

College of Education

UNIVERSITY OF MINNESOTA

BULLETIN

1994 - 1996



The College of Education
is dedicated to
preparing in
education and
human development.



The College of Education is committed to recruiting, enrolling, and educating a diverse population of students who represent the overall composition of our society.

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The College of Education

UNIVERSITY OF MINNESOTA

College of Education

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General Information

Resources

This biennial bulletin describes College of Education courses, programs, student services, and requirements for certificates, degrees, and endorsements. Information about registration procedures, course changes, and new courses is published each quarter and distributed with your registration materials. For more information, contact the Education Student Affairs Office, 110 Wulling Hall, 86 Pleasant Street S.E., Minneapolis, MN 55455 (612/625-6501).

Annual Calendar

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

Other Publications

Class Schedule—Each quarter this publication lists University day school courses complete with hours, rooms, instructors, prerequisites, registration instructions, tuition and fees, maps, grading definitions, and other pertinent information.

Bulletins—In addition to this bulletin, separate bulletins are printed for Continuing Education and Extension, Summer Session, Graduate School, and other University units.

College of Education Degree Programs—Brochures describing the content and requirements of various academic programs within departments of the College of Education are available from the Education Student Affairs Office.

College of Education Student Publications—The Education Student Affairs Office publishes a quarterly newsletter announcing its series of professional development seminars, information about awards and scholarships, and other college information.

Policies

Bulletin Use—The information in this bulletin and other University bulletins, publications, or announcements is subject to change without notice. University offices can provide current information about changes.

This publication is available in alternative formats upon request. Please contact the Office of Admissions, University of Minnesota, 240 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455 (612/625-2008).

This bulletin also is available in electronic format on Internet and may be accessed via Gopher.

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, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

In adhering to this policy, the University abides by the Minnesota Human Rights Act, Minnesota Statute Ch. 363; by the Federal Civil Rights Act, 42 U.S.C. 2000e; by the requirements of Title IX of the Education Amendments of 1972; by Sections 503 and 504 of the Rehabilitation Act of 1973; by the Americans With Disabilities Act of 1990; by Executive Order 11246, as amended; by 38 U.S.C. 2012, 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 directed to Patricia A. Mullen, Director, Office of Equal Opportunity and Affirmative Action, University of Minnesota, 419 Morrill Hall, 100 Church Street S.E., Minneapolis, MN 55455 (612/624-9547).

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 a third party without the student's permission. (Exceptions under the law include state and

federal educational and financial aid institutions.) The policy also permits students to review their educational records and to challenge the contents of those records.

Some student information—name, address, electronic (E-mail) address, telephone number, dates of enrollment and enrollment status (full time, part time, not enrolled, withdrawn and date of withdrawal), college and class, major, adviser, academic awards and honors received, and degrees earned—is considered public or directory information. Students may prevent the release of public information only during their terms of enrollment. To do so, they must notify the records office on their campus.

Students have the right to review their educational records. The regents' policy, including a directory of student records, is available for review at 150 Williamson Hall, 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).

Immunization—Students born after 1956 who take more than one University class are required under Minnesota law to submit an Immunization Record form.

The form, which is sent along with the official University admission letter, must be filled out and returned to Boynton Health Service within 45 days of the first term of enrollment in order for students to continue registering for classes at the University. Complete instructions accompany the form.

Extracurricular Events—No extracurricular events requiring student participation may be scheduled from the beginning of study day to the end of finals week. Exceptions to this policy may be granted by the Senate Committee on Educational Policy. The Senate advises all faculty that any exemption granted pursuant to this policy shall be honored and that students who are unable to complete course requirements during finals week shall be provided an alternative and timely opportunity to do so.

Smoke-Free Campus Policy—Smoking is prohibited in all facilities of the University of

Minnesota, Twin Cities campus except for designated private residence hall rooms.

College of Education Overview

The College of Education is one of the premier colleges of its kind in the country. It encompasses 6 departments and nearly 20 research and service centers and is becoming a hub of interdisciplinary connections that address critical issues in education and human development.

Commitment to Diversity—The College of Education is committed to recruiting, enrolling, and educating a diverse population of students who represent the overall composition of our society. Advancing this commitment is a high priority for the college. For information on the Multicultural Teacher Development Project and other diversity initiatives within the college, contact the Education Student Affairs Office, 110 Wulling Hall, 86 Pleasant Street S.E., Minneapolis, MN 55455 (612/625-6501).

Location

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 is located at 110 Wulling Hall, 86 Pleasant Street S.E., Minneapolis, MN 55455 (612/625-6501).

Student Services

Education Student Affairs Office—The Education Student Affairs Office (ESAO) assists education students and alumni seeking information about college programs. Comprehensive services are provided for prospective students, applicants, enrolled students, and graduates. ESAO works in collaboration with program units to offer a quality student experience. Students are encouraged to make use of available advising resources within the college. ESAO's

General Information

address is 110 Wulling Hall, 86 Pleasant Street S.E., University of Minnesota, Minneapolis, MN 55455 (612/625-6501).

Academic Advising—Academic advising is a crucial component of the University's educational mission. Although the approach to advising varies somewhat among the different colleges and departments, these general principles apply:

- Academic advising is available to prospective and currently enrolled students.
- Academic advising addresses students' needs in coursework, program planning, career options, and developmental issues.
- Faculty, professional advisers, and peers are involved in academic advising.

University academic advisers participate in an Academic Advising Network: a forum for sharing information and expertise across colleges and departments. You should expect academic advisers at all levels to assist you in designing and implementing a program of study and related activities that will allow you to achieve your educational goals. Advisers expect you to prepare for program planning sessions by giving careful thought to possible course selections, program schedules, and short- and long-term education and career goals, and to come to appointments with pertinent academic records and materials.

University Counseling and Consulting Services—University Counseling and Consulting Services (UCCS) offers counseling for academic, career, personal, or relationship concerns. Besides counseling, UCCS features a variety of services. The Career Development Center and the Learning and Academic Skills Center offer workshops, courses, and materials for career development or academic skills improvement. The Organizational Development Program offers consultation, assessment, team building, conflict mediation, training, and workshops. UCCS's Measurement Services office administers tests; scores exams, surveys, and research instruments for University faculty; and operates the Minnesota Statewide Testing

Program for Minnesota elementary and secondary schools. The Testing Center administers admissions, placement, and national tests.

English Proficiency—If English is not your native language, you may be required to take the Test of English as a Foreign Language (TOEFL) or the Michigan English Language Assessment Battery (MELAB). To register for the TOEFL, contact the agency that handles TOEFL registration in your country or write to the Educational Testing Service (Box 899, Princeton, NJ 08540 USA) at least 10 weeks before any scheduled test date. If you are already in the Twin Cities area, you may register for the MELAB with the Minnesota English Center, 320 16th Ave. S.E., University of Minnesota, Minneapolis, MN 55455, or call (612) 624-1503. To register for the MELAB outside the Twin Cities area, contact the English Language Institute, Testing and Certification Division, University of Michigan, Ann Arbor, MI 48109 USA, or call (313) 764-2416.

Employment Outlook—In Minneapolis and St. Paul the employment situation for teachers is highly competitive. Students considering teaching as a career are encouraged to investigate employment opportunities in regions of the United States that are experiencing rapid growth, such as the Rocky Mountain region, the Southwest, the far West, and some parts of the South. Graduates from the college also work outside the public school classroom in corporate education settings, human service agencies, and a broad range of other occupations. During group meetings or individual advising appointments, prospective students are given details about the current employment outlook. The college's annual placement report, *The Occupational Status Report of Graduates: How Their Careers Began*, is available from the ESAO Career and Professional Services Unit (612/625-9884).

Financial Aid

Student inquiries about general financial assistance should be directed 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 Financial Aid—In addition to the financial aid opportunities offered by the University, the College of Education administers several scholarship programs of its own. Details about qualification, and application materials and instructions, may be obtained from department offices or ESAO (612/625-6501).

Library Resources

Walter Library, on the east bank campus, 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 excellent in 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 databases 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. The Children's Literature Research Collections, also housed in Walter Library, consist of rare books, original manuscripts, and illustrations for children's literature and serve as a unique resource for education students.

LUMINA, the on-line catalog of all books in the University Libraries, provides access to 1.9 million records by author, title, subject, and key word. Each record contains all the bibliographic information for each item, as well as where the item is located. LUMINA is accessible from any of the 100 public terminals available throughout the University Libraries, as well as from any home or office equipped with a personal computer and modem.

Computing Facilities

Five instructional computing laboratories, four computer classrooms, and several smaller student and faculty work areas equipped with computers are available within the college. In addition, the University's academic computing department on the Twin Cities campus offers students more than a dozen public computing laboratories and a free microcomputer telephone helpline.

College 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 more than 3,100 members, the society conducts a variety of professional and social activities each year for graduates of the college. Alumni members receive a College of Education news magazine, *The Link*, each fall and spring. For membership information, call 612/624-2323.

General Information

Glossary of Terms

Adult Special Students: a student designator that lets individuals who have completed a baccalaureate degree register through the College of Education for any unrestricted day school course, even though they have not been formally admitted to a program in the college or the Graduate School.

Certificate, Teaching: see "initial licensure" and "licensure, vocational."

Class Schedule: quarterly list of University day school courses; this publication is used for registration and includes a complete academic calendar, class hours, rooms, instructors, prerequisites, registration instructions, tuition and fees, maps, grading definitions, and other pertinent information. Preliminary class schedules are published in advance of each quarter to allow long-term planning.

Doctor of Education (Ed.D.): recognizes satisfactory academic preparation and demonstrated competence for professional activity in the fields of educational administration and vocational education. The Ed.D. is the highest professional degree offered in those fields. Standards and procedures for admission and expectations for scholastic performance are, in general, comparable to those for the Ph.D.

Doctor of Philosophy (Ph.D.): recognizes high attainment and ability in special subject fields as demonstrated through required examinations covering both the general and special subject fields and through the preparation and defense of a thesis based on original research and making a significant contribution to knowledge in the student's subject field.

Endorsement: a teaching license that is added to an initial/existing license; an endorsement indicates an additional area of expertise beyond the initial teaching license.

Graduate Record Examination (GRE): a standardized test administered by the Educational Testing Service and required for admission into an M.A., specialist certificate, Ed.D., or Ph.D. program. Official scores must be sent to the Graduate School office from the testing service.

Initial Licensure: refers to the first license a student earns. The college recommends state licensure for those students who complete an initial licensure/master of education or undergraduate licensure program. Through licensing standards, including the Pre-Professional Skills Tests, states can regulate the teaching industry and provide quality checks for public school teachers.

Initial Licensure/M.Ed. Programs: special programs in the College of Education that prepare educators who have completed an undergraduate/baccalaureate degree and who wish to obtain their initial licensure. At the College of Education, these are full-time day programs at the M.Ed. level (Plan III).

In-Service: refers to a teacher who is currently teaching or to an educator who is working in a non-school learning environment.

Licensure, Vocational: 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.

Master of Arts (M.A.): emphasizes research/theory and usually requires a written thesis or extensive research project. Graduate study leading to the M.A. degree is available in most education fields. M.A. candidates are admitted to the Graduate School, not the College of Education.

Master of Education (M.Ed.): emphasizes applied coursework for in-service education professionals and usually requires completion of a field-based experience. There are three types of M.Ed. programs: 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; Plan III programs are for individuals seeking initial licensure. The M.Ed. degree is typically more practitioner-based than the M.A. degree. M.Ed. candidates are admitted to the College of Education, not the Graduate School.

Middle School Endorsement: a teaching license that can be added to an elementary or secondary license, enabling a teacher to teach a subject specialty in a middle-school setting, grades 5-9.

PRAXIS I—Pre-Professional Skills Tests (PPST): tests the basic skills of reading, writing, and mathematics. The state of Minnesota requires successful completion of the PPST for all newly licensed teachers.

Practicum: sometimes called “clinical experience,” a practicum is a school-based activity designed to put theory/methods to use; the hands-on style serves as preparation for student teaching or as advanced work for in-service teachers/educators.

Pre-service: designates a teacher who has not yet taught or an educator who has not yet worked in a nonschool learning environment; students in initial licensure programs are often referred to as “pre-service” teachers.

Specialist Certificate: post-master’s programs that allow for the acquisition of additional licenses in specialized areas.

Information Directory

The first step for prospective, current, or former students seeking general information or direction is the Education Student Affairs Office (ESAO), University of Minnesota, 110 Wulling Hall, 86 Pleasant Street S.E., Minneapolis, MN 55455 (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

Education Student Affairs Office
110 Wulling Hall 625-6501

Adult Basic Literacy

Rosemarie J. Park
325 VoTech Building 625-6267

Advising and Registration

Education Student Affairs Office
110 Wulling Hall 625-6501

Agricultural Education and Extension

Roland L. Peterson
320 VoTech Building 624-4736

Agricultural Extension

Personnel Development
Mary Ann Smith
325M VoTech Building 624-3010

Alumni Relations

Lisa Hartwig
203B Burton Hall 625-1310

American Sign Language Program (ASL)

Tiera Baumgart 626-9392

Art Education

Margaret DiBlasio
148 Peik Hall 625-7818

Bilingual Education

Constance L. Walker
152 Peik Hall 625-4828

Business and Industry Education

(includes Marketing Education)
David Pucel
425 VoTech Building 624-3004

General Information

Career and Professional Services

Richard Wassen
Education Student Affairs Office
110 Wulling Hall 625-9884

Center for Applied Research and Educational Improvement (CAREI)

Geoffrey Maruyama
105 Burton Hall 624-3315

Center for the Study of Ethical Development

James Rest
206A Burton Hall 624-0876

Center for Early Education and Development (CEED)

Mary McEvoy
215 Pattee Hall 626-7819

Center for Experimental Education Service-Learning

James Kielsmeier
Gary Leske
460 VoTech Building 624-1214

Child Care Center

Patty Finstad
1600 Rollins Avenue S.E. 627-4014

Child Psychology

Richard A. Weinberg
180 Child Development 624-3575

Coaching Endorsement

(men and women)
March L. Krotee
218 Cooke Hall 625-0538

Communication Disorders

Charles E. Speaks
115 Shevlin Hall 624-3322

Community Education

Harlan Copeland
320 VoTech Building 625-6288

Community Education Administration

275 Peik Hall 624-1006

Counseling and Student Personnel Psychology

Thomas Skovholt
129 Burton Hall 624-6827

Curriculum and Instruction

Barbara M. Taylor
145 Peik Hall 625-1362

Curriculum Studies

Kerry Freedman-Norberg
125J Peik Hall 625-6098

Dean's Office

Robert H. Bruininks, Dean
Carol Boyer and Karen Seashore Louis,
Associate Deans
104 Burton Hall 625-6806

Development Office

Lisa Hartwig
203B Burton Hall 625-1310

Developmental/Adapted Physical Education

Allen Burton
222A Cooke Hall 625-0531

Early Childhood Education

Harlan S. Hansen
338 Peik Hall 625-4039

Economic Education

Center for Economic Education
Jane Plihal
460 VoTech Building 624-1214

Education Alumni Society

R.C. Johnson, President
Coffman Memorial Union, fifth floor
..... 624-2323

Education Student Affairs Office

Mary Bents
110 Wulling Hall 625-6501

Education Student Association (ESA)

Education Student Affairs Office
110 Wulling Hall 625-6501

Educational Policy and Administration

William Ammentorp
275 Peik Hall 624-1006

Educational Psychology

Mark L. Davison
204 Burton Hall 624-3543

Elementary Education

Patricia Heller
370E Peik Hall 625-0561

Elementary Student Teaching

(field experiences)

JoAnne Buggy
152A Peik Hall 625-2534

English Education

Richard Beach
359 Peik Hall 625-3893

Family Education

Marilyn Rossmann
325J VoTech Building 624-3082

Financial Aid

See also Student Scholarships

Office of Student Financial Aid
210 Fraser Hall
..... Minneapolis: 624-1665
..... Out of town: 1-800-400-U OF M

Graduation Requirements

(degree clearance)

See Education Student Affairs Office

Human Relations

206 Burton Hall 624-6083

Human Resource Development

Gary N. McLean
420J VoTech Building 624-4901

**Human Resource Development
Research Center**

Richard A. Swanson
425H VoTech Building 624-9727

Industrial Education

425 VoTech Building 624-3004

Institute on Community Integration

Scott McConnell
102 Pattee Hall 624-6300

Instructional Systems and Technology

Gregory C. Sales
130 Peik Hall 624-2034

International Development Education

John J. Cogan
152A Peik Hall 625-1896
or
R. Michael Paige
175D Peik Hall 626-7456

Kindergarten Education

Harlan S. Hansen
338 Peik Hall 625-4039

Kinesiology

Robert C. Serfass
224 Cooke Hall 625-3351

Mathematics Education

Robert Orton
175 Peik Hall 624-2301

Minnesota Council on Economic Education

Bruce Dalgaard
1169 Management/Economics Building
..... 625-4833

**Minnesota Research and Development
Center for Vocational Education**

James M. Brown
R460N VoTech Building 624-1214

Multicultural Teacher Development Project

Susan Slater
110 Wulling Hall 625-7511

Music Education

Rodney J. Loeffler
100C Ferguson Hall 624-4028

**National Center for Research
in Vocational Education**

Charles Hopkins
R350 VoTech Building 624-1705

Nursery School, Shirley G. Moore

Lynn P. Galle
134C Child Development 624-5283

Parent Education

Marilyn Rossmann
325J VoTech Building 624-3082

Physical Education

Robert C. Serfass
224 Cooke Hall 625-3351

Prekindergarten Education

Lynn P. Galle
134C Child Development 624-5283

Psychological Foundations of Education

206 Burton Hall 624-6083

Publications

Kate Tyler
104 Burton Hall 625-4874

Readmission Procedures

See Education Student Affairs Office

General Information

Recreation, Park, and Leisure Studies

Stuart J. Schleien
224 Cooke Hall 625-5887

Recruitment

Education Student Affairs Office
110 Wulling Hall 625-6501

Registration/Student Progress Subcouncil

Education Student Affairs Office
110 Wulling Hall 625-6501

Remedial Reading and Reading Supervisor Programs

Michael Graves
330A Peik Hall 625-2390

School Psychology

Sandra Christenson
345 Elliott Hall 624-4156

Science Education

Fred N. Finley
370B Peik Hall 625-2074

Second Languages and Cultures Education

Diane J. Tedick
125K Peik Hall 625-1081

Secondary Education

See individual academic fields in this listing

Social Studies Education

Patricia Avery
152C Peik Hall 625-5802

Special Education

Frank B. Wilderson, Jr.
214 Burton Hall 624-2342

Special Services

210B VoTech Building 624-1700

Sport Management

Mary Jo Kane
209 Cooke Hall 625-3870

Student Organizations

Education Student Affairs Office
110 Wulling Hall 625-6501

Student Scholarships (B.S. and M.Ed.)

See Education Student Affairs Office

Student Teaching

*See Elementary Student Teaching
or Teacher Education*

Teacher Education

Eugene Anderson
125F Peik Hall 626-0552

Teacher Leadership

William Gardner
136B Burton Hall 625-2313

Vocational Adult Parent Education

Marilyn Rossmann
325J VoTech Building 624-3082

Vocational Education

Gary Leske
350R VoTech Building 624-1221

Youth Development Leadership

James Stone III
325R VoTech Building 624-1795

Undergraduate Study



Undergraduate Study

Students seeking admission to undergraduate programs awarding the bachelor of science (B.S.) degree complete one or two years of preprofessional work in another college before transferring to the College of Education.

Clinical Experience

In the process of becoming professional educators, students participate in clinical experiences or internships. For undergraduate licensure students, application and registration information for student teaching may be obtained from the student's major department. Admission to student teaching is subject to final approval by the department coordinator for field experiences. Students in non-licensure programs should obtain information from their advisers about internships.

General Admission Guidelines

The faculty and staff of the College of Education welcome applications from all persons regardless of race, religion, color, sex, national origin, handicap, age, veteran status, or sexual orientation. It is the college's policy 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 standards and an appraisal of other factors related to the preparation of educators. 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 must complete the prescribed work before admission. It is strongly recommended that students attend an Information Group Meeting before applying to the college. For specific information, call ESAO (612/625-6501).

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

- 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 and have strong program-related experience. Specific admission criteria may be obtained from ESAO, 612/625-6501.
- Undergraduate B.S. programs admit students for initial enrollment during fall, winter, and spring quarters. Contact ESAO for specific deadlines.

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

- (1) *Students applying for undergraduate transfer to the College of Education from other divisions of the University* should apply at Student Relations, 150 Williamson Hall, where they will receive a change of college form. Applications may also be submitted to the Office of the Registrar—St. Paul, 130 Coffey Hall.
- (2) *Students applying for transfer from other colleges or universities* should write for an application for undergraduate admission to the Office of Admissions, University of Minnesota, 240 Williamson Hall, 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.

Planning to Transfer?

Minnesota's public colleges and universities are working to make transfer easier. You can help if you PLAN AHEAD, ASK QUESTIONS, and USE PATHWAYS created by transfer agreements.

Preparing for Transfer

If you are currently enrolled in a college or university:

- Discuss your plans with the transfer specialist on your campus.
- Call or visit your intended transfer college. You should obtain the following materials and information:
 - college catalog
 - transfer brochure
 - information on admissions criteria and on materials required for admission (e.g., portfolio, transcripts, test scores). Note that some majors have limited enrollments or their own special requirements such as a higher grade point average.
 - information on financial aid (how to apply and by what date)
- After you have reviewed these materials, make an appointment to talk with an adviser/counselor in the college or program you want to enter. Be sure to ask about course transfer and admission criteria.

If you are not currently enrolled in a college or university, you might begin by meeting with a transfer specialist or an admission officer at your intended transfer college to plan the steps you need to take.

Understanding How Transfer of Credit Works

- The receiving college or university decides what credits transfer and whether those credits meet its degree requirements. The accreditation of both your sending and your receiving institution can affect the transfer of the credits you earn.

- Institutions accept credits from courses and programs like those they offer. They look for similarity in course goals, content, and level. "Like" transfers to "like."
- Not everything that transfers will help you graduate. Baccalaureate degree programs usually count credits in three categories: general education, major/minor courses and prerequisites, and electives. The key question is, "Will your credits fulfill requirements of the degree or program you choose?"
- If you change your career goal or major, you might not be able to complete all degree requirements within the usual number of graduation credits.

Applying for Transfer Admission

- Application for admission is always the first step in transferring. Fill out the application as early as you can prior to the deadline. Enclose the application fee.
- Request that official transcripts be sent from every institution you have attended. You might be required to provide a high school transcript or GED test scores as well.
- Recheck to be certain you supplied the college or university with all the necessary paperwork. Most colleges make no decisions until all required documents are in your file.
- If you have heard nothing from your intended college of transfer after one month, call to check on the status of your application.
- After the college notifies you that you have been accepted for admission, your transcribed credits will be evaluated for transfer. A written evaluation should tell you which courses transfer and which do not. How your courses specifically meet degree requirements may not be decided until you arrive for orientation or have chosen a major.
- If you have questions about your evaluation, call the Office of Admissions and ask to speak with a credit evaluator.

Undergraduate Study

Ask why judgments were made about specific courses. Many concerns can be cleared up if you understand why decisions were made. If not satisfied, you can appeal. See "Your Rights as a Transfer Student" below.

Your Rights as a Transfer Student

- A clear, understandable statement of an institution's transfer policy.
- A fair credit review and an explanation of why credits were or were not accepted.
- A copy of the formal appeals process.

Usual appeals steps are: 1) Student fills out an appeals form. Supplemental information you provide to reviewers—a syllabus, course description, or reading list—can help. 2) Department or committee will review. 3) Student receives, in writing, the outcome of the appeal. 4) Student can appeal decision to ESAO.

- At your request, a review of your eligibility for financial aid or scholarships.

For help with your transfer questions or problems, see your campus transfer specialist.

Admission Requirements and Deadlines

Admission to all programs is competitive. To be considered for admission, a student must meet the minimum overall and major grade point average (GPA) requirements as established by each program within the college.

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

October 15 for the following winter quarter
January 15 for the following spring quarter
March 1 for the following fall quarter

Not all programs admit every quarter; check with ESAO for specific program information.

Readmission Policy—Students previously admitted to an undergraduate degree program in the College of Education whose day school registration has been discontinued for two or more consecutive years must apply for readmission at ESAO. A registration hold will be placed on students' records if two years have lapsed since the last registration. Applicants will be considered according to admission criteria in effect at the time of reapplication. Readmitted students must meet graduation requirements in effect at the time of readmission. Readmission may be granted for any quarter, as appropriate to individual program planning.

