education (4)
BME 5305—Applied Methods: Marketing Education (4)
BME 5252—Teaching Merchandise Display (3)
BME 5310—Introduction to Microcomputer Applications in Business and Marketing Education (4)
BME 5353—Curriculum Construction in Business and Marketing Education (4)
Four courses (minimum 12 credits) selected from those related to marketing, merchandising, and management

Licensure Program

In addition to the Common Requirements above, all students pursuing the licensure program will complete the following requirements:

Major Courses (minimum 35 credits)
BME 3603, 3604, 3605—Student Teaching in Business and Marketing Education (4 each)
BME 5351—Organization and Administration of Business and Marketing Education (4)
VoEd 5330—Coordination Techniques in Cooperative Education (3)
BME 5354—Postsecondary Business and Marketing Education (3) or BME 5355—Adult Business and Marketing Education Programs (3)
BME 5359—Occupational Experience (1-18)
Jour 5251 or Psy 5751—Psychology of Advertising (4)
VoEd 5300—Philosophy and Practice of Vocational Education (3)
Mktg 3065—Retail Management (4)

Professional Education Courses (minimum 21 credits)
SeEd 3150—Introduction to Secondary School Teaching (5)
SeEd 3155—Psychological Foundations of Secondary Education (5)
SPFE 5090—The School and Society (3)
EPsy 5401—Counseling Procedures (3) or EPsy 5410—Introduction to Guidance (3)
VoEd 5800—Working with Special Needs Students (3) or, with adviser's permission, EPsy 3606—Exceptional Students in Regular Classes (2)
Ind 5301—Tests in Industrial Subjects (3) or EPsy 5220—Educational Measurement in the Classroom (4)

Special Requirements for All Licensure Students
EPsy 3131—Introduction to Human Relations (3)
PubH 3004—Basic Concepts in Personal and Community Health (5)

Electives to complete 186 credits

Sales and Marketing Professional Program

In addition to the Common Requirements above, students pursuing this nonlicensure program will complete the following requirements:

Major Courses (minimum 44 credits)
BME 5253—Supervisory Training (3)
BME 5355—Adult Business and Marketing Education Programs (3)
VoEd 5750—Training in Industry and Business (4)
VoEd 5760—Organization and Development in Industry and Business (4)
6 credits in VoEd 5780—Internship: Training and Development (ar)
IR 3002—Personnel and Industrial Relations (4)
Mktg 3090—Marketing Topics (4)
Mgmt 3002—Psychology in Management (4)

Two courses from:

BME 5160—Word Processing Practicum (3)
BME 5320—Business Programming Applications Using Microcomputers (3)
BME 5330—Spreadsheet Analysis Using Microcomputers in Business and Marketing Education (3)
BME 5335—Teaching Microcomputer Business Graphics (3)
BME 5345—Data Base Microcomputer Applications (3)

Two courses (6 credits) from:

BME 5360—Program Developments in Business and Marketing Education (1-6)
BME 5390—Special Topics in Technical Updating (1-6)
VoEd 5770—Training and Development (1-4) or other BME training and development in vocational education courses

Electives to complete 186 credits

Minor in Marketing Education

Minor Courses (minimum 50 credits)
Econ 1101, 1102—Microeconomics, Macroeconomics (4, 4-5)
or AgEc 1020—Principles of Macroeconomics (5) and AgEc 1030—Principles of Microeconomics (4)

GC 1537—Professional Selling (3)
or equivalent course in principles of selling
Mktg 3000—Principles of Marketing (4) or AgEc 1400—Agricultural Marketing and Prices (4)
Mktg 3065—Retail Management (4)
BME 1100—Introduction to Marketing Education (4)
BME 5304—Methods: Marketing Education (4)
BME 3603—Student Teaching in Business or Marketing Education (4)
BME 5351—Organization and Administration of Business and Marketing Education (4)
3 credits in BME 5359—Occupational Experience (1-18)
Electives—12 credits selected in consultation with adviser

Advanced Study



Advanced Study

Graduate programs receive a major emphasis in the College of Education. These programs are designed to continue the development of school personnel and to prepare students for a wide range of specializations. The college offers a professional degree, the master of education (M.Ed.), intended primarily to help teachers and other professionals improve their skills. Programs offered through the Graduate School lead to the M.A., Ph.D., and Ed.D. degrees, and to the specialist certificate in school administration, college teaching, counseling, supervision of curriculum and instruction, and other specialized fields.

This section of the bulletin contains basic information about the professional and graduate degrees and brief descriptions of the specific programs. Students interested in a particular program should contact the appropriate department in the college or obtain the *Graduate School Bulletin* for further information.

Master of Education Degree

Programs for the M.Ed. are of two types. Plan I programs are for licensed teachers who wish to pursue advanced professional study; Plan II programs are for professional personnel in fields not requiring teacher licensure. The M.Ed. degree programs are *not* designed to prepare students for initial licensure.

M.Ed. programs are quite flexible. Each student's program is planned with an adviser. All programs require a minimum of 45 credits of study distributed among coursework, independent study, seminars, internships, workshops, and school-based experiences.

Applications for admission to all fields should be made to the College of Education through the Office of Admissions, Williamson Hall, University of Minnesota, 231 Pillsbury Drive S.E., Minneapolis, MN 55455. Admission criteria include graduation from an accredited college or university with an appropriate undergraduate major or specialization,

department approval of the application, and concurrence of the college.

Application deadlines for admission to M.Ed. programs in the college are:

Winter Quarter 1989: November 1, 1989

Spring Quarter 1989: February 1, 1989

Summer Sessions I and II 1989: April 1, 1989

The following master of education degree programs are offered by the College of Education:

Plan I (for licensed teachers)

Agricultural Education

Art Education

Business Education

Curriculum and Instructional Systems

Developmental/Adapted Physical Education

Early Childhood Education

Elementary Education

English Education

Home Economics Education

Industrial Education

Marketing Education

Mathematics Education

Music Education

Physical Education

Science Education

Second Languages and Cultures Education

Social Studies Education

Special Education

Plan II (for nonlicensed professional personnel or those with vocational licensure)

Adult Education

Agricultural Education

Business Education

Community Education Administration

Curriculum and Instructional Systems

Home Economics Education

Industrial Education

Marketing Education

Recreation, Park, and Leisure Studies

Science Education

Vocational Education

Following admission to an M.Ed. program, the student and adviser design a proposed program suited to the student's needs and interests. The proposed program is then submitted to a department committee for approval. The approved program with all necessary documentation is then submitted to the Student Progress Subcouncil in the Education Student Affairs Office, 1425 University Avenue S.E.

No more than 12 credits may be included from an institution other than the University of Minnesota, provided they are appropriate to the program. There is

no limitation on the number of credits that can be taken through Continuing Education and Extension, provided they are appropriate to the program. Individual program areas may modify the above guidelines to allow fewer credits permitted in the program from other institutions or from CEE. All work submitted for the degree must be concluded within seven years before graduation. A minimum grade average of 2.80 is required for graduation. Students should apply for graduation at 150 Williamson Hall early in the quarter in which they plan to complete work for the degree. Specific program information may be obtained from the Education Student Affairs Office, 1425 University Ave. S.E., Minneapolis, MN 55414, 612/625-6501.

Graduate School

Graduate programs at the University of Minnesota are administered by the Graduate School. Applications for admission to these programs are made to the Graduate School Office, 307 Johnston Hall, University of Minnesota, 101 Pleasant Street S.E., Minneapolis, MN 55455.

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 grading systems. Most major graduate schools, including the University of Minnesota, have adopted special policies for courses taken S-N that are offered in support of an application for admission. Specific policies are included in the *Graduate School Bulletin*.

Master of Arts Degree—Graduate study leading to the M.A. degree is available in most education fields. This degree is offered under two plans: Plan A, involving a thesis; and Plan B.

A master's degree program ordinarily takes from four to six quarters in residence to complete. After completion of 15 credits, and not later than the third quarter of registration (the second year for the longer programs), students file with the Graduate School the official proposed pro-

gram for the degree (Plan A or Plan B), listing all coursework, completed and proposed, that will be offered in fulfillment of degree requirements. The Graduate School does not require foreign language study, but departments may determine language requirements for specific major programs. Specific program requirements are listed in the *Graduate School Bulletin*.

Specialist Certificate—Programs that lead to the specialist in education certificate are available in a number of fields. These programs require the completion of a minimum of 90 credits. Students will usually complete the requirements for the master's degree with a major in the field of the specialty as the first year of the program. All first-year students must meet regular admission, degree candidacy, and examination requirements for the master of arts degree, and specify as their degree objective the master's degree on the application form. The two-year program must be completed within a period of 12 years. The following specialist certificate programs are offered:

- General Educational Administration
- School Business Administration
- Intermediate Unit in Educational Administration
- Secondary School Administration
- Elementary School Administration
- Counseling
- Psychology in the Schools Training Program
- Special Education
- Mathematics Education
- General Curriculum Supervision (Grades 7-12)

For details of program requirements, consult the *Graduate School Bulletin*.

Doctor of Education Degree—The University of Minnesota awards the doctor of education (Ed.D.), its highest professional degree in the field of education, in recognition of completion of academic preparation and demonstrated competence for professional activity in the field. The Ed.D. is offered in the following fields: educational administration, industrial education, and vocational education.

Standards and procedures for admission and expectations for performance are, in general, comparable to those for the Ph.D. Rules and procedures for the Ph.D.

governing examinations, degree candidacy, time limits, thesis credits, appointment of committees, and the thesis apply in general to the Ed.D.

Doctor of Philosophy Degree—The degree of doctor of philosophy is granted in recognition of high attainment and ability of candidates in their special fields as demonstrated through required examinations covering both the general and special fields and through the preparation and defense of a thesis.

Candidates for the doctoral degree must register in the Graduate School for at least nine quarters of graduate study in approved subjects and thesis research and writing. Students who transfer work for the degree from other graduate schools must spend the first two years, or the last year, in residence at the University of Minnesota. Consult the *Graduate School Bulletin* for specific program requirements.

Adult Special

A person who has already completed a baccalaureate degree and wishes to take courses but who has not been formally admitted to a program in the College of Education or 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 registration materials at the Education Student Affairs Office, 1425 University Avenue S.E. All others should obtain the adult special application form from the Education Student Affairs Office and secure approval and additional information from that office. Those who have previously been admitted as adult special students and who now wish to enroll in a degree program must apply for admission to the specific program. Students should be aware that there is a limit on the number and type of adult special credits that may be transferred to a Graduate School or M.Ed. program.

Curricula

Child Psychology

Graduate study is available in several areas of child psychology. Students interested in the Ph.D. degree program should apply for admission to the director of admissions, Institute of Child Development, and to the Graduate School, specifying the major as child psychology. Students are rarely admitted for a terminal M.A. degree. Consult the *Graduate School Bulletin* for details about admission requirements for the M.A. and Ph.D. degree programs. See also the section below for details of the M.Ed. program in early childhood education.

Communication Disorders

The Department of Communication Disorders in the College of Liberal Arts, through the Graduate School, offers graduate programs leading to the master of arts degree with emphasis in either speech-language pathology or audiology, and to the Ph.D. degree with emphasis in speech-language pathology, speech science, audiology, or hearing science. Graduate students who complete the M.A. degree in speech-language pathology or audiology meet the academic and clinical practicum requirements for the American Speech-Language-Hearing Association Certificate of Clinical Competence. Minnesota licensure requirements are currently under review by the Minnesota Board of Teaching. For more information, contact the Department of Communication Disorders, 115 Shevlin Hall, University of Minnesota, 164 Pillsbury Drive S.E., Minneapolis, MN 55455 (612/624-3322).

Community Education

Three program areas within the College of Education cooperate to offer graduate-level study to those interested in the design, implementation, evaluation, and administration of community schools and community education programs. Students

may prepare for leadership roles in community education through any of the three areas: adult education, educational administration, or recreation, park, and leisure studies. Students plan programs designed to develop both theoretical and practical competencies. Courses appropriate to community education are drawn from these areas as well as from other areas within the College of Education and other units of the University.

Community Education Administration—The master of education program is flexible, anchored largely in the major components of clinical process used in community education programs. It combines coursework, independent study, workshops, and community education-based experience to provide postbaccalaureate clinical training in organization and management of programs for those who plan to become community education directors or administrators or who have career aspirations in community education.

Advanced Study Programs in Education

The following chart identifies areas in education in which master of education (M.Ed.), master of arts (M.A.), and doctor of philosophy (Ph.D.) programs are available. In addition, the doctor of education (Ed.D.) degree is offered with a major in industrial education, vocational education, or educational administration. Also offered are specialist certificate programs in mathematics education, general curriculum supervision (grades 7-12), counseling, school psychology training programs, special education, and several levels of educational administration.

M.Ed. programs are described in detail in this section of the bulletin. Students interested in M.A., Ph.D., Ed.D., and specialist programs should consult the department and the *Graduate School Bulletin*.

Field or Emphasis	M.Ed.	M.A.	Ph.D.
Adult Education	yes	Education	Education (Curriculum and Instruction)
Agricultural Education	yes	Agricultural Education	Education (General Education Aspects of the Vocational Field) or Vocational Education
Art Education	yes	Art Education	Education (Curriculum and Instruction)
Business Education	yes	Business Education	Education (General Education Aspects of the Vocational Field) or Vocational Education
Child Psychology	no	Child Psychology	Child Psychology
Community Education	no	Education (Adult) or Educational Administration or Recreation, Park, and Leisure Studies	See field or emphasis
Community Education Administration	yes	See field or emphasis	See field or emphasis
Counseling and Student Personnel Psychology	no	Educational Psychology	Educational Psychology
Curriculum and Instructional Systems	yes	Education	Education (Curriculum and Instruction)
Early Childhood Education	yes	See Child Psychology or Elementary Education	See Child Psychology or Elementary Education

Advanced Study

Field or Emphasis	M.Ed.	M.A.	Ph.D.
Education	no	See field or emphasis	See field or emphasis
Educational Administration	no	Educational Administration	Educational Administration
Educational Psychology	no	See field or emphasis	See field or emphasis
Elementary Education	yes	Elementary Education	Education (Curriculum and Instruction)
English	yes	Education	Education (Curriculum and Instruction)
Foreign Languages (see Second Languages)			
Higher Education	no	Education	Education (Higher Education)
Home Economics Education	yes	Home Economics Education	Education (General Education Aspects of the Vocational Field) or Vocational Education
Industrial Education	yes	Industrial Education	Education (General Education Aspects of the Vocational Field) or Vocational Education
International Development Education	no	Education	See field or emphasis
Marketing Education	yes	Marketing Education	Education (General Education Aspects of the Vocational Field) or Vocational Education
Mathematics Education	yes	Mathematics Education	Education (Curriculum and Instruction)
Music Education	yes	Music Education	Education (Curriculum and Instruction)
Physical Education Developmental/Adapted	yes yes	Physical Education	Physical Education
Psychological Foundations	no	Educational Psychology	Educational Psychology
Reading	no	Education	Education (Curriculum and Instruction)
Recreation, Park, and Leisure Studies	yes	Recreation, Park, and Leisure Studies	Education (Recreation, Park, and Leisure Studies)
School Psychology	no	Educational Psychology	Educational Psychology
Science Education	yes	Education	Education (Curriculum and Instruction)
Second Languages and Cultures Education	yes	Education	Education (Curriculum and Instruction)
Social and Philosophical Foundations of Education	no	Social and Philosophical Foundations of Education	Education (Social and Philosophical Foundations)
Social Studies	yes	Education	Education (Curriculum and Instruction)
Special Education	yes	Educational Psychology	Educational Psychology
Teacher Education	no		Education (Curriculum and Instruction)
Vocational Education	yes	See field or emphasis	Vocational Education

Curriculum and Instruction

This department offers graduate-level study in all of its program areas. See the specific areas below for descriptions of advanced programs: adult, community, and continuing education; adult basic and continuing education endorsement; advanced career teacher program in elementary education; art education; curriculum and instructional systems; early childhood education; elementary education; international development education; mathematics education; middle school endorsement; remedial reading and reading supervisor endorsement; secondary academic fields of English education, mathematics education, science education, second languages and cultures education, and social studies education; and teacher education.

Adult, Community, and Continuing Education—Graduate-level study is offered to those interested in the design, implementation, and evaluation of educational programs for adults. Students can prepare for teaching, program development, and administrative roles in a wide variety of institutions, organizations, and agencies that offer training and education for adults. Students may develop programs in the general area of adult education. Within this program they may also concentrate on one of the following areas: adult literacy education, community education, continuing education of the professional, continuing education of older adults, and training and development. Course descriptions in this area are listed under the heading Education (Educ) and related areas in the next section of this bulletin.

An M.Ed. program in adult education is available for those who design, administer, and evaluate educational activities for adults as well as those who teach adults. This Plan II degree program is specifically designed for persons who are not required to hold teaching licensure as a condition of employment.

Adult Basic and Continuing Education (ABCE) Endorsement Program—A 16-credit endorsement is available for teachers with a valid Minnesota teaching license.

Required Courses (minimum 9 credits)

Educ 5201—Introduction to the Undereducated Adult (3)

Educ 5202—Adult Literacy: Diagnosis and Prescription (3)

Educ 5203—Adult Literacy: Methods and Materials (3)

Educ 5204—Reading in Work Settings (3)

Optional Courses (minimum 3 credits)

Educ 5401—Adult Development Through Life Span (3)

Educ 5411—Strategies for Teaching Adults (3)

Educ 5434—Counseling Adults in Transition (3)

Other courses of interest to ABCE teachers are Educ 5301, SeEd 5175, SeEd 5344, EPsy 5115, MthE 5355, MthE 5102, Educ 5103, Spch 5411

Field Experience

Teachers with under 180 hours of teaching experience with undereducated adults must take 4 credits of supervised teaching experience.

For more information, contact Rosemarie J. Park, 175 Peik Hall, University of Minnesota, 159 Pillsbury Drive S.E., Minneapolis MN 55455, or call 612/625-5524.

Advanced Career Teacher (ACT) Program in Elementary Education—This 36-credit program is for teachers who have completed a master's degree (M.A. or M.Ed.) in elementary education and who wish to pursue a guided program of post-master's study. Students may select one of the following emphases in the ACT program:

Developmental/Generalist

Language Arts/Literature

Mathematics/Science

Reading/Language Arts

Reading/Mathematics Remedial Instruction.

Each emphasis includes major field (elementary education) coursework made up of core courses and electives, as well as work in related areas and a practicum or field study.

Criteria for admission include completion of a master's (M.A. or M.Ed.) degree with emphasis in elementary education from an accredited institution; a grade average of B (3.00) in the master's degree;

and a desire to continue professional growth. For specific descriptions of each emphasis contact the Director of Graduate Studies, Department of Curriculum and Instruction, 145 Peik Hall, University of Minnesota, 159 Pillsbury Drive S.E., Minneapolis, MN 55455.

Art Education—The M.Ed. program in art education is designed to help teachers improve their teaching skills. Secondary teachers applying for the program should have an undergraduate major in art education. Elementary teachers must have completed 27 credits in art and art education for admission to the program. A general description of the master of education degree is at the beginning of this section of the bulletin. All programs are individually planned to meet the needs and interests of the student.

Course Requirements for Licensed Art Teachers in Secondary Schools (minimum 45 credits)

ArEd 5389—Application of Aesthetic Theory in Education (3)

ArEd 5900—Professional Problems (3)

14 credits from studio art, art history, and/or art education

9 credits in education courses outside the major

Electives—16 credits selected with the consent of an adviser

Course Requirements for Elementary School Teachers (minimum 45 credits)

36 credits in art, art education, and electives selected with the consent of an adviser

9 credits in education courses outside the major

Students interested in graduate study in art education should see the *Graduate School Bulletin* or contact the Graduate School for details about programs.

Curriculum and Instructional Systems—An M.Ed. program is available for those who design, implement, and evaluate technology-based educational experiences. A total of 45 credits is required. A general description of the requirements appears at the beginning of this section of the bulletin.

For information about the M.Ed. emphasizing curriculum systems, contact program area faculty.

Required Coursework

Instructional Design

CISy 5000—Introduction to Instructional Systems (1)

CISy 5201—Systems Approach to the Design of Instruction (3)

CISy 5209—Principles and Procedures in Designing Instruction (4)

Curriculum Design

CISy 5600—Introduction to Curriculum Systems (3)

or CISy 5605—Principles and Procedures in Designing Curriculum (3)

Technology (minimum 6 credits)

CISy 5003—Introduction to Computers and Their Uses (1)

CISy 5004—Introduction to Interactive Video Instruction (1)

CISy 5006—Introduction to Instructional Computer Programming (3)

CISy 5205—Computer-Based Instruction: Introduction to Design (3)

CISy 5206—Microcomputer Uses in Elementary Classrooms (3)

CISy 5207—Interactive Video Instruction (4)

CISy 5208—Computer-Based Tools for Teachers (3)

CISy 5212—Computer-Based Instruction: Design and Development (3)

CISy 5216—Computer-Based Instructional Simulations (3)

CISy 5218—Computer-Based Instructional Games (3)

Learning and Cognition (minimum 3 credits)

Examples include:

EPsy 5112—Knowing, Learning, and Thinking (4)

EPsy 5113—Introduction to the Psychology of Instruction (3)

EPsy 5114—Psychology of Student Learning (3)

EPsy 5115—Adult Learning and Educational Practice (4)

EPsy 5118—Individual Differences and Educational Practice (4)

EPsy 5150—Social Psychology of Education (4)

Practicum

3 credits of CISy 5509—Directed Individual Study (1-6)

Suggested Coursework (minimum 23 credits)

Measurement

EPsy 5220—Educational Measurement in the Classroom (4)

or EPsy 5221—Basic Principles of Measurement (3)

Evaluation

EPsy 5240—Principles and Methods of Evaluation (3)

Instructional Psychology

EPsy 5113—Introduction to Psychology of Instruction (3)

Students select further coursework for areas such as the training and development sequence in vocational education, adult education, educational administration, psychology, management, and computer science to complement work in educational technology.

Programs leading to the M.A. and Ph.D. degrees and Specialist Certificate are offered through the Graduate School. Studies in curriculum and instructional systems prepare students as college or university teachers, public school curriculum directors or coordinators, and instructional designers in higher education, business and industry, the health fields, and as educational technologists.

Early Childhood Education—The M.Ed. program in early childhood education is designed for the preschool and kindergarten teacher who wants to acquire expertise in a number of different curricular areas as well as in child growth and development. A general description of the master of education degree appears at the beginning of this section of the bulletin.

Course Requirements (minimum 48 credits)

30 credits from child psychology and elementary education with a minimum of 12 credits in child psychology and 12 credits in elementary education, including Elem 5376, 5377, 5378

18 credits to be selected in consultation with an adviser

Elementary Education—The M.Ed. program in elementary education has three primary objectives: (1) to help elementary school teachers improve their teaching skills, (2) to help elementary school teachers develop additional decision-making skills needed to select instructional materials and teaching strategies appropriate to their current teaching situations, and (3) to assist elementary school teachers in functioning effectively in school decision-making and evaluation processes. A general description of the master of education degree is at the beginning of this section of the bulletin.

Course Requirements (minimum 48 credits)

Elem 5100—Elementary School Curriculum (3)

Elem 5107—Diagnosis and Treatment of Learning Difficulties (3)

Elem 5300—Literature for the Elementary School (3)
Elem 5316—Teaching and Supervision of English in the Elementary School (3)

Elem 5337—Beginning Reading Instruction (3)
or Elem 5338—Teaching Reading in the Intermediate Grades (3)

Elem 5350—Elementary School Science: Materials and Resources (3)

Elem 5602—Practicum: Improvement of Teaching (3)

Elem 5361—Teaching Social Studies in the Elementary School

3 credits in MthE 5101—Workshop: Elementary School Mathematics (1-12)

6 credits from Elem 5108, 5145, 5315, 5347, 5317, 5334, 5339, 5362, 5363, 5376; MthE 5102, 5321

15 credits to be selected in consultation with an adviser

Programs leading to the M.A. and Ph.D. degrees emphasizing areas of study in elementary education are offered through the Graduate School. These graduate programs prepare teachers at an advanced level for classroom work or prepare the several specialists in elementary education such as the supervisor, consultant, principal, teacher educator, or teacher of special classes. Requirements for the M.A. and Ph.D. degree programs are described in the *Graduate School Bulletin*. Applicants should have completed an undergraduate program leading to licensure for elementary school teaching. In applying for admission to the Graduate School, applicants should indicate the specific area of interest within elementary education they wish to emphasize. Classroom teachers, supervisors, consultants, and teacher educators major in elementary education for the M.A. degree or education for the Ph.D. degree. Prospective elementary school principals major in educational administration for the M.A. or Ph.D. degree, and their programs include work in elementary education with special emphasis on the improvement of instruction. Special-class teachers take substantial amounts of work in educational psychology in addition to that required in elementary education.

International Development Education—This program is designed to give U.S. and international students the opportunity to systematically study the rela-

tionship between education and development. International students acquire theoretical knowledge and research skills to address research questions about education and development in their own nations. U.S. students are prepared in terms of theoretical knowledge and research methods to serve in development education projects outside of the U.S. or work with government agencies, foundations, or private voluntary organizations with international interests. The program is available at the graduate level as an M.A. degree in Education.

Mathematics Education—The M.Ed. program in mathematics education is intended to help teachers improve their ability to operate as skilled professionals in the classroom, to develop skills important in the selection of instructional materials and strategies, and to function effectively in decision-making and evaluation processes within the school and community. Special features of the program include emphasis on improvement of classroom instruction, exposure to current trends and issues in mathematics education, program components designed to accommodate individual needs, and an opportunity for a practicum experience in the public schools.

Course Requirements, Secondary Level (minimum 45 credits)

Mathematics education (minimum 18 credits)

MthE 5312—Teaching and Supervision of Mathematics in the Secondary School (3)

MthE 5322—Materials Laboratory for Secondary School Mathematics Instruction (3)

MthE 5332—Current Trends and Issues in Secondary School Mathematics Instruction (3)

3 credits in MthE 5980—Directed Studies (3-9)

Minimum of 12 credits in a supporting field in mathematics

Minimum of 6 credits in a supporting field in secondary education including CISy 5600 or one course in general curriculum to be selected with the approval of the adviser

Electives to complete 45 credits

Course Requirements, Elementary Level (minimum 45 credits)

Mathematics education, minimum 18 credits including:

MthE 5311—Teaching and Supervision of Mathematics in the Elementary School (3)

MthE 5321—Materials Laboratory for Elementary School Mathematics Instruction (3)

MthE 5331—Current Developments in Elementary School Mathematics Instruction (3)

3 credits in MthE 5980—Directed Studies (3-9)

Minimum of 12 credits in a supporting field in mathematics

Minimum of 6 credits in a supporting field in elementary education including Elem 5100

Electives to complete 45 credits

Graduate programs leading to the master of arts degree in mathematics education, specialist certificate in mathematics education, and doctor of philosophy degree in education with an emphasis in mathematics education are available. See the *Graduate School Bulletin* for details on admission and program requirements.

Middle School Endorsement—A licensed teacher completing this program is recommended for licensure to teach the subject matter in grades 5-8 in a middle school. Two programs are available: one for licensed elementary teachers, the other for licensed secondary teachers. Each program has specific course requirements of 29 or 30 credits at the postbaccalaureate level, divided between designated core courses and elective courses in a subject area specialization or in general elementary curriculum. Included is a required teaching experience component at an appropriate grade level within a middle school setting. The middle school endorsement program is *not* designed to prepare individuals for initial licensure. Specific requirements for each program may be obtained from the Department of Curriculum and Instruction, 125 Peik Hall, University of Minnesota, 159 Pillsbury Drive S.E., Minneapolis, MN 55455.

Remedial and Developmental Reading and Reading Supervisor Endorsement—Coursework is available at the postbaccalaureate level leading to recommendation as an elementary remedial reading teacher; secondary remedial reading teacher; secondary developmental reading teacher; and reading consultant, supervisor, or coordinator. To be recom-

mended for the remedial or developmental endorsement, the student must have a valid Minnesota teaching license, have at least two years of teaching experience at the appropriate level, and complete the requisite coursework. The reading consultant, supervisory, or coordinator endorsement requires a master's degree, three years of teaching including one year as a reading teacher, and the requisite coursework.

Secondary Education—M.Ed. programs for secondary school teachers are offered in English education, mathematics education, science education, second languages and cultures education, and social studies education. See the specific fields below for program descriptions.

A secondary school teacher interested in completing the M.A. degree in education should apply for admission to the Graduate School, specifying the major as education with a specific area of interest (e.g., science education). For mathematics education, the M.A. major is mathematics education. For the Ph.D. degree in secondary education, the major should be specified as education with a specific area of interest indicated. See the *Graduate School Bulletin* for details about admission requirements.

English Education

The M.Ed. program in English education is open to licensed teachers with a major in a language arts area. The program offers a variety of courses designed to benefit teachers in their work in the schools.

Course Requirements (minimum 45 credits)

SeEd 5176—Classroom Research in English Education and Reading (3)

SeEd 5194—English Language Arts Curricula in the Secondary School (3)

Three courses from:

SeEd 5321—Teaching Literature in Secondary Schools (3)

SeEd 5322—Teaching Composition and Communication in Junior and Senior High Schools (3)

SeEd 5344—Teaching Reading in Content Areas (3)

SeEd 5404—Language, Culture, and Education (4)

SeEd 5604—Perspectives on Literacy (3)
Electives—27 credits selected with consent of adviser

Mathematics Education

An M.Ed. program in mathematics education is offered. See the heading Mathematics Education above for program details.

Science Education

Two M.Ed. programs are offered in science education. The Plan I program is designed for classroom teachers and has as its goal the improvement of instruction. Areas of special emphasis are pedagogical training and the practical application of knowledge in the classroom. The program offers the teacher an opportunity to combine scholarly activity with practical classroom experience.

The Plan II program is designed for individuals who either work or plan to work at nature centers, museums, zoos, or other sites at which science is taught. Individuals entering this program need not be licensed to teach science in elementary or secondary schools.

Course Requirements (minimum 45 credits)

One course in current developments in science teaching

One course in research foundations of science teaching
Electives—39 credits selected with the consent of the adviser from any or all of the following: school-based projects, science, education including science education, other disciplines.

Second Languages and Cultures Education

The M.Ed. program in second languages and cultures education is offered for licensed teachers interested in improving classroom instruction and curricula. The program, which provides a variety of coursework as well as school-based experience, is planned with a needs assessment group (NAG) composed of the student's adviser(s), the student's department chair or school principal, and the student.

Course Requirements (minimum 45 credits)

SeEd 5186—Alternatives in Second Language Education (3)

SeEd 5189—Planning and Assessing Second Language Curriculum (4)

SeEd 5385—Planning and Assessing Second Language Instruction (4)
Minimum of 3 credits in SeEd 5185—School and Professional Based Experiences in Second Languages and Cultures (1-12)
Minimum of 3 credits in other education courses
Minimum of one 4- or 5-credit course in the student's chosen language
Minimum of 3 credits in a liberal arts course or courses
Electives—21 credits selected in consultation with the student's needs assessment group

Social Studies Education

The M.Ed. program in social studies is designed for classroom teachers interested in improving instruction.

Course Requirements (minimum 45 credits)
SeEd 5150—Advanced Methods of Teaching the Social Studies (3)
Minimum of 3 credits in SeEd 5151—School-Based Projects in Social Studies Education (1-12)
SeEd 5152—Techniques of Instruction in Social Studies (3)
One course in general curriculum
3 credits in the social sciences
Electives—27 credits selected with the consent of an adviser

Teacher Education—Persons interested in the study and design of training programs for both preservice and in-service teachers can select from a core of coursework that addresses this topic. Teacher education courses are described under the heading Education (Educ) in the next section of this bulletin. Related coursework is available in adult education, higher education, and curriculum and instructional systems.

Educational Policy and Administration

This department offers graduate and professional work leading to the M.A. degree, specialist in education certificate, and Ed.D. and Ph.D. degrees administered within the education programs identified below.

Educational Administration—The graduate programs in educational administration are designed to prepare personnel for administrative and supervisory

positions in schools and other educational settings. Other programs include preparation for leadership positions in community education and in regional, state, and federal educational agencies, as well as in professional and union groups. For more information, contact Director of Graduate Studies, 275 Peik Hall, University of Minnesota, 159 Pillsbury Drive S. E., Minneapolis, MN 55455.

Higher Education—The graduate program in higher education offers an interdepartmental major in education (emphasizing higher education) at the M.A. or Ph.D. level. The Ph.D. program focuses on the application of knowledge in the sciences of human behavior and organization to key problems in postsecondary education. Among the central concerns of faculty and students in the program are federal and state postsecondary policy, faculty development, institutional functioning and effectiveness, professional socialization, student development, academic program planning and evaluation, and institutional leadership. An M.A. program is also available for a limited number of students whose professional goals may be met at that level. Courses with a higher education focus are listed under the headings Higher Education (HiEd), Educational Administration (EdAd), Educational Psychology (EPsy), and Social and Philosophical Foundations of Education (SPFE) in the next section of this bulletin. These courses are designed for specialists in a variety of academic and professional disciplines as well as those whose majors have a higher education emphasis. For more information, contact the Director of Graduate Studies, 275 Peik Hall, University of Minnesota, 159 Pillsbury Drive S.E., Minneapolis, MN 55455.

Social and Philosophical Foundations of Education—The core of this program of graduate study is education as a socio-cultural phenomenon. Course offerings and research opportunities focus on concepts and methods for understanding the

place of education in society. This view of education is reflective; the study of education is approached through humanistic and social science methodologies. Students may plan programs leading to the M.A. degree in social and philosophical foundations of education and to the Ph.D. degree in education. Students may concentrate their study in the history of education, comparative and international education, the philosophy of education, the sociology of education, alternative social and educational futures, and the anthropology of education. Programs include courses specific to the field of concentration in foundations or related disciplines as well as required general foundations courses. For more information, contact the Director of Graduate Studies, 275 Peik Hall, University of Minnesota, 159 Pillsbury Drive S.E., Minneapolis, MN 55455.

Educational Psychology

This department offers graduate and professional programs leading to the M.A. and Ph.D. degrees in several areas in counseling and student personnel psychology (school counseling, counseling psychology, college personnel work), psychological and methodological foundations of education, school psychology training programs, and special education. Students who plan a major or minor in one of these areas should apply for admission to the Graduate School and to the appropriate unit within the department, and should plan their program in consultation with an adviser in their chosen area. 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 foundations area, including research methodology. For specific courses and requirements, see the *Graduate School Bulletin*.

Counseling and Student Personnel Psychology—Graduate study leading to the master's degree, specialist certificate, or Ph.D. degree can be taken with a con-

centration in this area to prepare for professional or administrative positions at the middle school, secondary school, or college level.

The doctoral program, which is approved by the American Psychological Association, is designed to prepare psychologists for work in educational and community settings. The major is in educational psychology with a minor or related field generally selected from psychology, family social science, education, or sociology. Preparation includes clinical practice and supervised experience in school, college, university, educational, or community programs. It also includes coursework in psychology of learning, statistics, personality development, measurement, social psychology, and individual and group counseling. Doctoral students will have advanced courses in statistics and measurement in their programs and complete research projects, and may become involved in instruction.

Psychological and Methodological Foundations of Education—This area of graduate study offers instruction in statistics, research methodology, program evaluation and measurement, learning and cognition, computer applications, personality, human relations, and social psychology. Graduate students are expected to acquire broad competence in educational psychology and specialized knowledge and skills in one of the areas of concentration. For more information, see the *Graduate School Bulletin* or contact the Director of Graduate Studies, 210E Burton Hall.

School Psychology—Two graduate programs are offered: a five-year program leading to a Ph.D. degree and a two-year program leading to a master's degree/specialist certificate. The Ph.D. program, approved by the American Psychological Association, trains individuals for work in school, clinic, or university settings as psychologists, administrators, researchers, or teachers. The master's degree specialist certificate program trains

individuals to work as psychologists in schools or community agencies. A strong interdepartmental emphasis allows Ph.D. students to choose among majors in child psychology, psychology, and educational psychology. The curriculum includes courses in learning, personality, child psychology, learning difficulties, diagnostic and remedial procedures, statistics and measurement, specialized research techniques, and special education. All students work in a school and/or clinic as part of their practicum experience; Ph.D. students also take a one-year internship in a school or community/hospital mental health agency. Applicants seeking admission to the program must fulfill all general standards and requirements of the Graduate School.

Special Education—All programs in special education require admission to the Graduate School, to the M.Ed. program, or to adult special status in the College of Education. In addition, the faculty has its own admission procedure. Inquiries about admission and advising procedures, state of Minnesota licensure requirements, and training sequences should be directed to the special education program admissions office in 253 Burton Hall.

Students in any college who are at least juniors may take 5xxx courses such as EPsy 5601, Education of Exceptional Children, to obtain an overview of school programs for children with special needs; however, recommendation for state licensure requires that the student be admitted *formally* to a special education program after earning a baccalaureate degree.

While special education programs provide instruction to educators of exceptional children, this unit also gives major emphasis to mainstreaming and other outreach activities. Teaching specialties are organized according to the specificity and severity of children's needs. Students in all programs receive a basic orientation to generic special education, which prepares them for subsequent concentration in the specific licensure programs dealing

with persons who are hearing impaired, visually impaired, physically handicapped, and severely mentally retarded and in the interrelated licensure programs dealing with persons who have learning disabilities, emotional/behavioral disturbances, and mild mental retardation. Professional preparation opportunities are also available for special education administrators and for persons working with culturally different and gifted children and youth.

Special Learning and Behavior Problems (SLBP)—Teacher training sequences leading to recommendation for state licensure in learning disabilities (SLD) and behavior problems (E/BD) are offered at the postbaccalaureate level only.

The SLD and E/BD training sequences offer entry-level preparation for persons who are or will be responsible for the instruction of learning disabled and/or emotionally disturbed and socially maladjusted children in a variety of school programs or settings. Prerequisites to admission to these programs are a bachelor's degree and elementary or secondary school teacher licensure. Students entering either the SLD or E/BD program should have completed work at the undergraduate or graduate level in developmental reading methods, the psychology of learning and instruction, and child psychology. Students may complete an adult special licensure program, an M.Ed. program, or an M.A. program, which may be planned to include either or both of the SLD and E/BD course sequences for state licensure.

Specific Learning Disabilities (LD)

Required Courses

- EPsy 5116—Behavior Analysis in Education (4)
or EPsy 5705—Behavior Analysis Procedures with Mildly and Moderately Handicapped People (4)
- EPsy 5601—Education of Exceptional Children (4)
- EPsy 5608—Parent and Professional Planning for Handicapped Students (3)
- EPsy 5612—Education of Learning-Disabled Children (3)
- EPsy 5615—Educational Intervention for Learning Disabilities (4)

EPsy 5654—Educational Interventions for Emotional Disturbance/Behavioral Disorders (4)

EPsy 5700—Assessment and Decision Making in Special Education (3)

Two of the following:

Elem 5331—Teaching and Supervision of Reading in the Elementary School (3)

Elem 5334—Reading Difficulties (3)

Elem 5335—Clinical Diagnosis of Reading Difficulties (3)

Elem 5338—Teaching Reading in the Intermediate Grades (3)

SeEd 5175—Secondary Remedial Reading Instruction (3)

SeEd 5344—Teaching Reading in Content Areas (3)

MthE 5355—Mathematics for Slow Learning Children (3)

8 credits in EPsy 5701—Practicum: Special Education (ar)

Emotional/Behavioral Disorders (E/BD)

Psychological Foundations—Complete one course in each area

A. Normal Personality and Social Development

EPsy 5130—Personality and Social Development (3)

CPsy 5303—Adolescent Psychology (4)

CPsy 5331—Processes of Socialization of Children (4)

B. Group Processes in Schools

EPsy 5608—Parent and Professional Planning for Handicapped Students (3)

C. Exceptionality

EPsy 5601—Education of Exceptional Children (4)

D. Psychopathology of Children and Youth

CPsy 5311—Behavioral and Emotional Problems (4)

CPsy 5319—Clinical Procedures with Children and Youth (4)

E. Behavioral Procedures

EPsy 5116—Behavior Analysis in Education (4)

EPsy 5705—Behavioral Procedures with Mildly and Moderately Handicapped People (4)

Academic Remediation Procedures—Both required

EPsy 5615—Educational Intervention for Learning Disabilities (4)

EPsy 5700—Assessment and Decision Making in Special Education (3)

Behavior Management/Development Procedures

EPsy 5654—Educational Interventions for Emotional Disturbance/Behavioral Disorders (4)

Practicum with Emotion/Behavior Disordered Students—Required

8 credits in EPsy 5701—Practicum: Special Education (ar)

Mildly Mentally Handicapped

(MMH)—Separate from the teacher training sequence in severe mental retardation is a training sequence for those interested

in working with mildly mentally handicapped (MMH) children who often present needs that cut across the learning disabilities and behavior problems areas. To be admitted to this program, applicants must have a bachelor's degree as well as elementary or secondary school teacher licensure. The entry-level sequence may be taken as an adult special or M.Ed. student in the College of Education or as part of a graduate program. It emphasizes special education coursework, academic skill development, child development, and supervised practice teaching MMH children.

Special Education Core

EPsy 5601—Education of Exceptional Children (4)

EPsy 5604—Social and Vocational Development of Handicapped Students (4)

EPsy 5608—Parent and Professional Planning for Handicapped Students (3)

EPsy 5620—Introduction to Mental Retardation (4)

EPsy 5700—Assessment and Decision Making in Special Education (3)

8 credits in EPsy 5701—Practicum: Special Education (ar)

EPsy 5705—Behavior Analysis Procedures with Mildly and Moderately Handicapped People (4)

Academic Skill Development—complete A or B

A. EPsy 5615—Educational Interventions for Learning Disabilities (4)

B. One course each in reading and mathematics instruction chosen from Educ 5201, 5202, 5203; Elem 5107, 5334, 5337; MthE 5355

Child Development and Psychology of Instruction—Minimum 3 credits from CPsy 5303, 5343; EPsy 5112, 5113, 5114 or equivalent

Teaching Severely and Profoundly Mentally Handicapped (SPH)

—Admission to this program, which usually leads to recommendation for a Minnesota license to teach severely retarded (trainable) pupils, requires admission to the Graduate School as a degree candidate or admission to the College of Education as an M.Ed. or adult special student. For admission, students must have a bachelor's degree and usually elementary or secondary school licensure. Courses listed below represent the core of the sequence required to meet the SPH licensure requirements.

Required

CDis 5606—Language Assessment and Intervention: Early Stages (4)

EPsy 5601—Education of Exceptional Children (4)

- EPsy 5608—Parent and Professional Planning for Handicapped Students (3)
- EPsy 5622—Programs and Curricula for Learners with Severe Handicaps (3)
- EPsy 5626—Instruction for Learners with Severe Handicaps (3)
- EPsy 5636—Education of Multihandicapped Learners with Physical and Sensory Impairments (4)
- EPsy 5708—Design of Instructional Environments for Learners with Severe Handicaps (3)
- EPsy 5709—Cognitive and Social Impairments of Learners with Severe Handicaps (3)

One of the following:

- EPsy 5604—Social and Vocational Development of Handicapped Students (4)
- EPsy 5625—Education of Handicapped Infants and Preschool Children (4)
- EPsy 5681—Methods and Materials for Handicapped Infants and Preschool Children (3)
- EPsy 5700—Assessment and Decision Making in Special Education (3)

8 credits in EPsy 5701—Practicum: Special Education (to be taken only after formal admission to this training program and with special permission of program coordinator)

Electives—for students wishing to emphasize the education of mentally retarded infants, severely retarded secondary or adult pupils, or profoundly retarded pupils, a set of additional courses and experiences may be selected in consultation with an adviser.

Note: Additionally, the Minnesota State Department of Education requires that all licensed teachers have (1) an approved course in human relations, and (2) a 2-4 credit course in drug and alcohol abuse, if these were not completed as part of any prior teacher training.

Teaching Children With Severe Hearing Impairment—Acceptance into this program requires submission of a formal application through the special education admissions office, 253 Burton Hall. For admission, students must have a bachelor's degree and usually elementary or secondary school licensure.

For recommendation for state licensure in this area, students must complete a set of courses in general and professional education. The following courses, or their equivalents, compose the preparatory program for teachers of the severely hearing impaired. Additional and specialized courses are required for the master's degree.

Required Core Courses

- A. Professional Studies in Special Education
 - EPsy 5601—Education of Exceptional Children (4)
 - EPsy 5608—Parent and Professional Planning for Handicapped Students (3)

- EPsy 5700—Assessment and Decision Making in Special Education (3)

B. Professional Studies in Education of Hearing-Impaired Persons

- EPsy 5640—Psychosocial and Educational Aspects of Deafness (3)
- EPsy 5641—Methods of Teaching School Subjects to the Hearing Impaired (3)
- EPsy 5643—Language for Hearing Impaired Children (4)
- EPsy 5644—Teaching Language to the Hearing Impaired II (3)
- EPsy 5645—Teaching Speech to the Hearing Impaired I (3)
- EPsy 5647—Aural Rehabilitation of Hearing-Impaired Children (3)
- EPsy 5648—Modes of Communication for the Handicapped (3)
- 8 credits in EPsy 5701—Practicum: Special Education (ar)

Teaching Gifted Children—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. Within the M.A. and Ph.D. programs in educational psychology, students may emphasize research concerning outstanding abilities and complete course offerings in special education and psychological foundations of education.

Teaching Physically Handicapped Children—A sequence of courses and practica leading to department recommendation for state licensure to teach children with physical impairments or disabilities is offered to students at the adult special or master's degree level. For admission to this program, applicants must have a bachelor's degree as well as elementary or secondary school licensure.

Required

- EPsy 5601—Education of Exceptional Children (4)
- EPsy 5608—Parent and Professional Planning for Handicapped Students (3)
- EPsy 5622—Programs and Curricula for Learners with Severe Handicaps (3)
- EPsy 5635—Education of Students with Physical Disabilities (3)
- EPsy 5636—Education of Multihandicapped Learners with Physical and Sensory Impairments (4)
- EPsy 5700—Assessment and Decision Making in Special Education (3)
- 8 credits in EPsy 5701—Practicum: Special Education (ar)

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

- CBN 1027—Anatomy for Physical Education Students (4)
 CPsy 5313—Psychology of Atypical Children (4)
 PE 3100—Adapted Physical Education (3)
 PE 5100—Teaching Physical Education for the Handicapped (3)
 EPsy 5612—Education of Learning-Disabled Children (3)
 EPsy 5620 or CPsy 5315—Introduction to Mental Retardation (4)

Teaching Visually Impaired Children—Students seeking licensure to teach visually impaired students may also be admitted concurrently to an M.Ed. or M.A. program. For admission, applicants must have a bachelor's degree as well as elementary or secondary school teacher licensure. Students satisfactorily completing this program are recommended for licensure in Minnesota and any other state recognizing such a licensure program.

Required Core Courses

- EPsy 5601—Education of Exceptional Children (4)
 EPsy 5608—Parent and Professional Planning for Handicapped Students (3)
 EPsy 5700—Assessment and Decision Making in Special Education (3)

Required Courses in Visual Impairment

- EPsy 5670—Introduction to Education of Visually Handicapped Children (3)
 EPsy 5671—Braille I (3)
 EPsy 5672—Braille II (3)
 EPsy 5673—Methods of Teaching Visually Handicapped Children (4)
 EPsy 5674—Orientation and Mobility Techniques for Visually Impaired Students (3)
 EPsy 5675—Structure and Function of the Eye: Educational Implications (3)
 EPsy 5676—Management of Low Vision (3)

Practicum in Visual Impairment

- 8 credits in EPsy 5701—Practicum: Special Education (ar)

Teaching Special Education/Early Childhood Education—Students seeking licensure to teach special education/early childhood education (SE/EC) may be admitted to the licensure program concurrently with an M.Ed. or M.A. program. Each program has a separate application form. Students should apply at the special education programs office, 253 Burton Hall. Persons completing the program are eligible for licensure in the state of Min-

nesota to teach in infant and preschool programs exclusively for children with handicaps and may qualify for infant and preschool programs that include both handicapped and nonhandicapped children. Normal development and all handicapping conditions and levels of severity are included in this program. Eligibility for Minnesota licensure to teach at the kindergarten level is *not* obtained through this program.

While primarily a postbaccalaureate level program, a limited number of undergraduate students will be admitted. Application criteria include: (a) undergraduate grade point average of 2.80 or higher, (b) quality and amount of instructional experience with young children with and without handicaps, (c) quality of letters of recommendation, and (d) quality of autobiographical statement submitted.

This program is currently under review for approval by the State Board of Teaching, and students should check with advisers in the program area.

Special Education (minimum 33 credits)

- EPsy 5601—Education of Exceptional Children (4)
 EPsy 5608—Parent and Professional Planning for Handicapped Students (3)
 EPsy 5625—Education of Handicapped Infants and Preschool Children (4)
 EPsy 5626—Methods and Materials for Learners with Severe Handicaps (4)
 EPsy 5681—Methods and Materials for Handicapped Infants and Preschool Children (3)
 EPsy 5700—Assessment and Decision Making in Special Education (3) or EPsy 5849—Assessment of the Preschool Child (4)
 8 credits in EPsy 5701—Practicum: Special Education (ar)

Child Psychology (minimum 19 credits)

- CPsy 1301—Introductory Child Psychology (4)
 or CPsy 5301—Advanced Child Development (4)
 3 credits in CPsy 3330—Directed Experiences (1-4)
 or Elem 5378—Contemporary Programs for Young Children (3)
 CPsy 5343—Cognitive Development (4)
 or CPsy 5345—Language Development (4)
 CPsy 3331 or 5331—Processes of Socialization of Children (4 each)
 CPsy 5335—Peer Relations (4)
 or CPsy 5339—Parent-Child Relations (4)

Early Childhood Education (minimum 9 credits)

- Elem 3379—Cognitive and Creative Learning in Early Childhood Education (3) or 3 credits in CPsy 5970—Directed Study in Child Psychology (ar)
 Elem 3378—Social Learning in Early Childhood Education (3) or 3 credits in CPsy 5970—Directed Study in Child Psychology (ar)

3 credits in Elem 3604—Student Teaching in the Nursery School (3-6, credits will vary depending on prior experience)

Special Requirements for All Students

PE 3327—Teaching Physical Education in the Elementary School (3) or equivalent course in physical education

EPsy 3131—Introduction to Human Relations (3) or EPsy 5135—Workshop in Human Relations (6)

PubH 3004—Basic Concepts in Personal and Community Health (5)

Supervision and Administration of Special Education Programs—The faculties in special education and educational administration, through the Graduate School, offer programs that lead to the specialist certificate in special education or the doctorate in educational administration with a major emphasis in administration of special education programs. These programs combine coursework 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 these programs requires completion of the master's degree, special licensure, and experience in some area of special education.

M.Ed. Degree Programs—Students with at least two years of successful teaching experience may be admitted to the M.Ed. program in special education. This 5th year program in the College of Education emphasizes improvement in professional knowledge and skill, in contrast to the emphasis on research and theory in the M.A. program. Sequences leading to recommendation for state licensure in an area of handicap may be incorporated. Information about procedures and program content may be obtained from the special education office, 253 Burton Hall.

Developmental/Adapted Physical Education—Licensure programs in developmental/adapted physical education for grades K-12 are offered for both the undergraduate major and M.Ed. programs. Requirements are listed under Physical Education and Recreation in both the Pro-

grams and Advanced Study sections of this bulletin.

Music Education

The master of education program in this field is designed for teachers who wish to increase their knowledge and strengthen their skills in music and education. The program includes courses in applied music, music theory, music history, music education, and education, selected with the approval of an adviser. A general description of the master of education degree appears at the beginning of this section of the bulletin.

Course Requirements (minimum 45 credits)

15 credits in music education

6 credits in education courses outside the major

18 credits in music

6 credits of electives

Graduate programs leading to the M.A. and Ph.D. degrees are offered. See the *Graduate School Bulletin* for details.

Physical Education and Recreation

In the School of Physical Education and Recreation, programs are available leading to the M.Ed. degree in physical education and in recreation, park, and leisure studies. The Plan I program is designed for teachers of physical education. The Plan II program is designed for nonlicensed professional workers in recreation, park, and leisure studies. Both are based on an extension of the undergraduate major and provide continuing education for the in-service professional or teacher. Major objectives are to help the person function more effectively in his or her present role; to provide opportunities for both refresher experiences in areas previously studied and retraining in new areas; and to offer a structure for working toward a degree and at the same time to meet requirements for licensure renewal.

Graduate study leading to the M.A. degree is offered with a major in recreation, park, and leisure studies or in physical education. The major in recreation, park, and leisure studies also provides for an

emphasis in community education. The Ph.D. degree is offered with a major in physical education, or with a major in education with an emphasis in recreation, park, and leisure studies. Application for admission to these programs should be made to the Graduate School. For requirements and course offerings for these degrees, consult the *Graduate School Bulletin*.

Physical Education—The M.Ed. program in physical education is designed to improve instructional competencies of the licensed teacher. Two options are available: general preparation or a concentration in physical education leading to licensure for developmental/adapted physical education in Minnesota. In addition to the general admission requirements, students are expected to have an overall grade average of at least C+ (2.50) in undergraduate coursework. A general description of the master of education degree appears at the beginning of this section of the bulletin.

Course Requirements for M.Ed. with General Preparation in Physical Education (minimum 45 credits)

30 credits in physical education including 3 credits in

PE 5981—Problems (ar)

PE 5980—Research Methodology (3) or PE 5985—Application of Research (3)

Electives—15 credits

Course Requirements for M.Ed. in Development/

Adapted Physical Education (minimum 45 credits)

30-35 credits in physical education and related areas from:

PE 5100—Teaching Physical Education for the Handicapped (3)

PE 5101—Physical Education Activities for the Handicapped (3)

PE 5102—Practicum: Physical Education for the Handicapped in an Adapted Setting (1-3)

PE 5103—Practicum: Physical Education for the Handicapped in a Mainstreamed Setting (1-3)

PE 5120—Advanced Biomechanics/Kinesiology (4) or PE 5130—Motor Learning and Human Performance (3) or PE 5134—Perceptual-Motor Development in Childhood (3) or PE

5122—Applied Physiology (3)

PE 5131—Motor Development (3)

PE 5152—Curriculum Development (3)

3 credits in PE 5161—Practicum: Construction of Motor Performance Tests (3-6)

3 credits in PE 5981—Problems (ar)

PE 5985—Application of Research (3) or PE

5980—Research Methodology (3)

EPsy 5622—Program Design for Learners with Severe Handicaps (3)

11 credits in special education:

EPsy 5601—Education of Exceptional Children (4)

EPsy 5608—Parent and Professional Planning with Handicapped Students (3)

EPsy 5705—Behavior Analysis Procedures with Mildly and Moderately Handicapped People (4)

Recreation, Park, and Leisure Studies—The master of education program in recreation is designed for nonlicensed professional workers. Students may concentrate in one of the areas of outdoor recreation, public parks and recreation, therapeutic recreation, and voluntary and youth-serving agencies. Students are expected to have a baccalaureate degree in recreation or a related area, including appropriate courses in psychology, sociology, and natural sciences. A written statement should be submitted with the application indicating the reason for seeking admission, specifying an area of interest, and stating experience of the applicant in the field of recreation. Adequate skill proficiency in the selected area of concentration is required for admission to the program.

Course Requirements (minimum 45 credits)

24-36 credits in recreation, park, and leisure studies including 3-9 credits in Rec 5630 or 5640

6-9 credits in education courses outside of physical education, recreation, or school health education offerings

Electives—15 credits selected in consultation with adviser

Vocational and Technical Education

The Graduate School offers M.A. programs with majors in agricultural education, business education, home economics education, industrial education, and marketing education; Ph.D. programs with a major in education with an emphasis in vocational education; and Ed.D. programs with a major in vocational education. The Ph.D. program is designed for persons preparing for positions that require the production of research. In contrast, the Ed.D. is designed to prepare for leadership positions where the application of research is a major expectation. Specializations available within the doctoral programs include agricultural education,

business education, extension education, home economics education, industrial education, international vocational education and training, marketing education, training and development, and comprehensive vocational education. See the *Graduate School Bulletin* for details.

M.Ed. programs are offered in agricultural education, business education, home economics education, industrial education, marketing education, and vocational education. A concentration in training and development in industry and business is also available.

Agricultural Education—Two types of M.Ed. programs are available. Plan I is designed for licensed teachers of agriculture. Plan II is for nonlicensed professional workers such as extension workers, employees of public service agricultural agencies, educational directors of agricultural industries, and others whose primary responsibility is agricultural education; candidates must have at least one year of professional experience in agriculture before the degree is awarded.

Students interested in the M.Ed. should submit an application for admission to the Office of Admissions, 240 Williamson Hall.

Course Requirements for Licensed Teachers—Plan I (minimum 45 credits)

18 credits in education, with a minimum of 12 credits in agricultural education including AgEd 5095—Independent Study (3)

23 credits in technical agriculture and appropriate noneducation areas

Electives—4 credits

Course Requirements for Nonlicensed Professional Workers—Plan II (minimum 45 credits)

18 credits in education, with a minimum of 12 credits in agricultural education including AgEd 5095—Independent Study (3)

23 credits in technical agriculture and other areas selected with the consent of an adviser

Electives—4 credits

For information on Graduate School programs, consult the *Graduate School Bulletin* and the director of graduate studies in this division.

A Master of Agriculture program, offered through the College of Agriculture, is designed for teachers who wish to engage in professional development. Stu-

dents who choose the applied social science specialization may select an agricultural education adviser. Details about requirements for the degree program can be obtained from the College of Agriculture, St. Paul.

Business Education—Two types of M.Ed. programs are available. Plan I is for licensed teachers who wish to pursue advanced professional study. Plan II is for persons preparing for an occupation within the business field that does not require teaching licensure such as training and development, midmanagement, and entrepreneurship.

The program in business education provides two options under Plan I. Option I is for licensed business teachers who have completed an undergraduate major in business education. Option II is for persons who hold a bachelor's degree in a content field such as office administration, accounting, business administration, economics, or computer science. Option II students are expected to have a full or provisional vocational teaching license in business education before admission to the program. All students are expected to have a grade average of 2.25 overall and 2.50 in the undergraduate major. A grade average of 2.80 is required for graduation.

Course Requirements—Plan I, Option I (minimum 45 credits)

BME 5353—Curriculum Construction in Business and Marketing Education (4)

BME 5357—Research Procedures in Business and Marketing Education (4)

BME 5340—Trends and Issues in Business and Marketing Education (3)

Two business education methods courses

Minimum 6 credits in BME 5600—Field-Based Projects in Business and Marketing Education (1-12)

4 credits from business administration, economics, agricultural economics, technical training and development in vocational education, or technical business education

Electives selected with the consent of an adviser

Course Requirements—Plan I, Option II (minimum 45 credits)

BME 5340—Trends and Issues in Business and Marketing Education (3)

BME 5353—Curriculum Construction in Business and Marketing Education (4)

BME 5357—Research Procedures in Business and Marketing Education (4)

Four courses from BME including at least two courses from BME 5150, 5151, 5152, 5153, 5154, 5156, 5157, 5350 and one course from BME 5351, 5354, 5355, 5358

EPsy 5220—Educational Measurement in the Classroom (4) or Ind 5301—Tests in Industrial Subjects (3)

6 credits in BME 5600—Field-Based Projects in Business and Marketing Education (1-12)

3 credits in education, which may include business education or training and development in vocational education courses

Electives selected with consent of adviser

Course Requirements—Plan II (minimum 45 credits)

Minimum 6 credits in BME 5600—Field-Based Projects in Business and Marketing Education (1-12)

BME 5357—Research Procedures in Business and Marketing Education (4) or equiv

Minimum 12 credits in courses in BME or VoEd consistent with stated career objective and selected in consultation with adviser

Minimum 6 credits in internship or occupational experience

Electives selected with consent of adviser

For information on Graduate School programs, consult the *Graduate School Bulletin* and the director of graduate studies in this division.

Home Economics Education—Two types of M.Ed. programs are available. Plan I is for licensed home economics teachers. Plan II is for nonlicensed professional workers in home economics education. It is possible, with careful planning, to complete requirements for the family life endorsement program or the parent education licensure programs as part of an M.Ed. (see Home Economics Education under Vocational and Technical Education in the preceding Programs section of this bulletin). A general description of the M.Ed. degree is at the beginning of this section of the bulletin. Interested students should submit an application for admission through the Office of Admissions and Records, 130 Coffey Hall, St. Paul.

Requirements—Plan I and II (minimum 45 credits)

18 credits in home economics education

6 credits in education outside the major

15 credits in home economics courses such as design, family social science, food science and nutrition, youth studies, and textiles and clothing, or in child development

Electives—6 credits selected with consent of adviser

For information on Graduate School programs, consult the *Graduate School*

Bulletin and the director of graduate studies in this division.

Industrial Education—Two types of M.Ed. programs are offered. Under Plan I, option I is for licensed teachers of industrial education who have an undergraduate degree in industrial education. Option II is for licensed teachers who have an undergraduate degree in a content field related to their vocational teaching license. Option II students are expected to have a full or provisional teaching license before admission to the program. For admission to either option, students are expected to have a grade average of 2.25 overall and 2.50 in the undergraduate major. A grade average of 2.80 is required for graduation.

Requirements—Plan I, Option I (minimum 45 credits)

Core—15 credits

Ind 5305—Critical Issues in Industrial Education (3)

Ind 5325—Foundations of Industrial Education (3)

6 credits in Ind 5900—School-Based Project in Industrial Education (1-6)

3 credits selected from Ind 5306, 5309, 5310, 5401, or 5600

Emphasis—15 credits in technical or occupational internship courses:

Ind 5112, 5122, 5132, 5142, 5152, 5100, 5101, 5102, 5103

Electives—15 credits at the 5000 level, 9 of them in College of Education courses and the other 6 in courses taken outside the college

Requirements—Plan I, Option II (minimum 45 credits)

Core—15 credits

Ind 5305—Critical Issues in Industrial Education (3)

Ind 5325—Foundations of Industrial Education (3)

6 credits in Ind 5900—School-Based Project in Industrial Education (1-6)

3 credits selected in Ind 5306, 5309, 5310, 5401, or 5600

Emphasis—15 credits in professional industrial or vocational courses:

Ind 5301, 5303, 5320, 5330, 5344, 5360, or VoEd 5100, 5101, 5102, 5200, 5300, 5400, 5500

Electives—15 credits at the 5000 level, 9 of them in College of Education courses and the other 6 in courses taken in other University academic units

For information on Graduate School programs, consult the *Graduate School Bulletin* and the director of graduate studies in this department.

Marketing Education—Two options for the Plan I M.Ed. degree are available. Option I is for licensed marketing education teachers who have completed an under-

graduate major in marketing education or a related teaching field. Option II is for persons who hold the bachelor's degree in a content field such as marketing, retailing, or business administration and who have had considerable occupational experience in marketing. For both options, students are expected to have a grade average of 2.25 overall and 2.50 in the undergraduate major. A grade average of 2.80 is required for graduation. A general description of the master of education degree is detailed at the beginning of this section of the bulletin.

Requirements—Option I (minimum 45 credits)

BME 5340—Trends and Issues in Business and Marketing Education (3)

BME 5357—Research Procedures in Business and Marketing Education (4) or equiv

6 credits in BME 5600—Field-Based Projects in Business and Marketing Education (1-12)

6 credits in marketing or marketing-related courses
Electives selected with consent of adviser

Requirements—Option II (minimum 45 credits)

BME 5304—Methods: Marketing Education (4)

BME 5351—Organization and Administration of Business and Marketing Education (4)

BME 5357—Research Procedures in Business and Marketing Education (4) or equivalent

BME 5353—Curriculum Construction in Business and Marketing Education (4)

BME 5355—Adult Business and Marketing Programs (3)

6 credits in BME 5600—Field-Based Projects in Business and Marketing Education (1-12)

3 credits in business administration or liberal arts

Electives selected with consent of adviser

For information on Graduate School programs, consult the *Graduate School Bulletin* and the director of graduate studies in this division.

Vocational Education—Two types of M.Ed. programs are offered. Plan I is for licensed vocational educators who wish to pursue advanced professional study for roles not necessarily specific to the fields of agriculture, business, marketing, home economics, or industrial education. Plan II is for professionals who are not licensed as vocational educators, but seek additional preparation or more depth through a program largely, though not exclusively, focused on professional practice. A general description of the master of education degree is at the beginning of this section of the bulletin.

Requirements—Plan I and II (minimum 45 credits)

Minimum 18 credits in Plan I, and 24 credits in Plan II, in courses offered by the Department of Vocational and Technical Education, selected in consultation with adviser

12 credits focusing on professional interests of the student, with a maximum of 9 credits in school and community-based projects, problems courses, independent study, and internship

Electives selected with consent of adviser

For information on Graduate School programs, consult the *Graduate School Bulletin* and the director of graduate studies in this department.

Concentration in Training and Development—Students pursuing an M.Ed. degree with a major in agricultural education, business education, home economics education, industrial education, and marketing education, as well as adult special students, may also achieve a concentration in training and development in industry and business by completing the requirements for the certificate in training and development.

Certificate in Training and Development—A professional certificate is awarded to adult special students who complete a minimum of 20 credits, to include:

VoEd 5750—Training in Industry and Business (3 or 4)

VoEd 5760—Organization Development in Industry and Business (3 or 4)

6 credits in VoEd 5780—Internship: Training and Development (ar)

Minimum 3 credits from VoEd 5762, 5770, 5790, BME 5253, or Ind 5300

Other courses to complete 20 credits to be selected with approval of training and development advisers

Course Descriptions



Course Descriptions

This section contains descriptions of the courses offered in the College of Education. The *Class Schedule*, published just before the registration period each quarter, lists the days, hours, locations, grading options, and instructors.

Course Numbering System

1000 to 1999—Courses primarily for freshmen and sophomores

3000 to 3999—Courses primarily for juniors and seniors

5000 to 5999—Courses for juniors, seniors, adult specials, and graduate (including M.Ed) students

8000 to 8999—Courses for graduate students only

Course Symbols

† All courses preceding this symbol must be completed before credit will be granted for any quarter of the sequence.

§ Credit will not be granted if the equivalent course listed after this symbol has been taken for credit.

¶ Concurrent registration is allowed or required in the course listed after this symbol.

Registration Override Permit, completed and signed by the instructor, is required for registration.

△ Registration Override Permit, completed and signed by the department offering the course, is required for registration.

□ Registration Override Permit, completed and signed by the college offering the course, is required for registration.

H Honors course (follows the course number)

When no department prefix precedes the number of a course listed as a prerequisite, the prerequisite course is in the same department as the course being described.

Child Psychology (CPsy)

1301. INTRODUCTORY CHILD PSYCHOLOGY. (4 cr, §3309, §5301; prereq 5 cr introductory psychology)

Introduction to the science of child behavior; review of theories and research.

1310. TOPICS IN CHILD PSYCHOLOGY. (1-4 cr; prereq #)

Readings and experiences, proposed by the student, related to cognitive, personality, perceptual, language, and social development in children.

1970. DIRECTED STUDY IN CHILD PSYCHOLOGY. (Cr ar; prereq #)

Reading in area of special interest in child psychology.

3302. INFANCY. (4 cr; prereq 1301 or #)

Perceptual, motor, emotional, social, and cognitive development during the first two years of life; the developing infant in its social and physical environment.

3303. ADOLESCENT PSYCHOLOGY. (4 cr, §5303; prereq 5 cr introductory psychology)

Physical, cognitive, and social development during adolescence.

3304. INTRODUCTION TO MATURITY AND AGING. (4 cr; prereq 1301 or equiv)

Empirical and theoretical issues in developmental psychology of maturity and aging; survey of perceptual-motor, cognitive, and social-psychological changes from young adulthood to old age.

3308. RESEARCH METHODS IN CHILD PSYCHOLOGY. (4 cr; S-N optional; prereq 1301, Psy 1004)

Techniques used in study of child development; emphasis on collection, organization, and analysis of data.

3309. INTRODUCTORY CHILD PSYCHOLOGY FOR THE SOCIAL SCIENCES. (4 cr, §1301, §5301; prereq Psy 1001)

Science of child behavior; review of theory and research. Designed for majors in psychology, sociology, and related disciplines; not suggested for child psychology majors.

3311. BEHAVIORAL AND EMOTIONAL PROBLEMS. (4 cr, §5311; prereq 1301 or equiv)

Description, etiology, development of behavioral and emotional problems of children; treatment where germane. Excluded are problems deriving primarily from sensory or physical handicap, mental retardation, or neurological impairment.

3313. PSYCHOLOGY OF ATYPICAL CHILDREN. (4 cr, §5313; prereq 1301 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.

3330. DIRECTED EXPERIENCES. (1-4 cr; S-N optional; prereq 1301 or equiv)

Intellectual and/or social development of children, adolescents, or adults as individuals, members of families, or peer groups. Options include active participation with an age group or training in research methods, including both experimental and observational techniques.

3331. PROCESSES OF SOCIALIZATION OF CHILDREN. (4 cr, §5331; prereq 1301 or equiv)

Processes of social learning; identification, social influence, imitation, reward and punishment, internalization, object choice.

3332. CROSS-CULTURAL CHILD DEVELOPMENT. (4 cr; S-N optional; prereq 4 cr in child psychology)

Interdisciplinary cross-cultural survey of theories and research on similarities and differences in cognitive, perceptual, socioemotional, and personality development, with emphasis on child-caretaker relations and Asian and Hispanic cultures.

3343. INTRODUCTION TO COGNITIVE DEVELOPMENT. (4 cr; prereq 1301; S-N optional)

Development of cognitive processes emphasizing research, methodology, and contrasting theoretical perspectives.

3360H. HONORS SEMINAR I: CURRENT RESEARCH IN DEVELOPMENTAL PSYCHOLOGY. (4 cr; prereq 1301 or equiv, #; primarily for child psychology majors)

Introduction to ongoing research programs, preparation for independent research (thesis research if honors major), discussion of career opportunities, other topics. Open to all students; required for all honors majors. Normally taken in the junior year.

3361H. HONORS SEMINAR II: RESEARCH AND THEORY IN DEVELOPMENTAL PSYCHOLOGY. (4 cr; prereq 1301 or equiv, #; primarily for child psychology majors)

Overview of history, theory, and systems of research in developmental psychology within broader framework of psychology; framework for interpreting recurring issues. Open to all students; required of all honors majors. Normally taken in the senior year.

3960. SENIOR PROJECT IN CHILD PSYCHOLOGY. (1-4 cr [max 4 cr]; prereq 1301, #, senior status)

A major review of the literature in a current topic area of child psychology.

3980. DIRECTED INSTRUCTION. (1-4 cr [max 4 cr]; S-N only; prereq #)

Undergraduates serve as teaching assistants in courses they have successfully completed for credit.

5301. ADVANCED CHILD DEVELOPMENT. (4 cr, §1301, §3309, §8301; prereq 5 cr introductory psychology)

Theory and research in child development with emphasis on perception, language, learning, cognition, personality, and social development in children.

5303. ADOLESCENT PSYCHOLOGY. (4 cr, §3303; prereq 5 cr introductory psychology)

Physical, cognitive, and social development during adolescence.

5305. MULTIDISCIPLINARY PERSPECTIVES ON AGING. (4 cr, §Educ 5440, §HSU 5009, §PA 5414, §SW 5024, §SAHP 5009, §Soc 5960)

Multidisciplinary introduction to aging and the aging process.

5310. TOPICS IN CHILD PSYCHOLOGY. (1-4 cr; prereq 1301)

Selected topics in the general content area.

5311. BEHAVIORAL AND EMOTIONAL PROBLEMS. (4 cr, §3311; prereq 1301 or equiv)

Description, etiology, development of behavioral and emotional problems of children; treatment where germane. Excluded are problems deriving primarily from sensory or physical handicap, mental retardation, or neurological impairment.

5313. PSYCHOLOGY OF ATYPICAL CHILDREN. (4 cr, §3313; prereq 1301 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.

5315. INTRODUCTION TO MENTAL RETARDATION. (4 cr, §EPsy 5620, §PsyS 5120; prereq 1301 or equiv)

Psychological and educational problems related to the mentally retarded.

5319. CLINICAL PROCEDURES WITH CHILDREN AND YOUTH. (4 cr; prereq 12 cr in psychology, educational psychology, sociology, or child psychology)

Survey of assessment and intervention procedures of child clinical psychology in clinical and community settings. Primarily for students not majoring in clinical psychology.

5320. CURRENT ISSUES IN CHILD DEVELOPMENT/EARLY EDUCATION. (1-3 cr; S-N optional; prereq Project CEED participants only)

Issues of importance to professionals and practitioners in disciplines whose work affects young children and families. Seminar format, nationally known speakers on topic specified at time of scheduling. Participants may register for academic credit or for CEUs.

5329. GENETICS, ETHOLOGY, AND DEVELOPMENT. (4 cr; prereq 1301 or equiv)

Survey of evolutionary theory, behavioral genetics applied to understanding of development of human behavior; formation of species-typical adaptive behavior and individual differences in infancy, childhood, adolescence.

5331. PROCESSES OF SOCIALIZATION OF CHILDREN. (4 cr, §3331; prereq 1301 or equiv)

Processes of social learning; identification, imitation, reward and punishment, internalization, and object choice.

Course Descriptions

5333. PERSONALITY DEVELOPMENT. (4 cr; prereq 3331 or 5331)
Psychoanalytic and behavior theory formulations, related research literature in content areas (e.g., attachment, dependency, aggression, competence, and sex typing).

5334. CHILDREN AND YOUTH IN SOCIETY. (4 cr; S-N optional; prereq 4 cr in child psychology)
Child development principles relative to social policy decision making; application of theories and findings to such issues as media influences, mainstreaming, day care, child abuse, and effects of peers.

5335. PEER RELATIONS. (4 cr; prereq 3331 or 5331)
Peer influences; social interactions and social relations; developmental changes.

5339. PARENT-CHILD RELATIONS. (4 cr; prereq 3331 or 5331)
Discussion of parent-child relationships and evaluation of relevant research (e.g., cross-cultural child rearing perspectives, alternative parenting roles, economics of parent-child relations, rights of parents and children).

5341. PERCEPTUAL DEVELOPMENT. (4 cr; prereq 1301 or #)
Perceptual learning and the development of sensory and perceptual processes.

5343. COGNITIVE DEVELOPMENT. (4 cr; prereq 1301 or #)
Development of cognitive processes; discussion of relevant theory, research literature, and methodology.

5345. LANGUAGE DEVELOPMENT. (4 cr; prereq 1301 or #)
Development of structure and function of language; factors influencing development; methodological problems, language scales, theories.

5349. CHILDREN'S LEARNING AND INTELLECTUAL SKILLS. (4 cr, §3347; prereq 1301, 3343, or #)
Current research on learning, problem solving, intellectual performance in children; practical applications.

5970. DIRECTED STUDY IN CHILD PSYCHOLOGY. (Cr ar; prereq #)
Independent reading.

5990. DIRECTED RESEARCH IN CHILD PSYCHOLOGY. (Cr ar; prereq #)
Individual empirical investigation.

For Graduate Students Only
(For description, see *Graduate School Bulletin*)

8304. RESEARCH METHODS IN CHILD PSYCHOLOGY

8310. SEMINAR: HISTORY OF CHILD DEVELOPMENT

8320. SEMINAR: CURRENT ISSUES IN TEACHING DEVELOPMENTAL PSYCHOLOGY

8327. ETHOLOGY OF CHILD BEHAVIOR

8329. GENETICS AND DEVELOPMENT

8333. ADVANCED SOCIAL DEVELOPMENT I

8334. CHILD DEVELOPMENT, SOCIAL POLICY, AND LEGAL VIEWS

8336. ADVANCED SOCIAL DEVELOPMENT II

8338. DEVELOPMENTAL PSYCHOLOGY OF COMMUNICATION

8341. ADVANCED PERCEPTUAL DEVELOPMENT

8343. ADVANCED COGNITIVE DEVELOPMENT I

8345. ADVANCED LANGUAGE DEVELOPMENT

8347. ADVANCED COGNITIVE DEVELOPMENT II

8351. THEORY AND PRACTICES IN THE PRESCHOOL

8355. BEHAVIOR OF PRESCHOOL CHILDREN

8360. SEMINAR: DEVELOPMENTAL PSYCHOLOGY

8605. DEVELOPMENTAL PSYCHOPATHOLOGY

8606. NEW APPROACHES TO PSYCHOPATHOLOGY IN CHILDREN AND ADOLESCENTS

8970. INDEPENDENT STUDY

8990. RESEARCH PROBLEMS

Curriculum and Instruction

Art Education (ArEd)

1207. EXPERIENCES WITH PICTORIAL EXPRESSION. (3 cr)
Materials, techniques, and ideas important in art expression; relationship between adult expression, child expression, and art history.

1208. EXPERIENCES WITH DESIGN AND MATERIALS. (3 cr)
Projects in invention, arrangement, and decoration; color, lettering, posters, bulletin board displays.

3000. ART OF CHILDREN. (3 cr)
Children's artistic development from infancy through adolescence; theoretical explanations of child art; implications for general learning.

3001. SURVEY OF ART ACTIVITIES. (4 cr; not open to art education majors)
Introduction to pictorial expression, design, and the function of art in the social environment.

3009. WEAVING WITHOUT A LOOM. (4 cr)

Developing fundamental weaving skills employing in-expensive equipment and techniques without use of the floor loom.

3010. INTRODUCTION TO WEAVING. (4 cr)

Equipment, design, setting up, and operation of floor and table looms.

3011. ADVANCED WEAVING. (4 cr; prereq 3010 or #)

Multiharness floor looms, warp beams, draft studies, design, finishes.

3020. CONTEMPORARY CRAFTS. (4 cr)

Materials, equipment, design criteria, and techniques for textile, wood, metal, and ceramics.

3030. PUPPETRY. (4 cr)

Construction, manipulation, and stage technique for basic puppet types.

3100. ART FOR YOUNG LEARNERS. (3 cr)

Art concepts, media, and activities appropriate for children.

3110. CURRICULUM DEVELOPMENT IN ART. (3 cr; prereq education student)

Rationales and methods for development and evaluation.

3120. NEWER MEDIA IN ART CURRICULUM. (3 cr; prereq 3110)

Development of art curriculum and support materials with emphasis on photography, filmmaking, video and sound production.

3130. COMMUNITY AND SCHOOL RESOURCES IN ART CURRICULUM. (3 cr; prereq 3110)

Methods for the utilization of school and community resources.

3200. FIELD EXPERIENCES IN ART EDUCATION. (3-9 cr; S-N only; prereq education student)

Art education experiences in the school and community.

3309. INDEPENDENT STUDY. (1-4 cr [max 4 cr]; prereq #)

Individual exploration and study of basic types of art expression with the opportunity for in-depth professional research and creative involvement in one area of interest.

3600. STUDENT TEACHING AND SUPERVISION OF ART. (3, 6, or 12 cr; S-N only; prereq 3120, 3130, sr in art education, SeEd 3150, Elem 3101; ¶3610)

Observations, participation, supervisory experiences with various types and levels of art classes.

3610. TEACHING ART IN THE SCHOOLS. (3 cr; prereq ¶3600)

Methods and media for teaching art in elementary and secondary schools.

3800. CURRENT TRENDS IN ART EDUCATION. (3 cr; prereq 3120, 3130)

Issues and trends, current practices, recent research.

5001. ART MEDIA TECHNIQUES. (1-12 cr [max 12 cr])

Lectures, demonstrations, discussions, critique sessions exploring and learning various techniques and processes in creativity; handling specific media. Each offering focuses on a single topic.

5020. ADVANCED CONTEMPORARY CRAFTS. (4 cr; prereq 3020 or #)

In-depth experiences in a variety of craft techniques, including ceramics, fibers, jewelry, and metal design with emphasis on design analysis, understanding of materials, and mastery of processes.

5201. INTRODUCTION TO ART THERAPY. (3 cr)

Examination of the history and current conceptions of art therapy.