Transferring into the College of Education

Certain undergraduate program areas allow students to transfer into the College of Education for their sophomore year, while other program areas require that students transfer into the college for their junior year.

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 admission requirements of their chosen major in this section of the bulletin.

Industrial Education
Recreation, Park, and Leisure Studies

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*
Business Education
Elementary Education
Kinesiology
Mathematics Education (see description in initial licensure/M.Ed. section of this bulletin)

* *This is the only undergraduate program awarding licensure with the bachelor's degree.*

Scholastic Policies and Procedures

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, 110 Wulling Hall, 86 Pleasant Street 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. There is a fee for each examination.

Registration Procedures—Dates for registration in the college and the specific procedures to be followed are announced each quarter in the *Class Schedule* and the Official Daily Bulletin column in *The Minnesota Daily*. Students registering in the College of Education should obtain their registration materials and specific instructions for each program area at ESAO, 110 Wulling Hall. Students must register their first quarter of admission.

Change of Registration—Students who find it necessary to make program changes should obtain a Course Request form at the registration desk in ESAO. All changes in registration must be done in person. Students may add or change courses according to the schedule published quarterly in the *Class Schedule*.

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 ESAO.

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 ESAO, 110 Wulling Hall, help students assess their academic status and advise students with respect to their academic progress.

Licensure Procedures—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 ESAO, attach a check or money order for the fee (payable to the Commissioner of Education, State of Minnesota), attach a second check or money order (payable to the University of Minnesota) for an official transcript, and submit the application and checks/money orders to Student Relations, 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.

Teaching licenses are awarded by the Minnesota State Board of Education, *not* by the University. 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.

Recommendation for licensure is based on: 1) successful completion of coursework, 2) favorable faculty judgment regarding teaching competence (including successful clinical experience), and 3) meeting minimum standards for the state-required examinations. All students seeking licensure will be required to pass the PRAXIS I—Pre-Professional Skills Test (PPST) before recommendation for teacher licensure by the College of Education. The PPST assesses basic skills in reading, writing, and mathematics. For more information, contact ESAO (612/625-6501).

Students completing a vocational licensure program should obtain an application and instructions from the Vocational Licensure Department of the State Department of Education (612/296-0680) 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, when appropriate, 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 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 for individual majors.

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.

Liberal Education Requirements—The University of Minnesota believes that all its students, whatever their majors or professional goals, should have a liberal education. Toward this end, the College of Education, together with all other University units, subscribes to an all-University policy stating the objectives of liberal education and describing the minimum liberal education requirements all students must complete.

If liberal education requirements are completed in one college of the University, all other University colleges the student may transfer to will accept the courses as completing liberal education requirements.

The University of Minnesota is implementing new liberal education requirements beginning fall 1994 and new writing requirements beginning fall 1995. *These requirements, discussed on the following page, will vary for College of Education students depending upon the year of admission to the college and prior credits.* Read the following requirements carefully and call an ESAO adviser (612/625-6501) if you have any questions. Be sure to consult

the individual program area to determine which courses fulfill the liberal education requirements and which courses fulfill major and prerequisite requirements.

Writing Practice Requirement (for students enrolled at the University before fall 1995 with more than 38 credits)—College of Education students must complete the CLA lower level writing practice requirement (Comp 1011) or an approved equivalent. An upper division composition course selected in consultation with an adviser is also required for graduation.

Distribution Requirements (for students enrolled at the University before fall 1994 with more than 38 credits)—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)

Group B. The Physical and Biological Universe—12 credits (some credits required in both physical and biological sciences)

Group C. The Individual and Society—16 credits including Psy 1001 (A minimum grade of C in Psy 1001 is required for education students.)

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

Writing Skills (for students enrolling at the University fall 1995 or later with 38 or fewer credits)—College of Education students must complete one writing course and four courses certified as writing intensive. Courses fulfilling these requirements will be listed in the *Class Schedule* each quarter.

Liberal Education Requirements

(effective fall 1994 and later for students enrolling with 38 or fewer credits)

A liberal education introduces you to the modes of inquiry and subject matter of the major branches of knowledge, including the factual information and theoretical or artistic constructs that form their foundations; the "ways of knowing"—the kinds of questions asked and how insight, knowledge, and data are acquired and used; the changes over time of their central ideas or expressive forms; and the interrelationships among them and with human society in general. To these ends, study by all undergraduate students on the Twin Cities campus is guided by a common framework.

The Diversified Core Curriculum

Physical and Biological Sciences. Comprehension of physical and biological principles; understanding of and ability to use the methods of scientific inquiry—the ways in which scientists investigate physical and biological phenomena; and appreciation of the importance of science and the value of a scientific perspective.

Requirement: A minimum of three courses totaling at least 12 credits, including one course with a laboratory or field experience in the physical sciences and one course with a laboratory or field experience in the biological sciences.

History and Social Sciences. Knowledge of how historians and social scientists describe and analyze human experiences and behavior; study of the interrelationships among individuals, institutions, structures, events, and ideas; understanding of the roles individuals play in their historical, cultural, social, economic, and political worlds.

Requirement: A minimum of three courses totaling at least 12 credits, including one course with historical perspective.

Arts and Humanities. Understanding of approaches to the human condition through works of art, literature, and philosophy; knowledge of how artists create and humanistic scholars think; ability to make aesthetic judgments.

Requirement: A minimum of three courses totaling at least 12 credits including courses in two of the following: literature, philosophical perspective, and visual or performing arts.

Mathematical Thinking. Acquisition of mathematical modes of thinking; ability to evaluate arguments, detect fallacious reasoning, and evaluate complex reasoning chains; appreciation of the breadth of applications of mathematics and its foundations.

Requirement: A minimum of one course totaling at least four credits.

The Designated Themes of Liberal Education

The designated themes of liberal education offer a dimension to liberal learning that complements the diversified core curriculum. Each of the themes focuses on an issue of compelling importance to the nation and the world, the understanding of which is informed by many disciplines and interdisciplinary fields of knowledge.

Requirement: A minimum of six courses (or five courses if one includes an approved practicum), including one course in each of the following:

Cultural Diversity. Understanding of the roles gender, ethnicity, and race play in structuring the human experience in and developing the social and cultural fabric of the United States.

International Perspectives. Comprehension of the ways in which you are part of a rapidly changing global environment dominated by the internationalization of most human endeavors.

Environment. Knowledge of the interaction and interdependence of the biophysical systems of the natural environment and human social and cultural systems.

Citizenship and Public Ethics. Reflection on and determination of a clearer sense of your present and future civic relationships and your obligations to the community.

Writing Skills *(effective 1995)*

The ability to communicate effectively is a hallmark of a liberally educated individual and a key to a successful and satisfying life. To encourage refining of writing skills, the liberal education curriculum includes both writing courses and writing across the curriculum.

Requirement: one writing course and four courses certified as writing intensive.

You may satisfy the liberal education requirements with a number of courses and credits different from those of other students because some courses serve multiple goals in the curriculum; e.g., some courses will satisfy a diversified core requirement and a designated theme requirement, and other courses will satisfy the requirements for each of two themes. Thus, you may satisfy the designated theme requirements with a smaller number of courses than is stated in the requirement. Each quarter, the *Class Schedule* will publish the requirements and list all courses that satisfy them. In addition, the *Class Schedule* will list which of these courses are offered that quarter and which are tentatively scheduled for the subsequent quarters during the academic year.

Undergraduate Study

Liberal Education Requirements (for students enrolling at the University fall 1994 or later with 38 or fewer credits)—

Students will be required to complete the following:

Diversified Core Curriculum

- Physical and biological sciences (12 credits)
- History and social sciences (12 credits)
- Arts and humanities (12 credits)
- Mathematical thinking (4 credits)

Designated Themes of Liberal Education

A minimum of six courses (or five courses and an approved practicum), including one from each of the following areas:

- Cultural diversity
- International perspectives
- Environment
- Citizenship and public ethics

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

Special Requirements—State law requires that all candidates for teacher licensure complete specific coursework in several areas. These courses are included as part of the programs outlined.

A State Board of Teaching regulation requires that all applicants for teacher licensure complete a program in human relations. College of Education undergraduates meet this requirement through program coursework, including EPsy 5139—Interpersonal and Personality Effects on Learning. The state's requirement for coursework in methods of teaching handicapped and gifted students in regular school settings is met through a combination of the required foundations coursework.

Residence Requirements—A minimum of 45 credits must be earned at the University of Minnesota after admission to the College of Education. Thirty of the credits completed while in residence must be earned after reaching senior status (136 credits).

Transfers—Once transfer students are admitted to the college, coursework taken at other institutions is subject to approval by the adviser and the Student Progress Subcouncil.

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 GPA of 3.50 is required for all coursework completed at the University of Minnesota, Twin Cities campus, and 3.60 for all coursework completed at the University in the junior and senior years. A minimum of 45 credits must be completed in residence before the final quarter of the senior year. Credits and grades for the final quarter of work required for the degree and any other subsequent work cannot be included in the computation. *Students with previously completed degrees are not eligible for graduation with distinction.*

Application for a Degree—Students should file their application for a degree at 150 Williamson Hall *at least two quarters* before they expect to graduate. In addition, students whose major or minor fields are agricultural education, marketing education, business education, recreation, park, and leisure studies, industrial education, or kinesiology must file with the Student Progress Subcouncil in ESAO a program approved by an adviser.

Senior Balance Sheet—The senior balance sheet is mailed to students by the degree clearance staff in the 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.

Curricula

Child Psychology

Richard A. Weinberg, director, 180 Child Development

B.A. and B.S. degrees in child psychology are offered through the College of Liberal Arts and are described in the *CLA Bulletin*. For programs in prekindergarten and kindergarten education, see early childhood education and elementary education in this section of the bulletin. Students interested in an initial licensure/M.Ed. program in early childhood education should see the description for that field under the initial licensure/M.Ed. section in this bulletin.

Curriculum and Instruction

Barbara M. Taylor, chair, 145 Peik Hall

Most of the licensure programs in the Department of Curriculum and Instruction have moved to the master's level, which requires completion of an undergraduate degree before admission to licensure programs. Please check the initial licensure/M.Ed. programs section of this bulletin for information on art education, early childhood education, elementary education, English education, mathematics education, science education, second languages and cultures education, and social studies education.

Early Childhood Education

The early childhood education curriculum is currently under review. Students interested in this field should refer to the section on initial licensure/M.Ed. programs (Department of Curriculum and Instruction) or contact ESAO, 110 Wulling Hall (612/625-6501).

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.

Child psychology juniors or seniors 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. Students in other majors must take the initial licensure/M.Ed. program. 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)

- CI 5250—Current Trends in Early Childhood Education (3)
- CI 5252—Contemporary Programs for Young Children (3)
- CI 5253—Cognitive and Creative Learning in Early Childhood Education (3)
- CI 5281—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 3331—Introduction to Social Development (4)
or 5331—Processes of Socialization of Children (4) (if undergraduate)
- CPsy 5336—Development and Interpersonal Relations (4)
- CPsy 5343—Introduction to Cognitive Development (4)
or CPsy 5345—Language Development (4)
or CPsy 5349—Children's Learning and Intellectual Skills (4)

Guided Electives (minimum 3 credits)

- CPsy 5302—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 5139—Interpersonal and Personality Effects on Learning (4)
 - PubH 5023—Basic Concepts in Personal and Community Health (5)
- One physical education activity course

Elementary Education

The curriculum outlined below prepares students for recommendations for licensure to teach in elementary schools. After completing the program, students are eligible for recommendation for licensure to teach grades 1-6 in Minnesota.

The current elementary education undergraduate program will be discontinued after the fall 1994 cohort. Beginning fall quarter 1995, the College of Education will

Undergraduate Study

admit upper division (typically junior status) students to a B.S. degree program with a major in foundations of education. *This will serve as preparation for the initial licensure/M.Ed. program in elementary education.* The curriculum includes an extensive core of courses in liberal education that are central to elementary school teaching. The major coursework provides a foundation for working with children in a school setting and emphasizes the multicultural nature of an urban environment.

Students who successfully complete this program receive a B.S. with a major in foundations of education. Students may automatically move into the initial licensure program in elementary education if they meet the minimum entrance criteria for the master of education degree. Licensure requirements can be completed with a designated cohort in about three additional quarters of coursework and clinical experience. This program also prepares graduates to move into non-licensure educational settings or other settings where a strong liberal education background is useful. Undergraduates who would like further information about this program should contact ESAO, 110 Wulling Hall (612/625-6501).

The University of Minnesota is implementing new liberal education requirements fall 1994. Check in ESAO, 110 Wulling Hall, 86 Pleasant Street S.E., for changes affecting students with 38 or fewer credits enrolling fall quarter 1994 and later. See page 17 for a general description of the new liberal education requirements.

Major in Elementary Education for Undergraduates (fall 1994 only)—Students should take liberal arts coursework for the first two years and apply for admission to the program after completing 90 quarter credits. The criteria for consideration for admission are:

- Completion of CLA writing practice requirement and general psychology (minimum grade of C);
- Completion of 90 quarter credits with a grade average of C+ (2.50). Preference

will be given to applicants with a GPA above 2.50;

- Completion of all but 12 or fewer credits of items 1 through 5 of the Related Course Requirements below.

Engl 3851, Math 1005, 1006, and one of the courses listed in item 2 of Related Course Requirements below, should be taken before entering the College of Education.

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.

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 1031—College Algebra and Probability (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 1105-1106—Introduction to Elementary Mathematics (4 cr each). *Note:* 1105-1106 should be taken *after* completion of course from first group.
3. 13 credits in science including courses in physical and biological sciences
4. 5 credits in Psy 1001—Introduction to Psychology with a grade of C or better.
5. 12 credits chosen from at least two of the following areas: anthropology, economics, geography, history, political science, social science, and sociology
6. 12 credits in literary and artistic expression including Mus 1001—Fundamentals of Music (4); CI 3001—Survey of Art Activities (4); and at least 4 credits of electives
7. 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.)

8. A concentration of 30 credits in any one of the following fields: American Sign Language, 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.
9. Comp 3027—Advanced Expository Writing (4)

Major and Professional Courses

- CI 5110—Introduction to Elementary School Teaching (3)
 EPsy 5119—Learning and Cognitive Foundations of Education (4)

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 before the first quarter of student teaching.)

- CI 3000—Art of Children (3)
 CI 3400—Children's Literature (3)
 CI 3410—Introduction to Teaching Reading in the Elementary School (3)
 CI 3420—Introduction to Teaching Language Arts in the Elementary School (3)
 CI 3500—Teaching Science in the Elementary School (3)
 CI 3700—Teaching Social Studies in the Elementary School (3)
 CI 5921—Teaching Mathematics in the Elementary School (3)

6 credits in CI 3180—Junior Practicum in Elementary Education (1 or 2)
 Minimum of 12 credits in student teaching from CI 3182, 3183, 3184, 3280

- EdPA 5090—The School and Society (3)
 MuEd 3011—Teaching Music in the Elementary School (4)

Additional Requirements

- EPsy 5139—Interpersonal and Personality Effects on Learning (4)
 Kin 3327—Teaching Physical Education in the Elementary School (3)
 PubH 3004—Basic Concepts in Personal and Community Health (5)
 Evidence of current American Red Cross Standard First Aid and Personal Safety Training
 Electives to complete 186 credits (students must maintain a 2.50 GPA in major Elem and EdPA courses)

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 elementary education major for undergraduates or the initial licensure/M.Ed. elementary education program.

For all students:

- CI 3280—Student Teaching in the Kindergarten (6)
 CI 5250—Current Trends in Early Childhood Education (3)
 CI 5251—Early Childhood Education: Materials and Resources (3)
 CPsy 1301—Introductory Child Psychology (4)

Mathematics Education

See mathematics education emphasis in the initial licensure/M.Ed. programs section of this bulletin for information on undergraduate option.

Educational Policy and Administration

William Ammentorp, chair, 275 Peik Hall

This department offers graduate-level programs, 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, international development education, and programs for the preparation of elementary and secondary school principals, superintendents, and directors of special and community education. Some courses of particular relevance might be:

- EdPA 5201—Formal Organizations in Education
 EdPA 5202—Politics of Education
 EdPA 5222—Introduction to Policy Research
 EdPA 5224—Legal Implications of Acts by School Boards, Administrators, and Teachers
 EdPA 5260—Introduction to Educational Planning
 EdPA 5281—Economic Analysis in Educational Evaluation

The department offers professional education courses basic to teacher preparation programs. Juniors and seniors 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.

- EdPA 5090—The School and Society
 EdPA 5101—Historical Foundations of Modern Education
 EdPA 5102—Education Imagery in Europe and America
 EdPA 5131—Comparative Education
 EdPA 5141—Critical Issues in Contemporary Education
 EdPA 5171—Anthropology and Education (same as Anth 5145)
 EdPA 5182—Comparative Philosophies of Education
 EdPA 5190—Sociology of Education (same as Soc 5953)
 EdPA 5209—Education in Future Social Systems
 EdPA 5280—Introduction to the Economics of Education

Educational Psychology

Mark L. Davison, 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 education or social, health-related services in light of legislation mandating universal educational opportunities for the disabled and emphasis on mainstreaming approaches to special education.

- EPsy 5601—Education of Exceptional Children
- 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 5700—Assessment and Decision Making in Special Education

The American Sign Language (ASL) program available through the educational

psychology department fulfills the CLA requirement for competency in a second language. All candidates for licensure in the education of deaf and hearing impaired children must demonstrate competency in ASL before being recommended for licensure.

Undergraduates are reminded that they may be admitted to an M.A. or M.Ed. 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 (CSPP) program offers courses for upper division undergraduates and adult special and nonmajor graduate students. These courses 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 5430—Foundations of Career Development
- EPsy 5433—Developmental Career Counseling of Women
- EPsy 5434—Counseling Adults in Transition
- EPsy 5461—Cross-Cultural Counseling

Also available are foundation courses basic to teacher preparation programs:

- EPsy 5112—Knowing, Learning, and Thinking
- EPsy 5114—Psychology of Student Learning
- EPsy 5115—Psychology of Adult Learning
- EPsy 5119—Learning and Cognitive Foundations of Education
- EPsy 5130—Personality and Social Development
- EPsy 5139—Interpersonal and Personality Effects on Learning
- EPsy 5150—Social Psychology of Education
- EPsy 5151—Structuring Learning: Social Psychological Approaches
- EPsy 5220—Educational Measurement in the Classroom
- EPsy 5221—Basic Principles of Measurement
- EPsy 5229—Classroom Assessment Methods
- EPsy 5240—Principles and Methods of Evaluation
- EPsy 5260—Introductory Statistical Methods
- EPsy 5281—Introduction to Computer Operations: U of M Systems, SPSS

Kinesiology and Leisure Studies

Michael Wade, director, 110 Cooke Hall

The School of Kinesiology and Leisure Studies offers programs in kinesiology; physical education; coaching; recreation, park and leisure studies, and sport management. Listed below are requirements for the B.S. degree, minors, special licensure, and certification programs.

Physical Activity Program

Physical activity courses in a variety of sport skills are open to all University students who wish to elect them for general education purposes in accordance with the regulations of the college in which they are enrolled. These courses are listed in the *Class Schedule* under Physical Education and numbered under 1500. Many of these courses involve participation requiring high energy expenditure and are considered highly intensive unless otherwise indicated. It is recommended that students know their health status and any limitations on their ability to participate safely in the activities involved. Students who have questions about their health status should seek advice from a

personal physician. See course descriptions later in this bulletin and in the *Class Schedule* for more information about each activity course.

Kinesiology

Major in Kinesiology—The undergraduate program in kinesiology prepares individuals for roles in sports and health clubs, or corporate fitness or exercise centers, or serves as a background for initial licensure/M.Ed. program study in physical education, exercise rehabilitation, exercise physiology, biomechanics, social psychology of sport, motor behavior, or ergonomics and human factors, as well as other human performance contexts. (For information on the initial licensure/M.Ed. program in physical education, see the initial licensure/M.Ed. section of this bulletin.) Many students have also found the kinesiology degree appropriate as preparation for other health science degrees such as athletic training, physical and occupational therapy, medicine, and nursing. The curriculum includes a background of two years of general liberal education, a core of basic and applied sciences, physical activity skills, and personal support skills relative to coursework that supports individual professional goals along with a practicum experience in various sport, exercise, educational, or public service/workplace settings. Coursework for the undergraduate kinesiology program, the coaching licensure, developmental/adapted licensure, and the physical education licensure are listed under Kinesiology (Kin) and numbered above 1500. Courses that apply to licensure are indicated by the identification Physical Education Licensure (PEL).

The University of Minnesota is implementing new liberal education requirements fall 1994. Check in ESAO, 110 Wulling Hall, 86 Pleasant Street S.E., for changes affecting students with 38 or fewer credits enrolling fall quarter 1994 and later. See page 17 for a general description of the new liberal education requirements.

Admissions requirements for the kinesiology program include:

- A minimum overall GPA 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 1011 or equivalent coursework

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

Category B: one course each in biology and chemistry

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

- Completion of the following required major coursework:
CBN 1027—Anatomy for Kinesiology Students
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
- Completion of Kin 1871—Introduction to Kinesiology is desirable.

A 2.50 GPA (C+) is required for students applying to the kinesiology major and a 2.80 GPA is required for students entering the Sport Management Certificate Program. This average is computed for all courses and credits listed under the major courses if they have been completed on the Twin Cities campus.

Students completing this curriculum receive the B.S. degree in kinesiology. A total of 186 credits must be completed with a GPA of 2.50 (C+) in the major courses and 2.50 (C+) overall GPA.

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 the section under recreation, park, and leisure studies for requirements related to the certificate in sport management.

Common Requirements for All Kinesiology Majors

Major Courses for All Students (38 credits)

CBN 1027—Anatomy for Kinesiology Students (4)

Kin 1871—Introduction to Kinesiology (3)

Kin 3111—Mechanics of Movement (3)

Kin 3131—History and Philosophy of Kinesiology and Sport (4)

Kin 3132—Motor Development (3 cr)

Kin 3135—Motor Learning and Human Performance (3 cr)

Kin 3150—Introduction to Evaluation (4)

Kin 3385—Exercise Physiology (4)

Kin 3386—Exercise Physiology (4)

Kin 3900—Directed Study (3)

Kin 5126—Advanced Psychological and Sociological Dimensions of Physical Activity (3)

Kin 5980—Introduction to Research (3)

Elective credits (32-42) in kinesiology and related fields as designated by individual goals. At least 12 credits must be in 3xxx or 5xxx kinesiology courses.

Practicum or directed study (15 cr) selected from Kin 3624, 3625, 3900

One 3-credit research practicum (3900)

Special Requirements for All Students (9 credits)

EPsy 5139—Interpersonal and Personality Effects on Learning (4)

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

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 to students who are enrolled in, or are making application to, a 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 Kinesiology for admission to either coaching program. Application to enroll in Kin 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 boys and girls interscholastic sports in Minnesota public secondary schools.