5302. CURRICULUM INNOVATIONS IN ART EDUCATION. (4 cr)

Study and analysis of innovations, evaluation of materials for teaching units and projects.

5303. ART PROGRAMS FOR EXCEPTIONAL LEARNERS. (4 cr)

Development and evaluation of art teaching units and projects for learners of all ages.

5310. HISTORY OF AMERICAN ART EDUCATION. (3 cr)

Development of art as subject matter in curriculum; relation to traditions in art and in schooling; comparison of change within social, political, and economic contexts.

5316. INTERCULTURAL EDUCATION THROUGH ART. (3 cr)

Approaches to international understanding through recognition of aesthetic contributions of diverse peoples to American life.

5318. ART EDUCATION IN EUROPE. (3 cr)

Current practices, problems, and achievements in art education in Western Europe compared with practices in American art education.

5386. IMPROVING ART PROGRAMS IN THE SCHOOLS. (4 cr; prereq tchg exper or #)

Critical examination of present art programs in the schools.

5389. 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.

5600. INTERNSHIP. (3-9 cr; prereq #)

Professional assignment for degree candidates under joint supervision of departments and cooperating agency.

Course Descriptions

5605. PRACTICUM. (3-9 cr; prereq #)

Independent project under direction; gathering data, developing proposals, experimenting with evaluating innovative practices.

5900. PROFESSIONAL PROBLEMS. (3 cr; prereq MEd student, #)

Independent study for M.Ed. candidates integrating learning from art education, art, and education.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8300. RESEARCH IN ART EDUCATION

8306. SEMINAR: ART EDUCATION

8900. PROBLEMS: ART EDUCATION

Curriculum and Instructional Systems (CISy)

5000. INTRODUCTION TO INSTRUCTIONAL SYSTEMS. (1 cr)

Introduction to major theories and areas of research relevant to instructional design.

5003. INTRODUCTION TO COMPUTERS AND THEIR USES. (1 cr; S-N only)

Introduction to computer technology in instruction: hardware, software, terminology, word processing, and instructional applications. Intended for students with no background in computing.

5004. INTRODUCTION TO INTERACTIVE VIDEO INSTRUCTION. (1 cr)

Introduction to the use of videodiscs and related technologies; hardware, software, terminology, and applications in instruction.

5006. INTRODUCTION TO INSTRUCTIONAL COMPUTER PROGRAMMING. (3 cr; prereq 5003 or #)

Introduction to designing computer-based instructional programs through programming. Students need not have a mathematics or science background.

5100. CURRICULUM AND INSTRUCTIONAL SYSTEMS WORKSHOP. (1-3 cr [max 9 cr])

Special topics courses in the design, development, implementation, and evaluation of curricular and instructional systems.

5201. SYSTEMS APPROACH TO DESIGN OF INSTRUCTION. (3 cr; prereq 5000 or #)

Instructional materials design in accordance with systems principles, including design of a specific unit of courseware.

5205. COMPUTER-BASED INSTRUCTION: INTRODUCTION TO DESIGN. (3 cr; prereq 5006 or #)

Examination of computer uses in education and training; models for designing computer-based instruction with particular emphasis on interface design.

5206. MICROCOMPUTER USES IN ELEMENTARY CLASSROOMS. (3 cr, \$Elem 5140)

Use of microcomputers to enhance instruction; applications in language arts, mathematics, science, social studies; evaluation of available programs.

5207. INTERACTIVE VIDEO INSTRUCTION. (4 cr; prereq 5004 and 5201 or 5205 or 5209 or #)

Videodiscs and related technologies; design and development of interactive instruction.

5208. COMPUTER-BASED TOOLS FOR TEACHERS. (3 cr; prereq 5003 or 5206 or #; S-N optional)

The use of microcomputers for instructional material generation, record keeping, and classroom management tasks in K-12 classrooms.

5209. PRINCIPLES AND PROCEDURES IN DESIGNING INSTRUCTION. (4 cr; prereq 5000)

Major models of instructional development; generic components; design models; review of instructional design and learning environments.

5212. COMPUTER-BASED INSTRUCTION: DESIGN AND DEVELOPMENT. (3 cr; prereq 5205 or #)

Design and development of a computer-based instruction package, including documentation and support materials.

5216. COMPUTER-BASED INSTRUCTIONAL SIMULATIONS. (3 cr; prereq 5212 or #)

Design implementation, and evaluation of instructional computer-based simulations.

5218. COMPUTER-BASED INSTRUCTIONAL GAMES. (3 cr; prereq 5212 or #)

Design, implementation, and evaluation of instructional computer-based games.

5509. DIRECTED INDIVIDUAL STUDY. (1-6 cr [max 6 cr]; prereq #)

Review of literature in research and theory of instructional systems.

5600. INTRODUCTION TO CURRICULUM SYSTEMS. (3 cr)

Exploration of principles of curriculum design, forces influencing goals and curriculum planning, curricular trends and issues, traditional and emergent curriculum designs, current proposals for change, and a model for curriculum planning.

5605. PRINCIPLES AND PROCEDURES IN DESIGNING CURRICULUM. (3 cr)

Systematic curriculum planning; development of models for planning, formulation of plans, and outlining a curriculum design for an educational setting.

5700. CURRICULUM PLANNING PROCESSES. (4 cr; prereq 5600 or 5605 or Elem 5100)

Analyzing models for planning; designing a curriculum system; employing the system to produce plans to develop curriculum.

5800. SUPERVISION OF SECONDARY INSTRUCTION. (3 cr; prereq 5600)

Achievement of appropriate teaching expectations focusing on problems of personnel responsible for their improvement.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8100. CURRICULUM AND INSTRUCTION CORE: CURRICULUM**8101. CURRICULUM AND INSTRUCTION CORE: INSTRUCTION****8102. CURRICULUM AND INSTRUCTION CORE: TEACHING****8305. INSTRUCTIONAL DELIVERY SYSTEMS****8307. DESIGNING INSTRUCTIONAL MATERIALS: RESEARCH AND THEORY****8411. ADVANCED DESIGNS IN COURSEWARE: COMPUTER****8412. ADVANCED DESIGNS IN COURSEWARE: VIDEO****8416. CURRICULUM AND INSTRUCTIONAL SYSTEMS SEMINAR****8501. PROBLEMS: CURRICULUM AND INSTRUCTIONAL SYSTEMS****8600. SEMINAR: CURRICULUM IMPLEMENTATION AND CHANGE****8700. CURRICULUM AND INSTRUCTIONAL SYSTEMS FIELD EXPERIENCE****8800. PROBLEMS: SECONDARY SCHOOL SUPERVISION****Education: Adult and Teacher (Educ)****1100. DEVELOPMENT OF PARAPROFESIONAL SKILLS IN INSTRUCTION.** (1-9 cr [max 9 cr]; prereq in-service paraprofessional)

Basic background information for the paraprofessional; training in assisting with instruction. Each offering will focus on a different area.

5103. ADULT EDUCATION WORKSHOP. (1-12 cr [max 12 cr]; prereq practicing adult educator or #)
Study of topic appropriate to the activities and interests of the participants.**5104. SURVEY OF ADULT EDUCATION.** (3 cr; prereq sr)
General concepts in the field; literature, objectives, history, philosophy, research, institutions, issues and problems.**5110. THE STATUS AND ROLE OF WOMEN IN AMERICAN SOCIETY.** (4 cr)

The role of women in American history; perceptions of women in literature and art; attention to women in social studies curricula; human sexuality; male and female character—nature and/or nurture; choices of family and career.

5180. ANALYSIS OF THE TEACHING PROCESS. (3 cr; prereq tchg exper or #)

Conceptual analysis of instructional strategies and methodologies.

5182. LABORATORY APPROACHES IN TEACHER EDUCATION. (3 cr)

Training modes in teacher education; microteaching, simulation, games, and protocol materials.

5184. SUPERVISION OF CLINICAL EXPERIENCES. (3 cr; prereq #)

Supervision of professional laboratory experiences.

5186. ALTERNATIVE SCHOOL DESIGNS: IMPLICATIONS FOR TEACHER EDUCATION. (3 cr)

Value positions and basic assumptions underlying alternative schooling processes and their implications for the selection and training of personnel.

5190. THE LEARNING ENVIRONMENT OF THE MIDDLE SCHOOL. (2 cr; S-N optional)

Implications of the philosophy and organization of middle schools; pre- and early adolescent psychology for structuring the learning environment: curriculum design, teaching and learning, student evaluation.

5191. THEMATIC INSTRUCTION FOR MIDDLE SCHOOLS. (2 cr)

Logical and contextual relationships among mathematics, science, and social studies as taught in middle schools.

5199. WORKSHOP: TEACHER EDUCATION. (1-12 cr [max 12 cr]; prereq tchg exper and #)

Topics appropriate to the activities and interests of the participants.

5201. INTRODUCTION TO THE UNDEREDUCATED ADULT. (3 cr)

Issues in literacy education, characteristics, problems, individual differences of the undereducated adult learner; traditional and innovative approaches for working with adults in literacy programs.

5202. ADULT LITERACY: DIAGNOSIS AND PRESCRIPTION. (3 cr; prereq 5201 or #)

Application of diagnostic information, instruments, and techniques to learning difficulties of adults in reading and mathematics programs.

5203. ADULT LITERACY: METHODS AND MATERIALS. (3 cr; prereq 5202 or Elem 5331 or #)

Teaching literacy skills to adults: basic theories, approaches, overview of methods and materials for implementation.

5204. READING IN WORK SETTINGS. (3 cr, §VoEd 5204)

Overview of concepts involved in integrating reading instruction into vocational training programs and work settings; diagnosis and methods of assessing needs of vocational students and workers on a job; techniques for building needs into training programs.

Course Descriptions

5205. FIELD EXPERIENCE IN ADULT EDUCATION. (4-8 cr [max 8 cr]; prereq #)

Supervised fieldwork practice and seminars; presentations and evaluations of adult education practice.

5301. DESIGNING THE ADULT EDUCATION PROGRAM. (3 cr)

Designing and implementing educational programs for adults: concepts, theories, determining needs, educational objectives, learning experiences, and evaluating outcomes.

5401. ADULT LEARNING AND DEVELOPMENT THROUGH THE LIFE SPAN. (3 cr)

Physiological, social, and cultural bases of adult behavior; motivation, socialization, personality change as applied to education of adults.

5411. STRATEGIES FOR TEACHING ADULTS. (3 cr)

Identification, classification, and analysis of techniques used in teaching adults.

5440. MULTIDISCIPLINARY PERSPECTIVES ON AGING. (4 cr, §CPsy 5305, §HSU 5009, §PA 5514, §SW 5024, SAHP 5009, §Soc 5960)

Multidisciplinary introduction to aging and the aging process.

5501. CONTINUING EDUCATION AND THE PROFESSIONS. (3 cr)

Review of literature; analysis of philosophies, issues, and trends; emphasis on integrating personal growth, professional needs, and statutory requirements in continuing education programs.

5601. INTERNATIONAL EDUCATION: TOPICS IN CLASSROOM PRACTICES AND PROCEDURES. (1-12 cr [max 12 cr]; prereq tchg license and #)

Educational practices in a designated country, region, or cultural group; impact of social and cultural features; organization, school structures, classroom practices, and delivery of educational services; potential for implementation in the United States.

5603. INTERNATIONAL EDUCATION AND DEVELOPMENT. (3 cr)

Contemporary theories relating formal and nonformal education to national development in social, cultural, political, and economic sectors; alternative conceptualizations and theoretical perspectives on education and development.

5605. RESEARCH TOPICS: INTERNATIONAL DEVELOPMENT EDUCATION. (3 cr)

Empirical research conducted in developing societies relating formal and nonformal education to national development in social, cultural, political, and economic sectors.

5607. APPLIED INTERNATIONAL DEVELOPMENT EDUCATION. (3 cr)

Educational innovations designed to promote national development in selected developing nations; educational case studies in the context of such objectives; conceptualizations of the role of education in development, outcomes.

5901. INTRODUCTION TO COMMUNITY EDUCATION. (3 cr)

Exploration and investigation of school, park, and recreation joint and individual programs, and relationship to community education; introduction to administration of such programs.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8090. ANALYSIS OF ISSUES IN ADULT EDUCATION

8100. RESEARCH IN ADULT EDUCATION

8188. ALTERNATIVE PROGRAMS IN TEACHER EDUCATION

8284. PROBLEMS: TEACHER EDUCATION

8285, 8286. PROFESSIONAL EDUCATION OF TEACHERS

8302. PROBLEMS: ADULT EDUCATION

8603. SEMINAR: INTERNATIONAL DEVELOPMENT EDUCATION

8605. PROBLEMS: INTERNATIONAL EDUCATION RESEARCH

Elementary Education (Elem)

1001. TEACHING IN AMERICAN SCHOOLS. (3 cr, §SeEd 1001; S-N optional)

Teaching in contemporary America: nature of the teaching profession, school organization and governance patterns, impact of social/economic/political issues on teachers and schools, how the public views teachers and schools.

3100. PSYCHOLOGICAL FOUNDATIONS OF ELEMENTARY EDUCATION. (4 cr; prereq 5 cr introductory psychology)

Educational psychology, learning, retention, transfer, intelligence, measurement, behavioral management and modification applied to elementary education; lecture, laboratory section, school or community agency participation.

3101. INTRODUCTION TO ELEMENTARY SCHOOL TEACHING. (3 cr; prereq §3100 and elementary education major)

Curriculum and organizational patterns; unit instruction; reporting, promotion and nonpromotion, classroom management; control and support of public instruction.

3103. THE TEACHER AND THE ELEMENTARY SCHOOL. (2 cr, §3101; prereq 3102)

Contemporary issues, curriculum, and organization of the elementary school.

3111. FOUNDATIONS OF ELEMENTARY EDUCATION. (1-5 cr [max 5 cr], §3100; prereq Δ)

Educational psychology applied to elementary education.

3300. CHILDREN'S LITERATURE. (3 cr)

Materials for children's reading in the elementary school program.

3316. TEACHING ENGLISH IN THE ELEMENTARY SCHOOL. (3 cr; prereq 3100, 3101, and EngI 3851)

Development of language power in elementary school in relation to all activities of the school day.

3331. TEACHING READING IN THE ELEMENTARY SCHOOL. (3 cr; prereq 3100, 3101)

Emphasis on comprehensive elementary school program; reading readiness, word recognition techniques, development of basic study skills, word meanings, comprehension abilities, and interest and taste in reading.

3346. TEACHING SCIENCE IN THE ELEMENTARY SCHOOL. (3 cr; prereq 3100, 3101, 10 cr in natural science)

Objectives, content, materials, philosophy, and methods of instruction and evaluation; practical applications.

3361. TEACHING SOCIAL STUDIES IN THE ELEMENTARY SCHOOL. (3 cr; prereq 3100, 3101)

Content and philosophy of the social studies program; methods of instruction and problems.

3376. NURSERY SCHOOL-KINDERGARTEN CURRICULUM I. (3 cr; prereq 3100)

Objectives of the kindergarten; use of literature; appropriate creative activities in the areas of art, dramatics, music; planning of learning activities.

3377. NURSERY SCHOOL-KINDERGARTEN CURRICULUM II. (3 cr; prereq 3376)

Additional expansion and clarification of the methods and materials in the areas of mathematics, reading, science, and social studies.

3378. SOCIAL LEARNING IN EARLY CHILDHOOD EDUCATION. (3 cr; prereq CPsy 1301 or 5301)

Theoretical bases of social and physical development and implications and applications to curriculum planning for young children.

3379. COGNITIVE AND CREATIVE LEARNING IN EARLY CHILDHOOD EDUCATION. (3 cr; prereq CPsy 1301 or 5301)

Developmental approach to planning cognitive, language, and creative curriculum.

3391. TEACHING MATHEMATICS IN THE ELEMENTARY SCHOOL. (3 cr; prereq 3100, 3101, and Math 1005, 1006)

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.

3600. STUDENT TEACHING IN THE ELEMENTARY SCHOOL: HALF-DAY. (6 cr; S-N only; prereq 12 cr methods, Δ)

Five half-days a week of supervised teaching and observing in elementary school.

3601. STUDENT TEACHING IN THE ELEMENTARY SCHOOL: HALF-DAY. (6 cr; S-N only; prereq 6 cr elementary student tchg, Δ)

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.

3603. STUDENT TEACHING IN THE KINDERGARTEN. (6 cr; S-N only; prereq 6 cr elementary student tchg, Δ)

Five half-days each week in supervised teaching and observation in public or private schools.

3604. STUDENT TEACHING IN THE NURSERY SCHOOL. (3-6 cr; S-N only; prereq approval of major adviser and director of student tchg)

Three to five half-days each week in supervised teaching in the nursery school.

3605. STUDENT TEACHING IN ELEMENTARY SCHOOL: HALF-DAYS AND FULL DAYS. (9 cr; S-N only; prereq 15 cr methods, Δ)

Five half-days and two full days each week in supervised teaching and observing in the elementary school.

3606. STUDENT TEACHING IN THE INNER CITY ELEMENTARY SCHOOL. (9 cr; S-N only; prereq 15 cr methods, Δ)

Five half-days and two full days each week in supervised teaching and observing in elementary school in the inner city.

3607. STUDENT TEACHING IN ELEMENTARY SCHOOL: FULL DAYS. (12 cr; S-N only; prereq 18 cr methods, Δ)

Five full days each week teaching and observing in elementary school.

3610. PRE-FALL STUDENT TEACHING: FULL DAYS. (3 cr; S-N only; prereq 9 cr methods, Δ)

Observing and teaching during the beginning of the school year; begins with fall semester opening of public schools and continues until University classes begin.

3620. PRE-FALL ORIENTATION IN ELEMENTARY SCHOOL. (1-4 cr; S-N only; prereq Δ)

Supervised observation and participation in classroom and related school activities; a pre-student teacher exploratory experience.

3621. JUNIOR PRACTICUM IN ELEMENTARY EDUCATION. (1 or 2 cr [max 6 cr]; S-N only; prereq elementary education major)

Supervised observation and participation in classroom and related school activities; a pre-student teacher exploratory experience.

3630. STUDENT TEACHING IN ELEMENTARY SCHOOL LITERATURE. (3 cr; S-N only; prereq 10 cr elementary student tchg, Δ)

Minimum of three hours weekly of supervised teaching and observation in elementary school.

Course Descriptions

3631. STUDENT TEACHING IN ELEMENTARY SCHOOL ENGLISH. (3 cr; S-N only; prereq 10 cr elementary student tchg, Δ)

Minimum of three hours weekly of supervised teaching and observation in elementary school.

3633. STUDENT TEACHING IN ELEMENTARY SCHOOL READING. (3 cr; S-N only; prereq 10 cr elementary student tchg, Δ)

Minimum of three hours weekly of supervised teaching and observation in elementary school.

3634. STUDENT TEACHING IN ELEMENTARY SCHOOL SCIENCE. (3 cr; S-N only; prereq 10 cr elementary student tchg, Δ)

Minimum of three hours weekly of supervised teaching and observation in elementary school.

3636. STUDENT TEACHING IN ELEMENTARY SCHOOL SOCIAL STUDIES. (3 cr; S-N only; prereq 10 cr elementary student tchg, Δ)

Minimum of three hours weekly of supervised teaching and observation in elementary school.

3639. STUDENT TEACHING IN ELEMENTARY SCHOOL MATHEMATICS. (3 cr; S-N only; prereq 10 cr elementary student tchg, Δ)

Minimum of three hours weekly of supervised teaching and observation in elementary school.

3900. DIRECTED STUDY. (1-3 cr [max 6 cr]; prereq elementary major and Δ)

Analysis of specific instruction; curricular, organizational, and operational situations or problems in elementary education.

5100. ELEMENTARY SCHOOL CURRICULUM. (3 cr; prereq 3101)

Selection and organization of subject matter for courses; methods, problems, and findings of research by subjects.

5101. WORKSHOP: PROGRAMS AND PROCEDURES OF CURRICULUM DEVELOPMENT. (1-3 cr; prereq elementary tchg exper, #; S-N only)

Leadership in procedures; operational processes; major considerations in planning and organizing; interpersonal relationships, and evaluation of improvement programs.

5102. PREPARATION OF CURRICULUM MATERIALS. (3 cr; prereq 5100 or SeEd 5113 or CISy 5600)

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

5107. DIAGNOSIS AND TREATMENT OF LEARNING DIFFICULTIES. (3 cr)

Diagnosis of pupil difficulty; development and prevention; tests as aids to teaching; following up a testing program, socioemotional problems associated with learning difficulties.

5108. SUPERVISION AND IMPROVEMENT OF INSTRUCTION. (3 cr; prereq 9 cr in education)

Functions and duties of a supervisor; techniques; analysis of classroom activities.

5109. 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.

5140. MICROCOMPUTER USES IN ELEMENTARY CLASSROOMS. (3 cr, §CISy 5206)

Use of microcomputers to enhance instruction; applications in language arts, mathematics, science, social studies; evaluation of available programs.

5141. USING LOGO IN THE CLASSROOM. (3 cr; prereq CISy 5003 or equiv)

Using LOGO in the elementary and middle grades to develop skills in thinking, planning, and logic; applying fundamental mechanics and philosophy of LOGO using turtle graphics; developing classroom materials.

5145. CLASSROOM MANAGEMENT. (3 cr, §SeEd 5145; prereq tchg or admin exper or #)

For teachers, administrators, and support staff working in elementary school programs: focus on management of student behavior, of instruction as it relates to student behavior, and of teacher organizational tasks in the classroom.

5164. GLOBAL EDUCATION: CONTENT AND PROCESS. (3 cr, §SeEd 5164)

Help for classroom teachers and administrators in assessing current methods and materials and selecting appropriate evaluation instruments by examination of existing content and methods in global education.

5227. TEACHING ABOUT THE NEWSPAPER IN THE CLASSROOM. (1-3 cr [max 4 cr], §SeEd 5227)

Institution of the newspaper; articulation of a series of useful instruction strategies, curriculum development techniques, and teaching materials.

5300. LITERATURE FOR THE ELEMENTARY SCHOOL. (3 cr)

Evaluative survey of books for children; research related to children's reading interests; selection of literature.

5305. SURVEY OF SPECIAL COLLECTIONS IN CHILDREN'S LITERATURE. (3 cr; prereq 5300 or #)

Content and accessibility of collections that relate to the creation of books; emphasis on possibilities and methods for interpreting the content of the collections to children.

5315. TEACHING COMPOSITION IN THE ELEMENTARY SCHOOL. (3 cr; prereq postbaccalaureate, MEd, or graduate student)

Theory and research dealing with the writing process and application to development of an elementary school writing curriculum.

5316. TEACHING AND SUPERVISION OF ENGLISH IN THE ELEMENTARY SCHOOLS. (3 cr; prereq 3316 or elementary tchg exper)

Improvement of instruction, study of trends in English education.

5317. MATERIALS LABORATORY FOR TEACHING ENGLISH IN ELEMENTARY SCHOOLS. (3 cr; prereq 3316 or elementary tchg exper)

Examination and evaluation of textbooks, programmed materials, and audiovisual resources for elementary school language arts instruction.

5318. CREATIVE WRITING FOR AND BY CHILDREN. (3 cr [max 6 cr]; S-N only; prereq 3300 or 3316 or elementary tchg exper or #)

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.

5319. TEACHING SECOND LANGUAGES AND CULTURES IN ELEMENTARY SCHOOLS. (3 cr)

Methods and materials: development of oral and written communication; consideration of alternatives in program format; preparation of materials; global awareness and cross-cultural experience; assessment of children's language; children's literature, games, songs; development of units and lessons.

5320. PRACTICUM: TEACHING SECOND LANGUAGES AND CULTURES IN ELEMENTARY SCHOOLS. (3 cr; S-N only; prereq 5319 or 5319, #)

Minimum of three hours weekly of supervised teaching and observation in elementary schools.

5330. COMPUTER-ASSISTED INSTRUCTION IN READING AND LANGUAGE ARTS FOR ELEMENTARY SCHOOL STUDENTS. (3 cr; prereq education major or elementary or secondary school tchg exper or #)

Developing, evaluating, and using materials to present reading and language arts content to elementary age students; interface of theoretical issues with instructional techniques presented on computers.

5331. 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.

5333. INSTRUCTIONAL LEADERSHIP IN ELEMENTARY READING. (3 cr; prereq 5331 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.

5334. READING DIFFICULTIES. (3 cr; prereq 5331 or SeEd 5344)

Causes, prevention, and correction; remedial practices useful to the classroom teacher, school counselor, and reading specialist.

5335. CLINICAL DIAGNOSIS OF READING DIFFICULTIES. (3 cr; prereq 5334)

Relationship to psychological factors and clinical remedial correction.

5336. CLINICAL PRACTICE IN REMEDIAL TEACHING. (3 cr; prereq 5334 or 5107 and #)

Remedial tutoring of individual children who have difficulty in school learning.

5337. BEGINNING READING INSTRUCTION. (3 cr; prereq 3331 or elementary tchg exper or #)

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.

5338. TEACHING READING IN THE INTERMEDIATE GRADES. (3 cr; prereq 3331 or elementary tchg exper or #)

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.

5339. WORKSHOP: CURRICULUM IMPLEMENTATION IN ELEMENTARY SCHOOL READING. (1-9 cr [max 9 cr]; prereq elementary tchg exper or #)

Analysis of new instructional materials, techniques, recent trends, and innovations in elementary reading instruction.

5346. TEACHING SCIENCE IN THE ELEMENTARY SCHOOL. (3 cr; prereq elementary tchg exper or #)

Materials, resources, and methods of teaching science at the elementary level.

5347. WORKSHOP: CURRICULUM IMPLEMENTATION IN ELEMENTARY SCHOOL SCIENCE. (1-3 cr [max 12 cr]; prereq elementary tchg exper)

Offered in summers with focus on a single program for each offering: treating concept foundations, goals, and teaching and evaluation procedures.

5348. WORKSHOP: OUTDOOR SCIENCE EDUCATION. (3 cr; prereq elementary 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.

5349. ELEMENTARY SCHOOL SCIENCE: CURRICULUM AND SUPERVISION. (3 cr; prereq 3346 or 5346)

Program foundations including elements from philosophy, psychology, the science disciplines; design of in-school curriculum improvement models; program evaluation; pupil reporting procedures.

5350. ELEMENTARY SCHOOL SCIENCE: MATERIALS AND RESOURCES. (3 cr; prereq 5349)

Experiences in the use of educational materials and media common to the teaching of modern elementary school science.

Course Descriptions

5361. TEACHING SOCIAL STUDIES IN THE ELEMENTARY SCHOOL. (3 cr; prereq 3101 or equiv)

Content and organization of social studies programs; programs of understanding, improving the learning situation, and effective use of materials.

5362. MATERIALS LABORATORY FOR ELEMENTARY SOCIAL STUDIES TEACHERS. (3 cr; prereq 3361 or 5361 or #)

Printed, audiovisual, and other materials; investigation and evaluation of teaching materials and devices.

5363. WORKSHOP: CURRICULUM IMPLEMENTATION IN ELEMENTARY SCHOOL SOCIAL STUDIES. (Cr or [max 9 cr]; prereq elementary tchg exper and #)

Analysis of new instructional materials and recent curriculum developments in the field; training in innovative instructional procedures.

5376. CURRENT TRENDS IN EARLY CHILDHOOD EDUCATION. (3 cr; prereq tchg exper in kindergarten or primary or #)

Continuing needs of children in our changing culture; current practices and recent research.

5377. EARLY CHILDHOOD EDUCATION: MATERIALS AND RESOURCES. (3 cr; prereq 3377 or 5376 and tchg exper)

Experience in the selection and use of commercial and teacher-made educational materials and media common to early childhood education programs.

5378. CONTEMPORARY PROGRAMS FOR YOUNG CHILDREN. (1-3 cr [max 3 cr]; prereq MEd student in early childhood education)

Child growth and development aspects of preschool children in light of need for curriculum intervention programs; current trends, program evaluation, recent research.

5602. PRACTICUM: IMPROVEMENT OF TEACHING. (3 cr; S-N only; prereq MEd student in elementary education)

Elementary school classroom teaching project designed to improve specific teaching skills, planned by student and approved and directed by student's adviser as part of M.Ed. program.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8300. RESEARCH IN SPECIAL COLLECTIONS OF CHILDREN'S LITERATURE

8316. RESEARCH IN ENGLISH COMPOSITION IN ELEMENTARY SCHOOLS

8317. RESEARCH IN SKILL DEVELOPMENT IN SPELLING, HANDWRITING, AND LISTENING

8331. RESEARCH FOUNDATIONS FOR READING INSTRUCTION

8332. RECENT RESEARCH IN READING

8333. SEMINAR: READING RESEARCH AND INSTRUCTION

8346. RESEARCH FOUNDATIONS OF ELEMENTARY SCHOOL SCIENCE TEACHING

8347. THE ELEMENTARY SCHOOL SCIENCE PROGRAM: ARTICULATION AND COORDINATION

8361. CURRICULUM CONSTRUCTION IN ELEMENTARY SOCIAL STUDIES

8362. RESEARCH IN ELEMENTARY SOCIAL STUDIES

8363. SEMINAR: ELEMENTARY SOCIAL STUDIES EDUCATION

8916. PROBLEMS: TEACHING ENGLISH

8931. PROBLEMS: TEACHING READING

8961. PROBLEMS: TEACHING SOCIAL STUDIES

8976. PROBLEMS: TEACHING KINDERGARTEN

8991. PROBLEMS: IMPROVEMENT OF INSTRUCTION

8992. RESEARCH IN EDUCATIONAL DIAGNOSIS

Mathematics Education (MthE)

5081. TEACHING SECONDARY SCHOOL ARITHMETIC. (2 cr; prereq mathematics education major or minor, Math 5081 or ¶5081 or #)

Survey of concepts, principles, and processes of the secondary school pre-algebra curriculum; learning difficulties, teaching strategies and alternatives; mathematical foundations of pre-algebra topics.

5082. TEACHING ALGEBRA. (2 cr; prereq mathematics education major or minor, Math 5082 or ¶5082 or #)

Survey of concepts, principles, and processes of the secondary school algebra curriculum; learning difficulties, teaching strategies and alternatives; mathematical foundations of algebra topics.

5083. TEACHING GEOMETRY. (2 cr; prereq mathematics education major or minor, Math 5083 or ¶5083 or #)

Survey of concepts, principles, and processes of the secondary school geometry curriculum; learning difficulties, teaching strategies and alternatives; mathematical foundations of geometry topics.

5101. WORKSHOP: ELEMENTARY SCHOOL MATHEMATICS. (1-12 cr [max 12 cr]; prereq #; not open to mathematics education majors)

Modern trends, methods, and materials used to convey mathematical ideas.

5102. WORKSHOP: MATHEMATICS EDUCATION. (1-12 cr [max 12 cr])

Issues, materials, and instructional techniques focusing on a single current topic of particular relevance to secondary school and college mathematics teachers.

5301. INSTRUCTIONAL LEADERSHIP IN ELEMENTARY SCHOOL MATHEMATICS. (3 cr; prereq #; not open to mathematics education majors)

Current trends in methods, materials, content, and evaluation; program development and research; intended for supervisors and principals.

5311. TEACHING AND SUPERVISION OF MATHEMATICS IN THE ELEMENTARY SCHOOL. (3 cr; prereq Elem 3391 or #)

Present practices and trends in methods, evaluation, and diagnosis; objectives, psychology, and philosophy related to improvement of instruction.

5312. TEACHING AND SUPERVISION OF MATHEMATICS IN THE SECONDARY SCHOOL. (3 cr; prereq mathematics tchg exper or #)

Methods, materials, and curriculum development; principles of learning; review of research; preparation and evaluation of tests, units, and materials of instruction.

5313. TEACHING AND SUPERVISION OF MATHEMATICS IN THE MIDDLE SCHOOL. (4 cr; prereq elementary or secondary school licensure)

Mathematics objectives, concepts and principles, skills and processes; instructional alternatives including calculators and microcomputers; applications of mathematics to individual differences; evaluation techniques to improve instruction and learning in middle school.

5321. MATERIALS LABORATORY FOR ELEMENTARY SCHOOL MATHEMATICS INSTRUCTION. (3 cr; prereq 5311 or Elem 3391 or #)

Printed and programmed materials, audiovisual aids, community resources; laboratory projects and techniques of using mathematical devices and instruments.

5322. MATERIALS LABORATORY FOR SECONDARY SCHOOL MATHEMATICS INSTRUCTION. (3 cr; prereq 5312 or #)

Sources and types of materials; laboratory projects and techniques of using mathematics devices and instruments, visual aids, and community resources.

5331. CURRENT DEVELOPMENTS IN ELEMENTARY SCHOOL MATHEMATICS INSTRUCTION. (3 cr; prereq 5311 or #)

Contemporary literature, trends and experimentation with content; criteria for program evaluation.

5332. CURRENT TRENDS AND ISSUES IN SECONDARY SCHOOL MATHEMATICS INSTRUCTION. (3 cr; prereq 5312 or #)

Recent developments in mathematics curriculum and instructional alternatives; issues in teaching and learning; providing for special student needs; program planning and evaluation.

5345. MATHEMATICS FOR GIFTED CHILDREN. (3 cr; prereq 5311 or Elem 3391 or #)

Curriculum and methods of instruction for academically talented children; development of enrichment units; source material for teachers.

5355. MATHEMATICS FOR SLOW LEARNING CHILDREN. (3 cr; prereq 5311 or Elem 3391 or #)

Units of instruction emphasizing mathematical concepts essential for vocational competence; experimental materials and methods designed to improve performance of low achievers.

5366. COMPUTER-ASSISTED MATHEMATICS INSTRUCTION. (3 cr; prereq 5312 or SeEd 3365; SeEd 3366 or CISy 5006; and one year of calculus or #)

The computer as an instructional resource in the mathematics classroom; programming and problem solving using the computer as a means of teaching and learning concepts, principles, and skills of mathematics; design of lessons; evaluation of software.

5680. PRACTICUM IN MATHEMATICS EDUCATION. (3-9 cr [max 9 cr]; prereq #)

Supervised experience in teaching or related work in school.

5980. DIRECTED STUDIES IN MATHEMATICS EDUCATION. (3-9 cr [max 9 cr]; prereq #)

Survey of recent literature; design and preparation of reports on special problems.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8500. THEORY AND CLASSICAL RESEARCH IN MATHEMATICS EDUCATION**8570. RESEARCH IN MATHEMATICS EDUCATION****8590. SEMINAR: MATHEMATICS EDUCATION****8680. INTERNSHIP: MATHEMATICS EDUCATION****8980. PROBLEMS: MATHEMATICS EDUCATION****Secondary Education (SeEd)****1001. TEACHING IN AMERICAN SCHOOLS.** (3 cr, §Elem 1001; S-N optional)

Teaching in contemporary America; nature of the teaching profession, school organization and governance patterns, impact of social/economic/political issues on teachers and schools, public views of teachers and schools.

3150. INTRODUCTION TO SECONDARY SCHOOL TEACHING. (5 cr; prereq 5 cr introductory psychology, education student)

Secondary education; purposes, history, organization, curriculum, pupils; organization of instructional units; teaching profession; lecture, discussion section; individual youth leadership project.

Course Descriptions

3151. DIRECTED STUDY. (1-9 cr; prereq Δ)

Analysis of specific instructional, curricular, organizational, and operational situations or problems in secondary education.

3152. PRACTICUM: SECONDARY EDUCATION. (1-7 cr [max 7 cr]; S-N only; prereq education student, Δ)

A pre-student teaching experience to enable students to develop teacher competencies; supervised observation and participation in classroom and related school activities.

3155. PSYCHOLOGICAL FOUNDATIONS OF SECONDARY EDUCATION. (5 cr; prereq Psy 1001, education student)

Educational psychology; theory and applications in secondary education of learning, cognition, behavior, growth and development, measurement and evaluation; lecture, laboratory, discussion, individual projects.

3156, 3157. THE SOCIAL SCIENCES AND THE SOCIAL STUDIES. (3 cr [max 6 cr]; prereq social studies major and #)

Social sciences as disciplines with specific attention to methods of inquiry, competing structures, and theories; implications for organizing and teaching social studies in secondary schools.

3220. TEACHING AND LEARNING IN THE HEBREW SCHOOL. (3 cr)

Methods, materials, techniques relating Hebrew to other subjects learned in Hebrew schools; microteaching practice; curriculum development and evaluation.

3320. BASIS FOR INSTRUCTION IN LANGUAGE IN SECONDARY ENGLISH CURRICULA. (3 cr; prereq Engl 5851)

Implications of recent developments in linguistic theory for English language instruction; special attention to studies of oral and written language development of children and adolescents; relevance of instruction in grammar(s); nonstandard dialects; review of language materials used in schools; practice in development of materials and short instructional episodes.

3325. INSTRUCTIONAL PRACTICE IN ENGLISH, SPEECH, AND THEATRE ARTS. (4 cr)

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.

3326. TEACHING ADOLESCENT LITERATURE. (3 cr; prereq 3150, 3155)

Methods and materials at secondary level; literature for adolescents; techniques for discussion, planning and evaluating units; reading interests.

3327. TEACHING OF WRITING IN THE SECONDARY SCHOOL. (3 cr; prereq 3150, 3155)

Sources and procedures for developing curriculum objectives and materials related to the teaching of written composition; attention to prewriting procedures; relational processes of composing; forms and functions of discourse; survey of research findings related to the evaluation of student writing.

3331. INTRODUCTION TO TEACHING READING IN THE CONTENT AREAS. (3 cr)

Problems encountered, objectives sought, methods and materials useful for advancing the reading skills of secondary students in regular classes.

3334. TEACHING SECOND LANGUAGES. (6 cr; prereq education student)

3335. TEACHING SECOND LANGUAGES. (3 cr)

3336. TEACHING SECOND LANGUAGES. (3 cr; prereq major in second languages and cultures)
Issues in language teaching and learning methodology; innovative approaches, student-centered classrooms, teacher-student interaction and classroom management practices for communicative language teaching, strategies for teaching culture, testing proficiency.

3348, 3349, 3350. TEACHING SOCIAL STUDIES IN THE SECONDARY SCHOOL. (3 cr each; prereq social studies major)

3356. TEACHING SECONDARY SCHOOL SCIENCE. (2 cr; prereq jr, 5 cr introductory psychology, #3155)

Procedures in selecting and organizing materials and in teaching secondary school science.

3357. TEACHING SECONDARY SCHOOL SCIENCE. (4 cr; prereq science major or minor and for majors, 3356 and #3152)

Procedures in selecting and organizing materials for teaching secondary school science.

3365. TEACHING SECONDARY SCHOOL MATHEMATICS. (4 cr; prereq 3150, 3155, #3152 for 2 cr)

Methods, materials, curriculum, and principles of learning pertinent to secondary school mathematics.

3366. COMPUTER-ASSISTED MATHEMATICS INSTRUCTION. (4 cr; prereq 3155 and Math 1231 or one year of calculus)

Programming in the BASIC language; use of timesharing and microcomputers in high school mathematics; evaluation of computer-based curriculum materials; applications of computing in the curriculum.

3368. TEACHING SECONDARY SCHOOL MATHEMATICS. (3 cr; prereq 3365, 3366)

Methods, materials, curriculum, and principles of learning pertinent to secondary school mathematics.

3600. STUDENT TEACHING. (Cr ar; S-N only; prereq Δ)

Supervised teaching for students wishing to elect credits in student teaching in addition to regular requirements.

3621. DIRECTED EXPERIENCES IN TEACHING ENGLISH, SPEECH, AND THEATRE ARTS. (6-9 cr; S-N only; prereq 3325, #)

3631. STUDENT TEACHING IN SECOND LANGUAGES. (3, 6, 9, or 12 cr; S-N only)

3641. STUDENT TEACHING IN SOCIAL STUDIES. (3 to 15 cr [max 15 cr]; S-N only; prereq 3350, sr)

3651. STUDENT TEACHING IN SCIENCE. (1, 3, 6, 9, or 12 cr; S-N only; prereq sr, 3357 and 4 cr in 3152 and for minors, 3357, #)

3661. STUDENT TEACHING IN MATHEMATICS. (3, 6, 9, or 12 cr; S-N only; prereq 3365 during same yr)

5122. TEACHING CULTURE: THEORY AND APPLICATION. (4 cr; prereq postbaccalaureate or graduate student)

Analysis of the concept; related factors and materials for use in the classroom; culture shock; empathy; culture conflict, awareness, learning.