Minnesota Public Secondary School

Coaching Licensure (18 credits required)

CBN 1027—Anatomy for Kinesiology Students (4)

or Kin 3110—Human Anatomy (3)

Evidence of current American Red Cross Standard First Aid and Personal Safety Training

Kin 3111—Mechanics of Movement (3)

or Kin 3115—Physiological Application to Sports (3)

or Kin 3386—Exercise Physiology (4)

Kin 3114—Prevention and Care of Injuries (3)

or Kin 5620—Practicum: Prevention and Care of Athletic Injuries (3)

Kin 3143—Organization and Management of Sport (3)

Kin 3624—Student Teaching: Coaching (3)

2 credits from:

Kin 3169—Volleyball Coaching (2)

Kin 3170—Baseball Coaching (2)

Kin 3171—Basketball Coaching (2)

Kin 3172—Football Coaching (2)

Kin 3173—Golf Coaching (2)

Kin 3174—Gymnastics Coaching (2)

Kin 3175—Ice Hockey Coaching (2)

Kin 3176—Swimming and Diving Coaching (2)

Kin 3177—Tennis Coaching (2)

Kin 3178—Track and Field Coaching (2)

Kin 3179—Wrestling Coaching (2)

Kin 3371—Soccer Coaching (2)

or Kin 5740—Workshop: Coaching of Individual, Dual, or Team Sports (min 2)

Coaching Minor (30 credits required)

CBN 1027—Anatomy for Kinesiology Students (4)

or Kin 3110—Human Anatomy (3)

Evidence of current American Red Cross Standard First Aid and CPR Training

Kin 3111—Mechanics of Movement (3)

Kin 3114—Prevention and Care of Injuries (3)

or Kin 5620—Practicum: Prevention and Care of Athletic Injuries (3)

Kin 3115—Physiological Application to Sports (3)

or Kin 3386—Exercise Physiology (4)

Kin 3131—History and Philosophy of Physical Education and Sport (4)

or Kin 5136—Psychology of Coaching (3)

Kin 3135—Motor Learning and Human Performance (3)

Kin 3143—Organization and Management of Sport (3)

Kin 3624—Student Teaching: Coaching (3)

4 credits from:

Kin 3169—Volleyball Coaching (2)

Kin 3170—Baseball Coaching (2)

Kin 3171—Basketball Coaching (2)

Kin 3172—Football Coaching (2)

Kin 3173—Golf Coaching (2)

Kin 3174—Gymnastics Coaching (2)

Kin 3175—Ice Hockey Coaching (2)

Kin 3176—Swimming and Diving Coaching (2)

Kin 3177—Tennis Coaching (2)

Kin 3178—Track and Field Coaching (2)

Kin 3179—Wrestling Coaching (2)

Kin 3371—Soccer Coaching (2)

or Kin 5740—Workshop: Coaching of Individual, Dual, or Team Sports (min 2)

Developmental/Adapted Physical Education

To qualify for licensure in D/APE, a student must complete 33-37 credits of coursework (21-22 credits in kinesiology and 12-15 credits in educational psychology) and have a current Minnesota teaching license in Physical Education.

Kinesiology Courses (21-22 credits)

Kin 5100*—Developmental/Adapted Physical Education (3)

Kin 5101*—Physical Activities for Persons with Disabilities (3)

Kin 5102*—Practicum: Developmental/Adapted Physical Education (max 6)

Kin 5132—Motor Development (3)

Kin 5163—Developmental Motor Assessment (3)

Complete *one* of the following:

Kin 5120—Advanced Biomechanics (4)

Kin 5122—Applied Physiology (3)

Kin 5126—Advanced Psychological and Social Dimensions of Physical Activity (3)

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

Kin 5135—Motor Learning and Human Performance (3)

Kin 5152—Curriculum (3)

Kin 5385—Exercise for Special Populations (3)

Educational Psychology (Special Education) Courses (12-15 credits)

Complete *one* of the following:

EPsy 5601—Education of Exceptional Children (4)

EPsy 5710*—Contemporary Services for Persons with Developmental Disabilities (3)

Complete *one* of the following:

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

EPsy 5609*—Family-Professional Planning for Persons with Severe Handicaps (3)

Complete *two* of the following:

EPsy 5612—Education of Learning-Disabled Children (3)

or EPsy 5615—Educational Interventions for Learning Disabilities (3)

EPsy 5620—Introduction to Mental Retardation (4)

or EPsy 5621—Methods and Materials for Elementary and Secondary Mentally Retarded Pupils (4)

EPsy 5622—Program Design for Learners with Severe Handicaps (4)

EPsy 5625—Education of Handicapped Infants and Preschool Children (4)

or EPsy 5681—Methods and Materials for Handicapped Infants and Preschool Children (3)

EPsy 5635—Education of Students with Physical Disabilities (3)

EPsy 5640—Psychosocial and Educational Aspects of Deafness (3)

or EPsy 5641—Models of Service Delivery to Students with Hearing Impairments (3)

EPsy 5656—Educational Needs of Students with Emotional Disturbances or Behavioral Disorders (3)

Undergraduate Study

- EPsy 5670—Introduction to Education of Visually Handicapped Children (3)
or EPsy 5673—Methods of Teaching Visually Handicapped Children (4)
EPsy 5705—Behavior Analysis Procedures with Mildly and Moderately Handicapped People (4)

* A student may qualify for an *Interdisciplinary Certificate in Development Disabilities* offered through the Institute on Community Integration by completing the five asterisked courses. For more information, call (612) 624-4848.

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.

For application deadlines, see the undergraduate programs section of this bulletin. 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 two option areas: 1) leisure services management; 2) therapeutic recreation. Within the leisure services option, students may elect one of four emphasis areas: 1) public parks and recreation; 2) commercial recreation; 3) outdoor recreation/education; 4) sport management. 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 must complete the liberal education requirements as described on page 17 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 a minimum of 9 credits in 3xxx or 5xxx courses in AdEd, CPsy, CI, EdPA, or EPsy courses.

Major Requirements (minimum 92 credits)

- Rec 1520—Orientation to Leisure and Recreation (4)
Rec 3530—Recreation and Park Areas and Facilities (4)
Rec 3540—Recreation Programming (4)
Rec 3550—Park and Recreation Administration (4)
15 credits in Rec 3700—Senior Internship (1-15)
24 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

Special Requirements for All Students

- 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

Sport Management Certificate Program—

The Sport Management Certificate Program is offered by the School of Kinesiology and Leisure Studies. This interdisciplinary program is based on an academic concentration that provides students with *specialized* educational and professional preparation required of individuals seeking career options in sport management. The program complements a student's existing academic program in business/management, kinesiology, recreation, or journalism.

Typical careers in sport management include sport organization management (responsibilities include budgeting, accounting, facility management), sport information management (responsibilities include marketing, promotion, and advertising), and exercise and sport science or the "fitness/wellness" industry

(responsibilities include testing, evaluating and monitoring exercise and fitness programs). For more information, call (612) 625-1007.

Music Education

Vern Sutton, director, 200E Ferguson Hall

The B.M. in music education is offered in CLA with teaching licensure through the College of Education. There are two undergraduate emphases in music education: instrumental/general music and choral/general music. (For information about the music therapy program, see the *CLA Bulletin*.) Consult the School of Music for admission and complete program requirements.

Precollege Music Preparation—An extensive background in high school instrumental and/or vocal ensembles is expected. Private lessons in voice or a band/orchestral instrument are desirable. 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 (for the choral/general concentration); a standard band or orchestral instrument (for the instrumental/general concentration). Piano lessons as well as beginning-level music theory (fundamentals) and music history/literature preparation via classes or individual study with texts, computer programs, and recordings will be helpful, as will conducting and leadership experiences.

Admission—Students must complete two years (90 credits) of coursework in music and liberal arts areas before admission to the music education program. A minimum cumulative grade average of C+ (2.50) must be earned in all music courses. An overall grade average of C (2.00) must be earned in all courses (music and nonmusic).

Students must also complete an interview with a major adviser in music education before their application for admission will be given final consideration.

Core Curriculum

See *CLA Bulletin* for information regarding courses required of all music students during the first two years of study, as well as general distribution requirements.

Major requirements in addition to core curriculum in the first two years

MuEd 1201—Introduction to Music Education (1)
Psy 1001—General Psychology (5)

Choral/General Music Education Concentration

This program is for vocalists, keyboard performers, or classical guitarists desiring to teach choral and classroom music in elementary and secondary schools. Students completing this program meet the requirements for licensure to teach choral and general classroom music grades K-12.

Music Courses

Applied Music—Minimum 11 quarters (22 credits) with majors in voice, piano, organ, or guitar
12 credits lower division lessons: MusA 1201—Piano, MusA 1203—Organ, MusA 1204—Voice, or MusA 1223—Guitar
10 credits upper division lessons: MusA 3201—Piano, MusA 3203—Organ, MusA 3204—Voice, or MusA 3223—Guitar

Secondary Applied Study—Minimum 6 credits
For non-voice majors: MusA 1404—Voice: Secondary Required (6 cr)

For non-keyboard majors: Mus 1151-1152-1153—Piano: Class Lessons (2 each) and MusA 1401—Piano: Secondary Required (6 cr)

For keyboard majors: Mus 1521-1522-1523—Keyboard Harmony (2 each)

Ensemble—Minimum of 11 quarters required, to be selected in consultation with the adviser.

Mus 3331—Jazz Improvisation I (2)

Mus 1161-1166—Diction for Singers I-VI (1 each)

Professional Education Courses

EdPA 5090—School and Society (3)

EPsy 5119—Learning and Cognition (4)

EPsy 5139—Interpersonal and Personality Effects on Learning (4)

EPsy 5229—Measurement and Assessment (2)

Kin 5530—Biological and Physical Foundations of Education (2)

MuEd 3301—Teaching Elementary Vocal and General Music (4)

MuEd 3302—Teaching Secondary Vocal and General Music (4)

MuEd 3322—Techniques of Classroom Instruments (2)

MuEd 3415—Choral Laboratory I (4)

MuEd 3416—Choral Laboratory II (4)

MuEd 3650—Student Teaching in Music (18)

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 (except EdPA 5090 and EPsy 5229); all major courses in theory, ear training, music history, and secondary applied study; 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/General Music Education Concentration

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

Music Courses

Applied Music—Minimum 9 quarters (18 credits) on principal instrument (standard band or orchestral instrument).

12 credits lower division principal lessons (12xx or higher)

6 credits upper division principal lessons (32xx)
(See *CLA Bulletin* "Applied Music" listings for specific course numbers.)

Secondary Applied Study—Minimum 6 credits

Students must select one woodwind and one brass instrument as well as voice for study for one quarter each (MusA 14xx, 2 credits/quarter; see *CLA Bulletin* "Applied Music" listings for specific course numbers).

Mus 3331—Jazz Improvisation I (2)

Ensemble—Required during 11 quarters of on-campus study (minimum 12 credits) to be selected in consultation with the adviser. Marching band experience is recommended for students whose major performance instrument is brass, woodwind, or percussion. Chamber ensemble experience is required during two quarters of on-campus study (minimum 2 credits).

10 credits from Mus 3410—Concert Band, Mus 1480—Marching Band

or Mus 3420—Orchestra (1 each)

2 credits from Mus 5360—Woodwind Ensemble, Mus 5380—Brass Choir, Mus 5390—Percussion Ensemble, Mus 3440—Ensemble, Mus 5340—Jazz Ensemble (1 each)

Professional Education Courses

EdPA 5090—The School and Society (3)

EPsy 5119—Learning and Cognition (4)

EPsy 5139—Interpersonal and Personality Effects on Learning (4)

EPsy 5229—Measurement and Assessment (2)

Kin 5530—Biological and Physical Foundations of Education (2)

MuEd 3301—Teaching Elementary Vocal and General Music (4)

MuEd 3302—Teaching Secondary General Music (4)

MuEd 3322—Techniques of Classroom Instruments (2)

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)

MuEd 3650—Student Teaching in Music (18)

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

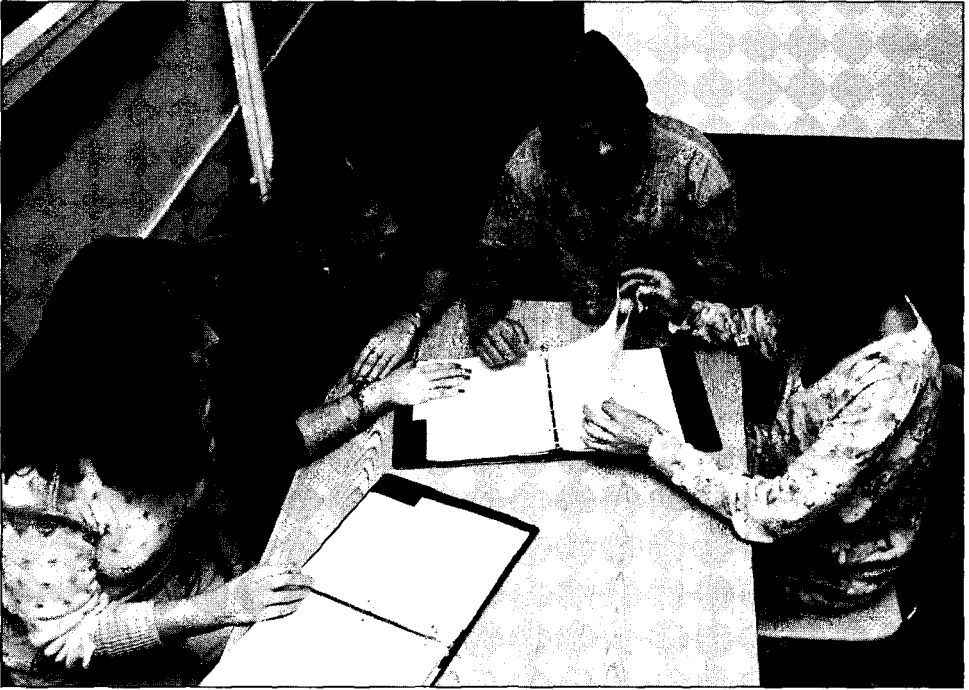
Admission to Student Teaching—See information given above for *Choral/General Concentration*.

Vocational and Technical Education

Charles Hopkins, 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 major fields: agricultural education, business education, and industrial education. Initial licensure/M.Ed. programs are offered in the following major fields: agricultural education, business and marketing education, family education, and industrial education. See description of the major for specializations, options, and programs.

Undergraduate Focus in Human Resource Development—The department also offers a focus at the undergraduate level (as well as at the continuing education and master's degree levels) in human resource development, which includes training and organization development. Students pursuing a degree in any one of the department's 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:



HRD 5750—Training in Industry and Business (3 or 4 cr)
 HRD 5760—Organization Development in Industry and
 Business (3 or 4 cr)
 6 credits in HRD 5780—Internship: Human Resource
 Development (ar)
 Other HRD courses to complete 20 credits, to be selected
 with approval of human resource development adviser

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 human resource development professional certificate is awarded to major and nonmajor students completing these requirements.

Agricultural Education

The undergraduate major in agricultural education, offered jointly by the College of Agriculture and the College of Education, is for students planning to teach agriculture, horticulture, agribusiness, food systems, natural resource management, and agriscience education in public schools, technical colleges, and community colleges,

or for those planning to work in educational positions in agricultural development and various agriculture-related organizations. The program provides comprehensive education for those preparing for teaching; extension work; local, national, and international development; and other professional careers in sales and marketing, financial management, or agricultural production. The program requires a broad study of agriculture and permits emphasis in animal science, crop science, agricultural economics, agricultural business, horticulture, soils, natural resources, and agricultural engineering technology. It also, in the two education specializations, offers special preparation in education necessary to qualify for licensure as a teacher of agriculture, horticultural science, agribusiness, agriscience education, and natural resources.

Admission Procedures—Students may enter a pre-agricultural education major in the College of Agriculture as freshmen or transfer students. Students must earn 90

credits in the pre-agricultural education major before transferring to the College of Education. Students should apply for admission to the College of Education in the final quarter of their sophomore year. This application may be completed in Agricultural Education, 320 Vocational Technical Education Building.

Students must complete the application requirements as directed by the Agricultural Education staff. Applications must be submitted within the first three weeks of the quarter preceding the desired quarter of admission.

The Natural and Managed Environmental Systems and Agricultural Education Specializations

—Students in these specializations will be eligible to teach agriculture, horticulture, natural resources, forestry, agribusiness, agriscience, food systems, and agricultural mechanics at the secondary or postsecondary levels; students in the agricultural education specialization may also teach adult farm business management education provided they have the appropriate work experience to accompany their degree. In addition, graduates from these specializations may seek employment in all other areas listed in the general features section.

To be eligible for admission to these specializations in the College of Education, students must have a minimum overall GPA of at least 2.50. Students are required to complete the PRAXIS I—Pre-Professional Skills Test (PPST) before admission. The test assesses basic skills in reading, writing, and mathematics.

The Agricultural Development Specialization

—Students in this specialization will be eligible for a wide range of positions in agricultural development. Students will guide the process of change for improving an individual organization, community, or society within the context of agriculture. Students may seek employment in all the fields listed in the other specializations except formal teaching situations. This specialization provides an emphasis in experiential education in both

the production and agribusiness phases of agriculture.

To be eligible for admission to the agricultural development specialization in the College of Education, students must have a minimum overall GPA of at least 2.30.

Transfer students who have completed less than two years of college work 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 also apply for admission to the College of Agriculture. During the first quarter of enrollment in the College of Agriculture, students must apply for admission to the College of Education.

Clinical Experience—In the natural and managed environmental systems and agricultural education specializations, students must have an overall GPA of 2.50 to be eligible for student teaching.

Graduation Requirements—Students must have an overall GPA of 2.50 to meet graduation requirements in the natural and managed environmental systems and agricultural education specializations. They must have an overall GPA of 2.30 to graduate with an agricultural development specialization.

Work Experience—In addition to the baccalaureate degree, students applying for licensure must have satisfactory work experience in agricultural production and agribusiness. In general, students will be expected to verify at least 2,000 hours of work experience in production and agribusiness agriculture.

Major Requirements—Students entering as freshmen fall 1994 or later majoring in agricultural education must complete the liberal education requirements listed on page 17 plus the following foundation and professional courses. Course substitutions in these categories may be made only with the approval of the adviser and the College of Agriculture. Changes in professional courses and emphasis areas require the approval of

the adviser and the College of Education. Changes in technical courses may be made with the adviser's recommendation and approval of the agricultural education coordinator.

Foundation Courses—41 credits

- Two writing courses (8)
- Two oral communication courses (8)
- AgEc 1101—Macroeconomics (4)
- BioC 1401—Elementary Biochemistry (4)
or Chem 3301—Organic Chemistry I (4)
- Biol 1103—General Botany (5)
or Biol 1106—General Zoology (5)
- Biol 1009—General Biology (5)
- Chem 1001-1002—General Principles of Chemistry (4 each)
or Chem 1051-1052—Chemical Principles I-II (4 each)
- Math 1031—College Algebra and Probability (4)
or Math 1142 Short Calculus (4)
- Phys 1041—General Physics (5)
- Psy 1001—Introduction to Psychology (4)

Professional Courses—3 credits

- AgEd 1001—Introduction to Agricultural Education (1)
- AgEd 1002—Principles of Career Planning in Agriculture (1)
- AgEd 3029—Directed Experience in Agricultural Education (1)

Transfer students entering with more than 38 credits fall 1994 or later and majoring in agricultural education must complete the requirements listed below in categories A, B, C, and D. Course substitutions in these categories must be approved by the adviser and the College of Agriculture. Changes in professional courses and the emphasis area must be approved by the adviser and the College of Education. Changes in technical courses must have adviser's recommendation and approval of the agricultural education coordinator.

A. Language, Logic, Mathematics, and the Study of Argument—25 credits

- Math 1031—College Algebra (5)
or Math 1142—Short Calculus (5)
- Rhet 1101—Writing to Inform and Persuade (4)
- Rhet 1104—Library Research Methods (1)
- Rhet 1200—Computer Applications in Your Profession (3)
- Rhet 1222—Public Speaking (4)
- Rhet 3562—Writing in Your Profession (4)
- One of the following:
 - Rhet 1151—Writing in Your Major (4)
 - Rhet 3254—Advanced Public Speaking (4)
 - Rhet 3266—Communication, Discussion in Small Group Decision Making (4)
- One statistics course

All courses in category A may be selected from equivalent courses offered in other departments or colleges within the University.

B. The Physical and Biological Universe—32 credits minimum

- BioC 1401—Elementary Biochemistry (4)
or Chem 3301—Organic Chemistry (4)
- Biol 1009—General Biology (5)
- Chem 1001—General Principles of Chemistry (4)
- One physics course (5)
- ScAg 1500—Basic Biotechnology (3)
- Eleven additional elective credits in biological and physical sciences
 - or BioC 1401—Elementary Biochemistry (4)
 - Biol 1009—General Biology (5)
 - Biol 1103—General Botany (5)
 - or Biol 1106—General Zoology (5)
 - Chem 1051-1052—Chemical Principles I-II (4 each)
 - One physics course (5)
 - ScAg 1500—Basic Biotechnology (3)
 - Two elective credits in biological or physical science

C. The Individual and Society—16 credits minimum

- Psy 1001—General Psychology (5)
- Soc 1001—Introduction to Sociology (4)
or Anth 1102—Introduction to Social and Cultural Anthropology (5)

Recommended Additional Courses:

- Anth 1102—Introduction to Social and Cultural Anthropology (5)
- Any additional anthropology course
- Geog 1301—Human Geography (5)
- Geog 1401—Physical Geography (5)
- Hist 1301-1302—American History (4 each)
- Phil 1002—Introduction to Philosophy (5)
- Phil 1003—Introduction to Ethics (5)
- Pol 1001—American Government and Politics (5)
- Pol 1025—World Politics (4)
- Pol 3825—The International System (4)
- Soc 1001—Introduction to Sociology (4)
- Soc 1651—Rural Sociology (4)
- Soc 3551—World Population Problems (4)

Students in the agricultural education development specialization may take any two of the following:

- Anth 1102—Introduction to Social and Cultural Anthropology (5)
- Psy 1001—General Psychology (5)
- Soc 1001—Introduction to Sociology (4)

D. Literary and Artistic Expression—12 credits minimum

Students are encouraged to pursue 12 or more credits in a theme area (see adviser's list for themes). Students may apply up to 5 credits in the performing arts such as music, theatre, and studio arts in category D. (See College of Agriculture general requirements for additional suggestions.)

Professional Courses—3 credits

- AgEd 1001—Introduction to Agricultural Education (1)
- AgEd 1002—Principles of Career Planning in Agriculture (1)
- AgEd 3029—Directed Experience in Agricultural Education (1)

Undergraduate Study

Agricultural Education Specialization (teacher licensure program)

General Education—20 credits

- EdPA 5090—School and Society (3)
EPsy 5119—Learning and Cognitive Foundations of Education (4)
EPsy 5139—Interpersonal and Personality Effects on Learning (4)
EPsy 5229—Classroom Assessment Methods (2)
Kin 5530—Biological and Physical Foundations of Education (2)
PubH 3001—Personal and Community Health (3) and
PubH 3003—Fundamentals of Alcohol and Drug Abuse(2)
or PubH 3004—Basic Concepts in Personal and Community Health (5)

Agricultural Education—32 credits

- AgEd 5028—Teaching Methods in Agricultural Education (5)
AgEd 5049—Agricultural Education for Adults (3)
AgEd 5061—Program Planning and Evaluation (3)
AgEd 5072—Practicum: Agricultural Business and Industry (3)
VoEd 5100—Clinical Experience (12)
VoEd 5300—Philosophy of Vocational Education (3)
VoEd 5330—Coordination Techniques for Vocational Education (3)
Animal science—14 credits
Applied economics/business—16 credits
BIE 3060—Professional Sales Management (3)
or GC 1537—Professional Selling (3)
Plus 13 credits in marketing, management (one course), and accounting (one course)
Mechanical technology and environment—6 credits
AgEd 1042—Current Technical Competencies (3)
AgEd 5042—Agricultural Mechanics (3)
Natural resources—9 credits
Plant science/plant protection—12 credits
Soil science—5 credits
Soil 1020—The Soil Resource (5)
or Soil 3125—Basic Soil Science (5)
Electives to complete the 198 credits required for graduation

Agricultural Development Specialization

General Education—3 credits

- AdEd 5401—Adult Learning and Development Through the Life Span (3)

Agricultural Education—25 credits

- AgEd 5010—Rural Leadership Development(3)
AgEd 5021—Education Through Extension Methods (3)
AgEd 5023—Extension Methods for Developing Countries (3)
AgEd 5025—Extension Program Planning (3)
AgEd 5055—Methods in Farming Systems Research and Extension (3)
10 credits from the following:
AgEd 3001—Experiential Learning: Production Agriculture (1-14)
AgEd 3002—Experiential Learning: Agricultural Business (1-14)

Development—15-16 credits

Two from the following:

- AgEc 3070—Agriculture and Economic Growth in Developing Countries (4)
AgEc 5790—World Food Problems (3)
Econ 5401—International Economics (4)
Pol 3477—Political Development (4)
Pol 3835—The International System (4)

Two from the following:

- AgEc 3006—Applied Macroeconomics: Government and the Economy (4)
AgEc 3007—Applied Macroeconomics: Policy, Trade, and Development (4)
AgEc 3040—Economic Development of American Agriculture (4)
AgEc 3610—Resource Development and Environmental Economics (4)
Econ 5301—Economic Development (4)
Econ 5307—Comparative Economic Systems (4)
FScN 1102—Technology of Food Processing (4)
FScN 1612—Principles of Nutrition (4)

Animal science—7 credits

Agricultural economics—19-20 credits

- AgEc 1250—Principles of Accounting (4)
or Acct 1050—Principles of Accounting (4)
AgEc 3810—Principles of Farm Management (4)
BIE 3060—Professional Sales Management (3)
or GC 1537—Professional Selling (3)

Two courses from the following:

- AgEc 3420—Grain Marketing Economics (4)
AgEc 3430—Dairy Marketing Economics (4)
AgEc 3440—Livestock and Meat Marketing Economics (3)
AgEc 3450—Agricultural Input Marketing (4)
AgEc 5440—Cooperatives and Agribusiness Organizations (4)
AgEc 5480—Futures, Markets, and Prices (4)

Mechanical technology and environment—5 credits

Natural resource management—6 credits

Plant science/plant protection—12 credits

Soil science—5 credits

- Soil 1020—The Soil Resources (5)
or Soil 3125—Basic Soil Science (5)

Electives to complete the 198 credits required for graduation with a bachelor of science degree.

Natural and Managed

Environmental Systems Specialization (Teacher Licensure Program)

- EEB 3001—Introduction to Ecology (4)
Geo 1001—Introduction to Geology (4)
or Geol 1111—Introduction to Physical Geology (5)
Math 1142—Short Calculus (5)
or Math 1251-1252—Calculus I-II (4 each)
Stat 3011—Statistical Analysis (4)
or Agro 3060—Field Plot Design (4)

General Education—20 credits

- EdPA 5090—School and Society (3)
EPsy 5119—Learning and Cognitive Foundations of Education (4)
EPsy 5139—Interpersonal and Personality Effects on Learning (4)
EPsy 5229—Classroom Assessment Methods (2)

- Kin 5530—Biological and Physical Foundations of Education (2)
- PubH 3001—Personal and Community Health (3) *and*
 PubH 3003—Fundamentals of Alcohol and Drug Abuse(2)
or PubH 3004—Basic Concepts in Personal and Community Health (5)
- Agricultural Education—32 credits**
 AgEd 5028—Teaching Methods in Agricultural Education (5)
 AgEd 5061—Program Planning and Evaluation (3)
 AgEd 5072—Practicum: Agricultural Business and Industry (3)
 VoEd 5100—Clinical Experience (12)
 VoEd 5300—Philosophy and Practice of Vocational Education (3)
 VoEd 5330—Coordination Techniques in Cooperative Education (3)
- Natural resources and environmental systems—15-17 credits
 NRes 3001—Colloquium in Natural Resources and Environmental Science (1)
 NRes 3060—Water Quality in Natural Resource Management (3)
or AgEt 5410—Hydrology and Water Quality (5)
 NRes 5100—Problem Solving in Natural Resources and Environmental Science (5)
 NRes 5210—Survey, Measurement, and Modeling Methods for Natural Resource Analysis (3)
- One from the following:
 NRes 1010—Issues in the Environment (3)
 FR 1201—Conservation of Natural Resources (3)
 FW 1002—Wildlife: Ecology Values and Human Impact (3)
 FW 1101—Ethics and Values in Research Management (3)
 FW 3052—Introduction to Fisheries and Wildlife (3)
 PIPa 3004—Air Pollution, People, and Plants (3)
- Plant and soil science—26-27 credits
 Agro 1010—Principles of Agronomy (4)
or Hort 1021—Woody Plant Materials (5)
or FR 1100—Dendrology (4)
 Agro 3020—Growth, Development, and Culture of Field Crops (5)
or Hort 3001—Growth and Regulation of Horticultural Crops (5)
 AnPl 3010—Environment and World Food Production (4)
or AnPl 5060—Integrated Management of Cropping Systems (4)
 Soil 1020—The Soil Resource (5)
or Soil 3125—Basic Soil Science (5)
 Soil 1425—Introduction to Meteorology (4)
or Geog 1425—Introduction to Meteorology (4)
 Soil 3220—Soil Conservation and Land Use Management (4)
or Soil 3416—Soil Fertility (4)
- Animal science—6 credits
 AnSc 3401—Principles of Animal Nutrition (3)
 One from the following:
 AnSc 1301—Management Technique: Swine (1)
 AnSc 1302—Management Technique: Sheep (1)
 AnSc 1303—Management Technique: Beef (1)
 AnSc 1304—Management Technique: Dairy (1)
 AnSc 1305—Management Technique: Poultry (1)
 Two additional credits in animal science

- Agricultural economics—8 credits
 AgEc 1250—Principles of Accounting (4)
or AgEc 3810—Principles of Farm Management (4)
 AgEc 3610—Resource Development and Environmental Economics (4)
- Mechanical technology and environment—6 credits
 AgEd 1042—Current Technical Competencies (3)
 AgEd 5042—Agricultural Mechanics: Preparing for Laboratory Instruction (3)
- Electives to complete 201 credits required for graduation

Business and Industry Education

Business and industry education offers a major in business education, emphasizing administrative management and training, and a major in industrial education that has four focuses: public school teaching in industrial education, technical college teaching in vocational-industrial education, industrial training, and industrial supervision.

Business Education—The B.S. degree program with a major in business education, which emphasizes *administrative management and training*, leads to a professional certificate in human resource development with special preparation in office systems management. (This program does *not* lead to a recommendation for the standard license to teach business and office education in Minnesota public schools; however, students who complete this program will have the prerequisite business content degree for admission to the University of Minnesota initial licensure/ M.Ed. program in business and marketing education.)

Students preparing to major in the business education program register for two years in a liberal arts or community college or in General College. Application for admission to the major may be made in the quarter in which students will have completed 90 credits. 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. An overall GPA of 2.80 or higher is required for admission.

Students who have had previous instruction or experience in keyboarding/ typewriting, word processing, office

procedures and management, and microcomputer applications may take proficiency examinations for credit or appropriate placement in required courses (see Examination for Credit at the beginning of this section of the bulletin). Students who have had related occupational experience may have the credits required in BIE 5510 waived. These matters should be discussed with a 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. Students are encouraged to apply appropriate related and major courses toward these requirements. A 2.80 GPA in all major and professional education courses is required for admission to an internship and for graduation.

Note: Business education courses are listed under the designator BIE (business and industry education).

Related Course Requirements

Math 1031—College Algebra and Probability (4)
or Math 1111—College Algebra and Analytical
Geometry (5) or equivalent

Major Courses (minimum 93 credits)

Acct 1050—Introduction to Financial Reporting (5)
BGS 3004—International Business (4)
BIE 3058—Office Management Techniques and
Technology (3)
BIE 3059—Word/Information Processing Concepts and
Management (3)
BIE 3061—Records Management (3)
BIE 5010—Introduction to Microcomputer Applications
in Business and Industry Education (3)
BIE 5015—Advanced Word Processing Practicum (3)
BIE 5020—Spreadsheet Analysis Using Microcomputers
in Business and Industry Education (3)
BIE 5025—Teaching Microcomputer Graphics in
Business and Industry (3)
BIE 5030—Database Microcomputer Applications (3)
BIE 5040—Integrated Microcomputer Applications in
Business and Industry Education (3)
BLaw 3058—Introduction to Law, and the Law of
Contracts and Sales Contracts (4)
Comp 3032—Preprofessional Writing for Business (4)
Econ 1101—Microeconomics (4)
Econ 1102—Macroeconomics (4-5)
HRD 5760—Organization Development in Industry and
Business (3-4)
IDSc 1010—Fundamentals of Information Development
and Use (4)
IDSc 3030—Information Systems and Information
Management (4)
Mgmt 3001—Fundamentals of Management (4)

Mgmt 3002—Psychology of Management (4) or IR
3002—Personnel and Industrial Relations (4)
Mgmt 3008—Entrepreneurship and the Smaller
Enterprise (4) or VoEd 5700—Teaching
Entrepreneurship: Small Business Management (4)
Mktg 3000—Principles of Marketing (4)
OMS 1020—Data Analysis and Statistical Inference for
Managers (4)
VoEd 5340—Principles of Supervisory Management (4)
Electives selected in consultation with adviser from
business administration, speech communication,
technical business education, human resource
development in vocational education (to complete
93-credit total)

Students must demonstrate competency in keyboarding and machine transcription by completing a proficiency examination or a postsecondary course with a minimum grade of C.

Professional Education Courses (minimum 33 credits)

BIE 5253/HRD 5253—Supervisory Training (3)
BIE 5400—Introduction to Business and Marketing
Education Curriculum (4)
BIE 5660—Instructional Methods (3)
HRD 5750—Training in Industry and Business (3-4)
One adult education course (3)
Electives selected in consultation with adviser from
business and industry education, curriculum and
instruction, adult education, vocational and technical
education, human resource development, internship
(to complete 33-credit total)

Internship (minimum 6 credits)

BIE 5510—Internship: Business and Industry Education
(1-12)
or HRD 5780—Internship: Human Resource
Development (1-15)

Industrial Education—The undergraduate major in industrial education has four focuses: general industrial education (pre-industrial technology education), technical college teaching in vocational-industrial education, industrial training, and industrial supervision.

Students completing the general industrial education focus are awarded the B.S. degree, which can fulfill the prerequisites for entry into the initial licensure/M.Ed. program for public school teaching in industrial technology education. Completing the initial licensure/M.Ed. program results in a recommendation to the state of Minnesota for a license to teach industrial technology education in grades 5-12 in Minnesota public schools. Students completing the vocational-industrial education focus are awarded the B.S. degree and recommended for licensure under the provisions of the Minnesota State Plan for Vocational Education to teach in technical college programs in Minnesota and

selected vocational education programs in high schools. Students completing the industrial training focus are awarded the B.S. degree and professional certificate in industrial training and development, but do not receive licensure to teach in Minnesota public secondary and postsecondary schools. Students completing the industrial supervision focus are awarded the B.S. degree with a concentration in industrial supervision, but do not receive licensure to teach in Minnesota secondary or postsecondary schools. Graduate study is also available in all four focuses.

Students applying for admission must have completed at least 45 quarter credits. A minimum GPA of 2.50 is required in all previous college-level work to be considered for admission. In addition, students must complete a questionnaire concerning education, work, and other relevant experiences. Students may elect to pursue courses meeting the requirements for a combination of focuses. For example, vocational-industrial majors may include a focus in training or supervision in industry as part of their degree. This would require the addition of selected industrial training or supervision courses. Some of the industrial education courses applicable to the B.S. are available off campus through Continuing Education and Extension (CEE) or through Special Services, an outreach program of the Department of Vocational and Technical Education.

Students may arrange to take a number of laboratory courses at the Dunwoody Institute and at metropolitan technical colleges without fees other than those paid at the University. Adviser consent 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. Specific required courses can be identified by contacting an industrial education adviser. Other appropriate related and major courses may be applied toward these requirements.

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

Note: Industrial education courses are listed under the designator BIE (business and industry education).

Related Course Requirements

- AgET 3030—Introduction to Problem Solving with Computers (4)
- or GC 1571—Introduction to Microcomputer Applications (5)
- Comp 1011—Writing Practice I (5)
- or Rhet 1101—Writing to Inform and Persuade (4)
- or GC 1421—Writing Lab: Personal Writing (4)
- Comp 3032—Preprofessional Writing for Business (4)
- or Rhet 3562—Writing in Your Profession (4)
- Math 1031—College Algebra and Probability (4)
- or Math 1111—College Algebra and Analytic Geometry (5)
- Phys 1001—The Physical World (4)
- Phys 1005—Physical Laboratory (1)
- Psy 1001—Introduction to Psychology (5)
- Spch 1101—Fundamentals of Speech Communication (4)
- or Rhet 1222—Public Speaking (4)

Technology Content—53 credits

Expertise in a technical specialty may be obtained through coursework and/or work experience.

Focus 1: Students must complete the basic technology content plus 18 credits of advanced technology content.

Basic Technology Content—35 credits

- BIE 1100—Technical Drawing (3)
- BIE 1101—Technical Design and Product Development (3)
- BIE 1110—Introduction to Production Systems (4)
- BIE 1120—Communication Technology (3)
- BIE 1130—Principles of Energy and Power (4)
- BIE 3111—Manufacturing (3)
- BIE 3112—Construction (3)
- BIE 3121—Graphic Communication (3)
- BIE 3131—Industrial Power Systems (3)
- BIE 3132—Industrial Electronics (3)
- BIE 3140—Transportation Systems (3)

Advanced Technology Content—18 credits

- BIE 3150—Technical Development: Advanced (1-12, max 18)
- BIE 5150—Technical Development: Specialized (1-12, max 18)

Focus 2: Students in the vocational-industrial focus may meet the technology requirement by completing at least 8 credits of technology courses selected with adviser approval and may receive up to 45 credits for technical work experience or a completed technical college program, with adviser approval.

Focus 3: Those who wish to specialize in industrial training or industrial supervision may fulfill the technology content requirement by completing an 18-credit block of adviser-approved courses in their area

Undergraduate Study

of specialization and may receive up to 27 credits for technical work experience. In place of technical work experience, they may complete additional approved industrial education coursework that develops technical competence.

Professional Education Course Requirements for All Students

- BIE 1300—Introduction to Industrial Education Teaching (2)
or BIE 1301—Introduction to Vocational-Technical Teaching (3)
BIE/HRD 5301—Student and Trainee Evaluation Systems (3)
BIE 5303—Instructional Aids (3)
BIE 5320—Vocational Guidance (3)
BIE 5325—Foundations of Industrial Education (3)
BIE 5344—Facilities and Management (3)
BIE 5630—Course Development (3)
BIE/HRD 5660—Instructional Methods (3)
EPsy 5139—Interpersonal and Personality Effects on Learning (4)
PubH 5023—Basic Concepts in Personal and Community Health (5)
VoEd 5800—Working with Special Needs Students (3)
Evidence of current American Red Cross Standard First Aid and CPR Training

Required of Students in Focus 2

- BIE 1302—Supervised Vocational-Technical Teaching (3) (required only of those without teaching experience)
VoEd 5300—Philosophy and Practice of Vocational Education (3)

Required of Those in Focuses 2-4

- AdEd 5401—Adult Learning and Development Through the Life Span (3)

Required of all students

- 12 credits in Issues, Structures, and Functions of Industry (selected with an adviser)
General Electives to complete 186 credits

Family Education

Secondary school licensure is not available at the undergraduate level. See initial licensure/M.Ed. programs section.

Family Education Minor—This minor is available to undergraduates in the Colleges of Human Ecology and Liberal Arts, Inter-College Program, and University College. It enables students to develop beginning educator competencies to complement and enhance their studies in their majors. Students develop the ability to plan, deliver, and evaluate family education programs in work and community settings. Courses taken in this minor may be applied toward a parent educator license. Applicants are encouraged to seek prerequisite advising.

Industrial Education

See Business and Industry Education.

Initial Licensure / M.Ed. Programs



Initial Licensure/M.Ed. Programs

The College of Education teacher education programs reflect current thinking and research in the field. Most of the initial teacher licensure programs are now at the master's level.

Admission to an initial licensure/M.Ed. (M.Ed. Plan III) program in the College of Education requires an earned bachelor's degree (B.A., B.F.A., or B.S.) in a major field related to the area in which the student wishes to teach. Most of these programs admit students for initial enrollment during Summer Session only (except for agriculture, business and marketing, family education, and industrial education, which may accept students each quarter). This is a full-time program and students are expected to complete it within the scheduled 15 months.

Licensure areas include:

Department of Curriculum and Instruction

- Art education
- Early childhood education
- Elementary education
- English education
- Mathematics education
- Science education
- Second languages and cultures education with majors in Chinese, English as a second language (ESL), French, German, Hebrew, Japanese, Latin, Russian, Spanish
- Social studies with emphases in anthropology, economics, geography, history, political science, psychology, sociology

School of Kinesiology and Leisure Studies

- Physical education

Department of Vocational and Technical Education

- Agricultural education
- Business and marketing education
- Family education
- Industrial education

Upon completing the licensure requirements, students have earned a majority of the credits required for the master of education degree.

Admission

Admission to all programs is competitive. To be considered for admission a student must have an earned B.A., B.F.A., or B.S. degree. Most programs require a minimum overall GPA of 2.80 and a minimum 3.00 GPA in the major; students should contact individual program areas for specific GPA requirements. Enrollment is limited and preference is given to students who surpass the minimum standards and who have strong teaching-related experience.

Applicants for the second languages and cultures program must complete the Modern Languages Association (MLA) language proficiency examination. Non-native speakers may be required to complete an oral proficiency interview as part of the admission process.

Application deadlines for admission to initial licensure/M.Ed. programs in the College of Education are:

Winter quarter:	October 1
Agricultural education	
Business/marketing education	
Early childhood education	
Family education	
Industrial education	
Spring quarter:	February 1
Agricultural education	
Business/marketing education	
Family education	
Industrial education	
Summer session I:	February 1
Art education	
Elementary education	
English education	
Mathematics education	
Physical education	
Science education	
Second languages and cultures education	
Social studies education	
Summer session II:	April 1
Agricultural education	
Business/marketing education	
Early childhood education (includes fall admission)	
Family education	
Industrial Education	
Fall quarter:	July 1
Agricultural education	
Business/marketing education	
Family education	
Industrial education	

All students must submit the M.Ed. application and official transcripts of the baccalaureate degree and any subsequent

coursework. Applications are available at the Education Students Affairs Office (ESAO), 110 Wulling Hall, 86 Pleasant Street S.E., Minneapolis, MN 55455, (612/625-6501) or at the Office of Admissions, 240 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455. Students are strongly encouraged to attend an introductory information group meeting.

For specific information regarding admission criteria and entrance examinations, contact the admissions unit of ESAO, 110 Wulling Hall, 86 Pleasant Street S.E. (612/625-6501).

Requirements for Completing the Initial Licensure/Master of Education Program

Students who complete initial licensure requirements receive, upon application, the recommendation for an appropriate Minnesota teaching license from the College of Education, as well as credits toward the M.Ed. degree.

Licensure requirements and M.Ed. requirements vary by program. All students are expected to maintain a minimum overall GPA of 2.80. Students are also expected to maintain continuous registration until licensure requirements are completed. All work submitted for the M.Ed. must be completed within seven years before graduation. See the Advanced Study section of this bulletin for specific M.Ed. 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. No more than 33 percent of the credits for the M.Ed. degree may be taken S-N.

Professional Requirements—Professional education courses are reserved for students admitted to approved licensure programs. Requirements for each program 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. These requirements are fulfilled by taking the specified foundation courses outlined in the curricular section of this bulletin.

Scholastic Policies and Procedures

Teaching Licensure—Students should apply for teaching licensure when they register for the final quarter of their program. They should obtain an application from ESAO, attach a check or money order for the fee (payable to the Commissioner of Education, state of Minnesota), and submit the application and check or money order to Student Relations, 150 Williamson Hall. All students must also submit fees to cover the cost of an official University of Minnesota transcript that will be mailed with the application when licensure requirements are completed.

Note: Students completing their undergraduate degrees and/or prerequisite coursework at another institution must also submit copies of those transcripts with the license application. The Minnesota Department of Education will not process the application without all transcripts. Failure to submit the transcripts will delay receiving the license.

Teaching licenses are awarded by the Minnesota State Board of Education, not by the University. Recommendation for licensure will be based on: 1) successful completion of coursework, 2) favorable faculty judgment regarding teaching competence (including successful clinical experience), and 3) meeting minimum standards for the state-required examinations. After admission to an initial licensure/M.Ed. program and completion of the requirements for licensure of the approved program, the College of Education recommends students for licensure in their field and at their level of specialization. All licensure programs described in this bulletin are approved by the

Initial Licensure/M.Ed. Programs

State Board of Teaching and are accredited by the National Council for the Accreditation of Teacher Education.

All individuals seeking initial licensure will be required to pass the PRAXIS I—Pre-Professional Skills Test (PPST) before recommendation for teacher licensure by the College of Education. The PPST assesses basic skills in reading, writing, and mathematics. For more information, contact ESAO (612/625-6501).

Students completing a vocational licensure program should obtain an application and instructions from the Vocational Licensure Department of the State Department of Education (612/296-2046) and submit according to the instructions.

Clinical Experience—Students in the licensure programs participate in clinical experiences throughout their programs. Students work with experienced teachers in local districts to gain experience in actual school settings. Information on these experiences is available from the specific program areas. Approval for the experiences and placement must be obtained from the program areas.

Degrees Offered—Students admitted to a master's program leading to initial licensure are admitted as master of education students. While completing the requirements for licensure, students also earn credits toward the M.Ed. degree (see curriculum outline). Students are expected to follow the requirements for the M.Ed. degree as outlined in the Advanced Study section of the bulletin.

Registration Procedures—Dates for registration in the college and the specific procedures to be followed are announced each quarter in the *Class Schedule* and the Official Daily Bulletin in *The Minnesota Daily*. Students registering in the College of Education should obtain their registration materials and specific instructions for each program area in ESAO, 110 Wulling Hall. Students registering in any specific quarter will receive a Registration Status Notice for the

subsequent quarter. This notice specifies the time and date of registration for each student.

Change of registration—Students who find it necessary to make program changes should obtain a Course Request form at the ESAO registration desk. All changes in registration must be done in person. Students may add or change courses according to the uniform cancel/add requirements published in the *Class Schedule* each quarter.

Note: Any changes in registration may result in different fees. Consult the *Class Schedule* for information on refunds.

Unsatisfactory progress—Students must maintain a 2.80 GPA throughout their initial licensure/M.Ed. program. Overall academic performance and professional skills are evaluated by the faculty from the program area and the Student Progress Subcouncil.

Readmission—Because most initial licensure/M.Ed. programs admit a cohort of students, it is expected that the program be completed in 12 to 15 months. Should circumstances require a student to withdraw, a new application must be submitted for readmission consideration.

Curricula

Curriculum and Instruction

Barbara M. Taylor, Chair, 145 Peik Hall

Early Childhood Education and Pre-K Licensure

The early childhood education M.Ed. in which pre-K licensure is granted is a joint program of the Department of Curriculum and Instruction and the Institute of Child Development. Of the 53 credits in the program, 47 are taken for licensure and 6 are taken to complete the M.Ed.

Foundation Courses (18)

CI 5250—Current Trends in Early Childhood Education (3)

CPsy 5334—Children, Youth, and Society (4)

CPsy 5343—Cognitive Development (4)

EPsy 5139—Interpersonal and Personality Effects on Learning (4)

EPsy 5849—Assessment of the Preschool Child (3)

Public Health Requirement

PubH 5023*—Basic Concepts in Personal and Community Health (5)

* *Does not count toward M.Ed.*

Major Courses, Pre-K Licensure (18)

CI 5252—Contemporary Programs for Young Children (3)

CI 5253—Cognitive and Creative Learning in Early Childhood Education (3)

CPsy 5302—Infancy (4)

or EPsy 5625—Education of Infants and Handicapped Infants and Preschool Children (4)

CPsy 5330—Directed Experiences with Children (4)

CPsy 5336—Developmental and Interpersonal Relations (4)

Major Courses, Non-Licensure (6)

CI 5187—Practicum: Improvement of Teaching in Elementary or Prekindergarten Schools (3)

CI 5251—Early Childhood Education: Materials and Resources (3)

Student Teaching

CI 5281—Student Teaching in the Nursery School (3-6)

The M.Ed. Degree Program with a Major in Teaching (for initial licensure)

The Department of Curriculum and Instruction offers an M.Ed. with a major in teaching with 54 to 60 M.Ed. credits (62 in elementary education). Of these credits, 45 to 50 (54 in elementary education) are taken before licensure and the remaining 6 to 12 credits are taken after licensure.

In addition, five credits of public health are required for licensure as well as seven credits of methods at the 3xxx level in elementary education. These credits do not count toward the M.Ed. Admission to the program requires a bachelor's degree (B.A., B.F.A., or B.S.) in a major field related to the area in which the student wishes to teach. Students select a program emphasis from among the following: art education, elementary education, English education, mathematics education, science education, second languages and cultures education, and social studies education. Licensure credits fall into four categories: foundation courses (18); public health requirement (5); methods, practica, and seminars (15 to 20, 33 in elementary education); and student teaching (12).

Foundation Courses (18)

CI 5150—Secondary School Teaching (3)

or CI5110—Introduction to Elementary School Teaching (3)

EdPA 5090—School and Society (3)

EPsy 5119—Learning and Cognitive Foundations of Education (4)

EPsy 5139—Interpersonal and Personality Effects on Learning (4)

EPsy 5229—Classroom Assessment Methods (2)

Kin 5530—Biological and Physical Foundations of Education (2)

Public Health Requirement (5)

PubH 5023*—Basic Concepts in Personal and Community Health (5)

* *Does not count toward M.Ed.*

Methods, Practica, and Seminars

These 15 to 20 credits (33 in elementary education, 7 of which are at the 3xxx level and do not count toward the M.Ed.) vary depending on whether students specialize in art education, early childhood education, elementary education, English education, mathematics education, science education, second languages and cultures education, or social studies education.