5132. TECHNIQUES OF INSTRUCTION. (3 cr)
Cross-departmental course designed to develop individual competencies; application of current psychological research to classroom instruction, defining objectives in terms of achievable student competencies.

5145. CLASSROOM MANAGEMENT. (3 cr, §Elem 5145; prereq secondary tchg or admin exper or #)

For teachers, administrators, and support staff working in secondary school programs: focus on management of student behavior, of instruction as it relates to student behavior, and of teacher organizational tasks in the classroom.

5150. ADVANCED METHODS OF TEACHING THE SOCIAL STUDIES. (3 cr)

Advanced methods for social studies teachers; prerequisite to other graduate level courses in social studies education.

5151. SCHOOL-BASED PROJECTS IN SOCIAL STUDIES EDUCATION. (1-12 cr [max 12 cr])

Opportunity to work individually or in teams on curricular, instructional, or evaluation problems within the school.

5152. TECHNIQUES OF INSTRUCTION IN SOCIAL STUDIES. (3 cr)

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 M.A., M.Ed., and Ph.D. candidates.

5153. NEW PERSPECTIVES IN THE SOCIAL STUDIES. (1-3 cr [max 12 cr])

Issues, materials, and instructional techniques related to current topics of particular relevance to social studies teachers.

5155. MATERIALS LABORATORY FOR SOCIAL STUDIES TEACHERS. (3 cr; prereq 5150, 5152)

Locating, developing, and using audiovisual materials, learning programs, and simulations for use in social studies classes.

5156. PRACTICUM IN SOCIAL STUDIES INSTRUCTIONAL TECHNIQUES. (1 cr; prereq 5150, 5152)

Includes production of videotape episodes to demonstrate competency in the use of materials and techniques of instruction; required for all M.A., M.Ed., and Ph.D. candidates.

5164. GLOBAL EDUCATION: CONTENT AND PROCESS. (3 cr, §Elem 5164)

Designed to help classroom teachers and administrators assess current methods and materials and select appropriate evaluation instruments by examination of existing content and methods in global education.

5167. ECONOMIC EDUCATION PROGRAMS. (1-3 cr; prereq Econ 1002 or equiv or #)

Conceptual framework of economic education through analyzing its research, objectives, philosophy, scope, and curricular sequence.

5175. SECONDARY REMEDIAL READING INSTRUCTION. (3 cr; prereq 5344 or Elem 5331 or #)

Principles and techniques for developing and conducting programs for secondary students seriously deficient in reading skills.

5176. CLASSROOM RESEARCH IN ENGLISH EDUCATION AND READING. (3 cr)

Review and analysis of current studies; design and analyses for school-based research.

5177. DIRECTING SECONDARY SCHOOL SPEECH ACTIVITIES. (3 cr)

Philosophy, organization, and administration of extemporaneous speaking, oratory, interpretive reading, and debate.

5184. COMPUTER COURSEWARE EXAMINATION, DEVELOPMENT, AND OTHER MATERIALS EVALUATION IN SECOND LANGUAGES. (4 cr; prereq 3334)

Review of computer use in second language learning; evaluation of tools of access based on proficiency concept-grammars, readers; development and use of evaluation criteria and authoring systems to develop sample courseware.

5185. SCHOOL AND PROFESSIONAL BASED EXPERIENCES IN SECOND LANGUAGES AND CULTURES. (1-12 cr [max 12 cr]; prereq MEd students only)

Opportunity for teachers to work together on curricular, instructional, or evaluation problems; internship experiences; participation in professional activities.

5186. ALTERNATIVES IN SECOND LANGUAGE EDUCATION. (3 cr)

Overview of curricula and instruction in various settings: elementary, secondary, open, free, suburban, and center city schools; bilingual programs, colleges, community colleges, universities, and adult programs including teacher preparation.

Course Descriptions

5189. PLANNING AND ASSESSING SECOND LANGUAGE CURRICULUM. (4 cr)

Development of competencies in curriculum and materials construction; application to lessons, units, modules, courses, levels of instruction in ongoing programs of second language acquisition in schools.

5191. WORKSHOP: TEACHING OF SECOND LANGUAGES AND CULTURES. (1-10 cr [max 10 cr])

Related specifically to the needs of the in-service teacher; topics, location, and duration will be highly flexible.

5194. PERSPECTIVES ON ENGLISH STUDIES IN SCHOOLS. (3 cr)

Nature, development, and future direction; evaluation of the "given-ness" of English studies in the context of widespread ambiguities of tradition, class, and culture.

5196. SECOND LANGUAGE PROFICIENCY: IMPLICATIONS FOR CURRICULUM, INSTRUCTION, EVALUATION. (6 cr; prereq in-service teacher or grad student)

Training in oral interview procedure; examination of implications of procedure for development of curriculum, instructional practices, materials, and evaluation of listening, reading, speaking, writing.

5216. FOUNDATIONS OF BILINGUAL EDUCATION. (4 cr)

Development of bilingual schooling in the U.S.: history, social and political impact, implications of congressional and judicial decisions related to language minority populations, current policy as it affects programs serving populations with limited English proficiency.

5217. PROGRAMS AND CURRICULA IN BILINGUAL EDUCATION. (4 cr; prereq 5216 or #)

Current curricular strategies to instruct language minority students in the U.S. and selected international settings; analysis of styles by program and individual student learning goals; materials for instruction and content focusing on non-English language curriculum; typologies and models of instructional programs; operational variables affecting curricular patterns and program goals.

5218. ASSESSMENT OF LEARNERS WITH LIMITED ENGLISH PROFICIENCY. (4 cr)

Social, political, and educational context. Evaluation vs. research and implications for bilingual schooling, curriculum development, and materials section; existing methods for assessment of language proficiency and academic achievement.

5219. TEACHING READING TO SECOND LANGUAGE LEARNERS. (4 cr)

Reading process in second language; relationship between first and second languages and implications for reading; comprehension development; skill building; assessing second language reading; materials and resources for different languages and levels.

5220. PARENT INVOLVEMENT IN BILINGUAL EDUCATION. (2 cr)

Nature of parent and community involvement; role of family and community in education of language minority children; actualizing parent potential and participation in classrooms and schools.

5227. TEACHING ABOUT THE NEWSPAPER IN THE CLASSROOM. (1-3 cr [max 4 cr], §Elem 5227)

Institution of the newspaper; articulation of a series of useful instructional strategies, curriculum development techniques, and teaching materials.

5320. LITERATURE FOR ADOLESCENTS. (3 cr)

Reading and analysis of fiction and nonfiction; methods for critically assessing quality and appeal; appropriate for secondary English and social studies teachers and librarians.

5321. TEACHING LITERATURE IN SECONDARY SCHOOLS. (3 cr)

Current theory and methods of instruction; research and response to literature and reading; adolescent literature; growth assessment; curriculum design and evaluation.

5322. TEACHING WRITING. (3 cr)

Historical and contemporary context; analysis of composing processes; prewriting and revision; audience analysis; comprehension and coherence; selected problems in assigning and evaluating writing.

5323. PRACTICUM IN DIAGNOSING, ASSESSING, AND TEACHING WRITING IN SECONDARY SCHOOL. (3 cr; prereq 5322 or #5322, education jr, sr, or grad student)

Application of theory and research on composition instruction to analysis of diagnosis of writing samples; evaluation of writing using written or conference feedback; large group writing assessment using different rating scales; development of assignments and curriculum materials for writing instruction.

5324. CURRICULUM PROBLEMS AND ISSUES IN TEACHING THEATRE ARTS IN SECONDARY SCHOOLS. (3 cr)

Philosophy, methods, materials of teaching drama in the curriculum and as an extracurricular activity in secondary schools; theatrical improvisation, including theatre games, sound and motion, characterization, plot structure, and experience with the informal use of scripted plays.

5325. IMPROVISATIONAL DRAMA TECHNIQUES IN THE CLASSROOM. (3-6 cr [max 6 cr])

Experiences in improvisation, including training in beginning theatre games, sound and motion, characterization and plot structure; development of improvisational activities based on themes and literature of subject interest and suited to the needs of students.

5326. TEACHING FILM AND TELEVISION. (3 cr)

Current theory and methods of teaching critical response to film and television; techniques, genres, history, economics; integration and use of short film and Super-8 filmmaking with English and social studies teaching in the classroom.

5340. TEACHING SPEECH AND FORENSICS IN SECONDARY SCHOOL. (3 cr)

Methods of teaching speech and forensics in the high school classroom; attention to social framework of spoken communication; administration and instructional procedures in the high school forensic program.

5344. TEACHING READING IN CONTENT AREAS. (3 cr)

Methods of accommodating student abilities and facilitating reading in regular content classes.

5347. 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.

5349. WORKSHOP: SECONDARY READING INSTRUCTION. (1-12 cr [max 12 cr]; prereq #)

Principles, instructional techniques, and materials for teaching reading in secondary schools. Each offering will focus on a single topic.

5350. CURRENT DEVELOPMENTS IN ENGLISH AND SPEECH EDUCATION. (1-6 cr [max 12 cr])

New instructional approaches, new materials, current issues and problems in English and language arts education. Each offering will focus on a single topic or issue.

5351. DIRECTED STUDY. (Cr ar [max 6 cr]; S-N

optional; prereq #, education or graduate student) Individual or group work on curricular, instructional, or evaluation problems.

5371. CURRICULUM WORKSHOP. (1-3 cr per qtr; prereq 5113 or Elem 5100 or CIsy 5600 or #)

Workshops pertaining to curriculum and instruction with specific topic to be identified at the time workshop is listed for offering.

5382. SECOND LANGUAGE TESTING, ASSESSMENT, AND EVALUATION. (3 cr)

Language proficiency assessment, English as a second language, bilingual education; oral interviews; testing communicative abilities; standardized language measures; building test items; evaluating programs; aptitude and attitude measurement.

5385. PLANNING AND ASSESSING SECOND LANGUAGE INSTRUCTION. (4 cr)

Identifying and assessing teaching competency; use of videotapes, simulation, and analysis to develop concept of teaching as a continuing process from planning through evaluation.

5390. CURRENT DEVELOPMENTS IN SECONDARY SCHOOL SCIENCE TEACHING. (3 cr; prereq 3356, 3357 or equiv undergrad courses or exper

in tchg science) Curricula, methods, materials of instruction, evaluation.

5394. 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 will focus on a single topic for varying credit.

5395. SCHOOL-BASED PROJECTS IN SCIENCE EDUCATION. (1-12 cr [max 12 cr]; prereq MEd student in science education)

Individual or group work on curricular, instructional, or evaluation problems and projects applicable to school situations.

5397. STUDIES IN SCIENCE EDUCATION. (3 cr, \$8887; prereq MEd student, #)

Improvement of science teaching through application of research findings.

5404. LANGUAGE, CULTURE, AND EDUCATION. (4 cr, \$Spch 5404)

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.

5504. THEORETICAL AND RESEARCH BASES FOR THE TEACHING OF WRITING. (4 cr; prereq postbaccalaureate, MEd, or graduate student)

Emerging multidisciplinary perspectives on writing and the teaching of writing, with particular attention to text-grammatical and cognitive science contributions.

5604. PERSPECTIVES ON LITERACY. (3 cr; prereq jr, sr, or grad student)

Sociocultural and sociolinguistic perspectives emphasizing problematic status of traditional concepts of literacy and education for literacy.

5615. PRACTICUM IN SECONDARY READING: TUTORING REMEDIAL STUDENTS. (3 cr [max 9 cr]; prereq #)

Supervised experience in diagnosing; planned individual instruction and teaching secondary students with reading difficulties.

5659. SCHOOL-RELATED PROJECTS IN LANGUAGE ARTS. (1-12 cr [max 12 cr]; prereq MEd student in English education)

Individual or group work on curricular, instructional, or evaluation problems and projects applicable to school situations.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8104. CURRICULUM DEVELOPMENT IN THE SOCIAL STUDIES**8187. SECOND LANGUAGE TEACHING IN THE CLASSROOM: THEORY AND APPLICATION****8188. INFORMATION SOURCES AND RESEARCH IN SECOND LANGUAGE LEARNING AND TEACHING**

Course Descriptions

8362. RESEARCH IN SOCIAL STUDIES

8364. SEMINAR: SOCIAL STUDIES EDUCATION

8387. SEMINAR: SECOND LANGUAGE EDUCATION

8673. INTERNSHIP: COLLEGE TEACHING IN SOCIAL STUDIES EDUCATION

8801. PROBLEMS: TEACHING SOCIAL STUDIES

8871. PROBLEMS: CURRICULUM CONSTRUCTION

8887. RESEARCH FOUNDATIONS OF SECONDARY SCHOOL SCIENCE TEACHING

8892. INTRODUCTION TO RESEARCH IN ENGLISH EDUCATION AND READING

8893. SEMINAR: ADVANCED TOPICS IN ENGLISH-LANGUAGE ARTS EDUCATION

8894. PROBLEMS: SECOND LANGUAGES AND CULTURES EDUCATION

8895. READINGS IN ENGLISH EDUCATION

8896. PROBLEMS: TEACHING ENGLISH

8897. RESEARCH IN ENGLISH AND SPEECH EDUCATION

8898. READINGS IN SECOND LANGUAGES AND CULTURES EDUCATION

8899. SEMINAR: RESEARCH IN SCIENCE EDUCATION

Educational Policy and Administration

Educational Administration (EdAd)

5101. PUBLIC SCHOOL ADMINISTRATION. (3 cr; not open to majors in educational administration; prereq 9 cr in education; S-N optional)
Organization, administration, and general support of public schools in state and local school districts.

5103. SUPERVISION AND ADMINISTRATION OF SPECIAL EDUCATION. (3 cr, §EPsy 5660 or PsyS 5160; prereq #; S-N optional)
Procedures in establishing and improving educational programs for exceptional children.

5105. WORKSHOP: ADMINISTRATION AND SUPERVISION OF SPECIAL EDUCATION. (1-6 cr; S-N optional)
Laboratory approach to common administrative and supervisory problems for experienced administrators of special needs programs.

5110. PERSONAL TIME MANAGEMENT AND ADMINISTRATION. (2 cr; S-N optional)
Application of proven practical and pragmatic techniques to problems of personal and administrative scheduling, organizing, delegating, prioritizing, handling interruptions and meetings; doing the distasteful and difficult; increasing self- and staff productivity; developing new concepts and techniques of management.

5120. PRACTICUM: POSTSECONDARY ADMINISTRATION. (3-6 cr [max 6 cr])
Intensive group and individual examination of current and pertinent administrative problems in postsecondary but nonbaccalaureate institutions.

5125. PRINCIPAL-CONSTITUENT DECISION MAKING. (3 cr)
For school administrators and those preparing for administrative positions in educational institutions; focus on administrator's role in large group, small group, and dyadic interaction decision making; role playing, simulation, and case study analysis.

5127. WORKSHOP: POLICY DEVELOPMENT FOR SCHOOL MANAGERS. (3 cr; S-N optional)
Elements of feedback control applied to policy development and implementation in education; policies for instructional management, personnel administration, and fiscal control; implementation plans and procedures for analysis of policy impact.

5128. WORKSHOP: EDUCATIONAL ADMINISTRATION. (1-6 cr; S-N optional)
Opportunities through laboratory approach for experienced administrators to concentrate their study on common administrative and supervisory problems.

5130. ADMINISTRATOR DEVELOPMENT SEMINAR. (3-9 cr [max 9 cr]; S-N optional)
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 students pursuing professional licensure programs.

5139. LABORATORY IN DECISION MAKING. (1-4 cr; S-N optional)
Contribution of recent research and theory to effective administration; analysis of administrative behavior in realistic settings and relations of administration to human behavior.

5140. ADMINISTRATION OF EARLY EDUCATION PROGRAMS. (3 cr; S-N optional)
Issues and skills relevant to an administrator who directs a preschool program or the student planning a leadership position in early education.

5167. THE AMERICAN MIDDLE SCHOOL. (3 cr; S-N optional)
Sources of the movement; purposes, functions, and limitations; fundamental problems, types, and curricular implications of reorganization.

5180, 5181. SEMINAR: ADMINISTRATION OF SPECIAL EDUCATION. (3 cr each qtr, §EPsy 8760, 8761; S-N optional; prereq 5103 or EPsy 5660 or #)
Problems of administration and organization of special education programs.

5200. DESIGN AND MANAGEMENT OF EDUCATION SERVICES. (3 cr; S-N optional)
Educational services offered by schools, hospitals, industries, government agencies; contemporary technology, roles, authority systems, communication networks; resource-policy relationships, evaluation and management of activities of clients and staff members.

5202. POLITICS OF EDUCATION. (3 cr, §EdAd 8202, §SPFE 5202, §SPFE 8202; S-N optional)
Social science findings, concepts, and methods used to consider political context of educational administration; public school policy making by local and state governments; role of administrators.

5203. THE COMMUNITY SCHOOL. (3 cr, §8203; S-N optional)
Changing structure and process in school organization; evolving team model; multiple skills process in socialization.

5210. FINANCING ELEMENTARY AND SECONDARY SCHOOLS. (3 cr, §8210; S-N optional)
Value assumptions and educational finance policy, economic factors, sources and characteristics of educational revenue, state and local distribution systems, federal support, urban/rural variations, institutional financing alternatives.

5212. SCHOOL BUDGETING. (3 cr, §8212)
Concepts and skills involved in preparing financial budgets for public schools; competency in translating educational programs into budgetary systems, anticipating revenue receipts, planning expenditures, and techniques for preparing balanced budget.

5213. FINANCIAL RESOURCE MANAGEMENT. (3 cr, §8213)
Concepts and skills involved in management of financial resources in public schools; performance exercises related to public school accounting systems, purchasing, controller function, and reporting and interpreting school financial data.

5214. SCHOOL MANAGEMENT INFORMATION SYSTEMS. (3 cr, §8214)
Basic techniques required to generate, maintain, and make accessible the computer-based management information system in education.

5224. LEGAL IMPLICATIONS OF ACTS BY SCHOOL BOARDS, ADMINISTRATORS, AND TEACHERS. (3 cr, §8224)
Constitutional, statutory, and common law bases of school administration; principles growing out of fundamental legal procedures.

5225. EDUCATIONAL POLICY AND THE LAW. (3 cr, §8225)
Analysis of court decisions, statutes, and administrative regulations related to equality of educational opportunity and equal protection under the law.

5226. EDUCATIONAL FACILITIES PLANNING. (3 cr, §8226; S-N optional)
Planning educational facilities for public and private school systems and institutions of higher education.

5227. PUBLIC SCHOOL PERSONNEL PROGRAMS. (3 cr, §8227; S-N optional)
Selection, assignment, evaluation, and development of school personnel; salary and conditions of service; policies of administrative, instructional, and non-instructional personnel.

5230. PUBLIC RELATIONS FOR SCHOOL ORGANIZATIONS. (3 cr, §8230; S-N optional)
Concepts central to public relations programs in education, studied in selective theoretical contexts relevant to administrative leadership.

5231. PRACTICUM: PUBLIC RELATIONS FOR SCHOOL ORGANIZATIONS. (1-4 cr; S-N optional)
Practical experience in design and use of basic tools in a program such as conducting community analysis; preparing copy and news releases; meeting, working with material for the press, radio, and television; planning school publications; opinion polling and personal conferences.

5233. PRACTICUM: MIDDLE SCHOOL ADMINISTRATION. (1-4 cr; S-N optional)
Projects such as articulation with elementary and senior high school; organizing to meet the needs of the preadolescent; activity programs; guidance functions.

5250. AMERICAN HIGHER EDUCATION. (4 cr, §Educ 5250, §HiEd 5250; S-N optional)
American higher and postsecondary education in historical and contemporary perspective; special emphasis on societal and political demands on higher education system, consequent changes in its forms and functions.

5274. TWO-YEAR POSTSECONDARY INSTITUTIONS. (3 cr, §8274, §VoEd 5274; S-N optional)
Present status, development, functions, organization, curriculum, and trends in postsecondary but nonbaccalaureate institutions.

5275. TWO-YEAR COLLEGE ADMINISTRATION. (3 cr, §8275; prereq 5274 or VoEd 5274; S-N optional)
Selected topics and problems associated with administration, administrative positions, and organization of postsecondary but nonbaccalaureate institutions.

5280. INTRODUCTION TO THE ECONOMICS OF EDUCATION. (4 cr, §SPFE 5180; S-N optional)
Economic impact of education on educational markets, prices and production relationships, distribution of income, and investment and cost-benefit analysis in education.

5292. THE LAW AND POSTSECONDARY EDUCATIONAL INSTITUTIONS. (3 cr, §HiEd 5292)
Analysis of court opinions and federal regulations affecting postsecondary institutions.

Course Descriptions

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

- 8215. THE ELEMENTARY SCHOOL PRINCIPALSHIP
- 8216. RECENT RESEARCH IN ELEMENTARY SCHOOL ADMINISTRATION
- 8217. SEMINAR: ELEMENTARY SCHOOL ADMINISTRATION
- 8218. SEMINAR: THE SOCIAL ORGANIZATION OF SCHOOLS
- 8219. SEMINAR: APPLIED HUMANISM IN ADMINISTRATIVE BEHAVIOR (THE CLASSICAL PERSPECTIVE)
- 8220. QUANTITATIVE FOUNDATIONS FOR MANAGEMENT METHODS
- 8221. QUANTITATIVE MODELS FOR PROGRAM ANALYSIS AND RESEARCH
- 8223. QUANTITATIVE TECHNIQUES FOR DECISION MAKING
- 8228. PROBLEMS: HIGHER EDUCATION
- 8229. SEMINAR: HIGHER EDUCATION
- 8234. SEMINAR: EDUCATIONAL FINANCE
- 8235. SEMINAR: APPLIED HUMANISM IN ADMINISTRATIVE BEHAVIOR (THE MODERN PERSPECTIVE)
- 8236. SEMINAR: EDUCATIONAL FACILITIES PLANNING
- 8237. SEMINAR: THEORY AND RESEARCH IN EDUCATIONAL LAW
- 8238. SEMINAR: THEORY AND RESEARCH
- 8240. SEMINAR: CLINICAL EXPERIENCES IN EDUCATIONAL ADMINISTRATION
- 8241. SEMINAR: INTERNSHIP IN EDUCATIONAL ADMINISTRATION
- 8242. SEMINAR: PUBLIC SCHOOL PERSONNEL PROGRAMS
- 8247. SEMINAR: SCHOOL DISTRICT POLITICS
- 8248. SEMINAR: METROPOLITAN SCHOOL GOVERNANCE
- 8253. ADMINISTRATION IN HIGHER EDUCATION
- 8264. THE SECONDARY SCHOOL PRINCIPALSHIP
- 8265. ADMINISTERING THE HIGH SCHOOL PROGRAM

- 8270. PROBLEMS: ELEMENTARY SCHOOL ADMINISTRATION
- 8271. PROBLEMS: SECONDARY SCHOOL ADMINISTRATION
- 8272. PROBLEMS: EDUCATIONAL ADMINISTRATION
- 8273. FIELD STUDY
- 8276. SEMINAR: ADMINISTRATION OF CURRICULUM IN THE TWO-YEAR COLLEGE
- 8278. RECENT RESEARCH IN TWO-YEAR COLLEGE ADMINISTRATION
- 8290. FINANCING HIGHER EDUCATION

Educational Policy and Administration (EdPA)

- 5201. FORMAL ORGANIZATIONS IN EDUCATION. (3 cr, §EdAd 5201, §8201; S-N optional)
Introduction to classical and current theories of organizational behavior and administration in education. Leadership and control, communication, conflict, the effects of educational environments, organizational design and change, and organizational effectiveness.
- 5260. INTRODUCTION TO EDUCATIONAL PLANNING. (3 cr; S-N optional)
Principles, tools, and emerging issues in higher and elementary/secondary education settings, including decision-making models, strategic planning, forecasting, program planning, and short-range planning.
- 5281. COST ANALYSIS IN EDUCATIONAL EVALUATION. (3 cr; S-N optional)
Use and application of cost-effectiveness, cost-benefit, cost-utility, and cost-feasibility in evaluation of educational problems and programs.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

- 8340. POLICY SYSTEMS IN EDUCATION
- 8341. ANALYSIS OF EDUCATION POLICY SYSTEMS

Higher Education (HiEd)

- 5250. AMERICAN HIGHER EDUCATION. (4 cr, §Educ 5250, §EdAd 5250; S-N optional)
American higher and postsecondary education in historical and contemporary perspective; special emphasis on societal and political demands on higher education system, consequent changes in its forms and functions.

5292. THE LAW AND POSTSECONDARY INSTITUTIONS. (3 cr, §EdAd 5292)

Analysis of court opinions and federal regulations affecting postsecondary educational institutions.

5540. SEMINAR: THE COLLEGE STUDENT. (3 cr, §EPsy 5451, §PsyS 5540; S-N optional; prereq 6 cr in psychology or educational psychology)

Psychology and sociology of college students; research concerning diversity of populations, vocational development of students; student society, culture, mental health, underachievement, dropouts, values and attitudes; relevant research methods.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8228. PROBLEMS: HIGHER EDUCATION

8229. SEMINAR: HIGHER EDUCATION

8230. SEMINAR: DISSERTATION RESEARCH IN HIGHER EDUCATION

8250. THE HIGHER EDUCATION INSTITUTION: ORGANIZATION AND ENVIRONMENT

8251. DEVELOPMENT AND EVALUATION OF ACADEMIC PROGRAMS

8252. INSTRUCTION AND LEARNING IN HIGHER EDUCATION

8253. SEMINAR: IMPROVEMENT OF COLLEGE INSTRUCTION

8254. DIRECTED EXPERIENCE IN COLLEGE INSTRUCTION

8255. ADMINISTRATION IN HIGHER EDUCATION

8290. FINANCING HIGHER EDUCATION

Social and Philosophical Foundations of Education (SPFE)

5090. SCHOOL AND SOCIETY. (3 cr, §3090; prereq sr or postbaccalaureate student in education)

Readings in social science and philosophy give the student opportunity to integrate points of view in thinking about the role of the school in a changing American society.

5099. DIRECTED STUDY. (Cr ar [max 9 cr]; S-N optional; prereq #)

Individual or group work on topics or problems in social and philosophic foundations of education.

5101. HISTORICAL FOUNDATIONS OF MODERN EDUCATION. (3 cr; S-N optional)

Analysis and interpretation of important elements in modern education derived from the Greeks, the Romans, the Middle Ages, and the Renaissance. Background course for all other courses in the history and philosophy of education.

5102. EDUCATION IMAGERY IN EUROPE AND AMERICA. (3 cr; S-N optional)

Images and ideas of education expressed in the visual arts of Western civilization (antiquity to 20th century) in relation to concurrent educational thought and practice; symbolism, myth, propaganda, didacticism, genre, caricature.

5120. HISTORY OF CHILDHOOD EDUCATION. (3 cr; S-N optional)

Childhood education in Western civilization; emphasis on images, symbols, ideas important to educational theory and practice in home and school.

5125. YOUTH IN MODERN SOCIETY. (4 cr, §Soc 5952; S-N optional)

Youth in advanced societies and as a social entity; functions and roles in industrial society, family, education, politics and government, economy and work, welfare, and religion; organizations, social movements, and subcultures; empirical research and cross-cultural perspectives.

5131. COMPARATIVE EDUCATION. (3 cr; S-N optional)

European, Asiatic, and American systems and philosophies of education; possibilities of international education.

5141. CRITICAL ISSUES IN CONTEMPORARY EDUCATION. (3 cr; S-N optional)

Introduction to ideas involved in current theory and practice.

5155. HISTORY OF WESTERN EDUCATIONAL THOUGHT. (3 cr; S-N optional)

Major educational classics of Western civilization; Plato, Aristotle, Cicero, Quintilian, Montaigne, Milton, Locke, Rousseau, and others.

5156. HISTORY OF IDEAS IN AMERICAN EDUCATION. (3 cr; S-N optional)

Readings in American political, economic, and social development related to education; reference to the emerging system of public education. Recommended as background for 5170 but not a prerequisite.

5170. AMERICAN PRAGMATISM AND EDUCATION. (3 cr; S-N optional)

Analysis and interpretation of the educational philosophy of pragmatism (experimentalism); readings from Dewey, Kilpatrick, Bode, Counts, Childs, and others.

5171. ANTHROPOLOGY AND EDUCATION. (4 cr, §Anth 5145; S-N optional)

Cross-cultural perspectives in examining educational patterns, the implicit and explicit cultural assumptions underlying them; methods and approaches to cross-cultural studies in education.

5172. ANTHROPOLOGY OF AMERICAN EDUCATION. (3 cr, §Anth 5144; S-N optional; prereq Δ)

Application of anthropological principles to study of socialization, schooling, and cultural transmission in the United States; utility of anthropological concepts for the study of our own education systems and analysis of educational change.

Course Descriptions

5174. FIELD METHOD FOR THE STUDY OF EDUCATION. (4 cr; S-N optional; prereq 5171 or 5172 or Anth 5145 or 5144 or 1502)

Practice in aspects of field methodology below the level of full field study; detailed reading; analysis of studies in anthropology and education for methodological content.

5175. INTRODUCTION TO SYSTEMS THEORY IN SOCIAL SCIENCE AND EDUCATION. (3 cr; S-N optional)

Fundamental aspects of general systems theory; readings; basic modeling techniques.

5176. ETHNOGRAPHIC RESEARCH SKILLS LABORATORY. (2 cr; prereq 5174; S-N only)

Introduction to processes of creating evaluative design; supervised practice in data analysis, use of theory, proposal writing, reporting.

5180. INTRODUCTION TO THE ECONOMICS OF EDUCATION. (4 cr, \$EdAd 5280; S-N optional)

Economic impact of education on educational markets, prices and production relationships, distribution of income, and investment and cost-benefit analysis in education.

5182. COMPARATIVE PHILOSOPHIES OF EDUCATION. (3 cr; S-N optional)

Examination of competing philosophies of education.

5190. SOCIOLOGY OF EDUCATION. (4 cr, \$Soc 5953; S-N optional)

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.

5191. PROFESSIONALIZATION AND TEACHING. (3 cr; S-N optional)

Process, social history, and ideology; role of teacher organizations; forms of militancy; comparison with professionalism in other occupations.

5192. SOCIOLOGY OF HIGHER EDUCATION. (4 cr, \$Soc 5958; S-N optional; prereq introductory statistics or #)

Advanced studies in social aspects of higher education; socialization of students, comparative institutional organization, role structure; emphasis on theory and empirical research.

5202. POLITICS OF EDUCATION. (3 cr, \$EdAd 5202, SPFE §8202, \$EdAd 8202; S-N optional)

Social science findings, concepts, and methods used to consider political context of education administration; public school policy making by local and state governments; role of administrators.

5209. EDUCATION IN FUTURE SOCIAL SYSTEMS. (3 cr, \$5212; S-N optional)

Interdisciplinary inquiry into problems of social specialization and generalization; projections and analysis of long-range (30 years or more) social and technological trends related to education.

5210. SOCIAL FORECASTING AND EDUCATIONAL FUTURES. (3 cr; S-N optional)

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.

5211. SOCIAL DESIGN AND EDUCATIONAL FUTURES. (3 cr; S-N optional)

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.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8170. SEMINAR: RESEARCH METHODS IN ANTHROPOLOGY AND EDUCATION

8172. SEMINAR: TOPICS IN ANTHROPOLOGY AND EDUCATION

8220. SEMINAR: SOCIAL AND EDUCATIONAL FUTURES

8241. PROBLEMS: HISTORY AND PHILOSOPHY OF EDUCATION

8242. SEMINAR: EDUCATIONAL PHILOSOPHY

8255. SEMINAR: EUROPEAN AND AMERICAN EDUCATIONAL THOUGHT: 16TH AND 17TH CENTURIES

8256. SEMINAR: EUROPEAN AND AMERICAN EDUCATIONAL THOUGHT: 17TH CENTURY

8260. SEMINAR: SOCIAL AND PHILOSOPHIC FOUNDATIONS OF EDUCATION

8290. ADVANCED SOCIOLOGY OF EDUCATION

8991. PROBLEMS: SOCIOLOGY OF EDUCATION

Educational Psychology (EPsy)

1604. WORKSHOP: DEVELOPING EDUCATIONAL AND HUMAN SERVICE PROGRAMS.

(Cr ar, \$PsyS 1304; S-N only)

Concepts, issues, practices; development of educational and psychological support services in school and human service settings. For persons in paraprofessional positions.

3131. INTRODUCTION TO HUMAN RELATIONS. (3 cr, \$PsyF 3380; prereq education jr or sr; S-N only)

Based on small-group training theory and methods. Designed to help students develop an understanding of her or his own behavior, behavior of other individuals, and group and organizational behavior.

3220. INTRODUCTION TO MEASUREMENT AND STATISTICS. (2-3 cr, \$PsyF 3102; prereq 5 cr introductory psychology)

Measures of central tendency, variability, and correlation; principles of test construction.

3606. EXCEPTIONAL STUDENTS IN REGULAR CLASSES. (2 cr, \$5606, \$PsyS 3106, \$PsyS 5106)

Policies and procedures for teaching handicapped and gifted students in regular school settings; exposure to special curriculum adaptations; collaborative roles of regular and special education teachers, parents, pupil personnel workers, and other educators.

5110. INTELLIGENCE. (3 cr, \$PsyF 5147)

Theories of intelligence; its development; implications for educational practices and psychological research.

5111. PSYCHOLOGY AND PEDAGOGY OF READING. (3 cr, \$PsyF 5148)

Physiological, psychological, and linguistic factors influencing beginning and fluent reading; implications for instruction.

5112. KNOWING, LEARNING, AND THINKING. (4 cr, \$PsyF 5152)

Principles of human information processing; issues in memory and thought; discussion of mental operations in comprehension and understanding; analysis of intellectual structures supporting problem solving in applied settings.

5113. INTRODUCTION TO THE PSYCHOLOGY OF INSTRUCTION. (3 cr, \$PsyF 5153)

Survey of psychological factors in design of instruction; performance criteria, strategy, and sequence in research contexts; development and implementation activities in instructional techniques, technologies, and delivery systems; psychological processes relevant to measures of effectiveness in teaching-learning environment.

5114. PSYCHOLOGY OF STUDENT LEARNING. (3 cr, \$PsyF 5182)

Survey of psychological methods and principles; models of learner; topics in development, creativity, intelligence, and motivation; implications for teaching and curriculum design in preschool, elementary, and secondary education; professional training with children and adolescents as clients.

5115. ADULT LEARNING AND EDUCATIONAL PRACTICE. (4 cr, \$PsyF 5183)

Survey of psychological methods and principles in human learning; models of adult learner, topics in motivation, creativity, achievement, intelligence; implications for teaching and curriculum design in higher education, continuing education, and professional training.

5116. BEHAVIOR ANALYSIS IN EDUCATION. (4 cr, \$PsyF 5149)

Practical applications of reinforcement theory; behavior analysis, precision teaching, programmed instruction.

5117. PROBLEM ANALYSIS AND DECISION MAKING. (4 cr, \$PsyF 5570)

Literature from decision research contrasted with literature in problem solving from cognitive psychology and psychology of information processing; improvement in decision making through consideration of training, allocation of work, and decision aids.

5118. INDIVIDUAL DIFFERENCES AND EDUCATIONAL PRACTICE. (4 cr, \$PsyF 5581; prereq 5221, PsyF 5121, or #)

Student characteristics (age, sex, personality, ethnicity, cognitive styles) as they relate to performance differences. Methods and models for using student characteristics to improve learning and development.

5130. PERSONALITY AND SOCIAL DEVELOPMENT. (3 cr, \$PsyF 5162; prereq 5 cr introductory psychology)

Major concepts and research findings in adjustment and development, with special emphasis on educational implications.

5135. WORKSHOP IN HUMAN RELATIONS. (6 cr, \$PsyF 5305; S-N only)

Experientially based course including simulation activities, curriculum writing, and supervised practice in basic human relation skills, emphasizing individual, cultural, and ethnic differences and their implications for educational practice.

5150. SOCIAL PSYCHOLOGY OF EDUCATION. (4 cr, \$PsyF 5170)

Concepts and theories applied to educational problems and settings; laboratory sessions to make applications and develop skills in group behavior.

5151. STRUCTURING LEARNING: SOCIAL PSYCHOLOGICAL APPROACHES. (3 cr, \$PsyF 5172)

How to use cooperation, competition, and individualization to affect learning climate and cognitive and affective outcomes of instruction.

5152. ISSUES IN SCHOOL DESEGREGATION. (4 cr, \$PsyF 5173; prereq survey course in social psychology or #)

Policy, methods, theory, research; emphasis on outcomes for children.

5153. WORKSHOP: IMPROVEMENT OF SCHOOL SUPPORT SERVICES. (1-12 cr [max 12 cr]; prereq #)

Topics appropriate to activities and interest of participants; each offering will focus on current problems.

5217. EDUCATIONAL RESEARCH COLLOQUIUM. (1 cr [max 6 cr]; S-N only)

Planned presentations for faculty and students of contemporary educational research by researchers.

5220. EDUCATIONAL MEASUREMENT IN THE CLASSROOM. (4 cr, \$PsyF 5120; S-N optional)

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.

Course Descriptions

5221. BASIC PRINCIPLES OF MEASUREMENT. (3 cr, \$PsyF 5121; prereq 5260 or 8260 or PsyF 5110 or 8110; S-N optional)

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.

5240. PRINCIPLES AND METHODS OF EVALUATION. (3 cr, \$PsyF 5125; S-N optional)

Introductory course in program evaluation; theory; practical examples; purpose, roles, program descriptions, and evaluation strategies.

5243. PRACTICUM: INSTRUMENTS AND PROCEDURES FOR EVALUATION. (3 cr, \$PsyF 5621; prereq 5221, 5240 or PsyF 5121 or PsyF 5125 or equiv; S-N optional)

Developing curriculum evaluation instruments and procedures, with introduction to methods and theories. Focus on identifying evaluation problems, developing and implementing techniques for their solution.

5246. EVALUATION COLLOQUIUM. (1 cr [max 6 cr]; S-N only)

Informal seminar of faculty and students interested in problems of evaluation.

5260. INTRODUCTORY STATISTICAL METHODS. (4 cr, \$PsyF 5110; S-N optional)

Techniques for organizing and presenting data; descriptive indices of central tendency, variability, and bivariate correlation/regression; procedures for making inferences concerning means and proportions.

5261. APPLIED MATRIX AND VECTOR CONCEPTS. (1 cr, \$PsyF 5111; S-N only)

Introduction to concepts and operations; applications in multiple regression, factor analysis of variance.

5262. STATISTICAL METHODS COMPUTER LABORATORY. (2 cr, \$PsyF 5112; prereq 5260 or PsyF 5110 or equiv; S-N only)

Practical experience using time-sharing computer language MINITAB; applications of introductory statistical methods and concepts to data files.

5280. COMPUTER PROGRAMMING: PASCAL. (3 cr, \$PsyF 5330; prereq sr; S-N optional)

Computer as a tool for research in behavioral sciences. Pascal is taught for both micro and mainframe; laboratory experience.

5281. INTRODUCTION TO COMPUTER OPERATIONS: U OF M SYSTEMS, SPSS. (1 cr, \$PsyF 5333; S-N only)

Procedures for operation of batch and interactive computers; emphasis on statistical packages for social sciences (SPSS).

5400. WORKSHOP: COUNSELING PSYCHOLOGY. (1-6 cr [max 12 cr])

For counselors, teachers, and administrators. Aspects of intervention theory in relation to psychological principles; counseling, career development, assessment, psychological education, and consultation.

5401. COUNSELING PROCEDURES. (3 cr, \$PsyS 5110)

For persons whose professional work includes counseling and interviewing; not for licensure as school counselor. Emphasis on counseling relationship and principles of interviewing; case studies, role playing, and demonstration.