Student Teaching (6-12)**Additional Courses to Complete M.Ed.**

Art Education—Two quarters of practicum and 10 weeks of student teaching build on principles and methods learned in University courses. After successfully completing initial licensure requirements, students are recommended for state licensure to teach visual arts to students in grades K-12.

Initial licensure/M.Ed. applicants are admitted to the art education emphasis area on the basis of:

- A fully developed knowledge base in visual art to include: 45 credits in studio art, art history, and art criticism; coursework in drawing, painting, or sculpture; proficiency in a wide range of media and material skills, with experience in six or more studio arts; and a broad knowledge of art history and criticism, including Western and non-Western traditions
- Arts-related bachelor's degree with a 2.80 overall GPA and a 3.00 in major coursework
- A pattern of work or volunteer experience with elementary or secondary students, including those of diverse cultures and special populations, preferably in a school setting
- Two letters of recommendation
- A writing sample addressing philosophy of art education
- A portfolio may be requested, depending on the recency of studio coursework.

Initial Licensure/M.Ed. Programs

Students are accepted into the program as a cohort once each year (see application deadlines in the general initial licensure/M.Ed. introduction); admitted students begin classes in June and continue through August of the following year.

Foundation Courses

- CI 5150—Secondary School Teaching (3)
- EdPA 5090—School and Society (3)
- EPsy 5119—Learning and Cognitive Foundations of Education (4)
- EPsy 5139—Interpersonal and Personality Effects on Learning (4)
- EPsy 5229—Classroom Assessment Methods (2)
- Kin 5330—Biological and Physical Foundations of Education (2)
- PubH 5023*—Basic Concepts in Personal and Community Health (5)

* Does not count toward M.Ed.

Major Courses

- CI 5008—Theory and Practice of Teaching Art in Elementary Schools (2)
- CI 5049—Art Media Techniques: Computers and Art Education (3)
- CI 5065—Improving Art Programs in the Schools (4)
- CI 5069—Curriculum Innovations in Art Education (4)
- CI 5078—Application of Aesthetic Theory in Education (3)
- CI 5080—Internship: Art Education(2)
- CI 5085—Practicum: Art Education(2)
- CI 5086—Student Teaching in Art Education (12)
- CI 5185—Orientation in the Secondary Schools (0-2)

Additional Courses to Complete M.Ed.

Courses taken after licensure to complete the M.Ed. include CI 5090—Professional Problems in Art Education (3) and 6 credits selected in consultation with an adviser.

Elementary Education—Twenty weeks of practicum and 10 weeks of student teaching build on principles and methods learned in University courses. After successfully completing initial licensure requirements, students are recommended for state licensure to teach students in grades 1-6.

Initial licensure/M.Ed. applicants are admitted to the elementary education emphasis area on the basis of:

- Completion of prerequisites and liberal arts requirements before beginning the program.
- 13 credits in language, logic, mathematics, and the study of argument, including English 3851, Math 1005 or 1006, an additional math course, and CI 5360.
- 12 credits in science, including courses in

the physical and biological sciences

- 16 credits in social sciences, including psychology and two of the following areas: economics, sociology, history, political science, or anthropology
- 12 credits in literary and artistic expression, including Music 1001
- Bachelor's degree with a 2.80 overall GPA
- A pattern of work or volunteer experience with elementary-age students, including those of diverse cultures and special populations, preferably in a school setting
- Evidence of current American Red Cross Standard First Aid and Personal Safety Training
- Two letters of recommendation
- A writing sample addressing philosophy of education
- Space availability.

Summer Session I

All prerequisite courses must be completed. At least one of the following foundation courses should be taken.

- EPsy 5139—Interpersonal and Personality Effects on Learning (4)
- Kin 5530—Biological and Physical Foundations of Education (2)
- PubH 5023*—Basic Concepts in Personal and Community Health (5)

Summer Session II

- CI 5110—Introduction to Elementary School Teaching (3)
- EPsy 5119—Learning and Cognitive Foundations of Education (4)

Fall Quarter

- CI 5008—Theory and Practice of Teaching Art in the Elementary School (4)
or MuEd 3011—Teaching Music in the Elementary School (4)
- CI 5183—Practicum: Applying Instructional Methods (2)
- CI 5400—Survey of Children's Literature (3)
- CI 5410—Teaching Reading in the Elementary School (3)
- CI 5425—Teaching Language Arts in the Elementary School (3)

Winter Quarter

- CI 5008—Theory and Practice of Teaching Art in the Elementary School (4)
or MuEd 3011—Teaching Music in the Elementary School (4)
- CI 5183—Practicum: Applying Instructional Methods (2)
- CI 5500—Teaching Science in the Elementary School (3)
- CI 5506—Teaching Health in the Elementary School (1)
- CI 5700—Teaching Social Studies in the Elementary School (3)
- CI 5821—Teaching Mathematics in the Elementary School (3)

Spring Quarter

CI 5180—Clinical Experience in Elementary School

Teaching (12)

EPsy 5229—Classroom Assessment Methods (2)

Summer Sessions

EdPA 5090—School and Society (3)

Kin 3327*—Teaching Physical Education in the
Elementary School (3)Remaining foundation courses (see summer session I
above)* *Does not count toward M.Ed.***Additional Courses to Complete M.Ed.**CI 5187—Practicum: Improvement of Teaching in
Elementary or Prekindergarten Schools (3)

3 credits selected with adviser

English Education—Ten weeks of practicum (winter quarter) and 10 weeks of student teaching (spring quarter) build on principles and methods learned in University courses. After successfully completing initial licensure requirements, students are recommended for state licensure to teach language arts in the secondary schools.

Initial licensure/M.Ed. applicants are admitted to the English education emphasis on the basis of:

- Fully-developed knowledge base in English
- 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, EngW 1101, 1102, 1103, 3102, 3103, 5101, 5102, 5105, 5106, 5201, 5202 (5xxx courses require permission from Creative Writing Program) or Comp 1027 or 3027 and two of the other courses listed above
- 3 to 4 credits in mass communications: CI 5472, Jour 3006, 3008, 3754, 5615, 5721
- Electives—8 credits in 3xxx and 5xxx courses chosen from English and humanities, to include work in continental and non-Western authors

- Bachelor's degree with a 2.80 overall GPA and a 3.00 in major coursework
- A pattern of work or volunteer experience with secondary-age students, including those of diverse cultures and special populations, preferably in a school setting
- Two letters of recommendation
- A writing sample addressing philosophy of education

Students are accepted into the program as a cohort once each year (see application deadlines in the general initial licensure/M.Ed. introduction).

Admitted students begin classes in June and continue through August of the following year. During the summers, students complete prerequisite major coursework in British and American literature, composition, speech, and linguistics. In addition to completing prerequisites, students take education foundation courses that include studies in cognitive theory; historical, philosophical, and social context of teaching; and physical and biological development.

Foundation Courses

EdPA 5090—School and Society (3)

EPsy 5119—Learning and Cognitive Foundations of
Education (4)EPsy 5139—Interpersonal and Personality Effects on
Learning (4)

EPsy 5229—Classroom Assessment Methods (2)

Kin 5530—Biological and Physical Foundations of
Education (2)PubH 5023*—Basic Concepts in Personal and
Community Health (5)**Fall Quarter**

CI 5150—Secondary School Teaching (3)

CI 5450—Teaching Reading in the Content Areas (5)

CI 5460—Teaching Writing in Secondary Schools and
Colleges (5)**Winter Quarter**

CI 5440—Teaching Literature in Secondary Schools (5)

CI 5475—Current Developments in English Education (3)

Spring Quarter

CI 5485—Directed Experiences in Teaching English (12)

* *Does not count toward M.Ed.***Additional Courses to Complete M.Ed.**

To complete the M.Ed. with an emphasis in English education, students must complete 12 credits including CI 5470 and CI 5480. The remaining six credits are taken from CI 5441, CI 5451, CI 5461, or CI 5472.

Initial Licensure/M.Ed. Programs

Mathematics Education—Extensive practicum experience and 10 weeks of student teaching build on principles and methods learned in University courses. After successfully completing initial licensure requirements, students are recommended for state licensure to teach mathematics in the secondary school.

Initial licensure/M.Ed. applicants are admitted to the mathematics education emphasis area on the basis of their bachelor's degree in mathematics. Juniors and seniors in the College of Liberal Arts or the Institute of Technology at the University of Minnesota are also eligible for admission to the mathematics education emphasis area. Please consult ESAO for further details. Students complete the program as a cohort and begin the day after Labor Day (pre-fall) before University courses officially start in late September. Students are encouraged to take any foundation courses during the summer before.

Pre-fall Quarter

MthE 5000—Survey of K-12 Mathematics Curricula (1)
MthE 5600—Introduction to Mathematics Education (1)

Fall Quarter

CI 5150—Secondary School Teaching (3)
EPsy 5119—Learning and Cognitive Foundations of Education (4)
MthE 5010—Teaching Mathematics: Arithmetic Structures (3)
MthE 5610—Clinical Experiences in Teaching Arithmetic (2)

Winter Quarter

EPsy 5139—Interpersonal and Personality Effects on Learning (4)
Kin 5530—Biological and Physical Foundations of Education (2)
MthE 5020—Teaching Mathematics: Algebraic Structures (3)
MthE 5620—Clinical Experiences in Teaching Algebra (2)
PubH 5023*—Basic Concepts in Personal and Community Health (5)

Spring Quarter

MthE 5650—Full-Day Student Teaching in Mathematics (12)

Summer Sessions

EdPA 5090—School and Society (3)
EPsy 5229—Classroom Assessment Methods (2)
MthE 5030—Teaching Mathematics: Geometric Structures (3)

Additional Courses to Complete M.Ed.

MthE 5312—Teaching and Supervising 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)
MthE 5980—Directed Studies in Mathematics Education (3)

* Does not count toward M.Ed.

Science Education—Extensive practicum experience and 10 weeks of student teaching build upon the principles and methods learned in University classes. After successfully completing initial licensure requirements, students are recommended for state licensure to teach life science, earth science, or physical science to students in grades 7-12 (middle school/junior high [grades 5-9] science certification may be added to any of those three areas).

Initial licensure/M.Ed. applicants are admitted to the science education emphasis area on the basis of:

- A fully developed knowledge base in the life, earth, or physical sciences**
- Bachelor's degree with a 2.50 GPA overall and in major coursework
- A writing sample addressing philosophy of education
- Two letters of recommendation
- A pattern of work or volunteer experience with secondary students, including those of diverse cultures and special populations, preferably in a school setting

** The complete prerequisite course list is available from ESAO Enrollment Services. State guidelines for content area courses are under revision.

Students begin the program as a cohort (see application deadlines in the general initial licensure/M.Ed. introduction).

Foundation Courses

EdPA 5090—School and Society (3)
EPsy 5119—Learning and Cognitive Foundations of Education (4)
EPsy 5139—Interpersonal and Personality Effects on Learning (4)
EPsy 5229—Classroom Assessment Methods (2)
Kin 5530—Biological and Physical Foundations of Education (2)
PubH 5023*—Basic Concepts in Personal and Community Health (5)

* Does not count toward M.Ed.

Summer Sessions

During the summer sessions before fall enrollment, students complete foundation coursework and/or any remaining science prerequisites. Before taking CI courses, students must have completed at least 80 percent of their major science coursework; the remainder is completed during the program.

Fall Quarter

CI 5150—Secondary School Teaching (3)
 CI 5530—Science Education for the Middle School (3)
 CI 5580—Applying Science to the Middle School (2)

Winter Quarter

CI 5531—Teaching Secondary School Science (4)
 CI 5581—Applying Science Methods in High Schools (4)

Spring Quarter

CI 5572—Seminar: Reflecting on Clinical Experience in Science Teaching (3)
 CI 5582—Clinical Experience in Science Teaching (12)

Summer Session

During the final quarter of enrollment, students complete coursework in foundation courses and CI 5532—Current Developments in Secondary School Science Teaching (3)

Additional Courses to Complete M.Ed.

Students wishing to obtain the M.Ed. complete the following additional courses:

CI 5533—Studies in Science Education (3)
 CI 5534—Foundations of Science Education (3)
 CI 5583—School-Based Projects in Science Education (3)

Second Languages and Cultures

Education—This program is for students seeking licensure to teach second languages in grades 1-12 or 7-12 and/or English as a second language (ESL) for grades K-12. Licensure options for second languages include Chinese, French, German, Hebrew, Japanese, Russian, and Spanish. Student teaching is integrated throughout the academic year with principles and methods learned in University courses. After successfully completing initial licensure requirements, students are recommended for state licensure in the chosen language(s).

Initial licensure/M.Ed. applicants are admitted to the second languages and cultures emphasis area on the basis of:

- High level proficiency in a second language as measured by the Modern Language Association examination and an oral interview
- Exposure to and use of a second language in communities of native speakers
- Bachelor's degree with a 2.80 overall GPA and a 3.00 in major coursework
- Two letters of recommendation

- A writing sample addressing philosophy of education
- A pattern of work or volunteer experience with secondary students, including those of diverse cultures and special populations, preferably in a U.S. school setting
- Superior proficiency in oral and written English for non-native English speakers.

French, German, and Spanish majors take the Modern Language Association (MLA) examination, a three-hour test analyzing reading, writing, and listening abilities. Passing students proceed to a one-on-one oral interview. Chinese, Hebrew, Japanese, and Russian majors will have their language proficiency individually assessed. Non-native English speakers will have an oral interview and take a writing test in English.

English as a Second Language (ESL) majors can meet the state second language requirement for licensure with two years of college-level foreign language, four years of high-school foreign language, or equivalent language experience through work or study abroad.

Students are accepted into the program as a cohort once each year (see application deadlines in the general initial licensure/M.Ed. introduction). Admitted students begin classes in June and continue through August of the following year. During both summers, students take education foundation courses and, for those seeking ESL licensure, linguistic courses. During the academic year, students enroll for the same second languages and cultures education courses each quarter.

Foundation Courses

EdPA 5090—School and Society (3)
 EPsy 5119—Learning and Cognitive Foundations of Education (4)
 EPsy 5139—Interpersonal and Personality Effects on Learning (4)
 EPsy 5229—Classroom Assessment Methods (2)
 Kin 5530—Biological and Physical Foundations of Education (2)
 PubH 5023*—Basic Concepts in Personal and Community Health (5)

* Does not count toward M.Ed.

Initial Licensure/M.Ed. Programs

Fall, Winter, and Spring Quarters

- CI 5150—Secondary School Teaching (3) (fall)
CI 5631—Second Language Curriculum (3 each quarter for total of 9)
CI 5632—Second Language Instruction (3 each quarter for total of 9)
CI 5684—Clinical Experiences in Second Languages (4 each quarter for total of 12)

Students who wish to teach ESL must complete additional studies that include:

- Ling 5001—Introduction to Linguistics
Ling 5731—The Structure of English
Ling 5732—The Structure of English
Ling 5801—Introduction to Language Learning

These courses are usually completed before entrance or during the first summer.

Those students seeking a foreign language license in grades 1-6 also complete CI 5619—Teaching Second Languages and Cultures in the Elementary Schools, and CI 5680—a practicum.

Additional Courses to Complete the M.Ed.

- CI 5633—Second Language Research (6)

During the first year of teaching, students are responsible for an extensive video critique project and written analysis of their teaching and must enroll in CI 5633. Successful completion of these requirements in consultation with second languages and cultures faculty meets final requirements for the M.Ed.

Social Studies Education—Twenty weeks of practicum and 10 weeks of student teaching build on principles and methods learned in University courses. After successfully completing initial licensure requirements, students are recommended for state licensure to teach social studies in grades 7-12.

Initial licensure/M.Ed. applicants are admitted to the social studies education emphasis area on the basis of:

- A fully developed knowledge base in the social sciences: an emphasis is required in one major area, plus supporting coursework from all areas (see list of prerequisites at the end of this section)
- Bachelor's degree with a 2.80 overall GPA and a 3.00 in social sciences coursework
- Two letters of recommendation
- A pattern of work or volunteer experience with students, including those of diverse cultures and special populations, preferably in a school setting
- Completion of all prerequisite coursework
- A writing sample addressing philosophy of education.

Students are accepted into the program as a cohort once each year (see application deadlines in the general initial licensure/M.Ed. introduction); admitted students begin classes in June and continue through August of the following year.

Foundation Courses

- EdPA 5090—School and Society (3)
EPsy 5119—Learning and Cognitive Foundations of Education (4)
EPsy 5139—Interpersonal and Personality Effects on Learning (4)
EPsy 5229—Classroom Assessment Methods (2)
Kin 5530—Biological and Physical Foundations of Education (2)
PubH 5023*—Basic Concepts in Personal and Community Health (5)

* Does not count toward M.Ed.

Fall Quarter

- CI 5150—Secondary School Teaching (3)
CI 5185—Orientation in the Secondary Schools (2)
CI 5740—Introduction to Social Studies Education (4)

Winter Quarter

- CI 5741—Advanced Methods of Teaching Social Studies (4)
CI 5742—Reflective Seminar: Postbaccalaureate (3)
CI 5780—Practicum: Secondary Social Studies Education (4)

Spring Quarter

- CI 5742—Reflective Seminar: Postbaccalaureate (3)
CI 5782—Student Teaching in Secondary Social Studies (12)

Summer Session

- SeEd 5153—New Perspectives—Preparing for the Profession (3)

Additional Courses to Complete M.Ed.

- CI 5764—Social Studies Inquiry Project (3)
6 additional credits selected with adviser from CI 5137, CI 5153, CI 5162, CI 5170, CI 5351, CI 5360, CI 5415, CI 5451, CI 5460, CI 5472, CI 5645, CI 5652, CI 5746, CI 5747, CI 5763, EPsy 5151

Anthropology Emphasis

Area Requirement—A course in anthropology or in any of the other social sciences in one of the following areas: Latin America, 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)

One course in each of the following areas as designated in anthropology listing in the *CLA Bulletin*: cross-cultural studies; human institutions; past, present, and future contemporary, complex societies

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, psychology, and sociology
 One additional 3xxx or 5xxx course
 One additional course to meet major requirement of 60 credits

Economics Emphasis

Area Requirement—A course in economics or in any of the other social sciences in one of the following areas: Latin America, 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 the *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, psychology, and sociology
- 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

Area Requirement—A course in geography or in any of the other social sciences in one of the following areas: Latin America, 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, psychology, and sociology

History Emphasis

Area Requirement—A course in history or in any of the other social sciences in one of the following areas: Latin America, Asia, or Africa. The course may count toward credit requirements listed below.

History—minimum 35 credits

- Hist 1021, 1022, 1023—Western Civilization (4 each)
- or Hist 3421, 3422, and a Third World development course (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, psychology, and sociology

Political Science Emphasis

Area Requirement—A course in political science or in any of the other social sciences in one of the following areas: Latin America, 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 the *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, psychology, and sociology
- Additional social science course to meet major requirement of 60 credits

Psychology Emphasis

Area Requirement—A course in one of the social sciences in one of the following areas: Latin America, Asia, or Africa. The course may count toward credit requirements listed below.

Psychology—minimum 34 credits

- CPsy 5303—Adolescent Psychology (4)
- 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)

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

Area Requirement—A course in sociology or in any of the other social sciences in one of the following areas: Latin America, 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

Initial Licensure/M.Ed. Programs

Supporting Fields—minimum 26 credits

Hist 1301, 1302—American History (4 each)

One course in each of the areas of anthropology, economics, geography, political science, and psychology

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

Kinesiology and Leisure Studies

Michael Wade, director, 110 Cooke Hall

Physical Education Licensure

Physical education licensure students enter a 12-month initial licensure/M.Ed. program integrating educational theory with classroom practice. Ten weeks of practicum and 20 weeks of student teaching build on the principles and methods learned in University classes. Working closely with experienced teachers, prospective teachers observe first hand the daily rewards and pressures of their profession. After successfully completing initial licensure requirements, students are recommended for state licensure to teach physical education to students in grades K-12.

Admission requirements for the initial licensure/M.Ed. program include an overall GPA of 2.80; a major GPA of 3.00; a completed baccalaureate degree in kinesiology, physical education, sport and exercise science, or equivalent; completion of the PPST at levels set by the state of Minnesota; and 200 hours of practical experience working with children (K-12) in sport/physical education-related settings.

Note: A complete list of prerequisite coursework for this licensure program is available in the Division of Kinesiology office, 224 Cooke Hall.

Requirements for Initial Licensure/ Master of Education Program

Major Courses

Kin 3144—Administration (2)

Kin 5127—Observation and Analysis of Teaching Physical Activity (3)

Kin 5151—Curriculum (3)

Kin 5152—Curriculum Development (3)

Kin 5521—Pedagogy I: Elementary Physical Education (6)

Kin 5522—Pedagogy II: Secondary Physical Education (6)

Kin 5530—Biological and Physical Foundations of Education (2)

Kin 5540—Technology in Sport and Physical Education (3)

Kin 5561—Clinical Experience I: Physical Education (6)

Kin 5562—Clinical Experience II: Physical Education (9)

Kin 5563—Clinical Experience III: Physical Education (9)

Kin 5981—Problems (3)

Foundation Courses

EdPA 5090—School and Society (3)

EPsy 5119—Learning and Cognitive Foundations of Education (4)

EPsy 5139—Interpersonal and Personality Effects on Learning (4)

EPsy 5229—Classroom Assessment Methods (2)

PubH 5023—Basic Concepts in Personal and Community Health (5)

Vocational and Technical Education

Charles Hopkins, chair, 210A Vocational and Technical Education Building, St. Paul

Agricultural Education

This program prepares individuals to teach agricultural production systems, horticulture, natural resources, environmental education, forestry, agribusiness, agrimechanics, agriscience, agrimarketing, or food systems at the secondary or postsecondary and adult levels. This innovative graduate-level program offers students the unique opportunity to become licensed as a teacher of agricultural education while working toward a master of education degree.

The program is for students holding a baccalaureate degree with a variety of professional and educational backgrounds. Degrees may be held in agricultural economics, plant and animal science, soil science, horticulture, natural resources, soil and water resource management, agricultural industry and marketing, animal and plant systems, science in agriculture, agribusiness management, agricultural engineering, food science, or other degrees with similar content. Students:

- may enroll any quarter and complete the licensing program over a 12- to 15-month period
- complete a clinical experience in which they apply theories and methods to the classroom situation

- are licensed to teach after completing the licensing requirements in the program and can begin their teaching career immediately, provided they have the work experience required for licensure

Students must have at least 50 credits in technical agriculture coursework in plant science, soil science, animal science, agricultural economics, and agricultural engineering. If students do not have the required coursework in agriculture, they may meet the requirement before, during, or following the teacher education sequence. They must also have at least 30 credits in the biological and physical sciences. In addition to the degree, they must meet the following criteria:

- A minimum overall GPA of 2.80
- Completion of an admission essay and personal data form
- Three letters of recommendation
- A personal interview with an Agricultural Education and Extension adviser

Licensure—to teach agriculture in Minnesota, students need:

- Verification of 2,000 hours of work experience in production agriculture and agribusiness
- Completion of the licensing requirements of the program
- Minimum scores on the PPST

Program Components—Students may begin courses whenever their schedules permit. After completion of the one-year core, they are recommended for licensure. Students then have the option of working toward completion of an M.Ed. degree by enrolling for Year Two while they are employed as teachers.

Program of Study

The following program is recommended for students who want to study at a full-time pace. The first year focuses on the completion of teacher licensure requirements within a 12-month period.

Summer Session II

PPST

VoEd 5100—Clinical Experience (2)

Fall Quarter

AgEd 5028—Teaching Methods in Agricultural Education (5)

AgEd 5042—Agricultural Mechanics(3)

AgEd 5049—Agricultural Education for Adults (3)

EPsy 5119—Learning and Cognitive Foundations of Education (4)

VoEd 5100—Clinical Experience (2)

Winter Quarter

AgEd 5061—Program Planning and Evaluation (3)

EPsy 5139—Interpersonal and Personality Effects on Learning (4)

EPsy 5229—Classroom Assessment Methods (2)

VoEd 5100—Clinical Experience (2)

VoEd 5300—Philosophy of Vocational Education (3)

VoEd 5330—Coordination Techniques in Cooperative Education (3)

Spring Quarter

AgEd 5041—Workshop: Agricultural Technology (4)

AgEd 5072—Practicum: Agricultural Business and Industry (3)

VoEd 5100—Clinical Experience (8)

Summer Session I

EdPA 5090—School and Society (3)

Kin 5530—Biological and Physical Foundations of Education (2)

PubH 5023—Basic Concepts in Personal and Community Health (5)

The second year of the recommended program focuses on completion of the M.Ed. degree concurrent with a first-year teaching experience. Initial licensure/M.Ed. students may apply for an M.Ed. by successfully completing the following courses along with an exit interview and an M.Ed. final oral examination.