5402. COUNSELING PROCEDURES II. (3 cr, \$PsyS 5111; prereq 5401 or PsyS 5110)

Analysis of type of client and stage of counseling; isolation of chain of interactions between client and counselor described and practiced; appropriate techniques.

5410. INTRODUCTION TO GUIDANCE. (3 cr, \$PsyS 5130)

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.

5411. GROUP PROCEDURES IN GUIDANCE. (3 cr, \$PsyS 5131; prereq 9 cr education, 5410 or PsyS 5130 or #)

Content and materials for homeroom groups, occupation units, and other guidance courses in junior and senior high school.

5417. CLINICAL USE OF TESTS IN PSYCHOLOGICAL SERVICES. (3 cr; prereq 5260 or PsyF 5110 or Psy 3801, 5221 and PsyF 5121 or Psy 5862 or #)

Psychological theories related to test interpretation and counseling process; critical review and selection of standardized tests.

5422. GROUP COUNSELING: PRINCIPLES AND PROCEDURES. (3 cr, \$PsyS 5320; prereq course in counseling theory)

Basic principles of group dynamics related to group counseling process; emphasis on developing concepts, attitudes, and skills. Theory and laboratory experiences included.

5430. FOUNDATIONS OF CAREER DEVELOPMENT. (3 cr, \$PsyS 5210)

Introduction to theory, research, practice; examination of concepts of work, work values, career and career education; application of theory and research to career guidance practice in educational, industrial, and community agency settings.

5431. CAREER DEVELOPMENT: THEORY AND COUNSELING APPLICATIONS. (3 cr, \$PsyS 5331)

Provides students in counseling and allied fields with background. Emphasis on counseling skills; work and other life values, counseling process, planning and decision making, information and employment trends, sex equity in career options, needs of specific groups.

5432. CAREER DEVELOPMENT PROGRAMS AND ORGANIZATIONAL CHANGE. (3 cr, \$PsyS 5332; prereq 5430 or 5431 or PsyS 5210 or PsyS 5331 or equiv or #)

Provides knowledge and skills to create and implement programs for a variety of populations and settings; a life-roles concept integrated with systematic model of program development; consultation process, organizational intervention, and race, age, and gender issues.

5433. DEVELOPMENTAL CAREER COUNSELING OF WOMEN. (3 cr, \$PsyS 5310; S-N optional) Counseling skills and interventions to facilitate career development of girls and women at different life stages; sex role system, female socialization and stereotyping; facts, myths, and trends regarding women's changing roles in technological society; issues of sexism in strategies and programs.

5434. COUNSELING ADULTS IN TRANSITION. (3 cr) Theoretical and empirical knowledge to provide bases for analyzing adaptation to transitions; applications of counseling interventions and training in coping skills to cases of life change.

5451. SEMINAR: THE COLLEGE STUDENT. (3 cr, \$PsyS 5540, \$HiEd 5540; prereq 6 cr psychology or educational psychology) Psychology and sociology of college students; research concerning diversity of populations, vocational development of students, student society, culture, mental health, underachievement, dropouts, values and attitudes; relevant research methods.

5461. CROSS-CULTURAL COUNSELING. (3 cr, \$PsyS 5505; prereq #) Effect of cross-cultural and cross-national differences in counseling processes.

5471. SEMINAR: PSYCHOLOGICAL EDUCATION. (3 cr [max 9 cr]; prereq #) Review of curriculum programs in psychological/affective education including achievement training, sensitivity groups, psychological and moral education. Not intended to meet licensure requirements in school psychology.

5542. PRACTICUM IN GROUP COUNSELING. (1-6 cr [max 6 cr]; prereq 5422 or PsyS 5320 or equiv, #) Supervised practice in counseling several groups, preferably in setting in which student intends to work. Emphasis on systematic evaluation of progress through direct observations and tapes and on skill development in interpersonal perception, communication, and research.

5571. PRACTICUM: PSYCHOLOGICAL EDUCATION. (1-3 cr [max 9 cr]; prereq #) Practice designing and implementing programs in psychological/affective education. Not intended to meet licensure requirements in school psychology.

5600. CHILDHOOD LANGUAGE DEVELOPMENT: CLASSROOM IMPLICATIONS. (3 cr, \$PsyS 5100) Recent trends and findings in study of language acquisition; classroom implications for education of exceptional children.

5601. EDUCATION OF EXCEPTIONAL CHILDREN. (4 cr, \$PsyS 5101) Introduction to field of special education for classroom teachers and other school personnel.

5604. SOCIAL AND VOCATIONAL DEVELOPMENT OF HANDICAPPED STUDENTS. (4 cr, \$PsyS 5104) Organization and design of training programs to promote independent living, vocational and community adjustment of handicapped persons; curriculum materials and methods at adolescent and adult levels.

5605. LAW AND THE HANDICAPPED: IMPLICATIONS FOR EDUCATION. (2-4 cr, \$PsyS 5105) Analysis of recent litigation and legislation; emphasis on implementation of right to education, right to treatment, labeling, due process, and related issues.

5606. EXCEPTIONAL STUDENTS IN REGULAR CLASSES. (2 cr, \$3606, \$PsyS 3106 or PsyS 5106) Policies and procedures for teaching handicapped and gifted students in regular school settings; exposure to special curriculum adaptations; collaborative roles of regular and special education teachers, parents, pupil personnel workers, and other educators.

5607. MAINSTREAMING: ISSUES IN INDIVIDUALIZING INSTRUCTION. (3-5 cr, \$PsyS 5107) Mandate for, implications of, and problems in the implementation of systems models and practical classroom practices that facilitate education of the handicapped in regular classroom settings.

5608. PARENT AND PROFESSIONAL PLANNING FOR HANDICAPPED STUDENTS. (3 cr, \$PsyS 5108) Study and demonstration of constructive approaches to cooperative planning and implementation of education programs by parents, teachers, and persons involved with children who have special needs.

5609. FAMILY-PROFESSIONAL PLANNING FOR PERSONS WITH SEVERE HANDICAPS. (3 cr) Interdisciplinary course examining the needs of families who have children with severe handicaps; emphasis on life cycle needs, service issues, programs of support from infancy through adult years, services from different agencies, disciplines, professional requirements, and responsibilities in serving families.

5612. EDUCATION OF LEARNING-DISABLED CHILDREN. (3 cr, \$PsyS 5112) Analysis of considerations in design and conduct of services for learning-disabled children; approaches to their education.

5615. EDUCATIONAL INTERVENTIONS FOR LEARNING DISABILITIES. (4 cr) Planning, implementing, evaluating academic programs for students with disabilities in written and spoken language, quantitative concepts, and cognitive skills required for learning.

5620. INTRODUCTION TO MENTAL RETARDATION. (4 cr, \$CPsy 5315, \$PsyS 5120; prereq 5601 or PsyS 5101 or #) Issues that relate to educational practices; community planning; educational philosophy, administration and organization, programming.

Course Descriptions

5621. METHODS AND MATERIALS FOR ELEMENTARY AND SECONDARY MENTALLY RETARDED PUPILS. (4 cr, \$PsyS 5121; prereq 5601 or PsyS 5101 or equiv)

Curriculum content, materials and methods of instruction for educable mentally retarded children; preparation of units and development of teaching aids.

5622. PROGRAMS AND CURRICULA FOR LEARNERS WITH SEVERE HANDICAPS. (3 cr; S-N optional)

Elementary and secondary school program design and curricula for learners with severe disabilities, including moderate to profound developmental delay, autism, severe multihandicapping conditions; emphasis on preparing children and youth for integrated, normalized community environments in domestic living, leisure, vocational domains.

5624. BIOMEDICAL ASPECTS OF DEVELOPMENTAL DISABILITIES. (Cr ar [max 4 cr], \$PsyS 5124)

Selected information in genetics, anatomy and physiology, central nervous system, biochemistry of body, and prenatal development; causative factors and clinical features, particularly mental retardation and its clinical manifestations.

5625. EDUCATION OF HANDICAPPED INFANTS AND PRESCHOOL CHILDREN. (4 cr, \$PsyS 5125; prereq 5601 or 5620 or PsyS 5101 or PsyS 5120 or #)

Issues, problems, and practical applications in designing strong programs for young children with all types of handicapping conditions.

5626. INSTRUCTION FOR LEARNERS WITH SEVERE HANDICAPS. (3 cr; prereq 5622, 5700 or #5700; S-N optional)

Data-based strategies for school and nonschool instruction; assessment, design, implementation, and evaluation of instruction related to specific disability curriculum and environmental learning; concept and task analysis; natural and instructional cues, corrections and consequences.

5635. EDUCATION OF STUDENTS WITH PHYSICAL DISABILITIES. (3 cr, \$PsyS 5135; prereq 5601 or PsyS 5101 or #)

Characteristics and abilities; methods and materials for training; observation of teaching situations; personal consultation in addition to class hours.

5636. EDUCATION OF MULTIHANDICAPPED LEARNERS WITH PHYSICAL AND SENSORY IMPAIRMENTS. (4 cr; prereq 5601; S-N optional)

Characteristics; design of instructional programs to remedy or circumvent disabilities, use of prosthetic devices; related areas of performance affected by physical and sensory impairments.

5640. PSYCHOSOCIAL AND EDUCATIONAL ASPECTS OF DEAFNESS. (3 cr, \$PsyS 5140)

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 psychological processes on acquiring language, speech, and speechreading skills.

5641. METHODS OF TEACHING SCHOOL SUBJECTS TO THE HEARING IMPAIRED. (3 cr, \$PsyS 5141)

Adaptation of materials and teaching methods for hearing-impaired children in reading, mathematics, social studies, and science.

5643. LANGUAGE FOR HEARING-IMPAIRED CHILDREN. (4 cr, \$PsyS 5143; prereq 5640 or PsyS 5140)

Functional language development in communicatively handicapped persons; overview of language curricula and programming strategies, pertinent research and models of instruction for use in educational environment.

5644. TEACHING LANGUAGE TO THE HEARING IMPAIRED II. (3 cr, \$PsyS 5144)

Devising language curricula and teaching techniques in primary, intermediate, and advanced programs for the deaf; comparative study of language development of the deaf and hearing.

5645. TEACHING SPEECH TO THE HEARING IMPAIRED I. (3 cr, \$PsyS 5145)

Survey of speech methodologies in teaching auditorily impaired children; major emphasis on teaching specific sounds, articulation, voice, and sentence rhythm, stressing intelligibility of speech. Demonstration and practice with individuals and groups of auditorily impaired children.

5647. AURAL REHABILITATION OF HEARING-IMPAIRED CHILDREN. (3 cr, \$PsyS 5147)

Recent trends in training hearing-impaired (deaf and hard-of-hearing) children in utilization of residual hearing; consideration of present alternative approaches to auditory training and aural rehabilitation.

5648. MODES OF COMMUNICATION FOR THE HANDICAPPED. (3 cr, \$PsyS 5148)

Theoretical and applied study of selection and application of alternative communication modalities; assessment and development of modes, including gestures, speech reading, cued speech, sign systems, form boards, and Bliss-symbolics.

5649. CLINICAL AND EDUCATIONAL PROCEDURES FOR PRESCHOOL AND PRIMARY HEARING-IMPAIRED CHILDREN. (6 cr, \$PsyS 5340; prereq teacher of hearing impaired or #)

Overview of education of the deaf; practical application to guided clinical experience with hearing-impaired children ages 1-6. For professionals working with the hearing-impaired.

5651. MANAGING PROBLEM BEHAVIOR IN THE CLASSROOM. (3 cr, \$PsyS 5151)

Typical patterns of problem behavior in classroom settings; relationships to teacher mental health; simulation of methods for prevention and management.

5654. EDUCATIONAL INTERVENTIONS FOR EMOTIONAL DISTURBANCE/BEHAVIORAL DISORDERS. (4 cr)

Preparation for specialists: theoretical background; assessment procedures; strategies and interventions appropriate for school settings; teaching social behavior; team procedures.

5660. SUPERVISION AND ADMINISTRATION OF SPECIAL EDUCATION. (3 cr, §PsyS 5160, §EdAd 5103)

Procedures in establishing and improving educational programs for exceptional children.

5670. INTRODUCTION TO EDUCATION OF VISUALLY HANDICAPPED CHILDREN. (3 cr, §PsyS 5170)

Educational programs, services, and resources for blind and partially seeing children; historical background; philosophy; sociological and psychological problems.

5671. BRAILLE I. (3 cr, §PsyS 5171; prereq 5670 or PsyS 5170)

Mastery of literary Braille code; analysis of specialized equipment emphasizing use of Braille writers, slates, and computers for Grade 2 Braille transcription.

5672. BRAILLE II. (3 cr, §PsyS 5172; prereq 5671 or PsyS 5171)

Mastery of Nemeth Code of mathematics, introduction to foreign languages, computer notation and consideration of Braille textbook formats and techniques; consideration of music Braille.

5673. METHODS OF TEACHING VISUALLY HANDICAPPED CHILDREN. (4 cr, §PsyS 5173; prereq 5670 or PsyS 5170)

Principles of preparation, selection, and effective use of instructional materials; adaptation of school environment; utilization of family, school, and community resources.

5674. ORIENTATION AND MOBILITY TECHNIQUES FOR VISUALLY IMPAIRED STUDENTS. (3 cr, §PsyS 5174)

Introduction to basic techniques to gain skills in pre-cane techniques, orientation to learning environment, construction of mobility maps; consideration of cane, guide dog, and telescopic aids to mobility.

5675. STRUCTURE AND FUNCTION OF THE EYE: EDUCATIONAL IMPLICATIONS. (3 cr, §PsyS 5175)

Ophthalmological and educational considerations of anatomy and physiology of the eye and visual tract, vision screening and visual efficiency.

5676. MANAGEMENT OF LOW VISION. (3 cr; prereq 5675 or #)

Advanced course requiring competence in evaluation and use of low vision aids; evaluating and managing cognitive, psychosocial, and physical needs of students; consideration of parent, teacher, and student counseling.

5680. EDUCATION OF THE DISADVANTAGED. (3 cr, §PsyS 5180; prereq 12 cr 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.

5681. METHODS AND MATERIALS FOR HANDICAPPED INFANTS AND PRESCHOOL CHILDREN. (3 cr, §PsyS 5181; prereq 12 cr education or #)

Methods, materials, conceptual models for maximizing educational development of young children with all types of handicapping conditions.

5690. EDUCATION OF THE GIFTED AND TALENTED. (3 cr, §PsyS 5190)

Origin and development of terms such as giftedness, creativity, genius, talent, and intelligence; implications for educational practice; current issues and trends.

5695. INTRODUCTION TO RESEARCH IN SPECIAL EDUCATION. (2 cr, §PsyS 5501; S-N only)

Issues in special education; critique of research with exceptional children.

5700. ASSESSMENT AND DECISION MAKING IN SPECIAL EDUCATION. (3 cr, §PsyS 5200)

For teachers and other educational personnel. Identifying needs of handicapped students; planning, monitoring, evaluating instructional programs; practice in use of standardized devices and development of clinical measures for handicapped students.

5701. PRACTICUM: SPECIAL EDUCATION. (Cr ar; prereq #; S-N optional)

Supervised experience in teaching or related work in schools or other agencies serving exceptional children.

5702. WORKSHOP: SPECIAL EDUCATION. (Cr ar; prereq #)

Laboratory approach; provides opportunities for school personnel to study specific problems related to special education.

5704. WORKSHOP: INTERVENTIONS AND PRACTICES IN EDUCATIONAL AND HUMAN SERVICE PROGRAMS. (Cr ar; S-N only)

Concepts, issues, and practices; development of educational and psychological support services in school and human service settings. For practicing professionals.

5705. BEHAVIOR ANALYSIS PROCEDURES WITH MILDLY AND MODERATELY HANDICAPPED PEOPLE. (4 cr, §PsyS 5305; prereq 5116 or PsyF 5149 or Psy 5017 recommended)

Behavioral approaches to improving academic and personal-social behavior of mildly and moderately handicapped people in mainstream and resource programs.

5708. DESIGN OF INSTRUCTIONAL ENVIRONMENTS FOR LEARNERS WITH SEVERE HANDICAPS. (3 cr; prereq 5622, 5626; S-N optional)

Strategies for planning context of instructional delivery, emphasis on community-based instruction; program implementation features: massed and distributed trials, homogeneous and heterogeneous grouping patterns; design of ecological inventories; transition of learners between educational settings and between educational and community settings.

Course Descriptions

5709. COGNITIVE AND SOCIAL IMPAIRMENTS OF LEARNERS WITH SEVERE HANDICAPS. (3 cr; prereq 5622; S-N optional)

Normal functioning within these domains; nature of deficits and developmental delays and differences; associated deficits in related curriculum areas; design of instruction to enhance performance in functional instructional domains.

5710. CONTEMPORARY SERVICES FOR PERSONS WITH DEVELOPMENTAL DISABILITIES. (3 cr)

Characteristics and service needs of persons with substantial developmental disabilities surveyed using multidisciplinary approaches. Changing concepts, models of services, issues related to promoting the independence, productivity, and integration of persons with developmental disabilities into the community.

5711. PRACTICUM: BEHAVIOR ANALYSIS CERTIFICATE PROGRAM. (Cr ar; prereq #)

Practical experience applying behavioral intervention techniques and principles in applied settings.

5713. ASSESSMENT IN INFANCY AND EARLY CHILDHOOD. (3 cr, \$PsyS 5313; S-N optional)

Issues related to psychological assessment of neonates, infants, and toddlers to age two; basic theory, knowledge, current research in relationship to current practices.

5801. WORKSHOP IN SCHOOL PSYCHOLOGY. (3-6 cr [max 6 cr])

Concepts and techniques of psychological and developmental education, applied to needs of specific groups of educators, emphasizing classroom applications. Improving effectiveness of educational programming for conceptual, moral, or ego development; positive self identity; or interpersonal and affective growth.

5814. METHODS OF DEVELOPMENTAL INTERVENTION IN THE CLASSROOM: GROUP. (3 cr, \$PsyS 5514; prereq #; S-N optional)

Developmental approach to use of group techniques to promote psychological growth in classroom.

5815. METHODS OF DEVELOPMENTAL ASSESSMENT: THE PUPIL AND CURRICULUM CONTENT. (3-6 cr [max 6 cr]; S-N optional)

Practical approaches matching individual development with curriculum materials; developmental psychology applied to assessment of individual pupils and instructional programs.

5849. ASSESSMENT OF THE PRESCHOOL CHILD. (3 cr, \$PsyS 5549; prereq statistics or measurement or grad course in assessment; S-N optional)

Review of assessment of children ages 0-5 from developmental perspective; overview of normal and abnormal development; issues and techniques in cognitive, social, and emotional assessment; early education programs.

5900. INDEPENDENT STUDY. (Cr ar [max 12 cr]; prereq #)

Independent study in areas of special interest to students.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8111. KNOWLEDGE AND SKILL

8112. SEMINAR: COGNITIVE PROCESSES OF THE ADOLESCENT AND EDUCATIONAL IMPLICATIONS

8113. PSYCHOLOGICAL ANALYSIS OF VERBAL LEARNING AND READING

8114. ETHOLOGICAL ISSUES IN EDUCATION

8115. INSTRUCTIONAL PSYCHOLOGY

8116. THEORETICAL DEVELOPMENTS IN INSTRUCTIONAL DESIGN

8128. RESEARCH PROBLEMS: INSTRUCTIONAL PSYCHOLOGY

8129. RESEARCH PROBLEMS: LEARNING AND COGNITION

8130. PERSONALITY DEVELOPMENT AND SOCIALIZATION

8131. DEVELOPMENT OF MORAL-POLITICAL JUDGMENT AND PROGRAMS IN VALUE EDUCATION

8149. RESEARCH PROBLEMS: PERSONALITY

8150. PSYCHOLOGY OF CONFLICT RESOLUTION

8151. ORGANIZATIONAL DEVELOPMENT AND CHANGE

8152. SMALL GROUP PROCEDURES USED FOR PERSONAL AND ORGANIZATIONAL CHANGE

8153. SOCIAL AND PSYCHOLOGICAL INFLUENCES ON INDIVIDUAL BEHAVIORS

8154. PRACTICUM IN GROUP LEADERSHIP

8169. RESEARCH PROBLEMS: SOCIAL PSYCHOLOGY

8210. METHODS IN EDUCATIONAL RESEARCH

8211. SEMINAR: RESEARCH PLANNING

8220. ADVANCED THEORY OF MEASUREMENT

8221. THEORY OF PSYCHOLOGICAL SCALING

8239. PROBLEMS: MEASUREMENT

8245. SEMINAR: SPECIAL TOPICS IN EDUCATIONAL EVALUATION

8247. INTERNSHIP: EVALUATION

8259. PROBLEMS: EVALUATION

8260, 8261, 8262. STATISTICAL METHODS

8263. DESIGN AND ANALYSIS OF EXPERIMENTS

8264. MULTIPLE REGRESSION ANALYSIS

8265. FACTOR ANALYSIS

8266. ANALYSIS OF RESULTS FROM NONEXPERIMENTAL RESEARCH

8279. PROBLEMS: STATISTICS FOR STUDENTS IN EDUCATION AND PSYCHOLOGY

8280. COMPUTER APPLICATION TO STATISTICAL ANALYSES

8281. SEMINAR: DEVELOPING COMPUTER APPLICATIONS

8289. RESEARCH PROBLEMS: COMPUTER APPLICATIONS

8402-8403-8404. COUNSELING THEORY AND PROCEDURES I, II, III

8410. SEMINAR: ADVANCED COUNSELING THEORY

8411. SEMINAR: ADVANCED COUNSELING RESEARCH

8412. SEMINAR: ADVANCED COUNSELING RESEARCH

8420. COLLEGE STUDENT PERSONNEL WORK—FOUNDATIONS AND SCOPE

8421. COLLEGE STUDENT PERSONNEL WORK—HOUSING

8422. COLLEGE STUDENT PERSONNEL WORK—STUDENT ACTIVITIES

8423. COLLEGE STUDENT PERSONNEL WORK—DISCIPLINE AND ADMINISTRATION

8424. DIAGNOSIS AND TREATMENT OF COLLEGE LEARNING DIFFICULTIES

8431. MASTERS SEMINAR: COUNSELING AND STUDENT PERSONNEL PSYCHOLOGY

8432. DOCTORAL SEMINAR: COUNSELING AND STUDENT PERSONNEL PSYCHOLOGY

8433. PROFESSIONAL SEMINAR: COUNSELING AND STUDENT PERSONNEL PSYCHOLOGY

8434. SEMINAR: RESEARCH IN GROUP COUNSELING

8441. PSYCHOLOGICAL CONSULTATION: THEORY AND PRACTICE

8450. PSYCHOLOGICAL ASPECTS OF COUNSELING SUPERVISION

8502-8503-8504. COUNSELING PRACTICUM I, II, III

8505-8506-8507. FIELD PLACEMENT IN COUNSELING AND STUDENT PERSONNEL PSYCHOLOGY

8510. INTERNSHIP: COUNSELING AND STUDENT PERSONNEL PSYCHOLOGY

8513-8514-8515. COUNSELING PRACTICUM: UNIVERSITY COUNSELING SERVICES

8520. COUNSELING PRACTICUM: ADVANCED

8521. PRACTICE IN STUDENT PERSONNEL WORK

8524. CLINICAL PRACTICE IN DIAGNOSIS AND TREATMENT OF COLLEGE LEARNING DIFFICULTIES

8612. CURRENT ISSUES IN LEARNING DISABILITIES

8620. PSYCHOLOGICAL THEORY AND RESEARCH IN MENTAL RETARDATION

8621. FUNCTIONAL ANALYSIS OF BEHAVIOR IN THE MENTALLY RETARDED

8651. THEORIES OF EDUCATING DISTURBED CHILDREN

8652. RESEARCH IN EDUCATION OF DISTURBED CHILDREN

8695. RESEARCH IN SPECIAL EDUCATION

8701. ADVANCED PRACTICUM

8702. SEMINAR: SPECIAL EDUCATION

8706. BEHAVIORAL RESEARCH WITH HANDICAPPED STUDENTS

8720. LANGUAGE ACQUISITION AND LEARNING THEORY

8725. SOCIOCULTURAL THEORY AND RESEARCH ON HANDICAPPING CONDITIONS

8760, 8761. SEMINAR: ADMINISTRATION OF SPECIAL EDUCATION

8780. SEMINAR: THE DISADVANTAGED

8810. TECHNIQUES OF PSYCHOEDUCATIONAL ASSESSMENT

8811. TECHNIQUES OF PSYCHOEDUCATIONAL ASSESSMENT: SPECIAL POPULATIONS

8812. PERSONALITY APPRAISAL IN CHILDREN AND ADOLESCENTS

8813. THEORIES AND METHODS OF INTERVENTION: INDIVIDUALS

8814. THEORIES AND METHODS OF INTERVENTION: GROUPS

8815. THEORIES AND METHODS OF INSTRUCTIONAL INTERVENTION

Course Descriptions

8820. SEMINAR: RESEARCH IN SCHOOL PSYCHOLOGY

8821. SEMINAR: SCHOOL PSYCHOLOGY

8831. PRACTICUM: SCHOOL PSYCHOLOGICAL SERVICES

8832. CLINICAL PRACTICE IN SCHOOL PSYCHOLOGY

8840. INTERNSHIP: SCHOOL PSYCHOLOGICAL SERVICES

8841. INTERNSHIP: INSTRUCTION AND SUPERVISION IN SCHOOL PSYCHOLOGY

8850. DEVELOPMENTAL NEUROPSYCHOLOGY

8853. NEW APPROACHES TO PSYCHOPATHOLOGY IN CHILDREN AND ADOLESCENTS

8900. RESEARCH PROBLEMS

8905. LANDMARK ISSUES AND GREAT CONTROVERSIES IN EDUCATIONAL PSYCHOLOGY

8910. DIRECTED STUDY

Music Education (MuEd)

1201. INTRODUCTION TO MUSIC EDUCATION. (1 cr)

Orientation to various areas and levels of music teaching through observation and school-centered experiences.

1801. INTRODUCTION TO MUSIC THERAPY. (1 cr)

Survey exploring methods, materials, and applications of music therapy in various clinical settings with emphasis on field observations.

3011. TEACHING MUSIC IN THE ELEMENTARY SCHOOL. (4 cr; prereq Mus 1001, elementary education major)

For non-music majors; methods and materials in teaching singing, rhythm, music reading, creativity, classroom instruments, fundamentals, appreciation in K-6.

3301. TEACHING VOCAL AND GENERAL MUSIC, K-4. (4 cr; prereq music education major or #)

Methods, materials, curriculum development, principles of learning; the child voice; music reading, history, and appreciation; classroom instruments, creativity, rhythm, and basic conducting techniques.

3302. TEACHING VOCAL AND GENERAL MUSIC, GRADES 5-12. (4 cr; prereq music education major or #)

Methods, materials, curriculum, principles of learning; the adolescent voice; music reading, history, and appreciation; creativity; advanced conducting techniques for middle, junior, and senior high school music.

3322. TECHNIQUES OF CLASSROOM INSTRUMENTS. (4 cr; prereq Mus 1001 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 Studio 49 (Orff-Schulwerk) melodic and percussion instruments, and bowed, fretted instruments; factors in combining these instruments with voices and keyboard instruments.

3331. PRACTICUM: MUSIC EDUCATION. (2 cr; prereq music education major or #)

School-centered experience applying methods and materials for teaching choral and general music in the public schools.

3415. CHORAL LABORATORY. (4 cr; prereq music education major or #)

Development of basic conducting skills and rehearsal techniques; methods and materials for school choral ensembles; school-based experiences; score reading and arranging.

3500. STRING TECHNIQUES I. (3 cr; prereq music education major or #)

Playing experience on violin and viola; basic concepts of teaching with study of methods and materials; techniques of individual and class instruction.

3501. STRING TECHNIQUES II. (3 cr; prereq music education major or #)

Playing experience on cello and bass; basic concepts of teaching with study of methods and materials; techniques of individual and class instruction.

3503. WOODWIND TECHNIQUES. (4 cr; prereq music education major or #)

Playing experience on all woodwind instruments; basic concepts of teaching; study of methods and materials; class instruction.

3504. BRASS TECHNIQUES. (4 cr, §1525; prereq music education major or #)

Theory and technical development of instruments, elementary instruction in performing, special attention to routine class instruction.

3505. PERCUSSION TECHNIQUES. (4 cr; prereq music education major)

Playing experience on snare drum, timpani, keyboard mallet instruments, drum set; basic concepts of teaching; study of methods and materials; class instruction.

3515, 3516. INSTRUMENTAL LABORATORY I, II. (4 cr each; prereq music education major or #)

Fundamentals of conducting with emphasis on rehearsal techniques for bands and orchestras; literature and materials for school use; school-based experiences; orchestration and arranging.

3650. STUDENT TEACHING IN MUSIC. (3-12 cr; prereq #)

Supervised teaching and observing in elementary, junior high, and senior high schools. Weekly seminar emphasizing classroom management, curriculum development, administration of music programs.

3800. OBSERVATION IN MUSIC THERAPY. (2 cr, \$3803; prereq education student)
Elementary laboratory and field studies of music therapy and music behavior.

3801. PSYCHOLOGY OF MUSIC I. (4 cr; prereq Psy 1001, 3604 or #)
Basic study of acoustics, the ear and hearing, musical systems, and the psycho-socio-physiological processes involved in musical behavior.

3802. PSYCHOLOGY OF MUSIC II. (4 cr; prereq 3801)
Consideration of research methods applied in the psychology of music problems through examination of selected research studies.

3804. MUSIC THERAPY TECHNIQUES I. (4 cr; prereq major in music therapy)
Examination of specific techniques in the quantification of study of music behavior; projects using behavioral applications.

3805-3806†. MUSIC THERAPY TECHNIQUES II, III. (3 cr each; prereq 3804)
Methods and materials for music therapy in school and hospital settings; designing and implementing programs for severely and moderately handicapped children and adults.

3850. FIELD EXPERIENCES: MUSIC THERAPY. (1 or 2 cr per qtr [max 10 cr]; S-N only; prereq 3800, 3804)
Pre-internship experiences in health, welfare, recreational, and educational settings.

3851-3852†. INTERNSHIP: MUSIC THERAPY. (6 cr each; S-N only; prereq #)
Six-month resident internship in music therapy at an affiliated, approved hospital or clinic.

5111. RESEARCH IN MUSIC EDUCATION: BIBLIOGRAPHY. (3 cr)
Sources, materials, and techniques.

5112. RESEARCH IN MUSIC EDUCATION: TECHNIQUES. (3 cr)
Methods and techniques employed in investigating and reporting music education problems; review of significant research.

5115. RESEARCH IN MUSIC EDUCATION: MEASUREMENT. (3 cr; prereq #)
Current status in music testing; principles; survey of evaluative, accountability, and testing materials in music.

5211. PHILOSOPHIES OF MUSIC EDUCATION. (3 cr)
Analysis and interpretation of philosophies of music and education; objectives, trends, curriculum, evaluation.

5214. PSYCHOLOGICAL FOUNDATIONS. (3 cr; prereq #)
Analysis and interpretation of psychologies of music and education as applied to the teaching of music.

5217. HISTORICAL FOUNDATIONS OF MUSIC EDUCATION. (3 cr; prereq #)
Analysis and interpretation of important elements in modern music teaching derived from the past.

5601. TECHNIQUES AND MATERIALS: INTERMEDIATE AND ADVANCED RECORDER. (3 cr, \$5323; prereq intermediate level competence, two-octave range or #)
Lecture-demonstrations and assignments in breath and articulation technique; ornamentation, improvisation, solo and ensemble editing, arranging, and playing.

5603. TECHNIQUES AND MATERIALS: ORFF-SCHULWERK APPROACH. (3 cr)
Demonstration and class practice in teaching and performance skills; the recorder; movement, improvisation, singing, and creation of musical forms; techniques to encourage children to create and improvise songs, instrumental music, and related bodily movement; class exercises in adapting indigenous and ethnic music material for school use.

5611. TECHNIQUES AND MATERIALS: MUSIC AND RELATED ARTS. (3 cr; prereq #)
Teaching music to reflect the major developments of Western culture.

5613. TEACHING MUSIC LITERATURE. (3 cr; prereq #)
Principles, methods, and materials for teaching music history (appreciation) in grades K-12.

5615. TEACHING MUSIC READING. (3 cr; prereq #)
Objectives; materials, research, teaching procedures, evaluation; class and individual projects; emphasis on general music class approach.

5621. SUPERVISION AND ADMINISTRATION OF SCHOOL MUSIC. (3 cr; prereq #)
Analysis and evaluation of instructional, supervisory, and administrative techniques; readings, new trends.

5631. TECHNIQUES AND MATERIALS: CHORAL CONDUCTING. (3 cr; prereq #)
Student conducting with class as performing ensemble; criteria for selecting choral and combined choral and instrumental materials; rehearsal techniques.

5633. TECHNIQUES AND MATERIALS: CHORAL ENSEMBLES. (3 cr; prereq #)
Empirical research and literature on voice development in individual, class, and choral work; individual surveys of performance practices and organization of school vocal groups; selection of vocal music.

5643. TECHNIQUES AND MATERIALS: WOODWINDS. (3 cr; prereq #)
Practical performance with lectures and discussions of research in performance techniques.

5645. TECHNIQUES AND MATERIALS: BRASS. (3 cr; prereq #)
Practical performance with lectures and discussions of research in performance techniques.

Course Descriptions

5647. TECHNIQUES AND MATERIALS: PERCUSSION. (3 cr; prereq #)

Contemporary approaches to teaching in elementary, junior high, and senior high school; emphasis on performing techniques; playing of teaching materials, solo and ensemble repertoire.

5651. TECHNIQUES AND MATERIALS: INSTRUMENTAL ENSEMBLES. (3 cr)

Survey of solo, chamber, and larger wind ensemble music and use in teaching instrumental music at pre-collegiate level.

5653. BAND ARRANGING. (3 cr, §Mus 5564; prereq #)

Current scoring techniques for wind and percussion; creative arrangements and scoring for marching or concert band.

5655. NEW DIMENSIONS IN MUSIC EDUCATION. (3 cr)

Study of contemporary music through analysis, performance, listening, composition; recent curriculum trends and issues; evaluative procedures.

5657. TECHNIQUES AND MATERIALS: INSTRUMENTAL CONDUCTING. (3 cr)

Basic conducting and rehearsal techniques for school bands and orchestras; selection of instrumental materials; organization of school ensembles, elementary and secondary.

5666. MICROCOMPUTERS IN THE MUSIC CLASSROOM. (3 cr)

Using the microcomputer to enhance instruction; materials for theory, ear training, composition, electronic music; developing a data base for music libraries, instrument inventories, budgets.

5669. CONDUCTING THE MUSICAL SHOW. (3 cr)

Rehearsal techniques, coordination of singing actors and instrumental accompaniment, conducting the pit orchestra; laboratory performance and listening activities focused on traditions and trends in the musical theater.

5750. WORKSHOP: MUSIC EDUCATION. (1-12 cr [max 12 cr])

Selected topics in music education. Each offering will focus on a single topic.

5821. HISTORY OF MUSIC THERAPY. (3 cr)

Historical development of profession; outstanding persons and their contributions; incorporation of technique in increasing number of treatment populations.

5831. MUSIC FOR EXCEPTIONAL CHILDREN. (3 cr; prereq #)

Trends; methods and materials for a functional program of singing, playing, rhythm, listening, and creative activities for mentally and physically handicapped and gifted pupils.

5970. INDEPENDENT STUDY. (1-4 cr; prereq education or graduate student)

Independent study project organized by the student in consultation with the appropriate instructor.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8281-8282-8283. SEMINAR: HISTORICAL, PHILOSOPHICAL, AND PSYCHOLOGICAL ISSUES

8990. RESEARCH PROBLEMS

Physical Education and Recreation

Activity courses are offered on successive levels in each of the following areas:

Adapted activities

Aquatics

Conditioning

Dual sports and activities

Individual sports and activities

Team sports

The beginning courses, listed first in numerical order, require no prerequisite. For courses at more advanced levels, prerequisites are indicated, but students with skills or experience in a given area may start with one of the more advanced offerings rather than register for the prerequisite course. Advisers in Cooke Hall will aid students who have questions about the appropriate level for registration.

Students who do not attend the first meeting of a class for which enrollment is limited forfeit their place. If a class in which enrollment is limited is closed at the time of registration, a student may report to the first class meeting to ask about possible cancellations.

The S-N option is available for all PE courses numbered through 1499.

All courses involve participation requiring a high energy expenditure level and are to be considered high intensity in nature except Activities for the Handicapped, which is adjusted for each individual; and Archery, Bowling, Golf, Posture and Individual Exercise, and Rifle Marksmanship, which involve a lower level of energy expenditure and are considered moderate intensity in nature. It is recommended that students know their health status and any limitations on their ability to participate safely in the physical activities involved in the course in which they

plan to register. Students who have questions about their health status should seek advice from a personal physician.

Physical Education (PE)

1001. ACTIVITIES FOR THE HANDICAPPED. (1 cr; prereq #; intensity individually prescribed)
Individual and group activities appropriate for students whose physical capabilities are such that they could derive maximum benefit from a modified program.

1004. DIVING, SPRINGBOARD. (1 cr; prereq 1007 or #)
Elementary entry into water, teaching diving at the beginning level, basic dives.

1007. SWIMMING. (1 cr; prereq non-swimmer)
Designed for the beginner including breathing, floating, treading water, elementary back stroke, side stroke, and front crawl.

1008. WATER POLO. (1 cr)
Introduction to and practice of skills through drills and game situations.

1014. CONDITIONING. (1 cr)
Improvement of physical fitness through running, circuit training, and progressive exercise.

1015. WEIGHT TRAINING. (1 cr)
Fundamentals including techniques, theory, and individualized exercise prescription.

1016. POSTURE AND INDIVIDUAL EXERCISE. (1 cr; moderate intensity)
Individually prescribed exercises for increased muscular strength, improvement of posture and weight control.

1017. RHYTHMIC GYMNASTICS. (1 cr)
Rhythmic exercises following the natural movements of the body.

1029. HANDBALL. (1 cr)
Basic fundamentals of skills and shots; rules and game strategy.

1031. SABER FENCING. (1 cr)
Development of physical and perceptual skills for fencing; techniques of the saber; history, rules, practical bouting experience.

1032. BADMINTON. (1 cr)
Emphasis on fundamental skills, rules, etiquette, and strategy for both singles and doubles.

1033. FOIL FENCING. (1 cr)
Developing necessary physical and perceptual skills; history, rules, and practical bouting experience included.

1034. JUDO. (1 cr)
Basic skills including falls, hold-downs, chokes, throwing and counter techniques.

1035. KARATE. (1 cr)
Emphasis on learning basic stances, blocks, and attacks; hand and foot techniques.

1036. RACQUETBALL. (1 cr)
Fundamentals of skills and shots; rules and game strategy.

1037. SQUASH RACQUETS. (1 cr)
Fundamental strokes and rules with game situations emphasized.

1038. TENNIS. (1 cr)
Fundamental strokes of service, forehand and backhand drives, and volley; court positions and strategy for singles and doubles; rules, terminology, etiquette.

1039. WRESTLING. (1 cr)
Take-downs, rides, escapes, reversals, and pinning combinations; basic rules and strategy.

1041. CYCLING. (1 cr; prereq supply own bicycle)
Basic skills; physiological and mechanical principles; maintenance, safety, training.

1042. ORIENTEERING. (1 cr)
Fundamental skills including land navigation, terrain analysis, fitness.

1043. BEGINNING HORSEMANSHIP. (1 cr)
Introduction to fundamental skills and techniques in riding.

1044. SELF-DEFENSE. (1 cr)
Fundamental skills; development of basic techniques and values from active participation in physical activity.

1046. APPARATUS. (1 cr)
Basic skills for men on horizontal bar, parallel bars, rings, long horse, side horse; for women on uneven parallel bars, balance beam, and vaulting.

1047. ARCHERY. (1 cr; moderate intensity)
Instruction in fundamentals; history, safety, formal and informal tournaments, and competition included.

1048. BOWLING. (1 cr; moderate intensity)
For the beginning student. Fundamentals of stance, approach and delivery, scoring, bowling terminology, and etiquette.