AgEd 5081—Current Issues for the Beginning Agriculture Teacher (3)

AgEd 5095—Integrating Paper (3)

Six additional credits in AgEd and final written comprehensive and oral examinations

An extended program of study is recommended for those students who want to enter the initial licensure/M.Ed. program at a part-time pace to accommodate employment and/or family life. Students may start the program in any quarter.

Business and Industry Education

Business and industry education offers several initial licensure/M.Ed. programs.

Business and Marketing Education

The business and marketing education initial licensure/M.Ed. program is for individuals who hold baccalaureate degrees with a business or marketing content major and want to become licensed teachers. This graduate-level program offers two options for licensure. Option I provides preparation to teach business in positions that require standard licensure. Option II provides preparation to teach in secondary or postsecondary sales and marketing positions that require vocational licensure. Through this innovative program, students integrate educational theory with classroom practice. Classes may be pursued full- or part-time.

Admission to the program requires a bachelor's degree, earned at an accredited institution, with a business or marketing content major (e.g., accounting, business administration, office systems management, marketing, retail management, hospitality management). Applicants should have completed coursework in economics, business communications, and each of the foundation areas of business: accounting, business organization and management, marketing, business law, industrial relations or personnel, information systems, international business, and entrepreneurship. Before completing the program, business education students must demonstrate competence in advanced keyboarding, machine transcription, and microcomputer applications, including word processing, spreadsheets, databases, and business graphics. Marketing education students should demonstrate competence in marketing: selling, promotion, pricing, purchasing, marketing, information management, product/service planning, distribution, financing, and risk management before completing the program. Competence may be demonstrated by submission of transcripts verifying prior coursework or the completion of appropriate courses identified by the program adviser. Applicants with limited content deficiencies may be admitted to the program and allowed to make them up before program completion.

To be considered for admission, applicants should provide information indicating:

- Completion of a bachelor's degree with a related business or marketing major from an accredited institution
- A minimum overall GPA of 2.80

Licensure—Candidates who successfully complete the required related and major courses specified in the selected program option and who score at or above the minimum level on the PPST will be recommended for licensure. In Option I the recommendation will be to the Board of Teaching for a Minnesota *standard teaching license* in business education. In Option II the recommendation will be for a Minnesota *vocational teaching license* in marketing education. Licensing in both business and marketing education is possible by completing the courses and prerequisites of both options. Interested students should consult with an adviser. One of the state requirements for a vocational teaching license is occupational experience related to the teaching field. At the time of the license application, candidates will be asked to verify related occupational experience sufficient to meet current licensure requirements. Information about related occupational experience requirements should be obtained from a major program adviser.

M.Ed. Degree—A field-based project is required for the M.Ed. Upon completion of the field-based project requirement, candidates will be awarded the master of education degree by the College of Education.

Vocational Business and Office

Licensure—The state of Minnesota requires special licensure to teach in certain business vocational programs at the secondary and postsecondary levels. Information about these special licensure requirements should be obtained from a major program adviser.

Note: Business and marketing education courses are listed under the designator BIE (business and industry education).

Course Requirements—Students are expected to complete the following course and clinical experience requirements in Option I or Option II:

Related Courses for Options I and II (minimum of 18 credits)

- EdPA 5090—School and Society (3)
- EPsy 5119—Learning and Cognitive Functions of Education (4)
- EPsy 5139—Interpersonal and Personality Effects on Learning (4)
- EPsy 5229—Classroom Assessment Methods (2)
- Kin 5530—Biological and Physical Foundations of Education (2)
- PubH 5023—Basic Concepts in Personal and Community Health (5)

Major Courses for Options I and II (minimum 26 credits)

- BIE 5400—Introduction to Business and Marketing Education Curriculum (4)
- BIE 5512—Clinical Experience: The School Setting (4)
- BIE 5514—Clinical Experience: Teaching (12)
- BIE 5630—Course Development (3)
- VoEd 5300—Philosophy and Practice of Vocational Education (3)

Major Courses for Option I for Business Education (minimum 13 credits)

- BIE 5451—Research and Methods in Teaching Typewriting/Keyboarding (3)
- BIE 5452—Research and Methods in Teaching the Basic Business Subjects (3)
- BIE 5457—Materials and Methods for Office Education (3)
- BIE 5462—Research and Methods in Teaching Accounting and Data Processing (4)

Major Courses for Option II for Marketing Education (minimum 8 credits)

- BIE 5660—Instructional Methods (3)
- VoEd 5310—Advising Vocational Student Organizations (2)
- VoEd 5330—Coordination Techniques in Cooperative Education (3)

Field-Based Project for Options I and II (minimum 6 credits)

- BIE 5700—Field-Based Projects (1-12)

Note: Students must complete the majority of prerequisite, related, and major coursework before enrolling in the clinical experience.

Industrial Education

The initial licensure/M.Ed. program allows individuals with bachelor's degrees to prepare to become licensed teachers for grades 5-12. Applicants must have completed a baccalaureate degree from an accredited college or university and must make up any deficiencies in undergraduate work using the B.S. in industrial education

with a focus in general industrial education described in this bulletin as the standard. To be considered for admission, applicants must have a minimum overall GPA of 2.80 in all previous undergraduate college-level work. In addition, students must complete a standardized test and a questionnaire concerning education, work, and other relevant experiences. The PPST *may be taken after admission, but must be completed before enrolling* in courses.

Each person who enrolls in this initial licensure program must be admitted to an M.Ed. program. The licensure program will incorporate the credits and activities needed for licensure as a 5-12 technology education teacher plus other requirements for an M.Ed. in industrial education. However, a person will be recommended for teacher licensure upon completing all of the licensure requirements of the state of Minnesota and may complete the additional requirements for the M.Ed. later.

For courses to be applied to an M.Ed., they must be at the 5xxx level or above and be approved by an M.Ed. adviser. Credits applied to the M.Ed. must be completed *after* earning the bachelor's degree. A maximum of 12 transfer credits can be applied to the M.Ed., and a maximum of 33 percent of courses may be graded S-N. Credits applied to the M.Ed. must have been earned no more than seven years before the awarding of the M.Ed. degree. At least 15 credits must be in industrial education. A GPA of at least 2.80 is required for graduation.

Note: Industrial education courses are listed under the designator BIE (business and industry education).

Course Requirements (beyond those specified in the B.S. program)—

Foundation Courses

- BIE 5325—Foundations of Industrial Education (3)
- BIE 5365—Curriculum Development in Technology Education (4)
- EdPA 5090—School and Society (3)
- EPsy 5119—Learning and Cognitive Functions of Education (4)
- EPsy 5139—Interpersonal and Personality Effects on Learning (4)
- EPsy 5229—Classroom Assessment Methods (2)
- Kin 5530—Biological and Physical Foundations of Education (2)

Initial Licensure/M.Ed. Programs

PubH 5023—Basic Concepts in Personal and Community Health (5)

Clinical Experiences

Students must complete the foundation courses before entering the clinical experiences courses.

FE/BIE 5512—Clinical Experience: The School Setting (4)

FE/BIE 5514—Clinical Experience: Student Teaching (4, 8, or 12)

Additional Courses to Complete M.Ed.

BIE 5605—Critical Issues (3)

BIE 5700—Field-Based Projects (1-6, min 6, max 12)

VoEd 5900—Using Vocational Education Research (3) or equivalent

Family Education

(formerly Home Economics Education)

Family education offers

- a specialization in the doctoral degrees in the Department of Vocational and Technical Education (see *Graduate School Bulletin*)
- an M.A. (see *Graduate School Bulletin*)
- an M.Ed.
- an initial teacher licensure program that leads to a license to teach family studies in junior and senior high school as well as an M.Ed.
- courses and advising to qualify students for additional Minnesota educator licenses
- a family education minor that complements majors in the College of Human Ecology and the College of Liberal Arts

Initial Licensure/M.Ed. Program in Family Education

—This program prepares individuals at the master's level to teach family studies in junior and senior high school. Designed to follow the completion of a relevant bachelor's degree, this is a full-time, 12-month program. Although the licensure program itself begins each year in July, admission can occur during any quarter for students wishing to complete prerequisite coursework. Applicants should follow the stated application deadlines listed on page 38 of this bulletin. Students who complete the program will be recommended for a secondary teaching license in Minnesota, as well as the M.Ed. in family education.

Criteria for admission include

- a completed baccalaureate degree in an area related to family studies

- a minimum GPA of 2.80 in undergraduate coursework
- completion of the PPST
- completion of prerequisite coursework as specified by the family education program

Course Requirements

8-12 credits in FE core courses

20 credits of clinical experience with accompanying seminars

15-20 credits in foundations of education

Students must participate in secondary school activities in late August and early September.

Family Education Minor—This minor is available to undergraduates (see undergraduate section of this bulletin).

Minnesota Educator Licenses

Licenses for which students can qualify while studying for a degree or by taking additional courses related to family education:

- Combined Initial License and Master of Education in Family Education—leads to secondary school licensure in Minnesota.
- Family Education Endorsement—for elementary and secondary teachers who hold a license and want to teach family life education as a component of their program.
- Adult Vocational Parent Education License—for professionals who teach adults about parenting in programs funded with vocational and/or community education funds.
- Family Education/Parent Educator License—for professionals who teach adults about parenting in programs funded with community education funds.

Information about courses qualifying students for these licenses may be obtained from Family Education, 325 Vocational and Technical Education Building, St. Paul, MN 55108 (612/624-3010).

Home Economics Education

See Family Education

Industrial Education

See Business and Industry Education

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Advanced Study

Graduate programs receive a major emphasis in the College of Education. These programs continue the development of school personnel and 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

There are three types of M.Ed. programs. 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. These in-service M.Ed. degree programs do not prepare students for initial licensure. Plan III programs are initial licensure programs. Program descriptions for Plan III are found in the initial licensure/ M.Ed. section of this bulletin.

Plan I and II 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 at the 5xxx level or above distributed among coursework, 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, University of Minnesota, 240 Williamson Hall, 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 the college's Plan I and II M.Ed. programs are:

- October 1 for the following winter quarter
- February 1 for the following spring quarter
- April 1 for the following summer sessions I and II
- July 1 for the following fall quarter

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

Plan I (for licensed teachers)

Department of Curriculum and Instruction

- Art education
- Early childhood education
- Elementary education
- English education
- Instructional systems and technology
- Mathematics education
- Science education
- Second language and cultures education/ESL
- Social studies education
- Teacher leadership

Department of Educational Policy and Administration

- Teacher leadership

Department of Educational Psychology

- Special education

Department of Vocational and Technical Education

- Agricultural education
- Business and marketing education
- Family education
- Industrial education
- Vocational education

School of Kinesiology and Leisure Studies

- Developmental/adapted physical education
- Physical education

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

Department of Curriculum and Instruction

- Instructional systems and technology
- Science education

Department of Educational Policy and Administration

- Community education administration
- Youth development leadership

Department of Vocational and Technical Education

- Adult education
- Agricultural education
- Business and marketing education
- Family education
- Industrial education
- Vocational education (vocational education administration, comprehensive vocational education, extension education, human resource development, international vocational education and training, vocational special needs)
- Youth development leadership

School of Kinesiology and Leisure Studies

- Kinesiology
- Recreation, park, and leisure studies

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. A separate graduation application must be submitted before the student's final quarter. The approved program with all necessary documentation is then submitted to the Student Progress Subcouncil in ESAO, 110 Wullling Hall, 86 Pleasant Street S.E., Minneapolis, MN 55455.

No more than 12 credits may be included from an institution other than the University of Minnesota, provided they are appropriate to the program. No more than 40 percent of the degree coursework may be completed before admission 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. Independent Study courses are generally not accepted for the M.Ed. 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 completed within seven years before graduation. No more than one-third of the credits may be completed S-N. A minimum GPA of 2.80 is required for graduation. Students should apply for graduation at 150 Williamson Hall before their final quarter of coursework. Specific program information may be obtained from ESAO.

Graduate School

Certain 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, University of Minnesota, 309 Johnston Hall, 101 Pleasant Street S.E., Minneapolis, MN 55455.

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, requiring a thesis, and Plan

B, which substitutes additional coursework and special project(s) for the thesis.

A master's degree program ordinarily takes from four to six quarters in residence to complete. After completing 15 credits, and ordinarily not later than the third quarter of registration (the second year for the longer programs), students file with the Graduate School an official program for the degree (Plan A or Plan B). The student lists 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 leading to the specialist in education certificate are available in several education fields. The specialist certificate requires completion of a minimum of 90 credits. All first-year students must meet regular admission, coursework, and examination requirements for the master of arts degree, and should specify the master degree as their degree objective on the application form. The first year of the specialist program usually consists of completion of the M.A. degree. The two-year program must be completed within a period of 12 years. A decision regarding continuation beyond the master's degree in a specialist program will depend on an evaluation of performance in meeting the M.A. requirements.

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

Doctor of Education Degree—The University awards the doctor of education (Ed.D.), its highest professional degree in the fields of educational administration and vocational education, in recognition of satisfactory academic preparation and demonstrated competence for professional activity in those fields.

Standards and procedures for admission and expectations for scholastic performance are comparable to those for the Ph.D. A major part of the program must be conducted

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in full-time residence, including at least one continuous academic year at advanced stages of the program. Rules and procedures for the Ph.D. governing examinations, candidacy, time limits, appointment of committees, and the thesis for the Ph.D. apply in general to the Ed.D.

Doctor of Philosophy Degree—This degree is awarded chiefly in recognition of high attainment and ability in a special subject field as demonstrated by passing required examinations covering both a candidate's general and special subject fields and by preparing and defending a thesis that is based on original research and that makes a significant contribution to knowledge in the student's subject field.

Candidates for the doctoral degree must register in the Graduate School for at least seven full-time quarters of graduate study in approved subjects and thesis research and writing. 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 ESAO, 110 Wulling Hall. All others should obtain the adult special application form from ESAO 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.

Admission to adult special status allows registration in 1xxx, 3xxx, and 5xxx courses

in which the student has the appropriate prerequisites or class standing. Courses numbered 8000 to 8999 are not routinely available to adult specials. Exceptions to allow adult specials entry into 8xxx courses are rare; questions should be addressed to the Graduate School, 306 Johnston Hall.

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 in communication disorders 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. For more information, including public school licensure requirements in speech-language pathology, contact the Department of Communication Disorders, University of Minnesota, 115 Shevlin Hall, 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 vocational education or 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./Ed.D.
Adult Education	yes	Education (Vocational Education)	Vocational Education
Agricultural Education	yes	Agricultural Education	Education or Vocational Education
Art Education	yes	Art Education	Education (Curriculum and Instruction)
Business and Marketing Education	yes	Business and Marketing Education	Education or Vocational Education
Child Psychology	no	Child Psychology	Child Psychology
Community Education Administration	yes	See field or emphasis	See field or emphasis
Continuing and Community Education	no	Education, Adult or Educational Administration	See field or emphasis
Counseling and Student Personnel Psychology	no	Educational Psychology (Counseling and Student Personnel Psychology)	Educational Psychology (Counseling and Student Personnel Psychology)
Curriculum Studies	no	Education (Curriculum and Instruction)	Education (Curriculum and Instruction)
Early Childhood Education	yes	See Child Psychology or Elementary Education	See Child Psychology or Education* (Curriculum and Instruction)
Education	no	See field or emphasis	See field or emphasis
Educational Administration	no	Educational Policy and Administration (Educational Administration)	Ph.D.—Educational Policy and Administration Ed.D.—Educational Administration

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Educational Psychology	no	See field or emphasis	See field or emphasis
Elementary Education	yes	Elementary Education	Education* (Curriculum and Instruction)
English Education	yes	Education (Curriculum and Instruction)	Education (Curriculum and Instruction)
Family Education	yes	Family Education	Vocational Education
Foreign Languages (see Second Languages)			
Higher Education	no	Educational Policy and Administration (Higher Education)	Educational Policy and Administration (Higher Education)
Industrial Education	yes	Industrial Education	Vocational Education
Instructional Systems and Technology	yes	Education (Curriculum and Instruction)	Education (Curriculum and Instruction)
International Development	no	Educational Policy and Administration (International Development Education)	Educational Policy and Administration (International Development Education)
Kinesiology	no	Kinesiology	Kinesiology
Mathematics Education	yes	Mathematics Education	Education (Curriculum and Instruction)
Music Education	yes	Music Education	Music
Physical Education	yes	Kinesiology	Kinesiology
Developmental/Adapted Physical Education	yes	Kinesiology	Kinesiology
Psychological Foundations of Education	no	Educational Psychology (Psychological Foundations of Education)	Educational Psychology (Psychological Foundations of Education)
Reading Education	no	Education (Curriculum and Instruction)	Education (Curriculum and Instruction)
Recreation, Park, and Leisure Studies	yes	Recreation, Park, Leisure Studies	Education (Recreation, Park, and Leisure Studies)
School Psychology	no	Educational Psychology (School Psychology)	Educational Psychology (School Psychology)
Science Education	yes	Education (Curriculum and Instruction)	Education (Curriculum and Instruction)
Second Languages and Cultures Education	yes	Education (Curriculum and Instruction)	Education (Curriculum and Instruction)
Social Studies Education	yes	Education (Curriculum and Instruction)	Education (Curriculum and Instruction)
Special Education	yes	Educational Psychology (Special Education)	Educational Psychology
Teacher Education	no		Education* (Curriculum and Instruction)
Teacher Leadership	yes	not offered	not offered
Vocational Education	yes	See field or emphasis	Vocational Education
Youth Development Leadership	yes	not offered	not offered

* Admission to the Ph.D. in these areas has been suspended. For more information, contact the Curriculum and Instruction director of graduate studies.

Curriculum and Instruction

This department offers graduate-level study in all its emphasis areas. See the specific areas below for descriptions of advanced programs: the M.Ed. program for in-service teachers and other educators, the advanced career teacher program in elementary education, the middle school endorsement program, and the remedial reading and reading supervisor endorsement program.

Programs leading to the M.A. and Ph.D. in the following emphasis areas are also available: art education, curriculum studies, early childhood education, elementary education, English education, instructional systems and technology, mathematics education, science education, second languages and cultures education and social studies education. See the *Graduate School Bulletin* for details.

Elementary Education—The M.Ed. program for in-service teachers and other educators offers an emphasis in elementary education, described below. 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 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 improving instruction. Special-class teachers take substantial amounts of work in educational psychology in addition to that required in elementary education.

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

The M.Ed. Degree Program for In-Service Teachers and Other Educators

The Department of Curriculum and Instruction offers an M.Ed. for in-service teachers and other educators. Students select an emphasis area from among the following: art education, early childhood education, elementary education, English education, instructional systems and technology, mathematics education, science education, second languages and cultures education, and social studies education.

The 45 credits of coursework fall into four categories. The following provides the general outline for the M.Ed. program with a major in curriculum and instruction (see emphasis areas for specific requirements):

Core/practicum (9 credits)

CI 5130—Introduction to Curriculum Studies (3)

CI 5155—Classroom Instruction (3)

Practicum (3)

CI emphasis area (15-18 credits)

Courses outside the College of Education (9-12 credits)

Electives (9-12 credits)

Art Education—The M.Ed. emphasis in art education helps teachers improve their

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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 M.Ed. degree is at the beginning of this section of the bulletin. All programs are individually planned to meet the needs of the student.

Core/practicum (9 credits)

- CI 5090—Professional Problems in Art Education (3)
- CI 5130—Introduction to Curriculum Studies (3)
- CI 5155—Classroom Instruction (3)

CI Emphasis Area (18 credits)

- CI 5058—Issues in Art Education (3)
- CI 5078—Application of Aesthetic Theory in Education (3)

Nine credits from the following:

- CI 5045—Advanced Contemporary Crafts (4)
- CI 5049—Art Media Techniques (3-6)
- CI 5052—Introduction to Art Therapy (3)
- CI 5055—Multicultural Art Education (3)
- CI 5060—Art Programs for Exceptional Learners (4)
- CI 5065—Improving Art Programs in the Schools (4)
- CI 5069—Curriculum Innovations in Art Education (4)
- CI 5070—History of American Art Education (3)
- CI 5074—International Art Education (3)

Three credits selected from a related CI area with adviser consent.

Courses Outside the College of Education (9 credits)

Nine credits selected from studio arts, design, art history, philosophy (aesthetics) or other related areas with adviser consent.

Electives (9 credits)

Early Childhood Education—The M.Ed. emphasis in early childhood education is 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 M.Ed. degree is at the beginning of this section of the bulletin.

Course Requirements (minimum 45 credits)

Core (9 credits)

- CI 5130—Introduction to Curriculum Studies (3)
- CI 5155—Classroom Instruction (3)
- CI 5187—Practicum: Improvement of Teaching in Elementary or Prekindergarten Schools (3)

Emphasis Area (17 credits)

- CI 5250—Current Trends in Early Childhood Education (3)
- CI 5251—Early Childhood Education: Materials and Resources (3)

- CPsy 5330—Directed Experiences with Children (4)
- CPsy 5344—Children and Youth in Society (4)
- EPsy 5849—Assessment of the Preschool Child (3)

Electives (19 credits to include 9 credits outside of the College of Education)

- CI 5xxx (3)
- CPsy 5xxx (4)
- Concentration (12 credits *minimum*)
- Electives selected in consultation with adviser

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

Core (9 credits)

- CI 5130—Introduction to Curriculum Studies (3)
- CI 5155—Classroom Instruction (3)
- CI 5187—Practicum: Improvement of Teaching in Elementary or Prekindergarten Schools (3)

CI Emphasis Area (18 credits)

- CI 5401—Literature for the Elementary School (3)
- CI 5414—Beginning Reading Instruction (3)
or CI 5415—Teaching Reading in the Intermediate Grades (3)
- CI 5425—Teaching Language Arts in the Elementary School (3)
- CI 5504—Elementary School Science: Materials and Resources (3)
- CI 5700—Teaching Social Studies in the Elementary School (3)
- MthE 5101—Workshop: Elementary school Mathematics (3)

Education electives (9 credits)

Nine credits in the College of Education to be selected in consultation with adviser. Strongly recommended are courses in classroom management, educational technology, learning difficulties, and multicultural education.

Electives (9 credits)

Nine credits of any 5xxx courses outside the College of Education, to be selected in consultation with adviser. Strongly recommended are courses in anthropology, art, economics, English, geography, history, mathematics, music, political science, science, and sociology.

English Education—The M.Ed. emphasis in English education is open to licensed English teachers with a major in a language arts area. Admission requirements include two years teaching experience and a 2.50 GPA.

Core (9 credits)

- CI 5130—Introduction to Curriculum Studies (3)
- CI 5155—Classroom Instruction (3)
- CI 5480—School-Related Projects in English Education and Reading (3)

Required (15 credits)

- CI 5440—Teaching Literature in the Secondary Schools (3)
- CI 5441—Literature for Adolescents (3)
- CI 5450—Teaching Reading in Content Areas (3)
- CI 5460—Teaching Writing in Secondary Schools and Colleges (3)
- CI 5470—Classroom Research in Literacy Education (3)

Electives in English Education or Reading (6 credits)

- CI 5451—Secondary Remedial Reading Instruction (3)
- CI 5461—Diagnosing and Assessing Writing in Secondary Schools (3)
- CI 5471—Teaching Film and Television (3)
- CI 5480—School Related Projects in English Education and Reading (3)

Reading courses selected with adviser consent

Electives (6 credits)

Six credits of education courses selected with adviser consent.

Related Fields (9 credits)

Nine credits of 5xxx adviser-approved courses outside the College of Education from composition, humanities, journalism/mass communication, linguistics, rhetoric, speech, theater, and youth studies from the University or another graduate-level institution.

Instructional Systems and Technology—

An M.Ed. emphasis is available for those who design, implement, and evaluate technology-based educational experiences. This program is for educators and requires a 2.50 GPA for admission.

Core (9 credits)

- CI 5130—Introduction to Curriculum Studies (3)
- CI 5155—Classroom Instruction (3)
- CI 5190—Directed Individual Study in Curriculum and Instruction (3)

Emphasis Area (10 credits)

- CI 5335—Introduction to Instructional Systems and Technology (3)
- CI 5336—A Systematic Approach to Designing Instruction (3)
- CI 5337—Principles and Procedures in Designing Instruction (4)

Technology (8 credits)

- CI 5310—Microcomputer Uses in the Elementary Classroom (3)
- CI 5351—Computer-Based Tools for Teachers (3)
- CI 5360—Introduction to Computers and Their Uses (1)
- CI 5361—Introduction to Interactive Video Instruction (1)
- CI 5362—Introduction to Software Development (3)
- CI 5363—Computer-Based Instruction: Introduction to Design (3)
- CI 5364—Computer-Based Instruction: Design and Development (3)

- CI 5365—Computer-Based Games and Simulations (3)
- CI 5367—Interactive Video Instruction (4)

Learning and Cognition (3 credits)

- 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)

Measurement or Evaluation (3 credits)

- EPsy 5220—Educational Measurement in the Classroom (4)
- EPsy 5240—Principles and Methods of Evaluation (3)

Electives (12 credits)

At least nine of these credits must be taken outside the College of Education. The student and adviser will select other courses from areas such as the training and development sequence in adult education, computer science, educational administration, educational psychology, management, mass communication, or vocational education. Students are encouraged to pursue coursework that complements their work in instructional technology.

Mathematics Education—The M.Ed.

emphasis in mathematics education helps teachers improve their ability to operate as skilled professionals in the classroom, develop skills important in the selection of instructional materials and strategies, and function effectively in decision-making and evaluation processes within the school and community. Special features of the program include 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.

A teaching license (with a major in mathematics or elementary education with a supporting field in mathematics) and two years mathematics or elementary teaching experience are required for admission.

Core (9 credits)

- CI 5130—Introduction to Curriculum Studies (3)
- CI 5155—Classroom Instruction (3)
- MthE 5980—Directed Studies (3)

Required Secondary Level (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)

Advanced Study

Six additional credits in mathematics education
Three credits in a supporting field in secondary education

Required Elementary Level (18 credits)

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)

Six additional credits in mathematics education
Three credits in a supporting field in elementary education

Electives (6 credits)

Six additional credits selected with adviser

Related Fields (12 credits)

Twelve credits in mathematics from outside the College of Education

Science Education—Two M.Ed. emphasis options are offered in science education. Plan I is for classroom teachers and its goal is to improve instruction. Special emphasis areas are pedagogical training and the practical application of knowledge in the classroom. This option offers the teacher an opportunity to combine scholarly activity with practical classroom experience.

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

Core (9 credits)

CI 5130—Introduction to Curriculum Studies (3)

CI 5155—Classroom Instruction (3)

CI 5583—School-Based Projects in Science Education (3)

Required (15 credits)

CI 5532—Current Developments in Secondary School Science Teaching (3)

CI 5533—Studies in Science Education (3)

CI 5534—Foundations of Science Education (3)

Six additional credits in CI

Related Fields (12 credits)

Courses outside the College of Education in sciences and the history, philosophy, or sociology of science that extend the depth and breadth of the student's scientific background. Courses are selected in consultation with adviser.

Electives (9 credits)

Electives in the sciences or education selected in consultation with adviser.

Second Languages and Cultures—The M.Ed. in second languages and cultures education is offered for licensed second language teachers interested in improving

classroom instruction and curricula. The emphasis, which provides a variety of coursework as well as school-based experience, is planned cooperatively by the student, the student's adviser, and the student's department chair or school principal. Students wishing to add English as a second language (ESL) licensure to an existing license must apply to the M.Ed. in second languages and cultures program.

Core (9 credits)

CI 5130—Introduction to Curriculum Studies (3)

CI 5155—Classroom Instruction (3)

CI 5669—School and Professional-Based Experiences in Second Languages and Cultures (3-12)

Required (16 credits)

CI 5650—Second Languages and Cultures Education: Introduction and Overview (4)

CI 5656—Reading and Writing in a Second Language (4)

CI 5657—Speaking and Listening in a Second Language (4)

CI 5662—Critical Issues in Second Language Curriculum (4)

Related Fields (9 credits)

Nine credits outside the College of Education to include a minimum of one course in the student's chosen language and one or more additional courses in liberal arts.

Electives (3-11 credits)

Minimum of one additional course in education.

Additional coursework to total 45 credits.

Social Studies—The M.Ed. emphasis in social studies is for licensed social studies teachers interested in improving instruction. Admission requirements include two years teaching experience and an undergraduate GPA of 2.50.

Core (9 credits)

CI 5130—Introduction to Curriculum Studies (3)

CI 5155—Classroom Instruction (3)

CI 5764—Social Studies Inquiry Project (3)

Required (15-18 credits)

CI 5741—Advanced Methods for Teaching Social Studies (3)

CI 5760—Social Studies for the In-Service Middle/Secondary School Teacher (3)

9-12 additional credits selected from the following in consultation with adviser: CI 5137, CI 5153, CI 5162, CI 5170, CI 5351, CI 5360, CI 5415, CI 5451, CI 5460, CI 5472, CI 5645, CI 5652, CI 5746, CI 5747, CI 5763.

Related Fields (9-12 credits)

Non-College of Education credits in the social sciences, selected with adviser consent.

Electives (6-12 credits)

Additional credits (to total 45) selected with adviser consent.

Advanced Career Teacher (ACT) Program in Elementary Education

This 36-credit program is for teachers who have completed an M.A. or M.Ed. in elementary education and wish to pursue a guided program of post-master's degree 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 an M.A. or M.Ed. degree with emphasis in elementary education from an accredited institution; a GPA of 3.00 in the master's degree; and a desire to continue professional growth. For descriptions of each emphasis, contact the Director of Graduate Studies, Department of Curriculum and Instruction, University of Minnesota, 125 Peik Hall, 159 Pillsbury Drive S.E., Minneapolis, MN 55455.

Middle School Endorsement

A 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 and the other for licensed secondary teachers. Each program has specific course requirements at the 5xxx level divided between designated core 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 does not prepare individuals for initial licensure.

Middle School Endorsement for Elementary Licensed Teachers

Core

- CI 5153—Thematic Instruction for Middle Schools (2)
- CI 5172—Teaching Students with Learning Difficulties (3)
- CPsy 5303—Adolescent Psychology (4)
- EdPA 5167—The American Middle School (3)

Subject area specializations are available in English/language arts, mathematics, science, and social studies. Requirements in each area are as follows:

English/Language Arts Education (core requirements plus 12 credits in English/language arts)

Three credits from:

- CI 5450—Teaching Reading in Content Areas (3)
- CI 5451—Secondary Remedial Reading Instruction (3)

Three credits from:

- CI 5440—Teaching Literature in Secondary Schools (3)
- CI 5441—Literature for Adolescents (3)
- CI 5460—Teaching Writing in Secondary Schools and Colleges (5)

Six credits in literature, including a course in American literature and a course focusing on ethnic or minority literature

Practicum

Mathematics Education (core requirements plus 19 credits in mathematics/mathematics education)

- *Math 1201—Precalculus (5)
- *Math 5005—Diversity of Mathematics (4)
- *Math 5006—Diversity of Mathematics (4)
- *Math 5007—Diversity of Mathematics (4)
- or 2 credits from MthE 5150 or MthE 5160

MthE 5313—Teaching and Supervision of Mathematics in the Middle School (4)

Practicum

* *Students with academic concentrations in mathematics should meet with adviser to plan substitute courses.*

Science Education (core requirements plus 18 credits in science/science education)

- CI 5504—Elementary School Science: Resources and Materials (3)
- *Life Science (5)
- *Earth science (5)
- *Physical Science (5)

Practicum

* *Courses planned in consultation with middle school science adviser.*

Social Studies Education (core requirements plus 19 credits in social studies)

One course in social studies and the middle school learner (4)

- CI 5746—Teaching About the Newspaper in the Classroom (3)

or CI 5747—Global Education: Content and Process (3)

Practicum

Remaining 12 credits planned in consultation with adviser.

Middle School Endorsement for Secondary Licensed Teachers

Core

- For secondary teachers who hold licensure in English/ language arts, mathematics, science, or social studies:
CI 5153—Thematic Instruction for Middle Schools (2)
CI 5172—Teaching Students with Learning Difficulties (3)
CPSy 5303—Adolescent Psychology (4)
EdPA 5167—The American Middle School (3)

Students seeking licensure in the various fields must also complete the following:

Secondary English/Language Arts Teachers

- CI 5401—Children's Literature (3)
CI 5415—Teaching Reading in the Intermediate Grades (3)
CI 5420—Teaching Writing in the Elementary School (3)
CI 5425—Teaching Language Arts in the Elementary School (3)
CI 5451—Secondary Remedial Reading Instruction (3) Practicum

Secondary Mathematics Teachers

- CI 5411—Reading Difficulties: Assessment and Instruction (3)
or CI 5451—Secondary Remedial Reading Instruction (3)
CI 5415—Teaching Reading in the Intermediate Grades (3)
or CI 5450—Teaching Reading in the Content Areas (3)
MthE 5150 or MthE 5160—Special topics course (2)
MthE 5313—Teaching and Supervision of Mathematics in the Middle School (4)
MthE 5345—Mathematics for Gifted Children (3)
or MthE 5355—Mathematics for Slow-Learning Children (3)
Practicum

Secondary Science Teachers

- CI 5415—Teaching Reading in the Intermediate Grades (3)
CI 5451—Secondary Remedial Reading Instruction (3)
CI 5501—Workshop: Curriculum Implementation in the Elementary School (3)
or CI 5505—Integrating Science and Health Education
CI 5504—Elementary School Science Resources and Materials (3)
Practicum

Secondary Social Studies Teachers

- CI 5411—Reading Difficulties: Assessment and Instruction (3)
or CI 5451—Secondary Remedial Reading Instruction (3)
CI 5415—Teaching Reading in the Intermediate Grades (3)
or CI 5450—Teaching Reading in the Content Areas (3)
One course in social studies and the middle school learner (4)
CI 5746—Teaching About the Newspaper in the Classroom (3)
or CI 5747—Global Education: Content and Process (3)

For more information, contact the various areas that offer middle school endorsement.

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 recommended 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, supervisor, or coordinator endorsement requires a master's degree, three years of teaching including one year as a reading teacher, and the requisite coursework.

M.Ed. Degree Program for Teachers—Teacher Leadership

The M.Ed. in teacher leadership program is offered by the Department of Curriculum and Instruction in collaboration with the Department of Educational Policy and Administration.

This unique program prepares teachers for the greater leadership roles mandated by the rapidly changing teaching profession.

The College of Education teacher leadership program, administered jointly by Continuing Education and Extension and the college, offers the degree coursework at convenient, *off-campus* metropolitan sites in the Twin Cities as well as University of Minnesota, Rochester Center.

Access to trend-setting, dynamic, and experienced faculty enables students to enhance leadership skills and network with other professional educators. The program emphasizes the vital components of teacher leadership, such as group dynamics and shared decision making, school policy, innovations in teaching, future educational systems, multicultural education, and technology.

The faculty advise, guide, and mentor throughout the program, but it is the student's individual vision that provides focus for the additional elective courses and leadership project selection. The program consists of a set of core required courses (18 credits), additional recommended courses (18 credits), and the leadership project with seminars to complete the 45-credit degree.

The teacher leadership program admits a cohort of students to begin each fall quarter. Taking classes together helps create a supportive community in which to learn. Students are encouraged to begin the program with other educators from the same school or district when possible; this enables local challenges to be addressed and collaborative leadership roles to be continued upon completing the program. Most students complete the program in two to three years by taking two classes per quarter during the academic year and either taking two courses or completing the project during the first summer.

The M.Ed. in teacher leadership program courses are distributed as follows:

Contemporary Educational Issues (10 credits)
CI 5138—Classroom Communication: Multicultural and Moral Perspectives (4)

CI 5149—American Schools in the 20th Century (3)
EdPA 5141—Critical Issues in Contemporary Education (3)

Leadership (9 credits)
EdPA 5263—Leadership in Education (3)
EdPA 5267—Group Dynamics and Shared Decision Making (3)
Elective (3)

Teacher Practice (9 credits)
CI 5145—Curriculum Topics: Innovations in Instruction (3)
Elective (6)

Electives (9 credits)
Credits are applied to each area as appropriate to program objectives.

Project (9 credits)
CI/EdPA 5178—Seminar (1-3)
CI/EdPA 5188—Project (6)

Note: 21 credits total must be from CI and EdPA departments. Please discuss elective course selection with your faculty adviser.

A 2.80 GPA must be maintained in an M.Ed. program.

Educational Policy and Administration

This department offers graduate and professional work leading to the M.Ed. and M.A. degrees, specialist in education certificate, and Ed.D. and Ph.D. degrees administered within the education programs identified below. For more information, contact Director of Graduate Studies, Department of Educational Policy and Administration, University of Minnesota, 275 Peik Hall, 159 Pillsbury Drive S.E., Minneapolis, MN 55455.

Educational Administration

The graduate programs in educational administration 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.

Higher Education

The graduate program in higher education offers a concentration in educational policy and administration (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 post-secondary 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 students whose professional goals may be met at that level. Courses with a higher education focus are listed under the headings Educational Policy and Administration (EdPA) and Educational Psychology (EPsy) in the next section of this bulletin. These courses are for specialists in a variety of academic and professional disciplines as well as those whose majors have a higher education emphasis.

Social and Philosophic Studies Education Minor (SPSE)

This graduate minor serves M.A. and Ph.D. students in American studies, anthropology, education, English, history, philosophy, political science, sociology, and women's studies.

Curriculum—The SPSE minor provides a multidisciplinary foundation for studying education from the perspectives of history, philosophy, and the social sciences. Courses are selected in consultation with the SPSE graduate studies coordinator in educational policy and administration from a list of existing EdPA 5xxx and 8xxx courses and adjacent fields.

Prerequisites for Admission—Admission is contingent on prior admission to a Graduate School degree-granting program. Interested students should consult with the SPSE graduate studies coordinator in educational policy and administration.

Application Requirements—The director of graduate studies must approve the applicant's proposed course of study by signing the student's degree program form.

Minor Requirements—M.A. students must complete at least 12 graduate credits in approved courses in two areas of study. Ph.D. students must complete at least 18 graduate credits in approved courses in two areas of study and have an SPSE faculty member on their preliminary examination committees. Following is a list of approved courses and distribution requirements.

Language Requirements—No language requirement is specific to the minor.

For further information and applications—Contact Director of Graduate Studies, Department of Educational Policy and Administration, University of Minnesota, 275 Peik Hall, 159 Pillsbury Drive S.E., Minneapolis, MN 55455.

Distribution Requirements

For M.A. minor, at least two courses from Areas I and/or II

For Ph.D. minor, at least three courses from Areas I and/or II

Area I—History and Philosophy of Education

EdPA 5101—Foundations of Modern Education (3)

EdPA 5102—Education Imagery in Europe and America (3)

EdPA 5155—History of Western Educational Thought (3)

EdPA 5156—History of Ideas in American Education (3)

EdPA 5170—American Pragmatism and Education (3)

EdPA 5182—Comparative Philosophies of Education (3)

EdPA 5245—Ethics, Morality, and Values in Education (3)

EdPA 8261—Problems: History and Philosophy of Education (cr ar)

Phil 5324—Ethics and Education (2-4)

WoSt 5103—Feminist Pedagogy (4)

Area II—Social Sciences and Education

EdPA 5131—Comparative Education (3)

EdPA 5171—Anthropology and Education (4)

EdPA 5174—Ethnographic Research Methods (4)

EdPA 5175—Systems Thinking for Innovative Professionals (3)

EdPA 5176—Ethnographic Research Skills Laboratory (2)

EdPA 5190—Sociology of Education (4)

EdPA 5202—Politics of Education (3)

EdPA 5209—Education in Future Social Systems (3)

EdPA 5211—Social Designs and Educational Futures (3)

EdPA 5280—Introduction to the Economics of Education (4)

EdPA 8170—Seminar: Research Methods in Anthropology and Education (1-3, max 9)

EdPA 8268—Seminar: Social and Educational Futures (1-6, max 6)

EdPA 8340—Policy Systems in Education (3)

International Development Education

This program gives U.S. and international students the opportunity to systematically study the relationship 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 the United States 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. or Ph.D. degree in educational policy and administration.

Educational Psychology

This department offers graduate programs leading to the M.A. and Ph.D. degrees in several areas in counseling and student personnel psychology (school counseling, counseling psychology, college student

personnel work), psychological and methodological foundations of education, school psychology, 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*.

M.Ed. Degree Programs

These programs in special education emphasize improving 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 special education may be incorporated.

Counseling and Student Personnel Psychology

Graduate study leading to the master's degree, specialist certificate, or Ph.D. degree. The master's degree program offers preparation in counseling for careers in a variety of areas including school counseling, higher education, community agencies, and business and industry. Preparation includes coursework in counseling theory and psychological foundations as well as supervised practice in educational and community settings.

The doctoral program, approved by the American Psychological Association, prepares counseling 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 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.

School Psychology

Two graduate programs are offered: a five-year program leading to a Ph.D. degree and a three-year program leading to a master's degree/specialist certificate. The Ph.D. program 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, prevention and intervention strategies, diagnostic and remedial procedures, statistics and measurement, specialized research techniques, and special education. All students work in a school and clinic as part of their practicum experience; students also take a one-year internship in a school or community/hospital mental health agency. The program is approved by the American Psychological Association, the National Association of School Psychologists, and the National Council for Accreditation of Teacher Education.

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 or the College of Education. In addition, the faculty has its own admission procedure. Inquiries about application deadlines, admission and advising procedures, Minnesota licensure requirements, and training sequences should be directed to the special education program admissions office, 227 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 students be admitted *formally* to a special education program *after* earning a baccalaureate degree. In addition, all students must possess or earn the equivalent regular teaching license.

Applications to all endorsement programs are competitive. The following information is used to make admission decisions: (a) grades in pre- and postbaccalaureate courses, (b) experience and/or interest in educating persons with special needs, (c) strength of recommendations, and (d) quality of autobiographical statement submitted.

While special education programs provide instruction to educators of exceptional children, this unit also gives major emphasis to mainstreaming, interdisciplinary instruction, and other outreach activities. Teaching specialties are organized according to the specificity and seriousness of children's needs. Students in all programs receive a basic orientation to special education that prepares them for subsequent concentration in the specific licensure programs for teaching persons who are deaf/hard-of-hearing, visually disabled, physically disabled, and moderately/severely disabled; and the interrelated licensure programs for early childhood/special education, learning disabilities, emotional/behavioral

disturbances, and mild/moderate intellectual disabilities. Professional preparation opportunities are also available for special education administrators and for persons working with culturally different children and youth.

Interdisciplinary Studies in Developmental Disabilities—The interdisciplinary certificate program in developmental disabilities offers specialized training for educators, human services professionals, community members, and students in a variety of majors. By combining the certificate program with their majors or their fields of expertise, trainees enhance their abilities to serve individuals with developmental disabilities.

The program is offered through the Institute on Community Integration in the Department of Educational Psychology. The institute is nationally recognized for its research, training, and technical assistance work and its commitment to the belief that individuals with developmental disabilities should have access to the necessary services enabling them to live, work, play, attend school, and build relationships in their communities. For more information, call (612) 624-4848.

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.

Developmental/Adapted Physical Education—Licensure programs in developmental/adapted physical education for grades K-12 are offered for both the initial licensure and M.Ed. programs. Requirements are listed under Physical Education and Recreation in the Initial Licensure/M.Ed. Programs and Advanced Study sections of this bulletin.

Kinesiology and Leisure Studies

In the School of Kinesiology and Leisure Studies, programs are available leading to the M.Ed. degree in physical education and in recreation, park, and leisure studies. The Plan I program is for physical education teachers. The Plan II program is for non-licensed professional workers in kinesiology and 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 individual 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 kinesiology. The Ph.D. degree is offered with a major in kinesiology 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 improves 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. in Physical Education (minimum 45 credits)

At least 30 credits in physical education including 3 credits in Kin 5981—Problems (ar)

Kin 5980—Research Methodology (3)

or Kin 5985—Application of Research (3)

Electives—no more than 15 credits

Note: Courses taken for the Licensure in Developmental/Adapted Physical Education may be applied toward completion of the M.Ed. See information under major Kinesiology for licensure requirements.

Recreation, Park, and Leisure Studies—The M.Ed. program in recreation is for nonlicensed professional workers. Students may concentrate in one of the areas of outdoor recreation, public parks and recreation, therapeutic recreation, sport programs, and commercial recreation. 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 recreation

Electives—15 credits selected in consultation with adviser

Music Education

The M.Ed. program in this field is for teachers wishing 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 M.Ed. appears at the beginning of this section of the bulletin.

Advanced Study

Course Requirements (minimum 45 credits)

15 credits in music education
6 credits in education courses outside the major
15 credits in music
6 credits of electives
3 credits in MuEd 5970—Independent Study
(culminating project)

Graduate programs leading to the M.A. and Ph.D. degrees are offered. See the *Graduate School Bulletin* for details.

Vocational and Technical Education

The Graduate School offers M.A. programs with majors in agricultural education, business and industry education, family education, and education with emphasis in vocational education with specializations in adult education, extension education, international vocational education, training and comprehensive vocational education; Ph.D. programs with a major in education and an emphasis in vocational education; and Ed.D. programs with a major in vocational education. The Ph.D. program is for persons preparing for positions requiring research production. In contrast, the Ed.D. program prepares persons for leadership positions in which applying research is a major expectation. Specializations available within the doctoral programs include adult education, agricultural education, business and industry education, extension education, family education, international vocational education and training, human resource development, and comprehensive vocational education. See the *Graduate School Bulletin* for details.

M.Ed. programs are offered in adult education, agricultural education, business and industry education, family education, and vocational education. A concentration in human resource development is also available.

Adult Education

Students can prepare for 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.

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 for persons who are not required to hold teaching licensure as a condition of employment.

The major field consists of 30 credits (20 credits minimum in adult education):

AdEd 5104—Survey of Adult Education (3)
AdEd 5205—Field Experience in Adult Education (4-8)
AdEd 5301—Designing the Adult Education Program (3)
AdEd 5401—Adult Learning and Development Through the Life Span (3)
AdEd 5411—Strategies for Teaching Adults (3)
Ten credits of electives in adult education or other education courses

Licensure in Adult Basic and Continuing Education—A 35-credit teaching license is available for those who wish to teach adult literacy but do not have an elementary or secondary teaching license. All coursework is applicable to the M.Ed. in adult education. Students wanting the M.Ed. degree must apply separately for admission to the program.

Adult Education Coursework (minimum 15 credits)

AdEd 5104—Survey of Adult Education (3)
AdEd 5310—Designing the Adult Education Program (3)
AdEd 5401—Adult Learning and Development Through the Life Span (3)
AdEd 5411—Strategies for Teaching Adults (3)
AdEd 5901—Introduction to Community Education (3)
EdPA 5603—International Education and Development (3)

Literacy Coursework (minimum 9 credits)

AdEd 5201—Introduction to the Undereducated Adult (3)
AdEd 5202—Adult Literacy: Diagnosis and Prescription (3)
AdEd 5203—Adult Literacy: Methods and Materials (3)
AdEd 5204—Reading in Work Settings (3)

Minimum of 3 credits from:

EPsy 5115—Psychology of Adult Learners (3)
EPsy 5433—Developmental Career Counseling of Women (3)
EPsy 5434—Counseling Adults in Transition (3)
EPsy 5461—Cross-Cultural Counseling (3)

Field Experience

8 credits including:

- Observing in multicultural settings (4)
- Teaching adults (if less than 180 hours teaching experience with adults) (4)

Additional Requirements

for getting a teaching license in Minnesota

PPST

- EPsy 5135—Workshop in Human Relations (2-6) or a course approved by the State Department of Education (a list of approved courses is available from the State Department of Education)
- PubH 3003 or PubH 5003—Drug and Alcohol Education (2)

For more information, contact Rosemarie J. Park, 325L VoTech Building, 1954 Buford Avenue, St. Paul, MN 55108 (612/625-6267).

Agricultural Education

Two types of M.Ed. programs are available. Plan I is 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—Integrating Paper (3)
- 23 credits in technical agriculture and other appropriate 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—Integrating Paper (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 for vocational education.

Business and Industry Education

Business and industry education offers several M.Ed. programs in business and marketing education and industrial education.

Business and Marketing 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 in business that does not require teaching licensure, such as midmanagement and entrepreneurship.

A GPA of 2.80 is required for graduation.

Note: Business and marketing education courses are listed under the designator BIE (business and industry education).