1050. GOLF. (1 cr; moderate intensity)
Fundamentals; grip, stance, and swing; etiquette and rules.

1052. RIFLE MARKSMANSHIP. (1 cr; moderate intensity)
Target shooting in prone, sitting, and standing positions; safety and care of equipment.

1053. ICE SKATING. (1 cr)
Basic techniques: forward stroking, backward stroking, stops and turns.

1055. FOUNDATIONS OF PHYSICAL ACTIVITY. (2 cr)
Theory and practice of physical activity introduced through lectures, conditioning programs, and sports skills.

Course Descriptions

1056. NORDIC (CROSS-COUNTRY) SKIING. (1 cr)

Basic techniques; participation in exercise and conditioning program preparatory to skiing.

1057. SKIING. (1 cr)

Basic skills in skiing and safety; care and purchase of equipment.

1058. PHYSICAL EDUCATION FOR FAMILY LIVING. (1 cr; moderate intensity)

Physical activities appropriate in the home setting and community.

1059. TRACK AND FIELD. (1 cr)

Fundamentals and strategy in sprint, distance, and field events.

1060. TUMBLING, FLOOR EXERCISE, AND TRAMPOLINE. (1 cr)

Development of basic skills.

1067. BASKETBALL. (1 cr)

Fundamentals of offense and defense; elementary team play and game strategy.

1068. CURLING. (1 cr)

Basic fundamentals including grip, in and out turns, sweeping, rules and strategy.

1069. FIELD HOCKEY. (1 cr)

Fundamentals, rules and game strategy.

1070. HOCKEY, ICE. (1 cr; prereq 1053 or equiv)

Basic skills of goal tending, individual and team defensive and offensive techniques and conditioning.

1071. LACROSSE. (1 cr)

Basic skills, strategy, and rules.

1072. SOCCER. (1 cr)

Strategy, rules, and fundamentals emphasized through drills and team play; basic techniques and ball skills, introduction to laws of the game, and experience in match play.

1073. SOFTBALL. (1 cr)

Fundamental skills and tactics: throwing, catching, batting, running, basic conditioning, and game play.

1074. VOLLEYBALL. (1 cr)

Fundamental skills and rules of volleyball; basic team play and strategy.

1107. SWIMMING. (1 cr; prereq ability to swim 100 yards)

Deep water skills, elementary back stroke, side stroke, front crawl, back crawl, elementary diving, and distance swimming.

1132. BADMINTON. (1 cr; prereq 1032 or equiv)

Improvement of fundamental skills and technique; advanced strokes, competitive play.

1133. FENCING. (1 cr; prereq 1033 or equiv)

Review of fundamentals, with major emphasis on tournament strategy and compound attack.

1134. JUDO. (1 cr; prereq 1034 or equiv)

Review of falling and hold-downs, progression from first Kyo through introduction to second Kyo.

1135. KARATE. (1 cr; prereq 1035 or equiv)

Advanced development of basic skills plus beginning practice of Kumite (basic sparring), introduction to first kata (form).

1136. RACQUETBALL. (1 cr; prereq 1036 or equiv)

Advanced techniques and shots in context of game strategy.

1138. TENNIS. (1 cr; prereq 1038 or equiv)

Improvement of basic skills, increased emphasis on single and doubles strategy and competitive play.

1139. WRESTLING. (1 cr; prereq 1039 or equiv)

Emphasis on combinations with opportunity to perfect basic maneuvers.

1143. INTERMEDIATE HORSEMANSHIP. (1 cr; prereq 1043 or #)

Progressive advancement through fundamental skills and techniques; initial stages of competition.

1146. APPARATUS-GYMNASTICS. (1 cr; prereq 1046 or equiv)

Intermediate skills for men on horizontal bar, parallel bars, rings, long horse and side horse; for women on uneven parallel bars, balance beam, and vaulting.

1147. ARCHERY. (1 cr; prereq 1047 or equiv; moderate intensity)

Intermediate-level instruction and coaching in target archery technique and competition; form, equipment tuning and repair, theories, and national and international competition.

1148. BOWLING. (1 cr; prereq 1048 or #; moderate intensity)

Delivery, fundamentals of spare conversion, and techniques for improvement. Intermediate course for the bowler with some experience.

1150. GOLF. (1 cr; prereq 1050 or equiv; moderate intensity)

More advanced skill development to meet individual needs.

1154. FIGURE SKATING. (1 cr; prereq 1053 or equiv)

Emphasis on basic school figures.

1157. SKIING. (1 cr; prereq 1057 or equiv)

Individual and small group instruction to develop advanced skills.

1159. TRACK AND FIELD. (1 cr; prereq 1059 or equiv)

Advanced skills with opportunities to specialize.

1160. TUMBLING, FLOOR EXERCISE, AND TRAMPOLINE. (1 cr; prereq 1060 or equiv)

Intermediate skills.

1167. BASKETBALL. (1 cr; prereq 1067 or equiv)

Review of fundamental offensive and defensive skills and rules; advanced skills presented.

1172. SOCCER. (1 cr; prereq 1072 or equiv)
Improvement of individual skills; advanced strategy of team play.

1173. SOFTBALL. (1 cr; prereq 1073 or equiv)
Emphasis on pitching, team defense, strategy, and game situations.

1174. VOLLEYBALL. (1 cr; prereq 1074 or equiv)
Review of fundamental and advanced skills including offensive and defensive strategy and competitive play.

1205. SCUBA AND SKIN DIVING. (1 cr; prereq 1107 or equiv)
Initial course. University of Minnesota card of certification issued to those successfully completing the course.

1207. SWIMMING. (1 cr; prereq ability to swim 200 yards)
Improving strokes and appropriate advanced swimming skills, increasing endurance.

1238. TENNIS. (1 cr; prereq 1138)
Development of advanced strokes; doubles and single tournament play.

1248. BOWLING. (1 cr; prereq 160 average; moderate intensity)
Perfecting techniques to meet individual needs.

1250. GOLF. (1 cr; prereq 1150; moderate intensity)
Individualized instruction for the experienced golfer.

1254. FIGURE SKATING. (1 cr; prereq 1154 or equiv)
Advanced skills and rhythms with opportunity for free skating composition.

1257. SKIING. (1 cr; prereq 1157 or equiv)
Refinement and combination of advanced techniques in downhill skiing.

1274. VOLLEYBALL. (1 cr; prereq 1174 or #)
Basic offensive and defensive skills; advanced skills and strategies; proficient performance during competitive play.

1306. ADVANCED LIFESAVING. (1 cr; prereq ability to swim 440 yds)
Focus on knowledge and skills necessary to save own life or life of another.

1307. SWIMMING. (1 cr; prereq ability to swim 400 yards)
Emphasis on advanced strokes such as trudgeon, trudgeon crawl, inverted breast stroke; endurance.

1309. SYNCHRONIZED SWIMMING. (1 cr; prereq 1207 or equiv)
For advanced swimmers to develop skill in synchronized swimming and synchronized swimming stunts.

1410. WATER SAFETY INSTRUCTOR. (2 cr; prereq current American Red Cross Advanced Lifesaving Certificate and have or concurrently acquire ARC First Aid and CPR Certificate)
Advanced lifesaving technique and teaching strategies.

1415. THEORY AND PRACTICE OF WEIGHT TRAINING AND CONDITIONING. (2 cr; prereq 1014, 1015 or #)
Advanced development of skills, techniques, knowledge, and understanding.

1497. DIRECTED STUDY. (1-6 cr; prereq 3 cr in physical education, Δ)
For the nonprofessional student who wishes to study a topic or problem under tutorial guidance.

1521. GYMNASTICS. (1 cr)

1522. GYMNASTICS. (1 cr; prereq 1521)

1654. TRACK AND FIELD. (1 cr; prereq 1059, physical ed major)
Demonstrations and practice in all events.

1871. INTRODUCTION TO PHYSICAL EDUCATION. (3 cr; prereq physical education major)
Professional and disciplinary dimensions of physical education; theoretical application to human movement.

1875. ORIENTATION TO TEACHING PHYSICAL EDUCATION. (4 cr; prereq physical education major)
Introduction to teaching techniques; emphasis on teaching styles, educational objectives, communication, and observation skills.

1980. PHYSICAL EDUCATION ACTIVITIES. (1-6 cr; S-N only; prereq physical education major)
Demonstration of competencies at the beginning level in a variety of activities.

1981. PHYSICAL EDUCATION ACTIVITIES: ADVANCED. (1-3 cr; S-N only; prereq physical education major)
Demonstration of competencies at the advanced level in a variety of activities.

1990. DIRECTED STUDY. (1-6 cr; prereq Δ)
For students majoring or minoring in physical education who wish to study a topic or problem under tutorial guidance.

3100. ADAPTED PHYSICAL EDUCATION. (3 cr)
Philosophy, principles, and techniques of adapting the program to meet the needs of handicapped pupils.

3110. HUMAN ANATOMY. (3 cr)
Emphasizes bones, nerves, and muscles and their significance in physical education.

3111. MECHANICS OF MOVEMENT. (3 cr; prereq Anat 1027)
Structure of the body, principles and mechanics of bodily movements.

3114. PREVENTION AND CARE OF INJURIES. (3 cr; prereq 3110 or CBN 1027)
Policies for conditioning athletes in interscholastic and intercollegiate sports; safety controls.

Course Descriptions

3115. PHYSIOLOGICAL APPLICATION TO SPORTS. (3 cr, \$PubH 3385, \$PubH 3386, \$PE 3385, \$PE 3386; prereq Physl 3051 or #)

Muscular contraction for strength development programs; contributions of training programs to endurance, speed, and skill acquisition; influence of training on the cardiovascular system; fatigue and recovery; early season training, pregame meals and ergogenic aids in athletics. Required for the Minnesota Coaching Endorsement.

3126. PSYCHOLOGICAL AND SOCIOLOGICAL DIMENSIONS OF PHYSICAL ACTIVITY. (3 cr)

Introductory focus on analysis of current literature and theoretical constructs in this dimension of physical activity.

3131. HISTORY AND PHILOSOPHY OF PHYSICAL EDUCATION AND SPORT. (4 cr; S-N optional)

Introductory description and interpretation of development of physical education and sport from primitive to 20th-century civilization.

3132. MOTOR DEVELOPMENT. (3 cr, \$3112)

Physical growth and development at all ages of childhood and adolescence; relationship of physical growth and psychomotor skill acquisition to cognitive and affective factors.

3135. MOTOR LEARNING AND HUMAN PERFORMANCE. (3 cr; \$3113)

Motor growth and development of children, adolescents, and adults with emphasis on sociopsychological factors.

3143. ORGANIZATION AND MANAGEMENT OF SPORT. (3 cr; prereq 2 cr coaching course)

Principles, policies, and procedures involved in the coaching of interscholastic sports.

3144. ADMINISTRATION. (2 cr, \$3120; prereq physical education major, sr)

Overview of objectives, content of organizations, evaluation and trends in administration of physical education for the elementary and secondary schools.

3150. INTRODUCTION TO EVALUATION. (4 cr)

Selection, evaluation, construction, and administration of tests; administration of sports skill and motor ability tests for elementary and secondary school levels.

3169. VOLLEYBALL COACHING. (2 cr; prereq 1174 or #)

Professional preparation emphasizing philosophies, skills, strategies, and responsibilities.

3170. BASEBALL COACHING. (2 cr)

Techniques of playing each position, batting, coaching runners, and team play; study of rules; officiating methods and practice; organization of practices.

3171. BASKETBALL COACHING. (2 cr)

Techniques, styles of offense and defense, conditioning and handling of players.

3172. FOOTBALL COACHING. (2 cr)

Techniques and orientation, strategy, generalship, styles of offense and defense, methods of organizing practices and handling players.

3173. GOLF COACHING. (2 cr)

Techniques for organizing the squad, selecting the team, and conducting tournaments; principle of the golf swing, practice routines, rules and strategy of play.

3174. GYMNASTICS COACHING. (2 cr)

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.

3175. ICE HOCKEY COACHING. (2 cr)

Techniques of and orientation to coaching high school hockey; planning and conducting practices, team offense and defense; drills to develop individual skills; conditioning.

3176. SWIMMING AND DIVING COACHING. (2 cr)

Instruction in and practice of the basic techniques used in competitive swimming and diving; rules and regulations governing staging of competition.

3177. TENNIS COACHING. (2 cr)

Techniques and orientation, methods and organization; emphasis on high school and college levels; coverage of coaching techniques, analysis of strokes, and organization of practice sessions.

3178. TRACK AND FIELD COACHING. (2 cr; prereq 1654 or 1059 or #)

Techniques of performance in all standard events; methods of coaching; organization of track meets; study of rules; officiating methods and practice.

3179. WRESTLING COACHING. (2 cr)

Analysis of the moves, combinations, and sequences; training, safety, and health features; administrative responsibilities of the coach; review of the literature.

3310. ATHLETIC TRAINING LABORATORY. (1 cr; prereq 3114)

Thirty hours of practical experience in the training room under supervision.

3322. TEACHING PHYSICAL EDUCATION: ELEMENTARY SCHOOL. (5 cr; prereq 1871, 1875)

Methods of teaching in grades K-6; emphasis on planning, organizational patterns, teaching techniques, and evaluation.

3323. TEACHING PHYSICAL EDUCATION: SECONDARY SCHOOL. (5 cr; prereq all required activity courses)

Methods of teaching in grades 7-12; emphasis on planning, organizational patterns, teaching techniques, and evaluation.

3327. TEACHING PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL. (3 cr; 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.

3371. SOCCER COACHING. (2 cr; prereq 1072 or #)

Styles, systems, training techniques, psychological aspects of soccer; fundamental approaches and tactics in coaching soccer.

3385. EXERCISE PHYSIOLOGY. (4 cr, \$PubH 3385; prereq CBN 1027 or equiv)

Physiological considerations of the human organism including nature and functions of the cell, transport, energy production, body fluids, and introductory aspects of nervous, circulatory, and muscular functions with reference to exercise.

3386. EXERCISE PHYSIOLOGY. (4 cr, \$PubH 3386; prereq 3385 or equiv)

Physiological considerations of the human organism including nature and function of the kidney, regulation of water and acid balance, function of hormones, exercise and heart and lung function; special reference to acute and chronic effects of training on cardiorespiratory systems.

3600. PRE-FALL STUDENT TEACHING. (3 cr; S-N only; prereq #)

Program and problems of organization and management; begins with fall semester opening of public schools.

3604. ADVANCED STUDENT TEACHING. (3 cr; S-N optional; prereq #)

Optional for those who have done superior work.

3607. STUDENT TEACHING: COLLEGE. (1 cr; prereq physical education major, #3323)

Observation and practical experience in teaching at the college level under guidance.

3621. STUDENT TEACHING: ELEMENTARY. (6 cr; S-N optional; prereq 3322, 3323, 3385, 3386, 3600, SeEd 3150, 3155 or Elem 3100)

Student teaching in physical education in grades 1-6 in public schools.

3622. STUDENT TEACHING: SECONDARY. (6 cr; S-N optional; prereq 3322, 3323, 3385, 3386, 3600, SeEd 3150, 3155 or Elem 3100)

Student teaching in physical education in grades 7-12 in public schools.

3624. STUDENT TEACHING: COACHING. (3 cr; S-N only; prereq Δ)

May be elected by physical education majors; required of candidates for coaching credential only; for men and women without public school coaching experience.

3625. SUPERVISED PRACTICAL EXPERIENCE. (1-12 cr [max 12 cr]; S-N only; prereq Δ)

On-the-job experience under a specialist in the particular area of study.

3900. DIRECTED STUDY. (1-12 cr [max 12 cr])
Self-directed study preceded by classroom study and possession of basic competence.**5100. TEACHING PHYSICAL EDUCATION FOR THE HANDICAPPED.** (3 cr; prereq #)

Introduction to the role of physical education in the education of the handicapped individual, emphasizing understanding, principles of organization, administration, curriculum, supervision, and evaluation.

5101. PHYSICAL EDUCATION ACTIVITIES FOR THE HANDICAPPED. (3 cr; prereq 5100 or EPsy 5601)

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.

5102. PRACTICUM: PHYSICAL EDUCATION FOR THE HANDICAPPED IN AN ADAPTED SETTING. (1-3 cr [max 3 cr]; S-N only; prereq 5100, 5101 or #)

Opportunity for teaching in public school or community settings, providing instruction for atypical individuals in the segregated or adapted environment; includes seminar for review of current theory and exchange of ideas and problems.

5103. PRACTICUM: PHYSICAL EDUCATION FOR THE HANDICAPPED IN A MAINSTREAMED SETTING. (1-3 cr; S-N only; prereq 5100, 5101 or #)

Teaching in the public school environment; instruction for atypical individuals in a mainstreamed setting; includes seminar for review of current theory and exchange of ideas and problems.

5110. SUPERVISION OF PHYSICAL EDUCATION. (3 cr)

Functions; adaptations of accepted procedures for observation, guidance, and training of physical educators.

5111. 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.

5112. PHYSICAL EDUCATION EQUIPMENT. (3 cr)

Selection, purchase, and maintenance of athletic equipment and supplies with opportunity to investigate selected equipment in depth.

5120. ADVANCED BIOMECHANICS/KINESIOLOGY. (4 cr; prereq undergrad kinesiology or #)

Principles of mechanics applied to human movement, analysis of motor skills, application to individual projects.

5121. CONTRIBUTIONS OF BASIC SCIENCE TO PHYSICAL EDUCATION. (3 cr; prereq #)

Recent research in related physical sciences; applications in selected areas.

Course Descriptions

5122. APPLIED PHYSIOLOGY. (3 cr; prereq 3386 or equiv or #)

Application of concepts in human physiology to exercise physiology, sports training, and physical activities with particular reference to respiratory and cardiovascular systems.

5123. ANALYSIS OF MOVEMENT IN GYMNAS-TICS. (3 cr; prereq 3111)

Scientific principles of body mechanics and training relating to teaching, analysis, and development of advanced performance techniques.

5125. ADVANCED PHILOSOPHY OF PHYSI-CAL EDUCATION AND SPORT. (3 cr; prereq 3131 or #)

Examination of comprehensive, systematic, and revealing accounts of the status of physical education and sport with respect to reality, knowledge, and value.

5126. ADVANCED PSYCHOLOGICAL AND SO-CIOLOGICAL DIMENSIONS OF PHYSICAL AC-TIVITY. (3 cr; prereq 3126 or #)

Advanced insight into the substance, nature, and significance of these dimensions of physical activity; focus on current research, issues, and trends as well as potential practical contributions.

5132. MOTOR DEVELOPMENT. (3 cr, \$5131; pre-req 3132 or #)

Development aspects of motor skill acquisition from birth to physical maturity.

5133. PRACTICUM: ASSESSMENT OF PSY-CHOMOTOR SKILLS IN YOUNG CHILDREN. (3 cr; prereq 3150 or #)

For the practitioner interested in collecting, treating, and analyzing assessment data.

5134. PERCEPTUAL-MOTOR DEVELOPMENT IN CHILDHOOD. (3 cr; prereq 3113 or #)

The motoric dimension of perception; emphasis on developmental tenets of perception, diagnosis and remediation of perceptual-motor deficiencies and related research.

5135. MOTOR LEARNING AND HUMAN PER-FORMANCE. (3 cr, \$5130; prereq 3113 or 3135 or #)

Mechanisms of human motor skill learning; emphasis on theories of motor learning and control of movement, motor memory, and individual differences.

5136. PSYCHOLOGY OF COACHING. (3 cr)

Psychological aspects of coaching at the elementary, secondary, and college levels.

5140. BIOMECHANICS OF SPORT SAFETY. (3 cr; prereq undergrad kinesiology)

Forces and torques developed in sports activities; tolerances of the human body; techniques for preventing injury; design of protective equipment.

5141. NUTRITION FOR EXERCISE AND PHYSI-CAL PERFORMANCE. (3 cr; \$HEEd 5412; S-N optional; prereq 3115 or FScN 1612 or FScN 3600 or equiv)

Application of basic nutritional principles to active populations, current issues related to dietary modifications for the possible improvement of physical performance, and strategies for educating clientele about nutrition and physical performance.

5150. TEACHING ELEMENTARY SCHOOL PHYSICAL EDUCATION. (3 cr; prereq tchg license or #)

Principles, techniques, and procedures in developing basic motor skills, physical fitness, and sports skills.

5151. CURRICULUM. (3 cr; prereq sr, 3322, 3323 or #)

For students without previous experience in curriculum; objectives, content, organization, evaluation, and trends.

5152. CURRICULUM DEVELOPMENT. (3 cr; pre-req 5151 or #)

Trends, issues, and problems at selected levels of interest: elementary, secondary, junior college; for experienced teachers.

5160. EVALUATION IN PHYSICAL EDUCA-TION. (3 cr; prereq 3150 or equiv)

General principles and techniques of evaluation.

5161. PRACTICUM: CONSTRUCTION OF MO-TOR PERFORMANCE TESTS. (3-6 cr; prereq 5160 or #)

Practical experience in the development and/or revision of motor performance tests from preschool through college with emphasis on test design and evaluation of the instrument.

5162. PRACTICUM: CONSTRUCTION OF WRITTEN TESTS. (3-6 cr, prereq 5160 or #)

Practical experience in the development of written tests with emphasis on test design and evaluation of items.

5170. FOUNDATIONS OF PHYSICAL EDUCA-TION. (3 cr; prereq grad or MEd students)

Establishment of guidelines for individual and group professional action; examination of pertinent social forces, educational philosophies, and general ethics.

5328. PROSEMINAR: HISTORY OF SPORT AND PHYSICAL EDUCATION. (4 cr; prereq 3131 or #)

Examination of the secondary literature detailing and interpreting development and cultural integration of sport and physical education, primarily though not exclusively in the United States.

5351. SEMINAR: TEACHING PHYSICAL EDU-CATION IN COLLEGES AND UNIVERSITIES. (1 cr [max 3 cr], prereq #)

Emphasis on improvement of instruction.

5371. SOCIOLOGY OF SPORT. (4 cr, §Soc 5371; prereq 3126 or #)
Sport within and among societies and nations; social organizations: socioeconomic development, contemporary structure, personnel, fans; relationship to other institutions: economy, education, family, government, religion; social differentiation: status, ethnicity, sex, age; careers; ethical and social problems: honesty and violence.

5387. DETECTION AND PREVENTION OF CORONARY HEART DISEASE. (4 cr; prereq 3386 or equiv or #)
Introduction to causes, detection, and prevention of major cardiovascular diseases emphasizing risk factor identification and modification, role of exercise in prevention, and measurement and interpretation of exercise electrocardiograms.

5388. EXERCISE TESTING, CONDITIONING, AND CARDIAC REHABILITATION. (4 cr; prereq 3386 or equiv, 5387 or #)
Administration and interpretation of exercise tests, cardiopulmonary resuscitation, and exercise prescription; survey of exercise programs for apparently healthy adults and CHD patients; familiarization with principles for establishment of intervention and rehabilitative programs.

5389. PRACTICAL EXPERIENCE IN GRADED EXERCISE TESTING, PRESCRIPTION, AND DIRECTION. (3-6 cr [max 6 cr]; prereq 5388 or #)
Supervised on-site training in testing, prescription, and direction of programs for adults.

5620. PRACTICUM: PREVENTION AND CARE OF ATHLETIC INJURIES. (3 cr; prereq Anat 1027 or equiv)
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.

5650. INTERNSHIP. (1-9 cr; prereq MEd, MA or PhD student, 18 cr at 5xxx level in PE, #)
On-the-job experience in private schools, colleges, private and state agencies in selected areas of physical education—administration, curriculum, supervision, and biomechanics.

5710. WORKSHOP: PHYSICAL EDUCATION FOR THE ELEMENTARY SCHOOL CHILD. (1-12 cr [max 12 cr]; S-N at option of dept)
Current trends, instructional techniques, and resource materials.

5720. TOPICS IN PHYSICAL EDUCATION. (1-12 cr [max 12 cr]; prereq #)
Current issues as they relate to physical education and sport.

5740. WORKSHOP: COACHING OF INDIVIDUAL, DUAL, OR TEAM SPORTS. (1-12 cr [max 12 cr])
Instruction at the advanced level including analyses of skills, game strategies, specific techniques of coaching, and methods of training and conditioning.

5750. ATHLETICS IN CONTEMPORARY SOCIETY. (3-9 cr; prereq sr or grad student)
Contemporary issues; background on organizational and management problems of interscholastic and intercollegiate athletics. Each offering will focus on a current problem.

5980. RESEARCH METHODOLOGY. (3 cr, §Hlth 5980; prereq education or grad student)
Methods and design for research in health, physical education, and recreation.

5981. PROBLEMS. (Cr ar; prereq MEd candidate, #)
Focus on teaching of physical education.

5983. READINGS: PHYSICAL EDUCATION. (Cr ar [max 9 cr] prereq education or grad student)
Independent study under tutorial guidance.

5985. APPLICATION OF RESEARCH. (3 cr)
Professional research for the practitioner; focus on interrelationships of the purpose, methods, findings, conclusions, and implications.

For Graduate Students Only
(For description, see *Graduate School Bulletin*)

8113. COLLEGE PHYSICAL EDUCATION ADMINISTRATION

8126. SEMINAR: PSYCHOLOGICAL AND SOCIOLOGICAL DIMENSIONS OF PHYSICAL ACTIVITY

8128. PSYCHOLOGY OF SPORT

8132. SEMINAR: MOTOR DEVELOPMENT

8135. SEMINAR: MOTOR LEARNING AND HUMAN PERFORMANCE

8150. PROFESSIONAL PREPARATION OF PHYSICAL EDUCATION TEACHERS

8320. SEMINAR: BIOMECHANICS

8325. SEMINAR: PHILOSOPHY OF PHYSICAL EDUCATION AND SPORT

8328. SEMINAR: HISTORY OF SPORT AND PHYSICAL EDUCATION

8381. LABORATORY RESEARCH TECHNIQUES

8382. BIOMECHANICS: RESEARCH TECHNIQUES

8980. GRAUATE RESEARCH SEMINAR

8981. RESEARCH PROBLEMS

8985. SEMINAR: CONTEMPORARY PROBLEMS

Course Descriptions

Recreation, Park, and Leisure Studies (Rec)

1520. ORIENTATION TO LEISURE AND RECREATION. (5 cr)

Examination of the history and development of the park and recreation movement; sociological, economic, psychological, and political considerations of leisure and recreation in contemporary societies; professional and service organizations and their interrelationship; orientation to the professional field.

1530. CAMP AQUATICS. (2 cr)

Administration of waterfront program, basic skills in handling small craft.

1540. CAMP COUNSELING. (4 cr)

Practical experience in all phases of camping; introduction to camping and outdoor education for prospective counselors.

1600. LEADERSHIP IN SOCIAL ACTIVITIES. (3 cr)

Techniques of leadership in social games, parties, dances, outings.

1650. SOCIAL ASPECTS OF LEISURE. (3 cr; prereq nonmajor only)

Sociological consideration of leisure and recreation as parts of our total socioeconomic structure.

1700. FIELD EXPERIENCE. (1-15 cr; S-N only)

Supervised experiences in selected agencies.

3150. LEADERSHIP IN OUTDOOR RECREATION. (3 cr; prereq 1520, recreation major)

Identity and scope of outdoor recreation programs.

3160. PROGRAMMING RECREATIONAL SPORTS. (3 cr, § PE 3160)

Basic ingredients for administering recreational sports programs including competitive intramurals, sports clubs, and self-directed exercise.

3210. THERAPEUTIC INFORMATION FOR RECREATORS. (3 cr; prereq Phar 5210, Anat 1027 or Anat 1004, Δ)

Survey of physical disability, limitations, treatment, and health serving agencies.

3530. RECREATION AND PARK AREAS AND FACILITIES. (5 cr; prereq 1520, recreation major or Δ)

Basic principles of planning community facilities; effective application of standards in planning, design, and construction.

3540. RECREATION PROGRAMMING. (5 cr; prereq 1520, recreation major or Δ)

Principles of program planning and leadership in all aspects of recreation.

3550. PARK AND RECREATION ADMINISTRATION. (5 cr; prereq 3530, 3540 or #)

Principles and practices in the delivery of park and recreation services.

3700. SENIOR INTERNSHIP. (1-15 cr; S-N only; prereq sr, recreation major or minor, Δ)

Supervised experiences in selected agencies.

3701. SENIOR SEMINAR. (3 cr; prereq 1525, §3700, sr, recreation major or minor, #)

Guided individual and group conferences.

3800. WORKSHOP: SPECIAL TOPICS IN RECREATION PROGRAMMING. (1-12 cr [max 12 cr]; prereq Δ; not open to MEd or grad students)

Background and current developments in recreation programming designed for program and allied service personnel. Each offering will focus on a specific service and/or clientele.

3900. DIRECTED STUDY. (3 cr [max 9 cr]; S-N optional; prereq recreation majors only and Δ)

Self-directed study preceded by classroom study and possession of basic competence.

5100. FOUNDATIONS OF RECREATION. (3 cr, §8120; prereq MEd, adult special or grad student)

Investigation of the historical, sociological, and educational bases of the recreative use of leisure time in contemporary society.

5160. CONSERVATION OF PARK RESOURCES. (3 cr; prereq 1520 or 5100 or Δ)

Environmental considerations in relation to recreation and leisure services.

5170. CAMP ADMINISTRATION. (3 cr; prereq 1540 or #)

Management and operation of group camping facilities.

5180. EMPLOYEE RECREATION SERVICES. (3 cr; prereq 1520 or 5100 or Δ)

Survey of history, development, and management patterns of employee recreation services in business, government, and industry.

5190. COMMERCIAL RECREATION. (3 cr; prereq 3550 or Δ)

Survey of scope and development of profit-making recreation agencies, facilities, and services.

5200. RECREATION IN COMMUNITY EDUCATION. (3 cr; prereq 1520 or 5100 or Δ)

Recreation and leisure services in the community education process.

5210. INTRODUCTION TO THERAPEUTIC RECREATION. (3 cr; prereq 1520 or §5100, recreation major or Δ)

Relationship of recreation to special populations; milieu and interdisciplinary approaches in the delivery of services.

5220. THERAPEUTIC RECREATION SERVICES. (5 cr; prereq 5120 or Δ)

Recreation services for the ill, disabled, and other special populations.

5230. RECREATION AND MENTAL RETARDATION. (3 cr; prereq 5210, 5220 or #)

Issues relating to leisure services for persons with mental retardation problems; approaches to programming in the institution and in the community.

5235. LEISURE AND MENTAL HEALTH. (4 cr; prereq 5210 or #, Psy 3604 or 5604, Δ)

Exploration and application of concepts of mental health and mental illness to leisure services delivery in institutional and community settings.

5240. RECREATION AND AGING. (4 cr; prereq 3540 or 5100 or Δ)

Leisure problems of the aging citizen; modification of program activities; investigation of community resources; trends and developments in recreation planning.

5250. FINANCING LEISURE SERVICES. (3 cr; prereq 3550 or Δ)

Methods and techniques of financing operations and capital improvements in public park and recreation agencies and nonpublic community leisure services; sources of revenue, budgeting procedures.

5255. LEISURE EDUCATION FOR SPECIAL POPULATIONS. (3 cr; prereq 5220, PsyS 5110 or EPsy 5260 or # and Δ)

Instruction, counseling, and other methods of education for awareness of leisure, self-in-leisure, leisure-related problem solving and decision making, and access to leisure services.

5270. COMMUNITY LEISURE SERVICES FOR SPECIAL POPULATIONS. (3 cr; prereq 1520 and rec and park major, or Δ)

Exploration and application of concepts and techniques of normalization and least restrictive environment strategies to leisure service delivery in community settings for range of individuals with handicaps.

5299. CLIENT ASSESSMENT AND PROGRAM EVALUATION IN THERAPEUTIC RECREATION. (4 cr; prereq 5220 or Δ)

In-depth study and application of approaches to therapeutic recreation, client assessment and program evaluation.

5300. FOUNDATIONS OF OUTDOOR EDUCATION. (3 cr; prereq sr, 1520 or 5100 or #)

Investigation of the philosophical, historical, and educational foundations of outdoor education.

5310. PROGRAMMING IN OUTDOOR EDUCATION. (4 cr; prereq 5300 or #)

Methods, materials, and setting appropriate for developing and conducting outdoor education and environmental interpretation programs; emphasis on development of practical skills.

5350. WILDERNESS OUTDOOR RECREATION PROGRAMMING. (4 cr; prereq 3150, fitness test of running 2 miles in under 17 minutes or #)

Exploration of leisure and educational resources of wilderness and management of wilderness-based outdoor recreation and outdoor education programs.

5455. RECREATIONAL SPORTS. (3 cr; \$PE 5255)

In-depth analysis of processes and benefits of recreational sports programming and participation.

5630. PRACTICUM: THERAPEUTIC RECREATION. (3-9 cr; prereq recreation MEd or grad student)

Supervised experiences in program operation; administrative and supervisory duties.

5640. PRACTICUM: LEISURE SERVICES. (3-9 cr; S-N only; prereq recreation MEd or grad student)

Supervised experiences in program operation; administrative and supervisory duties.

5695. PRACTICUM: RECREATIONAL SPORTS. (3 cr; \$PE 5695; prereq 5455 or PE 5255)

Theory and application of principles in developing programs, including supervised experiences in program operation.

5750. LEGAL ISSUES IN LEISURE SERVICES. (4 cr; prereq 3550 or Δ)

Broad study of basic legal considerations in the delivery of leisure services in public and private sectors.

5900. WORKSHOP: CONTEMPORARY ISSUES IN LEISURE SERVICES. (1-12 cr [max 12 cr]; prereq Δ)

Contemporary issues emphasizing administrative and supervisory functions for recreation and allied professionals; individual offerings focus on special issues and/or professional groups.

5980. INTRODUCTION TO RESEARCH. (3 cr, \$PE 5980; prereq MEd or grad student or Δ)

Basic techniques; emphasis on social research methodology; survey of present status of recreation and park research.

5981. PROBLEMS. (Cr ar; prereq MEd or MA student or Δ)

Focus on conduct of recreation programs.

5983. READINGS: RECREATION. (1-3 cr; prereq MEd or grad student or Δ)

Independent study under tutorial guidance.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8310. SEMINAR: RECREATION AND PARK ADMINISTRATION**8370. SEMINAR: ADMINISTRATIVE PROBLEMS IN THERAPEUTIC RECREATION****8380. SEMINAR: ADMINISTRATIVE PROBLEMS IN RECREATION AND PARKS**

Course Descriptions

8980. RESEARCH PROBLEMS

8981. RESEARCH PROBLEMS

School Health Education (Hlth)

1500. AMERICAN RED CROSS STANDARD FIRST AID AND PERSONAL SAFETY. (1 or 2 cr)

Lectures, demonstrations, and practice in first aid and personal safety; ARC Standard First Aid and Personal Safety Certificate awarded upon recommendation of the instructor.

1502. BASIC LIFE SUPPORT—CARDIOPULMONARY RESUSCITATION (CPR). (1 cr; S-N only)

Theory and practice in skills of rescue breathing and external cardiac compression; American Red Cross certification awarded upon demonstration of competence based on recommendation of instructor.

3300. INSTRUCTOR'S COURSE IN STANDARD FIRST AID AND PERSONAL SAFETY. (3 cr; prereq ARC First Aid and Personal Safety Certificate or Advanced Certificate)

Preparation to teach the ARC basic first aid and standard first aid and personal safety courses.

3310. INSTRUCTOR'S COURSE—CARDIOPULMONARY RESUSCITATION. (3 cr; prereq 1502 or current CPR certificate from American Heart Association or American Red Cross; S-N optional)

Prepares instructors to teach the skills and knowledge of basic life support (CPR).

3330. TEACHING HEALTH IN THE ELEMENTARY SCHOOL. (3 cr; prereq elementary education major)

Content (including critical health issues) and methods of instruction in health education.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8980. RESEARCH PROBLEMS

8981. RESEARCH PROBLEMS

Vocational and Technical Education

Agricultural Education (AgEd)

1001. INTRODUCTION TO AGRICULTURAL EDUCATION. (1 cr)

Orientation to employment and service; qualifications of teachers, survey of preparatory offerings; the program in Minnesota.

1010. HISTORY AND PHILOSOPHY OF VOCATIONAL AND COMMUNITY EDUCATION. (3 cr)

Analysis and interpretation; alternative value positions involving social, economic, and related community variables.

3010. ORGANIZATION AND DIRECTION OF FFA ACTIVITIES. (2 cr)

Development of FFA leadership: vocational agriculture/agribusiness and natural resources education, youth leadership organization; integration of classroom and supervised occupational experience.

3021. EDUCATION THROUGH EXTENSION METHODS. (3 cr, §HEEd 3021; 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.

3029. DIRECTED EXPERIENCE IN AGRICULTURAL EDUCATION. (1-3 cr; prereq Δ)

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.

3031. STUDENT TEACHING IN AGRICULTURE. (10 cr; prereq jr, 5028, SeEd 3155 and #)

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

3041. PRACTICUM: AGRICULTURAL EDUCATION TECHNOLOGY. (1-3 cr [max 5 cr]; prereq Δ)

Individualized study packages of one credit each on technology in agriculture, horticulture, off-farm agriculture, agricultural mechanics, adult and beginning farmer programs, youth organizations, program evaluation, and visual aids.

5010. RURAL EDUCATION AND COMMUNITY LEADERSHIP. (3 cr, §1010; prereq #)

Role of school in rural community, coordination of school with nonschool educational agencies; responsibility for community leadership.

5021. EDUCATION THROUGH EXTENSION METHODS. (3 cr, §HEEd 5021; prereq grad student or #)

Methods and techniques of formal and nonformal education used by Extension Service and other organizations.

5023. EXTENSION METHODS FOR AGRICULTURAL PRODUCTION IN DEVELOPING COUNTRIES. (3 cr, §HEEd 5023)

Extension methods to promote the rapid adoption of improved agricultural practices.

5024. EXTENSION HISTORY AND PHILOSOPHY. (3 cr, §HEEd 5024)

Origin, philosophy, historical development, objectives, and organizational structure of the Extension Service.

5025. EXTENSION PROGRAM DEVELOPMENT.

(3 cr, \$HEEd 5025)

Planning, implementing, and evaluating the program development process.

5026. EXTENSION ADMINISTRATION.

(3 cr, \$HEEd 5026; prereq #)

Administration of the Extension Service organization at the county, area, and state levels.

5027. PRACTICUM: PLACEMENT FOR EXTENSION EXPERIENCES.

(2-9 cr [max 9 cr], \$HEEd 5027; S-N optional)

Observation of and participation in activities of Extension Service staff at county and state level; familiarization with staffing, program planning and development, and educational and administrative functions.

5028. TEACHING METHODS IN AGRICULTURAL EDUCATION.

(5 cr; prereq SeEd 3155 or \$SeEd 3155)
Methods utilized in teaching agriculture in public schools; use of media, principles of learning, problem solving, test construction, classroom management and specific practice in problem-solving teaching techniques; use of competency-based individualized instruction as a medium for course presentation and a model for teaching methods.

5032. HIGH SCHOOL CURRICULUM IN AGRICULTURE.

(3 cr; prereq 10 cr in education)
Philosophy, organization, and administration of instruction in agriculture departments in secondary schools.

5034. PROCEDURES IN TEACHING AGRICULTURE.

(3 cr; prereq #)
New developments in methodology; assessment of innovations and procedures; consideration of various levels of instruction.

5035. 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.

5041. WORKSHOP: AGRICULTURAL EDUCATION TECHNOLOGY.

(1-6 cr [max 6 cr])
New understandings, techniques, and materials in animal science, plant science, horticulture, soil science, agricultural mechanics, forestry, natural resources, youth organization, visual aids, and occupational exploration.

5042. AGRICULTURAL MECHANICS.

(1-3 cr [max 12 cr])
Technical and managerial information, techniques, and materials. Designed to facilitate participant's instructional planning, resource development, and instruction. Topic to be identified with each offering.

5043. FARM MANAGEMENT.

(1-3 cr [max 12 cr])
Application of agricultural economics theory, principles, techniques, and materials. Designed to facilitate participant's instructional planning, resource development, and instruction. Topic to be identified with each offering.

5049. AGRICULTURAL EDUCATION FOR ADULTS.

(4 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.

5051. 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.

5052. FARM BUSINESS MANAGEMENT EDUCATION.

(3 cr; prereq 5049 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.

5055. INTRODUCTION TO FARMING SYSTEMS RESEARCH AND EXTENSION.

(3 cr)
Introduction to theory and practice; interdisciplinary approach to holistic view of farm family agricultural enterprise.

5056. APPLICATION OF FARMING SYSTEMS RESEARCH AND EXTENSION.

(3 cr; prereq AgEd 5055 or HEEd 5055)
Seminar and fieldwork projects; sondeos and on-farm trials conducted.

5061. PROGRAM PLANNING AND EVALUATION.

(3 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.

5071. SUPERVISED OCCUPATIONAL EXPERIENCES IN AGRICULTURE.

(3 cr)
Organization and administration of an occupational experience program in agriculture for high schools and area schools.

5072. PRACTICUM: AGRICULTURAL BUSINESS AND INDUSTRY.

(1-3 cr [max 9 cr]; prereq 5071 or #)
Observation, study, and experience in agricultural business and industry; application to educational problems in agriculture.

Course Descriptions

5080. ORGANIZATION AND MANAGEMENT (3

cr; prereq #)

Administrative structure and function of subcollegiate programs.

5081. CURRENT ISSUES FOR THE BEGINNING AGRICULTURE TEACHER. (1-3 cr [max 3 cr]; prereq #)

Teaching methods, organizing learning resource materials, managing classroom and laboratory learning activities, curriculum planning and organization, managing discipline situations, school and community relationships for the beginning teacher.

5082. CURRENT ISSUES IN AGRICULTURAL EDUCATION. (1-3 cr [max 9 cr]; prereq #)

Emphasizes study of and clarification of a current issue; strategies of response, implications of response actions, and related leadership roles.

5084. 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.

5085. CAREER DEVELOPMENT IN AGRICULTURAL EMPLOYMENT. (3 cr)

Methods and materials in teaching career development for agricultural industries.

5090. 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.

5095. INDEPENDENT STUDY. (3 cr; prereq MED student in agricultural education)

Preparation of a paper dealing with learning in agricultural education applied to professional responsibilities.

5128. METHODS OF TEACHING. (3 cr; prereq non-agricultural education major and/or #)

Methods of teaching agriculture or related subjects; developing competencies in planning, organizing, implementing, and evaluating instruction with practice in instructional techniques.

5129. CURRICULUM PLANNING. (3 cr; prereq 5128 or #5128, non-agricultural education major and/or #)

Methods and procedures in planning a curriculum to teach within a specific subject matter area; curriculum construction for use in native country setting.

5130. EFFECTIVE TEACHING IN A COLLEGE OF AGRICULTURE. (3 cr; prereq 1 yr grad study in agriculture or #)

Approaches to effective teaching, development of a personal philosophy, practice in employing types of instructional improvement activities. Primarily for the student who plans to teach in a college of agriculture.

5200. SEMINAR: WORKING WITH YOUTH

THROUGH ADULTS. (1-3 cr [max 9 cr incl HEEEd 5200 and YoSt 5200]; prereq Δ; S-N optional)

Interdisciplinary seminar focusing on definition of the youth work profession; essential skills for youth workers; youth needs, roles, relationships with adults; development and management of a system of support for youth work.

5244. TOPICS IN PROGRAM PLANNING FOR EXTENSION EDUCATION. (1-6 cr [max 9 cr]; §HEEd 5244)

Effective extension educational programming in relation to situation and needs analysis; coordination of content, people, methodology; specific aspects in development of program models; managing resources available.

5245. TOPICS IN ADMINISTERING EXTENSION EDUCATION. (1-6 cr [max 9 cr]; §HEEd 5245)

Issues and current literature; focus on personnel hiring and supervision, financial management, leadership styles, long-range planning; application of theory to administrative practice.

5246. TOPICS IN TEACHING AND DELIVERING EXTENSION EDUCATION. (1-6 cr [max 9 cr]; §HEEd 5246)

Teaching techniques related to concepts of use of media, telecommunications, computers, group process methods, experiential learning in extension education settings.

5247. TOPICS IN EVALUATING EXTENSION EDUCATION. (1-6 cr [max 9 cr]; §HEEd 5247)

Overall evaluation design; issues in choosing quantitative versus qualitative evaluation methods; developing skills and conceptual frameworks to apply theory to extension settings.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8001. RESEARCH IN AGRICULTURAL EDUCATION

8020. SEMINAR: AGRICULTURAL EDUCATION

8091. FIELD PROBLEMS

8303. SEMINAR: GRADUATE STUDIES REVIEW

Business and Marketing Education (BME)

1100. INTRODUCTION TO MARKETING EDUCATION. (4 cr)

Orientation to and explanation of marketing education in school and business settings.

1501. BASIC KEYBOARDING/TYPEWRITING. (3 cr, §BDE 1501; S-N optional for nonmajors)
Correct keyboarding techniques for the typewriter, microcomputer, and other applications; letter format; manuscripts; proofreading.

1502. INTERMEDIATE TYPEWRITING. (3 cr, §BDE 1502; prereq 1501 or proficiency exam)
Form letters; job application forms; personal data sheets; centering and tabulations; memoranda; manuscripts with footnotes; speed and accuracy building.

1503. ADVANCED TYPEWRITING. (3 cr, §BDE 1503; prereq 1502 or proficiency exam)
Form letters; business and personal letters; business forms; tabular/columnar copy; speed and accuracy building.

1504. INTRODUCTION TO BUSINESS EDUCATION. (4 cr)
Definition; all levels of public and private education and business and industry sites; content; methodologies; issues; personal career exploration.

1505. BEGINNING SHORTHAND. (3 cr, §BDE 1505; prereq 1501 or equiv)
Shorthand theory, speed building on familiar material, typewritten transcription; introduction to new matter dictation and personal note-taking.

1506. INTERMEDIATE SHORTHAND. (3 cr, §BDE 1506; prereq 1502, 1505 or proficiency exam)
Emphasis on building speed on new matter dictation and typewritten transcription.

1507. ADVANCED SHORTHAND. (3 cr, §BDE 1507; prereq 1502, 1506 or proficiency exam)
Continued emphasis on speed building, using new matter dictation; emphasis on transcription of mailable letters.

1509. OFFICE PROCEDURES AND MACHINES. (3 cr, §BDE 1509; prereq 1502 or equiv)
Introduction to word processing and office procedures; transcribing and calculating machines.

3300. TEACHING TYPEWRITING/KEYBOARDING. (3 cr, §BDE 3300; prereq 1502 or BDE 1502 or ¶1502 or equiv, SeEd 3155 or ¶SeEd 3155)
Objectives, content, methods, materials, and evaluation.

3302. TEACHING BASIC BUSINESS SUBJECTS. (3 cr, §BDE 3302; prereq SeEd 3155 or ¶SeEd 3155)
Developments in content and methods of teaching nonvocational business subjects.

3303. TEACHING ACCOUNTING AND DATA PROCESSING. (3 cr, §BDE 3303)
Methods, materials, curriculum, and principles of learning pertinent to accounting and data processing.

3602. PRE-FALL STUDENT TEACHING. (3 cr, §BDE 3602; S-N only; prereq #)
Introductory student teaching experience in business or marketing education subjects.

3603, 3604, 3605. STUDENT TEACHING IN BUSINESS OR MARKETING EDUCATION. (4 cr each; S-N optional; prereq SeEd 3155 and Δ)
BME 3603 is required for students majoring or minor-ing in marketing education and students majoring in business education. BME 3604 and 3605 are required for all students majoring in business or marketing education.

5150. RESEARCH AND METHODS IN TEACHING ACCOUNTING. (4 cr, §BDE 5150)
Application of current research findings to teaching methodology.

5151. RESEARCH AND METHODS IN TEACHING TYPEWRITING/KEYBOARDING. (3 cr, §BDE 5151)
Application of research findings to classroom methodology and materials development.

5152. RESEARCH AND METHODS IN TEACHING THE BASIC BUSINESS SUBJECTS. (4 cr, §BDE 5152)
Application of research findings to classroom methodology in general business, economics, introduction to business, business law, and consumer education.

5153. CONSUMER EDUCATION: CURRICULUM, METHODS, AND MATERIALS. (3 or 4 cr, §BDE 5153, SHEEd 5153)
Objectives, content, curricular organization, teaching methods, materials, and evaluation methods for the elementary, secondary, postsecondary, and adult levels.

5154. MATERIALS AND METHODS FOR MODEL OFFICE COURSES. (4 cr, §BDE 5154)
Course organization, methods, development, and evaluation of objectives and materials; practicum in simulation.

5156. TEACHING SHORTHAND AND TRANSCRIPTION. (3 cr, §BDE 5156)
Classroom methodology and materials development in shorthand and shorthand transcription.

5157. MATERIALS AND METHODS IN OFFICE EDUCATION. (4 cr, §BDE 5157)
Recent research and developments in teaching office procedures, the preparatory and related classes for cooperative office education, and the advising of vocational office education student organizations.

5158. OFFICE MANAGEMENT TECHNIQUES AND TECHNOLOGY. (4 cr, §BDE 5158)
Present and future management principles, financial management, personnel, communications, systems, and environment.

Course Descriptions

5159. WORD/INFORMATION PROCESSING CONCEPTS AND MANAGEMENT. (4 cr, §BDE 5159)

Personnel and organization in industry; input and output hardware; implementation of word processing systems.

5160. WORD PROCESSING PRACTICUM. (3 cr)

Introduction to software for personal and business applications; completion of projects using basic through advanced editing and printing capabilities.

5161. RECORDS MANAGEMENT. (4 cr)

Management of records in business; examination of business records creation, maintenance, protection, and disposition.

5252. TEACHING MERCHANDISE DISPLAY. (3 cr, §BDE 5252; prereq #)

Materials and methods; practice in using equipment.

5253. SUPERVISORY TRAINING. (3 cr, §BDE 5253)

Problems, practices, programs, issues, and methodologies related to preparing trainers of supervisors in business, office, and marketing occupations.

5255. MATERIALS LABORATORY: MARKETING EDUCATION. (3 cr, §BDE 5255; prereq 5305 or BDE 3305 or BDE 5251)

Development of specific related vocational materials for marketing occupations, cooperative vocational education classes.

5260. PROFESSIONAL SALES EDUCATION. (3 cr)

Instruction designed to help students acquire and demonstrate higher order selling competencies reflecting client-centered and problem-solving abilities.

5304. METHODS: MARKETING EDUCATION. (4 cr, §BDE 3304)

Determining and organizing course content based on competency lists and objectives; constructing units and lesson plans; locating and selecting resources; demonstrating specific teaching methods pertinent to marketing topics.

5305. APPLIED METHODS: MARKETING EDUCATION. (4 cr, §BDE 3305; prereq 5304, #)

Applying, practicing specific methods pertinent to marketing content categories; constructing a complete unit and teaching five one-hour sessions in school or laboratory setting.

5310. INTRODUCTION TO MICROCOMPUTER APPLICATIONS IN BUSINESS AND MARKETING EDUCATION. (3 cr; §BDE 5310)

Instructional uses of microcomputers, representative business and marketing education applications, and BASIC programming.

5320. BUSINESS PROGRAMMING APPLICATIONS USING MICROCOMPUTERS. (3 cr; prereq 5310 or equiv)

Using microcomputers to program business and marketing applications in the BASIC language.

5330. SPREADSHEET ANALYSIS USING MICROCOMPUTERS IN BUSINESS AND MARKETING EDUCATION. (3 cr; prereq 5310 or equiv)

Introduction to use of spreadsheet software; instructional applications in business areas.

5335. TEACHING MICROCOMPUTER BUSINESS GRAPHICS. (3 cr; prereq 5310 or equiv)

Representative microcomputer-based business graphics software packages; use for making instructional presentations; use of simulated projects to teach applications in business and marketing classrooms.

5340. TRENDS AND ISSUES IN BUSINESS AND MARKETING EDUCATION. (3 cr [max 6 cr], §BDE 5155, §BDE 5250)

Identification, analysis, and discussion of recent issues and trends.

5345. DATA BASE MICROCOMPUTER APPLICATIONS. (3 cr; prereq 5310 or equiv)

Introduction to use of data base software; instructional applications in business areas.

5350. BUSINESS DATA PROCESSING: CONTENT AND TEACHING METHODS. (4 cr, §BDE 5350)

Business applications of electronic data processing; current curriculum developments and teaching methodology in high school and postsecondary business and marketing education.

5351. ORGANIZATION AND ADMINISTRATION OF BUSINESS AND MARKETING EDUCATION. (4 cr, §BDE 5351)

Organization and administrative structure in the United States; objectives, programs, practices, teacher selection and supervision, evaluative criteria for business and marketing education departments.

5352. COORDINATION TECHNIQUES IN BUSINESS AND MARKETING EDUCATION. (4 cr, §BDE 5352)

The cooperative program in marketing and office education; program establishment; guidance, selection, and placement of students; work adjustment, student objectives, evaluation; labor laws; public relations.

5353. CURRICULUM CONSTRUCTION IN BUSINESS AND MARKETING EDUCATION. (4 cr, §BDE 5353)

Content identification, program organization, preparation of instructional objectives, guidelines for selection and development of instructional materials.

5354. POSTSECONDARY BUSINESS AND MARKETING EDUCATION. (3 cr, §BDE 5354)
Determining needs, curriculum facilities, admission practices, placement of and follow-up of students, teacher qualifications, interorganizational relations in junior college and area technical school programs.

5355. ADULT BUSINESS AND MARKETING EDUCATION PROGRAMS. (3 cr, §BDE 5355)
Selection and training of evening school instructors; planning and promoting evening school business and marketing education classes; teaching adults; course and program evaluation.

5357. RESEARCH PROCEDURES IN BUSINESS AND MARKETING EDUCATION. (4 cr, §BDE 5357)
Research design and techniques, computer orientation, preparation of reports; criteria for appraisal and critical analysis of research completed in business and marketing education.

5358. BUSINESS AND MARKETING EDUCATION STUDENT ORGANIZATIONS. (3 cr, §BDE 5358)
Organization, administration, and operation of local, state, and national business and marketing education vocational student organizations.

5359. OCCUPATIONAL EXPERIENCE. (1-18 cr; S-N optional; prereq #)
Observation and employment experiences in business offices or marketing businesses; weekly seminars on applications to teaching and guidance of high school and post-high school students.

5360. PROGRAM DEVELOPMENTS IN BUSINESS AND MARKETING EDUCATION. (1-6 cr)
Developments emerging from research and local, state, and national programs and projects. Content will vary with each offering.

5361. BUSINESS OBSERVATION AND SEMINAR. (3-9 cr, §BDE 5361)
Current operating practices and career opportunities in business and industry combining planned experiences in work environments and related seminars.

5370. SPECIAL TOPICS IN INSTRUCTION. (1-6 cr)
Planning and providing content, evaluating instruction. Topics vary with each offering.

5380. SPECIAL TOPICS IN CURRICULUM. (1-6 cr)
Content development and evaluation of curriculum and curriculum materials. Topics vary with each offering.

5390. SPECIAL TOPICS IN TECHNICAL UPDATING. (1-6 cr)
Technological and procedural changes in business content. Topics vary with each offering.

5600. FIELD-BASED PROJECTS IN BUSINESS AND MARKETING EDUCATION. (1-12 cr [max 12 cr]; prereq #)
Individual or group work on curricular, instructional, developmental, or evaluative problems and projects applicable to local school or business situations.

5900. DIRECTED STUDY IN BUSINESS AND MARKETING EDUCATION. (1-6 cr [max 6 cr]; S-N optional; prereq Δ)
Opportunity for individual learning experiences not covered by regular courses.

For Graduate Students Only
(For description, see *Graduate School Bulletin*)

8300. SEMINAR: RESEARCH IN BUSINESS, MARKETING, AND ECONOMIC EDUCATION

8600. INTERNSHIP: BUSINESS AND MARKETING EDUCATION

8900. PROBLEMS: BUSINESS AND MARKETING EDUCATION

Home Economics Education (HEEd)

1500. INTRODUCTION TO HOME ECONOMICS EDUCATION. (2 cr)
Exploration of profession and educator's alternative roles; implications of contemporary and future social forces for home economics education.

1510. KNOWLEDGE AND VALUES IN TEACHING. (4 cr; prereq 1500 or #)
Processes of developing, acquiring, and integrating knowledge and values, application to home economics education.

3021. EDUCATION THROUGH EXTENSION METHODS. (3 cr, §AgEd 3021; 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.

3315. ADULT EDUCATION IN HOME ECONOMICS. (3 cr)
Resources and processes for community analysis and design of educational programs to enable adults of all ages to identify and solve problems in personal and family life.

3325. PRACTICUM IN CHILD DEVELOPMENT. (1 cr)
Observation and experience with children as a method of teaching child development in the home economics program.

3331. CHILDREN AND PARENTING: CURRICULUM METHODS AND MATERIALS. (2 cr; prereq † special section of CPsy 3330 for home economics majors or #)
Appropriate methods and materials for teaching concepts at the secondary and adult levels.

Course Descriptions

3520. HOME ECONOMICS CURRICULUM AND INSTRUCTION: COGNITIVE LEARNING. (5 cr; prereq 1510)

Broad overview of elements of curriculum; objectives, assessment, and strategies related to cognitive learning.

3530. HOME ECONOMICS CURRICULUM AND INSTRUCTION: AFFECTIVE LEARNING. (4 cr; prereq 3520 and 6 cr in learning psychology and educational processes)

Objectives, assessment, and strategies related to affective learning.

3601. CLINICAL EXPERIENCE. (3-18 cr; prereq 3620 and ¶3611; SeEd 3150, 3155, Δ; S-N only)

Classroom teaching in consumer homemaking, family life, and home economics occupations in selected Minnesota schools.

3611. FIELDWORK. (3 cr; S-N only; prereq 3620, ¶3601, Δ)

Individualized instruction in consumer homemaking, family life, or occupational education programs in the field and on campus.

3620. CURRICULUM MANAGEMENT. (3 cr; prereq 3530 or ¶3530)

Classroom activities including laboratory.

3900. INDEPENDENT STUDY. (1-9 cr per qtr [max 9 cr]; prereq jr and #)

Study of selected topics in home economics chosen in collaboration with staff.

3910. EDUCATIONAL METHODS FOR HOME ECONOMISTS AND RELATED PROFESSIONALS. (3 cr; prereq jr and non-home economics education majors; S-N optional)

For home economists and related professionals whose work includes educating people; development of skills necessary to organize, implement, and evaluate presentations and programs for individual clients as well as groups.

5001. SPECIAL TOPICS. (1-6 cr; S-N optional)

Study of topic not covered by available courses.

5003. INTERNSHIP: COMMUNITY/WORK SETTINGS. (3-12 cr [max 12 cr]; prereq #; max 3 credits applied to MEd and MA programs; S-N only)

Planned work experience focusing on educational competencies in these settings; students assume defined responsibilities of the position.

5021. EDUCATION THROUGH EXTENSION METHODS. (3 cr, §AgEd 5021; prereq grad student or #)

Methods and techniques of formal and nonformal education used by Extension Service and other organizations.

5023. EXTENSION METHODS FOR DEVELOPING COUNTRIES. (3 cr, §AgEd 5023)

Extension methods to promote the rapid adoption of improved practices.

5024. EXTENSION HISTORY AND PHILOSOPHY. (3 cr, §AgEd 5024)

Origin, philosophy, historical development, objectives, and organizational structure of the Extension Service.

5025. EXTENSION PROGRAM DEVELOPMENT. (3 cr, §AgEd 5025)

Planning, implementing, and evaluating the program development process.

5026. EXTENSION ADMINISTRATION. (3 cr, §AgEd 5026; prereq #)

Administration of the Extension Service organization at the county, area, and state levels.

5027. PRACTICUM: PLACEMENT FOR EXTENSION EXPERIENCES. (2-9 cr [max 9 cr], §AgEd 5027; S-N optional)

Observation of and participation in activities of Extension Service staff at county and state level; familiarization with staffing, program planning and development, and educational and administrative functions.

5055. INTRODUCTION TO FARMING SYSTEMS RESEARCH AND EXTENSION. (3 cr)

Introduction to theory and practice; interdisciplinary approach to holistic view of farm family agricultural enterprise.

5056. APPLICATION OF FARMING SYSTEMS RESEARCH AND EXTENSION. (3 cr; prereq AgEd 5055 or HEEEd 5055)

Seminar and fieldwork projects; sondeos and on-farm trials conducted.

5100. SERVICE OCCUPATIONS EDUCATION. (3 cr [max 12 cr], §5331)

Development of occupational programs; exploration of career opportunities; identification of competencies for career clusters; development of objectives, learning experiences, and appraisal procedures; preparation of teaching materials; licensure course for instructors.

5102. SERVICE OCCUPATIONS WORK EXPERIENCE. (3-6 cr [max 12 cr], §5336; S-N optional; prereq #; max 3 credits applied to grad degree)

Observation and directed experience in selected occupational cluster with application to teaching. Each credit requires 85 hours of paid occupational experience; work experience course for licensure requirements.

5104. CURRICULA, METHODS, AND MATERIALS FOR SERVICE OCCUPATIONS. (3 cr, §5301)

Examination of curricula, including methods and materials, for occupational clusters related to cooperative secondary and postsecondary programs; licensure course for instructor coordinators.

5106. COORDINATION TECHNIQUES FOR SERVICE OCCUPATIONS. (3 cr)

Responsibilities of instructor-coordinators in cooperative secondary and postsecondary programs; guidance, selection, and placement of students in training agencies; articulation, supervision, and evaluation of training; licensure course for instructor-coordinators.

5108. SEMINAR IN SERVICE OCCUPATIONS.

(3-9 cr [max 9 cr], §5337; prereq #; max 3 cr may be applied to degree program)

Exploration of current practices and career opportunities in business and industry, including planned experiences in work environments.

5109. SPECIAL TOPICS IN SERVICE OCCUPATIONS EDUCATION. (1-6 cr; S-N optional)

Relevant emerging issues, current literature, technological development, and technical updating.

5153. CONSUMER EDUCATION; CURRICULUM, METHODS, AND MATERIALS. (3 or 4 cr, §BME 5153)

Objectives, content, curriculum organization, teaching methods, materials, and evaluation methods for the elementary, secondary, postsecondary, and adult levels.

5200. SEMINAR: WORKING WITH YOUTH THROUGH ADULTS. (1-3 cr [max 9 cr incl AgEd

5200 and YoSt 5200]; prereq Δ ; S-N optional)

Interdisciplinary seminar focusing on definition of the youth work profession; essential skills for youth workers; youth needs, roles, relationships with adults; development and management of a system of support for youth work.

5244. TOPICS IN PROGRAM PLANNING FOR EXTENSION EDUCATION. (1-6 cr [max 9 cr], §AgEd 5244)

Effective extension educational programming in relation to situation and needs analysis; coordination of content, people, methodology; specific aspects in development of program models; managing resources available.

5245. TOPICS IN ADMINISTERING EXTENSION EDUCATION. (1-6 cr [max 9 cr], §AgEd 5245)

Issues and current literature; focus on personnel hiring and supervision, financial management, leadership styles, long-range planning; application of theory to administrative practice.

5246. TOPICS IN TEACHING AND DELIVERING EXTENSION EDUCATION. (1-6 cr [max 9 cr], §AgEd 5246)

Teaching techniques related to concepts of use of media, telecommunications, computers, group process methods, experiential learning in extension education settings.

5247. TOPICS IN EVALUATING EXTENSION EDUCATION. (1-6 cr [max 9 cr], §AgEd 5247)

Overall evaluation design; issues in choosing quantitative vs. qualitative evaluation methods; developing skills and conceptual frameworks to apply theory to extension settings.

5300. HOME ECONOMICS CURRICULUM. (3 cr)

Examination of research and literature; development of units of study and programs at elementary and secondary levels; production and evaluation of materials.

5305. 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.

5310. METHODS IN TEACHING HOME ECONOMICS: ATTITUDES, VALUES, AND KNOWLEDGE. (3 cr)

Derivation of theory for educational method from relevant research; application to educational objectives, strategies, and student motivation.

5315. EVALUATION: THEORETICAL AND TECHNICAL ASPECTS. (3 cr)

Collecting and interpreting evidence related to achievement of objectives, emphasizing higher levels of cognition and affective behaviors.

5320. ADULT EDUCATION IN HOME ECONOMICS. (3 cr)

Planning a community program; teaching procedures; special problems.

5321. INTERNATIONAL PERSPECTIVES IN HOME ECONOMICS EDUCATION. (3 cr)

Examination of the field (formal and nonformal) around the world; commonalities and differences in purpose, problems, history, methods of delivery, and context of home economics.

5325. TRENDS IN HOME ECONOMICS EDUCATION. (1-4 cr [max 12 cr])

Current status; purposes, programs, content emphasis, research, problems and issues in the field.

5400. HOUSING EDUCATION. (1-4 cr [max 12 cr])

Objectives, content, curriculum organization, teaching methods, materials, and evaluation approaches for teaching youth and adults about concepts, issues, and current trends related to housing and home furnishings problems.

5403. TEXTILES AND CLOTHING EDUCATION. (1-4 cr [max 12 cr])

Curricula, methods, and materials for teaching consumer, social, cultural, psychological, and technical aspects; analysis of family clothing and textile related problems; decisions at middle, secondary, and adult levels; evaluation and critique of instructional design.

5404. INTRODUCTION TO EARLY CHILDHOOD FAMILY EDUCATION PROGRAM. (1 cr)

Concept and philosophy of such programs as basis for program implementation.

5405. CHILD DEVELOPMENT AND PARENT EDUCATION. (1-4 cr [max 12 cr])

Objectives, content, curriculum organization, teaching methods, materials, and evaluation approaches for teaching youth and adults about social, cultural, psychological, economic, and technical aspects of child development, parenting, and parent-child interaction.

Course Descriptions

5406. SPECIAL TOPICS IN PARENT AND FAMILY EDUCATION. (1-6 cr; S-N optional)

Study of issues and current literature focused on emerging topics relevant to parent and family education.

5407. FAMILY LIFE EDUCATION. (1-4 cr [max 12 cr])

Objectives, content, curriculum development, methods, materials, and evaluation approaches for teaching diverse groups of youth and adults family life concepts including current research in communication, relationships, sexuality, self-esteem, and decision making.

5408. EDUCATION FOR WORK-FAMILY RELATIONSHIPS. (3 cr)

Examination of interactions between work and family with focus on educational applications for youth and adults.

5409. GROUP METHODS FOR PARENT AND FAMILY EDUCATION. (2 cr)

Methods and theories applied to development of skills for leading parent and family education groups.

5410. FOOD AND NUTRITION EDUCATION. (1-4 [max 12 cr])

Objectives, content, curriculum organization, teaching methods, materials, and evaluation approaches for teaching youth and adults about nutrition principles; psychological, social, cultural, political, economic, and technical aspects of food and nutrition-related problems, decisions, and issues.

5412. NUTRITION FOR EXERCISE AND PHYSICAL PERFORMANCE. (3 cr, §PE 5141; prereq PE 3115 or FScN 1612 or FScN 3600 or equiv; S-N optional)

Application of basic nutritional principles to active populations, current issues related to dietary modifications for the possible improvement of physical performance, and strategies for educating clientele about nutrition and physical performance.

5415. WORKSHOP: MATERIALS FOR INSTRUCTION. (1-4 cr [max 12 cr])

Problems in selection and use of new materials for instruction in home economics.

5420. WORKSHOP: ADULT EDUCATION. (1-4 cr [max 12 cr])

Procedures in teaching adults; planning the program; use of new materials and techniques; group and individual problems.

5430. WORKSHOP: CONTEMPORARY PROBLEMS IN HOME ECONOMICS EDUCATION. (1-6 cr [max 12 cr])

Consideration of topic of current concern in home economics education.

5440. COMPUTER APPLICATIONS IN HOME ECONOMICS. (3 cr)

Access to and use of information; evaluation of home economics data bases and software, impact of computers on families and consumer behavior.

5500. 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.

5505. SEMINAR: SUPERVISION OF STUDENT TEACHING. (2 cr)

Examination or research pertinent to purposes, procedures, evaluation, and interpersonal relations.

5520. PHILOSOPHY OF HOME ECONOMICS. (4 cr; prereq #)

Application of philosophic thought to conceptions of home economics upheld in literature and practice.

5600. PRACTICUM: ADULT EDUCATION. (1-9 cr; prereq #)

Individual field assignments under supervision.

5900. READINGS IN HOME ECONOMICS EDUCATION. (1-3 cr; [max 12 cr]; prereq #)

Independent study under tutorial guidance.

5910. INTEGRATING PAPER. (3 cr; prereq MED student)

Independent paper integrating learning from a course or courses in education with learnings in home economics education.

5920. DIRECTED STUDIES. (1-6 cr; S-N optional; prereq #)

Opportunity for individualized learning experience in areas not covered by regular courses.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8300. RESEARCH METHODS

8305. RESEARCH METHODS

8500. SEMINAR: CURRICULUM DEVELOPMENT

8510. SEMINAR: IMPROVEMENT OF INSTRUCTION IN ADULT EDUCATION

8515. SEMINAR: TEACHER EDUCATION

8520. SEMINAR: HISTORY AND PHILOSOPHY OF HOME ECONOMICS EDUCATION

8525. SEMINAR: ADMINISTRATION AND SUPERVISION OF HOME ECONOMICS PROGRAMS

8530. SEMINAR: HOME ECONOMICS EDUCATION

8631. PRACTICUM: HOME ECONOMICS TEACHER EDUCATION

8900. PROBLEMS: HOME ECONOMICS EDUCATION

Industrial Education (Ind)

1300. INTRODUCTION TO INDUSTRIAL EDUCATION TEACHING. (2 cr; for freshmen and those contemplating the major)
Objectives, programs, and teaching career options of industrial education.

1301. INTRODUCTION TO VOCATIONAL-INDUSTRIAL TEACHING. (3-6 cr [max 6 cr])
Techniques for the occupationally certifiable individual who plans to enter the field of vocational teaching; required for initial state vocational licensure.

1302. SUPERVISED VOCATIONAL-INDUSTRIAL TEACHING. (3 cr; prereq #)
Supervised teaching on the job for beginning teachers.

1490. ELEMENTARY HANDCRAFTS. (3 cr)
For majors in elementary, art, special, and recreational education.

1492. CRAFTWORK. (3 cr)
Projects in media suitable for industrial arts, plastics, art metal, lapidary, and leather work.

1600. DRAFTING. (3 cr)
Mechanical drafting utilizing current practices of industry: projection, sketching, dimensioning, sections, auxiliaries, fasteners, working drawings, reproduction processes, basic design problems.

1602. TECHNICAL DESIGN. (3 cr; prereq 1600 or #)
Introduction to procedures and application systems through laboratory instruction, graphic representation, and model instruction; aspects of social, economic, production, and aesthetic considerations in engineering new designs.

1604. INDUSTRIAL MATERIALS AND MEASUREMENT. (3 cr)
Instruction and laboratory experiences in the identification, characteristics, layout, and measurement of manufacturing and construction materials including ceramics, metals, plastics, and woods.

1606. INTRODUCTION TO INDUSTRIAL PROCESSES. (3 cr)
Instruction and laboratory experiences in basic technical process skills.

1608. ARCHITECTURAL DRAFTING. (3 cr; prereq 1600)
Using architectural graphic standards and techniques to convey residential planning and construction details.

1610. MATERIALS PROCESSING: NON-METALLIC. (3 cr)

Instruction and laboratory experiences in machining, cutting, forming, molding, fastening, and assembling of wood, plastic, and ceramic materials.

1612. CONSTRUCTION. (3 cr; prereq 1610)
Basic construction methods and techniques; applied activities oriented to laboratory experiences; planning, organization, and control of resources to produce products on a site.

1620. VISUAL COMMUNICATION TECHNOLOGY. (3 cr)
Technologies and laboratory processes involved in organization, development, transmission, storage, and use of ideas and information in a creative visual form.

1622. GRAPHIC COMMUNICATION. (3 cr; prereq 1620)
Concepts and laboratory practices involved in placing graphic images onto solid materials; layout, typesetting, screen printing, halftones.

1624. PHOTOGRAPHY. (3 cr)
Study and application of basic photographic principles relating to black-and-white or color photography.

1630. MATERIALS PROCESSING: METALLIC. (3 cr)
Instruction and laboratory experience in forming, molding, machining, cutting, fastening, and assembly of metallic materials.

1632. MANUFACTURING. (3 cr; prereq 1630)
Instruction and laboratory experience in processes and applications of manufacturing; exploration and interpretation of careers; group manufacturing activity.

1640. ELECTRONICS. (3 cr)
Basic experiences; lectures, experiments, fabrication of simple electronic projects.

1642. ELECTRONIC SYSTEMS. (3 cr; prereq 1640)
Complex systems including communication, digital, and electronic control systems; design and fabrication of electronic devices.

1650. FUNDAMENTALS OF POWER. (3 cr)
Fundamentals of mechanical, fluid, and electrical power systems; focus on design, operation, maintenance, analysis, fabrication, diagnosis, and repair; hands-on experience with energy and power-related experiments; technical manuals, specific charts, measurement techniques, power calculations, and test equipment.

1655. COMPLEX POWER SYSTEMS. (3 cr; prereq 1650)
Applications of mechanical, fluid, and electrical power in complex systems such as engines, power generators, and production equipment.

Course Descriptions

1660. INDUSTRIAL SERVICE. (3 cr; prereq 1612, 1622, 1632, 1642, 1655)

Servicing of equipment and facilities; implications of service industry for industrial education curricula and laboratory management.

1800. CAREER PLANNING PRACTICUM I. (1 cr; prereq Δ)

Peer group professional growth assessment and advising; human relations processes.

1801. CAREER PLANNING PRACTICUM II. (1 cr; prereq 1800, Δ)

Peer group professional growth assessment and advising; human relations processes.

1802. CAREER PLANNING PRACTICUM III. (1 cr; prereq 1801, Δ)

Peer group professional growth assessment and advising; human relations processes.

3110. CONSTRUCTION: INTERMEDIATE. (3 or 6 or 9 cr; prereq 1612, #)

Individualized technical skill development in areas of house framing, concrete work, domestic wiring, plumbing, surveying, painting, paper hanging, and basic construction codes.

3111. CONSTRUCTION: ADVANCED. (3 or 6 or 9 cr; prereq 3110, #)

Individualized advanced skill development in areas of forming, block and brick, commercial plumbing, industrial circuitry, landscaping, finishing, and advanced construction codes.

3120. GRAPHIC COMMUNICATIONS: INTERMEDIATE. (3 or 6 or 9 cr; prereq 1622, #)

Individualized technical skill development in areas of offset printing, technical illustrating, machine and architectural drafting, photography.

3121. GRAPHIC COMMUNICATIONS: ADVANCED. (3 or 6 or 9 cr; prereq 3120, #)

Individualized advanced skill development in areas of color separation, web press operation, drafting design, color renditions, air brush.

3130. MANUFACTURING: INTERMEDIATE. (3 or 6 or 9 cr; prereq 1632, #)

Individualized technical skill development in areas of welding, lathe operation, milling machine operation, sheet metal construction.

3131. MANUFACTURING: ADVANCED. (3 or 6 or 9 cr; prereq 3130, #)

Individualized advanced skill development in areas of numerical control and machine setup inspection, electric discharge machining, TIG welding.

3140. POWER AND ENERGY: INTERMEDIATE. (3 or 6 or 9 cr; prereq 1642, #)

Individualized technical skill development in areas of digital, hydraulic, and pneumatic control systems, and radio and television repair.

3141. POWER AND ENERGY: ADVANCED. (3 or 6 or 9 cr; prereq 3140, #)

Individualized advanced skill development in areas of digital, hydraulic, and pneumatic system design, electronic maintenance and repair, and alternative energy sources.

3150. TRANSPORTATION: INTERMEDIATE. (3 or 6 or 9 cr; prereq 1652, #)

Individualized technical skill development in areas of small gas and marine engine repair, automotive tuneup, cooling systems, brakes, and auto body repair.

3151. TRANSPORTATION: ADVANCED. (3 or 6 or 9 cr; prereq 3150, #)

Individualized advanced skill development in areas of diesel engine repair, auto engine overhaul, front end repair, automatic transmission, aircraft engine maintenance, chassis straightening.

3400. INDUSTRIAL TECHNOLOGY IN SOCIETY. (3 cr)

Nature and effects on individuals and society investigated through laboratory experiences, field trips, guest industrialists, values clarification, discussion of readings.

3655. AUTOMOTIVE SYSTEMS. (3 cr)

Concepts in automotive systems; specification, measurements, basic mechanics, repair techniques, diagnostic procedures.

3700, 3702, 3704, 3706. STUDENT TEACHING. (3 cr each; S-N only; for 3700, 3702, 3704: 9 cr required, prereq 1300, 5360 and Δ ...for 3706: elective course, prereq Δ)

3701, 3703, 3705, 3707. STUDENT TEACHING SEMINAR. (1-3 cr; S-N only; prereq ¶3700, ¶3702, ¶3704, ¶3706)

3708. PRE-FALL STUDENT TEACHING. (3 cr; S-N only; prereq 1300, 5306, Δ)

Practicum off-campus experience in public schools for industrial education majors; taught in the month before start of fall quarter.

3750. INDUSTRIAL PRACTICES AND PROCESSES. (3 cr; prereq #)

An organized series of field trips to representative industrial plants preceded by classroom study and investigation.

3900, 3901, 3902. INDEPENDENT STUDY. (3 cr per qtr, prereq #)

Self-directed study, preceded by classroom instruction in basic research procedures.

5100. COMMUNICATIONS OCCUPATIONAL EXPERIENCE. (1-5 cr [max 15 cr]; prereq #)

Structured/supervised employment in the communications industry. Credits allowed will be derived from the ratio of 100 clock hours of supervised work experience to each credit given the student. Total credit earned in 5100, 5101, 5102, and 5103 may not exceed 15.

5101. PRODUCTION/MANUFACTURING OCCUPATIONAL EXPERIENCE. (1-5 cr [max 15 cr]; prereq #)

Structured/supervised employment in the production/manufacturing industry. Credits allowed will be derived from the ratio of 100 clock hours of supervised work experience to each credit given the student. Total credit earned in 5100, 5101, 5102, and 5103 may not exceed 15.

5102. POWER/ENERGY OCCUPATIONAL EXPERIENCE. (1-5 cr [max 15 cr]; prereq #)

Structured/supervised employment in the power/energy industry. Credits allowed will be derived from the ratio of 100 clock hours of supervised work experience to each credit given the student. Total credit earned in 5100, 5101, 5102, and 5103 may not exceed 15.

5103. CONSTRUCTION OCCUPATIONAL EXPERIENCE. (1-5 cr [max 15 cr]; prereq #)

Structured/supervised employment in the construction industry. Credits allowed will be derived from the ratio of 100 clock hours of supervised work experience to each credit given the student. Total credit earned in 5100, 5101, 5102, and 5103 may not exceed 15.

5112. CONSTRUCTION: SPECIALIZATION. (1-9 cr; prereq Δ)

Integration of specialized technical instruction in advanced or emerging areas into courses in industrial education.

5113. SPECIAL TOPICS IN CONSTRUCTION. (1-6 cr)

Study of a topic not covered by available courses.

5122. GRAPHIC COMMUNICATIONS: SPECIALIZATION. (1-9 cr; prereq Δ)

Integration of specialized technical instruction in advanced or emerging areas into courses in industrial education.

5123. SPECIAL TOPICS IN COMMUNICATIONS. (1-6 cr)

Study of a topic not covered by available courses.

5132. MANUFACTURING: SPECIALIZATION. (1-9 cr; prereq Δ)

Integration of specialized technical instruction in advanced or emerging areas into courses in industrial education.

5133. SPECIAL TOPICS IN MANUFACTURING. (1-6 cr)

Study of a topic not covered by available courses.

5142. POWER AND ENERGY: SPECIALIZATION. (1-9 cr; prereq Δ)

Integration of specialized technical instruction in advanced or emerging areas into courses in industrial education.

5143. SPECIAL TOPICS IN POWER AND ENERGY. (1-6 cr)

Study of a topic not covered by available courses.

5152. TRANSPORTATION: SPECIALIZATION. (1-9 cr; prereq Δ)

Integration of specialized technical instruction in advanced or emerging areas into courses in industrial education.

5153. SPECIAL TOPICS IN TRANSPORTATION. (1-6 cr)

Study of a topic not covered by available courses.

5300. INDUSTRIAL SURVEYS. (3 cr)

Practices and techniques for studying instructional needs to establish or improve industrial courses in schools and industry.

5301. TESTS IN INDUSTRIAL SUBJECTS. (3 cr)

Development, performance evaluations, work attitude evaluations, student progress reporting systems.

5302. INSTRUCTIONAL MANAGEMENT. (3 cr)

Theory and application of classroom and laboratory management practices for industrial educators.

5303. INSTRUCTIONAL AIDS. (3 cr; prereq education or grad student)

Planning, construction, use.

5305. CRITICAL ISSUES IN INDUSTRIAL EDUCATION. (3 cr; prereq education or grad student)

Identification, analysis, and discussion of major current problems in the field.

5306. INDUSTRIAL EDUCATION WORKSHOP. (1-6 cr; prereq tchg exper and #)

Areas of concentration vary with each offering.

5309. 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.

5310. COORDINATION. (3 cr)

Duties and responsibilities of coordinators in trade schools, part-time programs, and comprehensive high schools.

5312. SUPERVISION OF INDUSTRIAL EDUCATION. (3 cr)

Functions of communications, group dynamics, management by objectives, motivation, problem solving, delegation, and evaluation.

5314. ADMINISTRATION OF INDUSTRIAL EDUCATION. (3 cr)

General and vocational phases; objectives, programs, and practices; laws, rulings, and standards for aid; significant literature.

5320. VOCATIONAL GUIDANCE. (3 cr)

Self-assessment, use of occupational and labor market information, job-seeking skills, work and work satisfaction. For industrial teachers and trainers in school and industrial settings.

Course Descriptions

5325. FOUNDATIONS OF INDUSTRIAL EDUCATION. (3 cr)

History, objectives, development, and current practices of the field.

5330. INDUSTRIAL COURSE CONSTRUCTION.

(3 cr; prereq education or grad student)

Principles and techniques; experience in planning, organizing, and building a teaching guide.

5344. FACILITIES AND MANAGEMENT. (3 cr;

prereq 1300 or 5330 or #)

Planning, evaluation, and management of industrial education shop and laboratory facilities.

5360. INDUSTRIAL INSTRUCTION. (3 cr)

Concepts and techniques of instruction in the industrial arts, trade and industrial schools and classes, and training-within-industry programs.

5400. INSTRUCTIONAL MATERIALS LABORATORY FOR NONMAJORS. (3 cr; prereq tchg exper or #)

For students needing manipulative skills and using craftwork activities in their teaching; individual and group projects.

5401. WORKSHOP: OCCUPATIONAL EDUCATION PROGRAMS FOR HANDICAPPED. (1-6 cr; prereq #)

An examination of exemplary programs in occupational education; workshop sessions involving directors of model programs and other personnel.

5600. INSTRUCTIONAL MATERIALS LABORATORY. (3-6-9 cr; prereq major, tchg exper or #)

Laboratory and shop experiences with new materials, processes, and equipment; development of complementary instructional materials.

5900. SCHOOL-BASED PROJECT IN INDUSTRIAL EDUCATION. (1-6 cr [max 12 cr]; S-N optional; prereq 5305, 5325, MEd students only)

Independent or team project designed to study, improve, evaluate, or develop curriculum or instructional materials to improve quality of instruction.

5901. INDEPENDENT STUDY. (1-6 cr; prereq Δ)

Independent inquiry into topics to permit in-depth study of areas in education or to supplement areas not provided in regular course structure.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8300. LITERATURE OF INDUSTRIAL EDUCATION

8310. RESEARCH

8700. SEMINAR: INDUSTRIAL EDUCATION

8900, 8901, 8902. RESEARCH PROBLEMS

Vocational Education (VoEd)

1200. COURSE CONTENT ANALYSIS WORKSHOP FOR ADULT VOCATIONAL INSTRUCTORS. (1 cr)

Identification and analysis of adult vocational education course content.

1210. COURSE DEVELOPMENT WORKSHOP FOR ADULT VOCATIONAL INSTRUCTORS. (1 cr)

Course planning, including assessment of student needs, development of lessons plans, related materials, learning activities.

1220. INSTRUCTIONAL STRATEGIES WORKSHOP FOR ADULT VOCATIONAL INSTRUCTORS. (1 cr)

Familiarization with and application of instructional methods and techniques for instructing adult learners in vocational education.

1230. INSTRUCTIONAL AIDS WORKSHOP FOR ADULT VOCATIONAL INSTRUCTORS. (1 cr)

Planning for and using community and educational resources and instructional media in adult vocational education.

3100. TECHNICAL SPECIALTY WORKSHOP.

(1-3 cr; prereq licensed vocational-technical or practical arts instructor)

Technical updating in occupational areas of vocational education; content varies with each offering.

5100. SPECIAL TOPICS IN INSTRUCTION. (1-6 cr [max 9 cr]; prereq #)

Topics will vary with each offering but course covers planning, providing, and/or evaluating instruction.

5101. SPECIAL TOPICS IN CURRICULUM. (1-6 cr [max 9 cr]; prereq #)

Topics will vary with each offering but course covers the development and evaluation of curricula and/or curriculum materials.

5102. SPECIAL TOPICS IN ADMINISTRATION. (1-6 cr [max 9 cr]; prereq #)

Topics will vary with each offering but course covers leadership and management of vocational education programs.

5200. EVALUATION OF LOCAL VOCATIONAL EDUCATION PROGRAMS. (3 cr)

Procedures and experience in the use of instruments for conducting program evaluations for teachers, administrators, and state department personnel.

5204. READING IN WORK SETTINGS. (3 cr, §Educ 5204)

Overview of concepts in integrating reading instruction into vocational training programs and work settings; diagnosis and methods of assessing needs of vocational students and workers on a job, techniques for building needs into training programs.

5274. TWO-YEAR POSTSECONDARY INSTITUTIONS. (3 cr, §EdAd 5274, §EdAd 8274)

Present status, development, functions, organization, curriculum, trends in postsecondary but nonbaccalaureate institutions.

5280. STRESS MANAGEMENT FOR THE VOCATIONAL EDUCATOR. (1 cr)

Methods and techniques for managing stressful situations in vocational classrooms and laboratories.

5281. TORT LIABILITY AND THE VOCATIONAL EDUCATOR. (1 cr)

Methods and techniques for administrators to use to comply with local requirements of managing vocational education programs.

5282. COUNSELING ADULTS IN TRANSITION. (3 cr, §EPsy 5434)

Theoretical and empirical knowledge as base for analyzing adaptation to transitions; applications of counseling interventions, training in coping skills.

5283. TIME MANAGEMENT FOR THE VOCATIONAL EDUCATOR. (1 cr)

Concepts, strategies, and skills; particular foci on managing and organizing personal and professional life to support the educational process and environment.

5284. LEADERSHIP SKILLS FOR VOCATIONAL EDUCATION. (1 cr)

Applying leadership theory to vocational education, industrial and business settings; management of community development or youth work programs.

5285. VOCATIONAL PLACEMENT. (3 cr)

Methods and techniques for designing an effective school-based vocational placement program. Topics will focus on principles of school-based placement, the placement process, and planning the placement program.

5300. PHILOSOPHY AND PRACTICE OF VOCATIONAL EDUCATION. (3 cr)

Interpretation of the purposes of vocational education in varying socioeconomic contexts; analysis of vocational fields in regard to recipients, practices, legislation, and funding.

5330. COORDINATION TECHNIQUES IN COOPERATIVE EDUCATION. (3 or 4 cr, §BME 5352, §HEEd 5106, Ind 5310 or AgEd 5071)

Responsibilities of instructor-coordinator; guidance, selection, placement, supervision, and evaluation of students; articulation of related instruction; training sponsor identification, orientation, development, and evaluation; purposes and management of program.

5340. PRINCIPLES OF SUPERVISORY MANAGEMENT. (3 cr)

Introduction to principles of personnel supervision for persons in vocational education, business, industry, or service organizations.

5400. EDUCATION FOR WORK. (3 cr; prereq 5300 or #)

Examination of contextual bases underlying education for work; implications for practice.

5451. MICROCOMPUTER INSTRUCTIONAL UTILITY SOFTWARE. (2 cr; prereq microcomputer coursework or experience)

Examination of software to aid in preparation of tests, worksheets, learner reports and records, instructional inventory records, and classroom group presentations for vocational educators.

5452. AUTHORING INSTRUCTION USING MICROCOMPUTERS. (3 cr; prereq 5450 or equiv or #)

Design and preparation of instructional materials using an authoring language.

5500. INTRODUCTION TO VOCATIONAL EDUCATION ADMINISTRATION. (3 cr)

Basic concepts of structure, financing, program planning and evaluation, law and liability, personnel policies, and the management of vocational education programs.

5600. PLANNING VOCATIONAL EDUCATION. (3 cr)

Context, definition, methods, and information needs in planning at national, state, and local education agency levels.

5700. TEACHING ENTREPRENEURSHIP: SMALL BUSINESS MANAGEMENT. (4 cr)

Methods, organization, curriculum modification, and implementation of education programs.

5750. TRAINING IN INDUSTRY AND BUSINESS. (3 or 4 cr)

Appraisal of training function in industry and business; advancement of competencies in analysis, design, development, delivery, and evaluation of training.

5760. ORGANIZATION DEVELOPMENT IN INDUSTRY AND BUSINESS. (3 or 4 cr)

Introduction to major concepts, skills, and techniques.

5762. MANAGEMENT OF CONFLICT. (2 cr)

Types, sources, and diagnosis of conflict styles; skills and strategies for managing interpersonal, intergroup, and intragroup conflict.

5770. TRAINING AND DEVELOPMENT. (1-4 cr; S-N at option of dept)

Developments related to problems; practices; programs; methodologies in training and development. Content will vary with each offering.

5780. INTERNSHIP: TRAINING AND DEVELOPMENT. (Cr ar [max 15 cr]; S-N optional; prereq 5750)

Students apply and contract for training and development positions in industry and business; individual contracts describe specific training and development responsibilities to be fulfilled during internship.

Course Descriptions

5790. STRATEGIC PLANNING: TRAINING AND DEVELOPMENT. (3 or 4 cr; prereq 5750 or 5760)

Human capital as component of industry and business strategic planning; analysis and articulation of practices.

5800. WORKING WITH SPECIAL NEEDS STUDENTS. (3 cr)

Designed to help vocational instructors identify instruction for disadvantaged and handicapped students within regular classroom/laboratory settings.

5801. EDUCATING VOCATIONAL STUDENTS WITH LEARNING DISABILITIES. (1 cr)

Overview of nature of such students; instructional strategies for meeting their unique needs.

5802. EDUCATING DISADVANTAGED VOCATIONAL STUDENTS. (1 cr)

Overview of nature of such students; instructional strategies for meeting their unique educational needs.

5803. MICROCOMPUTER MANAGEMENT OF SPECIAL NEEDS STUDENT INFORMATION AND SERVICES. (2 cr)

Application of microcomputer to student-oriented information and related services; identification, analysis, manipulation of types of relevant information.

5804. WORK EVALUATION OF SPECIAL NEEDS LEARNERS. (3 cr)

Overview of techniques, systems, organizations that evaluate such students entering vocational education programs.

5805. OCCUPATIONAL ANALYSIS OF VOCATIONAL SPECIAL LEARNERS. (2 cr)

Overview of techniques, issues, practices to analyze and describe placements in job settings of such students.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8100. VOCATIONAL EDUCATION TUTORIAL

8110. COMPARATIVE SYSTEMS IN VOCATIONAL EDUCATION

8130. CRITICAL ISSUES IN VOCATIONAL EDUCATION

8500. SEMINAR: GENERAL EDUCATION ASPECTS OF THE VOCATIONAL FIELDS

Administration and Faculty



Administration and Faculty

University Regents

David M. Lebedoff, Minneapolis, Chair
Mary T. Schertler, St. Paul, Vice Chair
Wendell R. Anderson, Minneapolis
Charles H. Casey, West Concord
M. Elizabeth Craig, Minnetonka
Jack P. Grahek, Ely
Wally Hilke, St. Paul
Elton A. Kuderer, Fairmont
Charles F. McGuiggan, Marshall
Wenda W. Moore, Minneapolis
David K. Roe, Minneapolis
Stanley D. Sahlstrom, Crookston

University Administrators

Richard J. Sauer, Interim President
C. Eugene Allen, Acting Vice President
for Agriculture, Forestry, and Home
Economics
Roger W. Benjamin, Provost and Vice
President for Academic Affairs
Carol N. Campbell, Acting Vice President
for Finance and Operations
Stephen S. Dunham, Vice President and
General Counsel
Richard B. Heydinger, Vice President
for External Relations
Neal A. Vanselow, Vice President
for Health Sciences
Frank B. Wilderson, Vice President
for Student Affairs

College of Education

William E. Gardner, Professor and Dean
Allen D. Glenn, Professor and Associate
Dean
Carol A. Carrier, Professor and Assistant
Dean
David J. Madson, Director, Education
Development Office

Faculty

Child Psychology

196 Child Development

William R. Charlesworth
W. Andrew Collins
Byron Egeland

Megan R. Gunnar
Willard W. Hartup
Michael P. Maratsos
Ann S. Masten
James L. Morgan
Charles Nelson
Anne D. Pick
Herbert L. Pick, Jr.
Elsa G. Shapiro
L. Alan Sroufe
June L. Tapp
James E. Turnure
Richard A. Weinberg
Carolyn L. Williams
Albert Yonas

Curriculum and Instruction

145 Peik Hall

Adult, Community, and Continuing Education

175 Peik Hall

Charles R. Bruning
Harlan G. Copeland
Rosemarie L. Park
Howard Y. Williams
Reynold A. Willie

Art Education

135 Wulling Hall

Margaret DiBlasio
Kerry J. Freedman

Elementary Education

145 Peik Hall

John J. Cogan
Robert Dykstra
Fred N. Finley
Harlan S. Hansen
Robert L. Jackson
Roger T. Johnson
Frances P. Lawrenz
John C. Manning
Dianne L. Monson
R. Norine Odland
Robert E. Orton, III
Thomas R. Post
Robert E. Schreiner
James E. Stochl
Barbara M. Taylor

International Development Education

Frank R. Braun
 John J. Cogan
 R. Michael Paige
 Constance L. Walker

Secondary Academic Fields

145 Peik Hall

Curriculum and Instructional Systems

Andrew Ahlgren
 Eugene M. Anderson
 Carol A. Carrier
 Richard D. Kimpston
 Gregory Sales
 Howard Y. Williams

Economic Education

Bruce R. Dalgaard
 Darrell R. Lewis

English/Speech Education

Richard W. Beach
 Michael F. Graves
 Stanley B. Kegler
 Gene L. Piché

Mathematics Education

Peggy A. House
 Robert L. Jackson
 Robert E. Orton, III
 Thomas R. Post
 James E. Stochl

Science Education

Fred N. Finley
 Eugene D. Gennaro
 Patricia Heller
 Francis Lawrenz

*Second Languages and Cultures
 (including Bilingual Education)*

Helen L. Jorstad
 Dale L. Lange
 Millie Mellgren
 R. Michael Paige
 Constance L. Walker

Social Studies Education

Patricia Avery
 William E. Gardner
 Allen D. Glenn
 James A. Mackey

*Educational Policy and
 Administration*

Educational Administration

275 Peik Hall

Gary F. Alkire
 William M. Ammentorp
 Shirley M. Clark
 James C. Hearn, Jr.
 Vernon L. Hendrix
 Clifford P. Hooker
 Darrell R. Lewis
 Karen Seashore Louis
 Tim L. Mazzoni, Jr.
 Van D. Mueller
 Neal C. Nickerson, Jr.
 Charles H. Sederberg
 Caroline S. Turner
 Richard F. Weatherman
 W. Keith Wharton

Higher Education

275 Peik Hall

William M. Ammentorp
 Russell W. Burris
 Shirley M. Clark
 James C. Hearn, Jr.
 Paul E. Johnson
 Darrell R. Lewis
 Karen Seashore Louis
 James R. Rest
 Robert D. Tennyson
 Caroline Turner

**Social and Philosophical
 Foundations of Education**

275 Peik Hall

Ayers L. Bagley
 Robert H. Beck
 Shirley M. Clark
 Marion L. Dobbert
 Arthur M. Harkins
 James C. Hearn, Jr.
 Darrell R. Lewis
 Karen Seashore Louis
 Caroline S. Turner

Administration and Faculty

Educational Psychology

204 Burton Hall

Counseling and Student Personnel Psychology

129 Burton Hall

Eli Coleman
L. Sunny Hansen
Thomas J. Hummel
Dorothy R. Loeffler
Patricia McCarthy
James R. Rest
John L. Romano
Warren Shaffer
Thomas M. Skovholt
W. Wesley Tennyson

Psychological Foundations

210D Burton Hall

Douglas H. Anderson
William M. Bart
Russell W. Burris
Ernest C. Davenport
Mark L. Davison
Stanley L. Deno
Lynne Edwards
Joan Garfield
David L. Giese
David W. Johnson
Paul E. Johnson
Roger T. Johnson
E. Gary Joselyn
Donald G. MacEachern
Geoffrey M. Maruyama
Jack C. Merwin
Renee Peterson
James R. Rest
S. Jay Samuels
John E. Stecklein
Robert D. Tennyson
James S. Terwilliger
Paulus van den Broek
Wayne W. Welch

School Psychology

N-548 Elliott Hall

Bruce E. Balow
Sandra L. Christenson
Byron Egeland
Sherrie Lindborg
Scott R. McConnell
Maynard C. Reynolds

Richard A. Weinberg
James E. Ysseldyke

Special Education

259 Burton Hall

Bruce E. Balow
Robert H. Bruininks
Stanley L. Deno
Susan Hupp
Marie Knowlton
Sallye McKee
Maynard C. Reynolds
Susan Rose
John E. Rynders
James E. Turnure
Richard F. Weatherman
Frank B. Wilderson
Frank H. Wood
James E. Ysseldyke

Music Education

100 Ferguson Hall

Robert L. Borg
Reginald T. Buckner
Charles E. Furman
Stephen W. Schultz
Karen Wolff

Physical Education and Recreation

110 Cooke Hall

Physical Education

224 Cooke Hall

John F. Alexander
Allen Burton
Nancy Greer
March Krotee
Mary B. Lampe
Jeralyn J. Plack
Robert C. Serfass
Jacqueline M. Shick
Lela June Stoner
Michael Wade
Mary L. Young

Recreation, Park, and Leisure Studies

203 Cooke Hall

Leo H. McAvoy
John H. Schultz
Stuart J. Schleien
Caroline R. Weiss

*Vocational and Technical
Education*

210 VoTech Building, St. Paul

Agricultural Education

320 VoTech Building, St. Paul

W. Forrest Bear
George H. Copa
Gary W. Leske
Curtis D. Norenberg
Edgar A. Persons
Roland L. Peterson
Gordon I. Swanson
George W. Wardlow

Business Education

420 VoTech Building, St. Paul

Charles R. Hopkins
Judith J. Lambrecht
Gary N. McLean
W. Wesley Tennyson

Home Economics Education

325 VoTech Building, St. Paul

Jerry C. McClelland
Jane E. Plihal
Marilyn A. Rossmann
Mary Ann Smith
Ruth G. Thomas

Industrial Education

425 VoTech Building, St. Paul

David C. Bjorkquist
James M. Brown
Stephen J. Miletich
Jerome Moss, Jr.
David J. Pucel
Richard A. Swanson
Karen F. Zuga

Marketing Education

420 VoTech Building, St. Paul

James R. Stone III

Information Directory

The first step for prospective, current, or former students seeking general information or direction is the Education Student Affairs Office (ESAO), 1425 University Avenue S.E. (612/625-6501).

Following is a specific, alphabetical list of departments, program areas, and offices where information can be obtained about courses, degree requirements, teaching licensure, and special resources.

Admission Procedures

Steven J. Reuter
Education Student Affairs Office
625-1550

Adult Education

Rosemarie Park
175 Peik Hall
625-5524

Agricultural Education

Roland L. Peterson
320M VoTech Building
624-2221

Agricultural Extension Personnel Development

Mary Ann Smith
325M VoTech Building
624-3010

Art Education

Margaret DiBlasio
135 Wulling Hall
625-7818

Bilingual Education

Constance L. Walker
125 Peik Hall
625-4828

Bulletins

In addition to the *College of Education Bulletin*, all current College of Education students should refer to the quarterly *Class Schedule*, which contains details on tuition, fees, and University policies. Separate bulletins are also published for Continuing Education and Extension, Summer Session, Graduate School, and other University units. Most bulletins may be obtained by visiting the Williamson Hall Information Center, 231

Pillsbury Drive S.E., Minneapolis, or calling 612/625-3030.

Business Education

Charles R. Hopkins
420A VoTech Building
624-7799

Center for the Study of Ethical Development

James Rest
141 Burton Hall
624-0876

Center for Early Education and Development

Erna Fishhaut
226 Child Development
624-3567

Child Care Center

Patricia Finstad
University Child Care Center
1818 4th Street South
Minneapolis, MN 55404
627-4014

Child Psychology

W. Andrew Collins
196 Child Development
624-0526

Coaching Endorsement

(men and women)
Jacqueline Shick
224B Cooke Hall
625-8527

Communication Disorders

Charles E. Speaks
115 Shevlin Hall
624-3322

Community Education

Charles R. Bruning
125 Peik Hall
625-4531

Community Education Administration

Van D. Mueller
224 Peik Hall
624-7093

Computer Laboratory (user fee basis)

Dennis Kern
66 Eddy Hall Annex
625-4350

Counseling and Student Personnel

Psychology
James R. Rest
129 Burton Hall
624-6827

Curriculum and Instruction

Dianne Monson
145 Peik Hall
625-3310

Curriculum and Instructional Systems

Carol Carrier
104 Burton Hall
625-6806

Dean's Office

104 Burton Hall
625-6806

Development Office

David Madson
203B Burton Hall
625-1310

Economic Education

Minnesota Council on Economic Education
Bruce Dalgaard
1169 Management/Economics Building
625-4833

Education Alumni Society

100 Morrill Hall
624-2323

Education Student Affairs Office

1425 University Avenue S.E.
625-6501

Education Undergraduate Student Association (EdUSA)

Education Student Affairs Office
625-2085

Educational Administration

Department Office
275 Peik Hall
624-1006

Educational Psychology

Jack C. Merwin
204 Burton Hall
624-7003

Elementary Education

125 Peik Hall
625-6372

Elementary Student Teaching

(Field Experiences)
Richard Simms
125 Peik Hall
625-5337

English Education

(Speech-Communication, Theatre Arts)
Gene L. Piché
125 Peik Hall
625-0791

Family Life Education

Ruth G. Thomas
325R VoTech Building
624-3010

Field Experiences (Student Teaching)

Eugene Anderson
203 Burton Hall
626-0552

Financial Aid

See also Student Scholarships
Student Financial Aid
210 Fraser Hall
Minneapolis: 624-1690
St. Paul: 624-1286

Global Education Center

John J. Cogan
110 Pattee Hall
626-0555

Graduation Requirements

(Degree Clearance)
See Education Student Affairs Office

Higher Education

Department Office
275 Peik Hall
624-1006

Home Economics Education

Ruth G. Thomas
325R VoTech Building
624-3010

Human Relations

Geoffrey Maruyama
250 Burton Hall
624-6083

Industrial Education

David C. Bjorkquist
425G VoTech Building
624-3004

Kindergarten Education

Harlan S. Hansen
125 Peik Hall
625-4039

Marketing Education

James R. Stone, III
420F VoTech Building
624-7799

Mathematics Education

Peggy House
350 Peik Hall
625-6656

**Minnesota Consortium for the
Education of Severely Handicapped
Learners**

John Rynders
6 Pattee Hall
624-6300

**Minnesota Council on Economic
Education**

Bruce Dalgaard
1169 Management/Economics Building
625-4833

**Minnesota Research and
Development Center for Vocational
Education**

David J. Pucel
R460N VoTech Building
624-1214

**Minnesota Research and Evaluation
Center**

Wayne W. Welch
210F Burton Hall
624-4095

Music Education

John E. Anderson
100 Ferguson Hall
624-0071

Nursery School

Lynn P. Galle
134C Child Development
624-5283

Parent Education

Ruth G. Thomas
325R VoTech Building
624-3010

Physical Education

Lela June Stoner
224B Cooke Hall
625-2044

Placement

Education Student Affairs Office
Frank Braun
1425 University Avenue S.E.
625-5545

Prekindergarten Education

Lynn P. Galle
134C Child Development
624-5283

**Psychological Foundations of
Education**

Mark L. Davison
210E Burton Hall
625-4540

Publications

Marta Fahrenz
104 Burton Hall
625-6806

Readmission Procedures

See Education Student Affairs Office

Recreation, Park, and Leisure Studies

John Schultz
203A Cooke Hall
625-4869

Recruitment

Andrea Nelson
Education Student Affairs Office
625-9039

**Registration/Student Progress
Subcouncil**

Mary Bents
Education Student Affairs Office
625-2342

**Remedial Reading and Reading
Supervisor Programs**

Robert L. Schreiner
145 Peik Hall
625-6539

School Psychology

James E. Ysseldyke
354 Elliott Hall
624-4014

Science Education

Fred N. Finley
370 Peik Hall
625-2074

Second Languages and Cultures Education

Dale L. Lange
145 Peik Hall
625-0394

Secondary Education

See individual academic fields in this listing

Social and Philosophical Foundations of Education

Department Office
275 Peik Hall
624-1006

Social Studies Education

James Mackey
152 Peik Hall
625-9873

Special Education

Bruce Balow
255 Burton Hall
624-5064

Special Services

Marilyn Rossmann
210B VoTech Building
624-1700

Student Organizations

EdUSA, AGES
Education Student Affairs Office
625-6501

Student Scholarships (Undergraduate)

See Education Student Affairs Office

Student Teaching

See Elementary Student Teaching or Field Experiences

Teacher Center

Fredrick Hayen
101 Pattee Hall
624-0552

Teacher Education

Allen Glenn
104 Burton Hall
625-6806

Training and Development

Gary McLean
420J VoTech Building
624-4901

Training and Development Research Center

Richard A. Swanson
425H VoTech Building
624-9727

University Affiliated Programs

Robert H. Bruininks
6 Pattee Hall
624-4848 or 624-7879

Vocational Adult Parent Education

325 VoTech Building
624-3010

Vocational Education

210B VoTech Building
624-1221

Vocational Family Life Education

325 VoTech Building
624-3010

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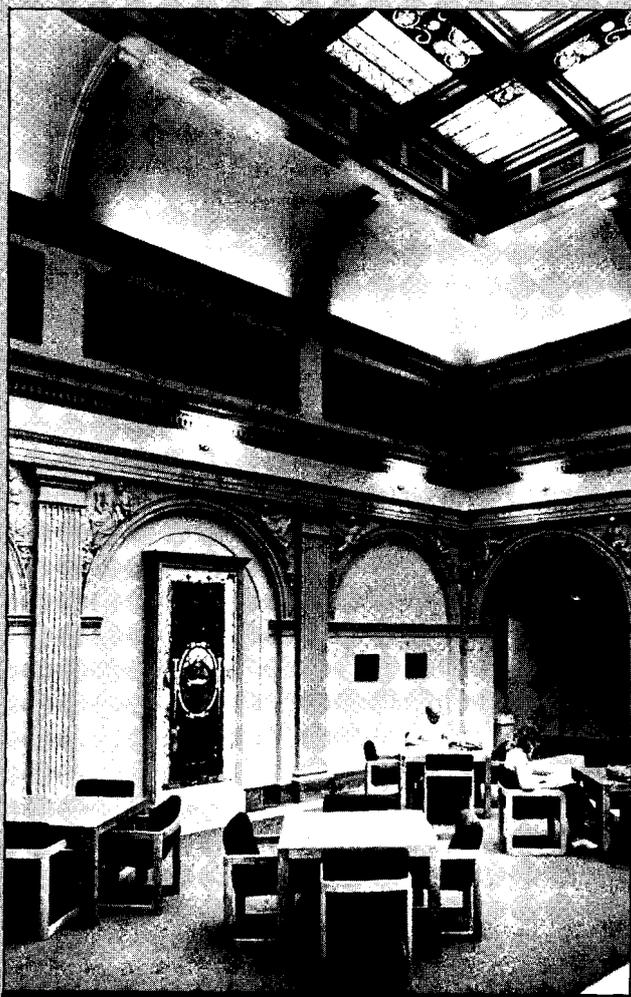
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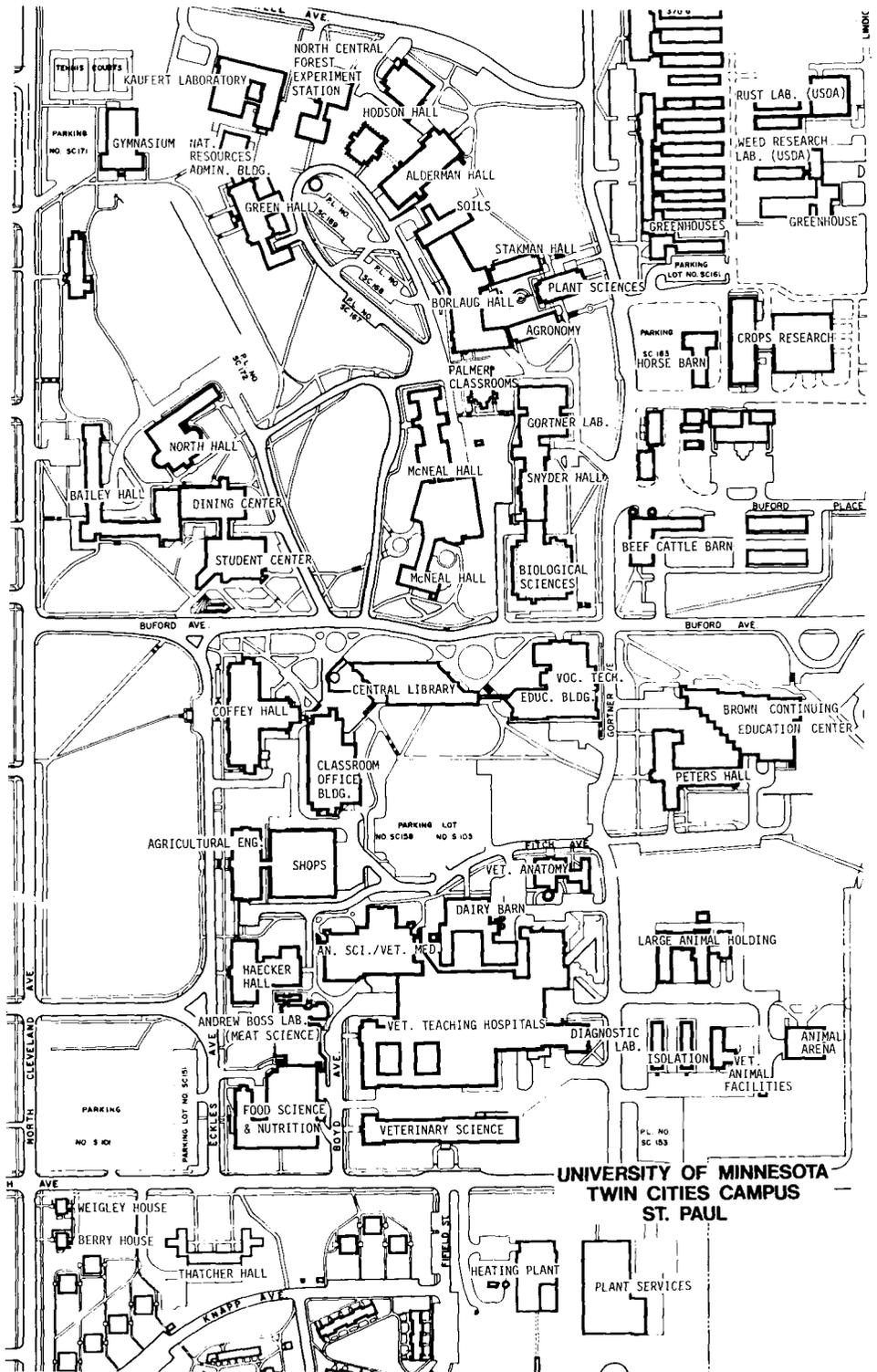
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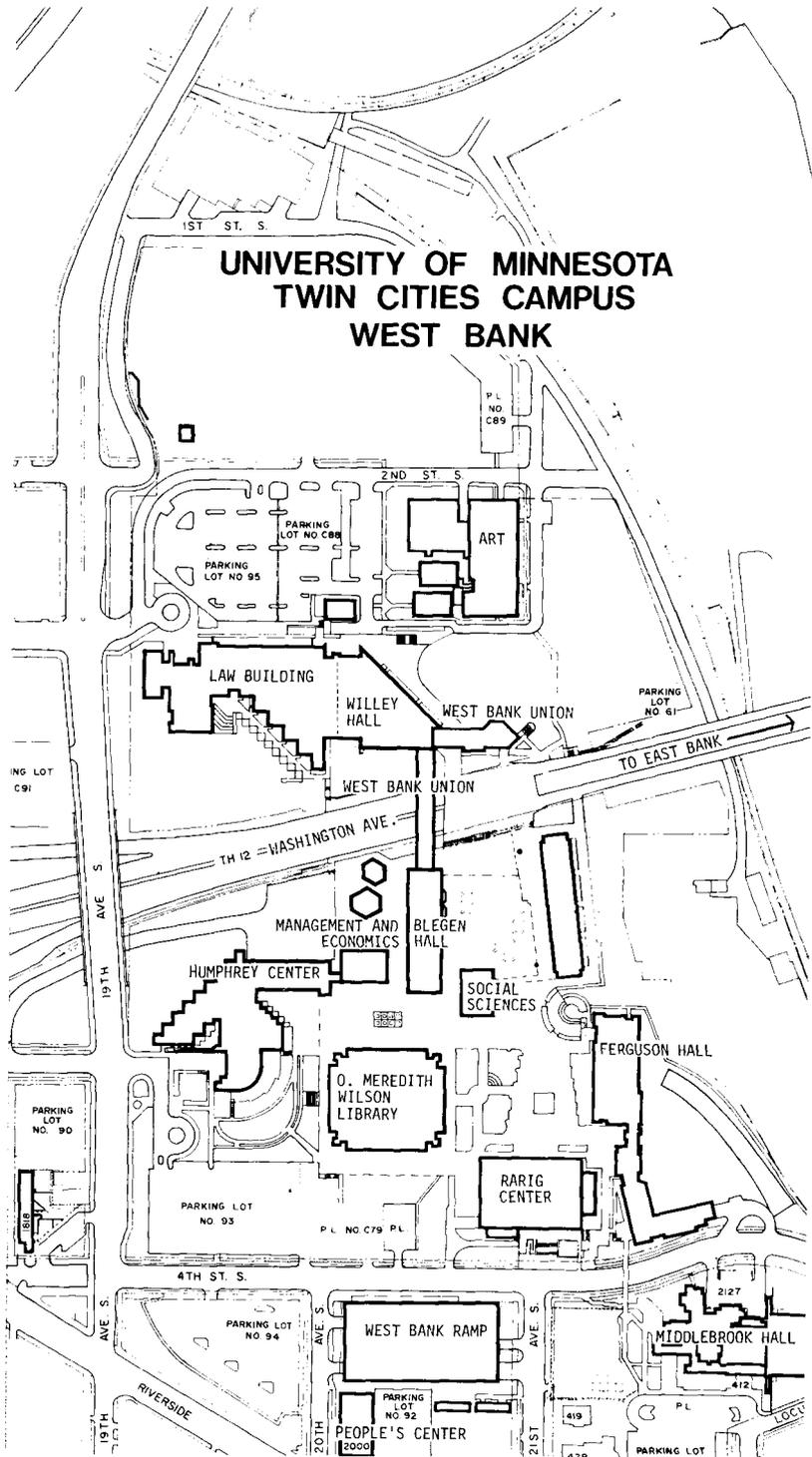
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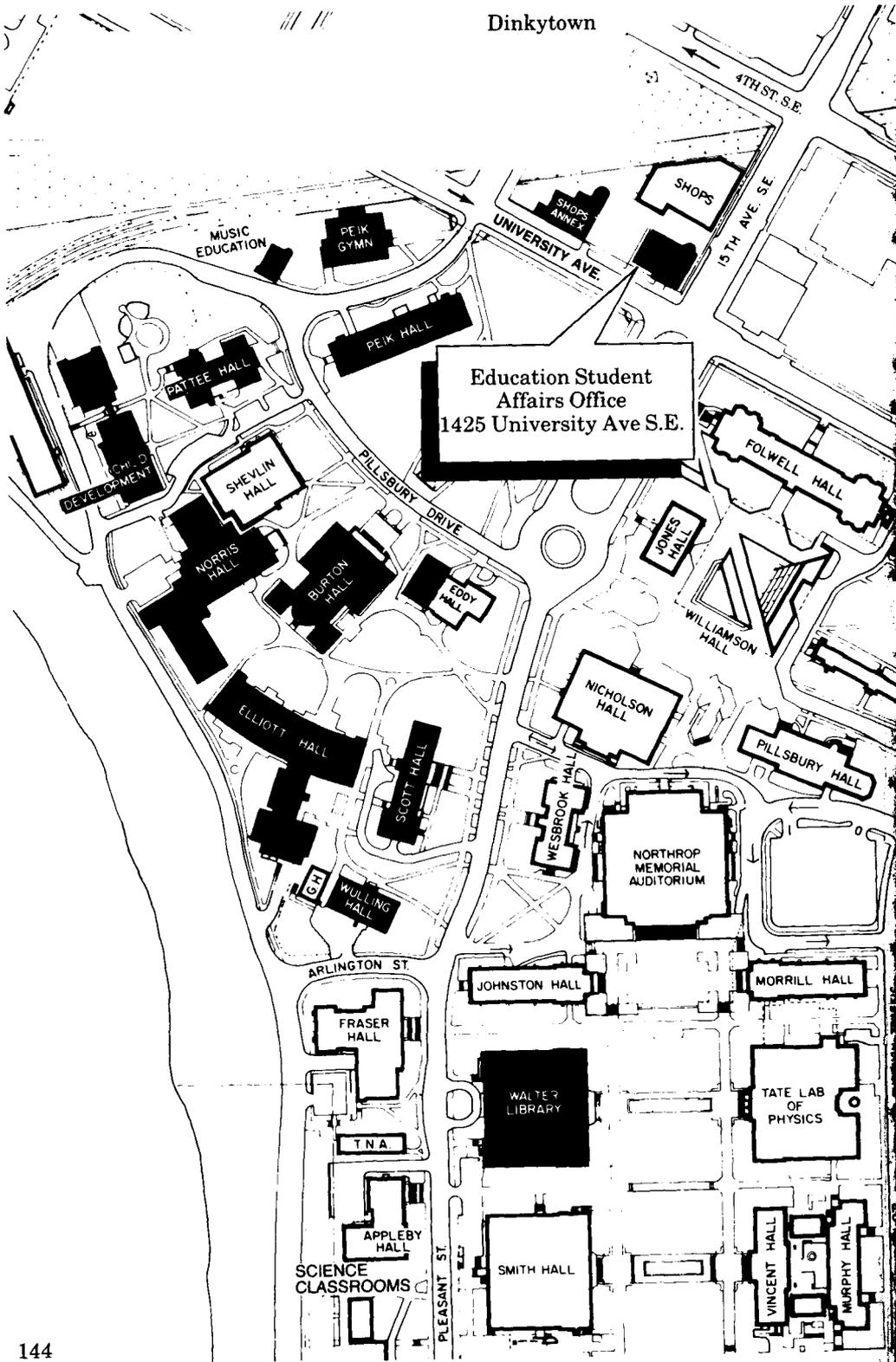


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