Course Requirements—Plan I (minimum 45 credits)

- BIE 5605—Critical Issues (3)
- BIE 5630—Course Development (3)
- VoEd 5900—Using Vocational Education Research (3)
- Two business or marketing education methods courses
- 6-12 credits selected from BIE 5700—Field-Based Projects (1-12), HRD 5780—Internship: Human Resource Development (max 15), or BIE 5900—Directed Study (1-6)
- 4 credits from business administration, economics, agricultural economics, technical human resource development in vocation educational education, or technical business and industry education
- Electives selected with adviser consent

Course Requirements—Plan II (minimum 45 credits)

- BIE 5605—Critical Issues (3)
- BIE 5630—Course Development (3)
- VoEd 5900—Using Vocational Education Research (3)
- 6-12 credits selected from BIE 5700—Field-Based Projects (1-12), HRD 5780—Internship: Human Resource Development (max 15), or BIE 5900—Directed Study (1-6)
- Minimum 12 credits in BIE, HRD, VoEd courses consistent with stated career objective and selected in consultation with adviser
- Electives selected with adviser consent

For information on Graduate School programs, consult the *Graduate School Bulletin* and the director of graduate studies in this division.

Industrial Education—The M.Ed. in industrial education has four specializations serving several populations. The industrial technology education specialization is for licensed industrial education teachers who have an undergraduate degree in industrial

education, as well as unlicensed people working on a initial licensure program in industrial education. The vocational-industrial education specialization is for current or prospective technical college instructors. The industrial training and industrial supervisor specializations serve those with a bachelor's degree or experience in industrial technical content, industrial training, or supervision. For admission, students must have a GPA of 2.80 in the undergraduate major. Students are also expected to provide a one-page goal statement and resumé.

For courses to be applied to an M.Ed., they must be 5xxx or above and approved by an M.Ed. adviser. Credits applied to the M.Ed. must be completed *after* earning the bachelor's degree. A maximum of 12 transfer credits can be applied to the M.Ed. and a maximum of 33 percent of courses may be graded S-N. Credits applied to the M.Ed. must have been earned no more than seven years before the awarding of the M.Ed. degree. At least 15 credits must be in industrial education. A GPA of at least 2.80 is required for graduation.

Note: Industrial education courses are listed under the designator BIE (business and industry education).

Foundation Courses (6 credits)

BIE 5325—Foundations of Industrial Education (3)

BIE 5605—Critical Issues (3)

Specialization Options (15 credits)

- Industrial technology education (grades 5-12)
- Vocational-industrial (technical college teaching)
- Industrial training
- Industrial supervision

(A minimum of 6 credits of industrial instruction courses is required for those without undergraduate degrees in industrial education.)

Research (9 credits)

BIE 5700—Field-Based Projects (1-6, max 12)

VoEd 5900—Using Vocational Education Research (3) or equivalent

Electives (15 credits)

Courses must be 5xxx; 9 credits must be from College of Education courses.

For information on Graduate School programs, consult the *Graduate School Bulletin* and the director of graduate studies in the Department of Vocational and Technical Education, 350 Vocational and

Technical Education Building, St. Paul, MN 55108 (612/624-1221).

Family Education

Students in this M.Ed. program prepare to work with individuals and families to improve family life. This degree serves students seeking initial teacher licenses to teach family studies in junior or senior high school (see family education under vocational and technical education in the preceding Initial Licensure/M.Ed. Programs section of this bulletin). The M.Ed. degree is also completed by students who want to be professional family educators working with adults, youth, or children outside of a secondary school setting. Requirements for the family education endorsement or the parent education licensure programs may be met as part of this degree. A general description of the M.Ed. is at the beginning of this section of the bulletin.

Requirements (minimum 45 credits)

18 credits in family education

6 credits in College of Education outside of family education

15 credits in College of Human Ecology

6 credits of electives selected with adviser consent

For information about Graduate School programs (M.A. and Ph.D. degrees), consult the *Graduate School Bulletin* and the director of graduate studies in the Department of Vocational and Technical Education, 350 Vocational Educational Building, St. Paul, MN 55108 (612/624-1220).

Vocational Education

Two types of M.Ed. programs are offered. Specializations are available in vocational education administration, extension education, human resource development, international vocational education and training, vocational special needs, and comprehensive vocational education. Plan I is for licensed vocational educators who wish to pursue advanced professional study. 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.

Requirements—Plans 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

Specified courses:

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

or VoEd 5400—Education for Work (3)

VoEd 5900—Using Vocational Education Research (3)
6 credits of field-based study or internship

6-12 credits focusing on professional interests of the student

A maximum of 9 credits in field-based projects, problem courses, independent study, and internship

Electives selected with consent of adviser

For information on Graduate School programs, consult the *Graduate School Bulletin* and the department director of graduate studies.

Vocational Education Administration—includes two plans for persons in administrative roles in work, family, and community education settings. Plan I requires the following courses in addition to the core:

CI 5160—Supervision of Elementary, Secondary, and Postsecondary Instruction (3)

VoEd 5200—Evaluation of Local Vocational Education Programs (3)

VoEd 5340—Principles of Supervisory Management (3)

VoEd 5500—Introduction to Vocational Administration (3)

VoEd 5600—Planning Vocational Education (3)

Departmental courses in methods, curriculum design/development, and testing/evaluation

Plan II requires all of the above except CI 5160

Extension Education—For those employed by the Cooperative Extension Service or a similar organization. In addition to core courses, 12 credits from 3 of 4 extension education content areas: administration, evaluation, program development, or educational methods.

Human Resource Development—Students may specialize in human resource development by completing the following courses in addition to those specified for all vocational education majors:

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

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

HRD 5790—Strategic Planning in Industry and Business (4)

One instruction course

International Vocational Education and Training—Prepares educators to assume leadership of international vocational education and training programs. In addition to core courses, a minimum of 9 credits from the following:

AgEd/FE 5023—Extension Methods in Developing Countries (3)

AgEd 5055—Farming Systems Research and Extension (3)

FE 5321—International Perspectives in Family Education (3)

HRD 5781—International Field Study in Human Resource Development (4)

HRD 5793—International Human Resource Development (4)

VoEd 5101—Special Topics: Vocational Education in Developing Countries (1-6)

Vocational Special Needs—Includes two plans for those who work with special populations in public vocational and technical education school systems and for those who work with special populations in nonpublic alternative schools. Plan I requires the following courses in addition to the core:

VoEd 5800—Educating Special Needs Learners in Vocational Education (3)

VoEd 5801—Educating Vocational Students With Learning Disabilities (1)

VoEd 5806—Interagency Collaboration for At-Risk Populations (3)

18 credits of electives focused on special needs, including at least 9 credits from vocational education (excluding field-based study or internships)

For Plan II, substitution for licensure courses is possible

Comprehensive Vocational Education—Offers two plans, licensure and nonlicensure for professionals in work, family, and community settings.

Plan I (18 credits) is for vocational educators who seek licensure in public vocational and technical school systems. In addition to core courses:

VoEd 5200—Evaluation of Local Vocational Education Programs (3)

VoEd 5600—Planning Vocational Education (3)
Departmental courses in a function/content area

Plan II (24 credits) is for educators who seek administrative or teaching responsibilities in other settings. In addition to core courses:

VoEd 5200—Evaluation of Local Vocational Education Programs (3)

VoEd 5340—Principles of Supervisory Management (3)

VoEd 5500—Introduction to Vocational Education Administration (3)

VoEd 5600—Planning Vocational Education (3)

Youth Development Leadership

This M.Ed., offered jointly by vocational and technical education and educational policy and administration, is for those who work with youth in public or private organizations committed to healthy youth development. Students participate as part of a cohort that begins each fall quarter. In addition to meeting entrance requirements of the program, applicants must have a minimum of two years experience working with youth and work at least eight hours per week in a youth-serving agency during the program. Students are expected to participate in an ongoing seminar that meets twice each academic term. Required courses:

VoEd 5410—Experiential Learning: Theory and Practice (3)

VoEd 5420/YS 5100—Youth in the World (3)

VoEd 5430/EdPA 5430—Organizational Approaches to Youth Development (3)

VoEd 5440—Issues: Youth Development in Work, Family, and Community (3)

VoEd 5490/EdPA 5490—Seminar: Youth Development (1-6)

Internship

Electives to complete the 45-credit program, selected from courses across the University to further develop understanding of healthy youth development, skills in working with youth, and skills in working with youth-serving organizations.

Certificate in Human Resource

Development—A professional certificate is awarded to adult special students who complete a minimum of 20 credits, including course requirements listed under Undergraduate Focus in Human Resource Development.

Certificate in Continuous Quality

Improvement—A professional certificate offered in conjunction with the Institute of Technology and the Carlson School of Management.

Requirements:

Two of the following:

HRD 5795—Human Resource Development Approaches to Quality Improvement (4)

IEOR 5030—Quality Control and Reliability (4)

OMS 3059—Quality Management (4)

OMS 5155—Methods for Quality and Productivity Improvement (4)

OMS 8059—Quality Management (4)

Four courses from the following, with at least one course from each of at least three of the requisite areas:

Statistics

EPsy 5260—Introductory Statistical Methods (4)

EPsy 8260, 8261, 8262—Statistical Methods (3 each)

EPsy 8263—Design and Analysis of Experiments (3)

IDSc 5055—Statistical Methods for Quality and Productivity Improvement (4)

IEOR 5550, 5551—Design and Analysis of Experiments (4 each)

OMS 8651—Experimental Design (4)

Stat 5121, 5122—Theory of Statistics (5 each)

Stat 5161, 5162, 5163—Applied Statistical Methods (4 each)

Stat 5301—Design Experiments (5)

Stat 8313—Topics in Experimental Design (3)

Cognitive Psychology

CgSc 8000—Philosophy of Cognitive Science (4)

CgSc 8001—Proseminar in Cognitive Science (1 each qtr for 3 qtrs)

IDSc 5998—Special Topics: Managerial Decision Making and Policy Formulation (4)

IDSc 8503—Cognitive Science Research and Theory in the Information and Decision Sciences (4)

IDSc 8702—Behavioral Decision Theory (4)

Phil 5609—Philosophy of Science: Philosophical Issues of Perception and Cognition (4)

Psy 5014—Psychology of Human Learning and Memory (4)

Psy 5015—Advanced Learning and Cognitive Processing (4)

Psy 8201—Social Cognition (3)

Soc 5701—Analytical Social Theory (4)

Systems Theory

CE 5700—Systems Analysis (4)

IDSc 5998—Special Topics: Managerial Decision Making and Policy Formulation (4)

IEOR 5445—Topics In Management Science: System Dynamics (4)

Organizational Behavior

EPsy 8151—Organizational Development and Change (4)

IR 8004—Organization Theory and Analysis (4)

Mgmt 8012—Organizational Behavior and Management Analysis (4)

Pol 5704—Organizational Theory and Behavior (4)

HRD 5760—Organization Development in Industry and Business (4)

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

- , In prerequisite listings, comma means "and."
 - † 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 credit has been received for the course listed after this symbol.
 - ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
 - # Registration Override Permit, completed and signed by the instructor, is required for registration.
 - Δ 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)
 - PEL Physical Education Licensure (see Kinesiology and Leisure Studies)
- A prerequisite course listed by number only (e.g., prereq 5246) is in the same department as the course being described.

Child Psychology (CPsy)

1301. INTRODUCTORY CHILD PSYCHOLOGY. (4 cr, §3309, §5301; prereq 5 cr intro psych)
Introduction to the science of child behavior; review of theories and research.

3303. ADOLESCENT PSYCHOLOGY. (4 cr, §5303; prereq 5 cr intro psych)
Physical, cognitive, and social development during adolescence.

3308. RESEARCH METHODS IN CHILD PSYCHOLOGY. (4 cr; prereq 1301, Psy 1001)
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. For majors in psychology, sociology, and related disciplines; not suggested for child psychology majors.

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. (4 cr; prereq 1301 or equiv, Psy 1004)
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. INTRODUCTION TO SOCIAL DEVELOPMENT. (4 cr, §5331; prereq 1301 or equiv)
Development of social relations and personality: research, methodology, and contrasting theoretical perspectives. Survey of findings on interpersonal relationships, the concept of self, prosocial and antisocial behavior, and acquisition of social roles.

3343. INTRODUCTION TO COGNITIVE DEVELOPMENT. (4 cr; prereq 1301, 3308 or Psy 1005)
Development of cognitive processes emphasizing research, methodology, and contrasting theoretical perspectives. Introduction to research and theory in developmental psychology necessary to understand course material.

3360H. HONORS SEMINAR: CURRENT RESEARCH IN DEVELOPMENTAL PSYCHOLOGY. (2 cr; prereq 1301 or equiv)
Introduction to ongoing research programs, preparation for independent research (thesis research if honors major), discussion of career opportunities, other topics. Required for honors majors. Normally taken in the junior year.

3960. SENIOR PROJECT IN CHILD PSYCHOLOGY. (1-4 cr [max 4 cr]; prereq 1301, sr status, #)
Major review of the literature in a current topic area of child psychology.

3980. DIRECTED INSTRUCTION. (1-4 cr [max 4 cr]) Undergraduates serve as teaching assistants in courses they have successfully completed for credit.

5301. ADVANCED CHILD DEVELOPMENT. (4 cr, §1301, §3309; prereq 5 cr intro psych; primarily for nonmajors)
Theory and research in child development with emphasis on perception, language, learning, cognition, personality, and social development in children.

5302. 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.

5303. ADOLESCENT PSYCHOLOGY. (4 cr, §3303; prereq 5 cr intro psych)
See 3303.

5304. 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.

5305. MULTIDISCIPLINARY PERSPECTIVES ON AGING. (4 cr, §Ed 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. INTRODUCTION TO DEVELOPMENTAL PSYCHOPATHOLOGY. (4 cr, §3311; prereq 1301 or equiv, 3308 or Psy 1005)
Theories and research strategies for investigating origins and course of disordered behavior in children and adults, including description, etiology, development.

5313. PSYCHOLOGY OF ATYPICAL CHILDREN. (4 cr, §3313; prereq 1301 or equiv)
See 3313.

5315. INTRODUCTION TO MENTAL RETARDATION. (4 cr, §EPsy 5620; prereq 1301 or equiv)
Psychological and educational problems related to the mentally retarded.

5319. INTRODUCTION TO CHILD CLINICAL PSYCHOLOGY. (4 cr; prereq 12 cr in psych, ed psych, sociology, or child psych)
Survey of assessment and intervention procedures of child clinical psychology in clinical and community settings. Primarily for students not majoring in clinical psychology.

5322. MOTOR DEVELOPMENT. (3 cr, §Kin 5132; prereq Kin 3132 or #)
Development aspects of motor skill acquisition from birth to physical maturity.

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.

5330. DIRECTED EXPERIENCES WITH CHILDREN. (4 cr; prereq 1301, 3309 or #)
Intellectual and/or social development of children as individuals or members of peer groups. Experiences offered in case study, social behavior, cognitive stimulation of children.

5331. PROCESSES OF SOCIAL DEVELOPMENT. (4 cr, §3331; prereq 1301 or equiv)
Processes of individual change from infancy through adolescence and development of capacities for and influences of social relations; research, methodology, and the theoretical perspectives.

5332. CROSS-CULTURAL CHILD DEVELOPMENT. (4 cr; prereq 4 cr child psych)
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.

5334. CHILDREN AND YOUTH IN SOCIETY. (4 cr; prereq 4 cr child psych)
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.

5336. DEVELOPMENT AND INTERPERSONAL RELATIONS. (4 cr, §5339; prereq 1301 or equiv, 3308 or Psy 1005, 3331 or 5331)
Processes and functions of interactions with parents and peers; analysis of theory and research on developmental changes and influences.

5341. PERCEPTUAL DEVELOPMENT. (4 cr; prereq 1301, 3308 or Psy 1005 or #)
Perceptual learning and the development of sensory and perceptual processes.

5343. COGNITIVE DEVELOPMENT. (4 cr; prereq 1301, 3308, 3343 or Psy 1005 or #)
Development of cognitive processes; discussion of relevant theory, research literature, and methodology.

5345. LANGUAGE DEVELOPMENT. (4 cr; prereq 1301, 3308 or Psy 1005 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.

5353. DEVELOPMENT DURING THE SCHOOL YEARS. (4 cr; prereq 4 cr psych)

Principles of psychological development emphasizing ages 5-18. Developmental psychology theory and research relevant to individual growth and achievement; issues in applying a developmental perspective to topics in child and adolescent development (e.g., fostering learning, risk of school failure, behavioral and emotional problems, diversity).

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

8325. DEVELOPMENTAL NEUROPSYCHOBIOLOGY

8327. ETHOLOGY OF CHILD BEHAVIOR

8329. GENETICS AND DEVELOPMENT

8330. DIRECTED FIELD EXPERIENCES

8333. ADVANCED SOCIAL DEVELOPMENT I

8334. CHILD DEVELOPMENT, SOCIAL POLICY, AND LEGAL VIEWS

8341. ADVANCED PERCEPTUAL DEVELOPMENT

8343. ADVANCED COGNITIVE DEVELOPMENT I

8345. ADVANCED LANGUAGE DEVELOPMENT

8347. ADVANCED COGNITIVE DEVELOPMENT II

8360. SEMINAR: DEVELOPMENTAL PSYCHOLOGY

8605. DEVELOPMENTAL PSYCHOPATHOLOGY

8606. NEW APPROACHES TO PSYCHOPATHOLOGY IN CHILDREN AND ADOLESCENTS

8777. THESIS CREDITS: MASTER'S

8888. THESIS CREDITS: DOCTORAL

8970. INDEPENDENT STUDY

8980. RESEARCH SEMINAR

8990. RESEARCH PROBLEMS

Curriculum and Instruction (CI)

Note: Art Education (ArEd), Curriculum and Instructional Systems (CISy), Elementary Education (Elem), and Secondary Education (SeEd) courses are now listed under Curriculum and Instruction (CI) in this bulletin, the *Class Schedule*, and other printed materials.

3000. ART OF CHILDREN. (3 cr, §ArEd 3000; A-F only)

Children's artistic development from infancy through adolescence; theoretical explanations of child art; implications for general learning.

3001. SURVEY OF ART ACTIVITIES. (4 cr, §ArEd 3001; not open to art ed majors; A-F only)

Introduction to pictorial expression, design, and the function of art in the social environment.

3040. EXPERIENCES WITH PICTORIAL EXPRESSIONS. (3 cr, §ArEd 1207)

Materials, techniques, and ideas important in art expression; relationship among adult expression, child expression, and art history.

3041. EXPERIENCES WITH DESIGN AND MATERIALS. (3 cr, §ArEd 1208)

Projects in invention, arrangement, and decoration; color, lettering, posters, bulletin board displays.

3042. ART FOR YOUNG LEARNERS. (3 cr, §ArEd 3100)

Art concepts, media, and activities appropriate for children.

3045. CONTEMPORARY CRAFTS. (4 cr, §ArEd 3020; A-F only)

Materials, equipment, design criteria, and techniques for working in two or three dimensions with various media—textile, wood, metal, and ceramics.

3090. INDEPENDENT STUDY. (1-4 cr [max 4 cr], §ArEd 3309; prereq #; A-F only)

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.

3180. JUNIOR PRACTICUM: ELEMENTARY EDUCATION. (1 or 2 cr [max 6 cr], §Elem 3621; prereq elem ed major)

Supervised observation and participation in classroom and related school activities; a pre-student teacher exploratory experience.

3182. STUDENT TEACHING IN ELEMENTARY SCHOOL: FULL DAY. (12 cr, §Elem 3607; prereq 18 cr methods, Δ)

Five full days each week teaching and observing in elementary school.

3183. STUDENT TEACHING IN THE ELEMENTARY SCHOOL: HALF DAY. (6 cr, §Elem 3600; prereq 12 cr methods, Δ)

Five half-days a week of supervised teaching and observing in elementary school.

3184. PRE-FALL STUDENT TEACHING IN THE ELEMENTARY SCHOOL. (3 cr, §Elem 3610; 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.

3185. PRACTICUM: SECONDARY EDUCATION. (1-7 cr [max 7 cr], §SeEd 3152; prereq init lic/MEd student, Δ)

Pre-student teaching experience to enable students to develop teacher competencies; supervised observation and participation in classroom and related school activities.

3190. DIRECTED STUDY IN ELEMENTARY EDUCATION. (1-3 cr [max 6 cr], §Elem 3900; prereq elem major, Δ)

Analysis of specific instruction; curricular, organizational, and operational situations or problems in elementary education.

3192. DIRECTED STUDY. (1-9 cr, §SeEd 3151; prereq Δ)

Analysis of specific instructional, curricular, organizational, and operational situations or problems in secondary education.

3230. NURSERY SCHOOL-KINDERGARTEN CURRICULUM I. (3 cr, §Elem 3376)

Objectives of the kindergarten; use of literature; appropriate creative activities in the areas of art, dramatics, music; planning of learning activities.

3232 SOCIAL LEARNING IN EARLY CHILDHOOD EDUCATION. (3 cr, §Elem 3378; prereq CPsy 1301 or CPsy 5301)

Theoretical bases of social and physical development and implications and applications to curriculum planning for young children.

3280. STUDENT TEACHING IN THE KINDERGARTEN. (6 cr, §Elem 3603; prereq 6 cr elem student tchg, Δ)

Five half-days each week in supervised teaching and observation in public or private schools.

3400. CHILDREN'S LITERATURE. (3 cr, §Elem 3300)

Materials for children's reading in the elementary school program.

3410. INTRODUCTION TO TEACHING READING IN THE ELEMENTARY SCHOOL. (3 cr, §Elem 3331; prereq 5110 or Elem 3100, Elem 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.

3420. INTRODUCTION TO TEACHING LANGUAGE ARTS IN THE ELEMENTARY SCHOOL. (3 cr, §Elem 3316; prereq 5110 or Elem 3100, Elem 3101)

Development of language power in elementary school in relation to all activities of the school day.

3500. TEACHING SCIENCE IN THE ELEMENTARY SCHOOL. (3 cr, §Elem 3346; prereq 5110 or Elem 3100, Elem 3101)

Objectives, content, materials, philosophy, and methods of instruction and evaluation; practical application.

3680. STUDENT TEACHING IN SECOND LANGUAGES AND CULTURES. (3 cr, §SeEd 3631; prereq #)**3700. TEACHING SOCIAL STUDIES IN THE ELEMENTARY SCHOOL.** (3 cr, §Elem 3361; prereq 5110 or Elem 3100, Elem 3101)

Content and philosophy of the social studies program; methods of instruction and problems.

5008. THEORY AND PRACTICE OF TEACHING ART IN ELEMENTARY SCHOOLS. (2 cr, §ArEd 5308; A-F only)

Art concepts, skills, and processes appropriate for elementary school; methods of art instruction, and children's production of and responses to art.

5045. ADVANCED CONTEMPORARY CRAFTS. (4 cr, §ArEd 5020; prereq 3045 or ArEd 3020 or #; A-F only)

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.

5049. ART MEDIA TECHNIQUES. (3-6 cr [max 12 cr], §ArEd 5001; A-F only)

Lectures, demonstrations, discussions, and critique sessions on creative processes; handling specific media. Offering focuses on a single topic.

5052. INTRODUCTION TO ART THERAPY. (3 cr, §ArEd 5201; A-F only)

History and current conceptions and practices of art therapy.

5055. MULTICULTURAL ART EDUCATION. (3 cr, §ArEd 5316)

Arts of diverse peoples; alternative conceptions of artistic tradition, value, and production; significance of cultural content to curriculum and teaching.

5058. ISSUES IN ART EDUCATION. (3 cr, §ArEd 3800; A-F only)

Issues and trends, current practices, recent research.

5060. ART PROGRAMS FOR EXCEPTIONAL LEARNERS. (4 cr, §ArEd 5303; A-F only; offered when feasible)

Development and analysis of art teaching units and projects for learners of all ages.

5065. IMPROVING ART PROGRAMS IN THE SCHOOLS. (4 cr, §ArEd 5386; prereq tchg exper or #; offered when feasible)

Critical examination of present art programs in the schools.

5069. CURRICULUM INNOVATIONS IN ART EDUCATION. (4 cr, §ArEd 5302; A-F only)

Study and analysis of innovations, evaluation of materials for teaching units and projects.

Course Descriptions

5070. HISTORY OF AMERICAN ART EDUCATION.

(3 cr, §ArEd 5310; A-F only; offered all yrs)
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.

5074. INTERNATIONAL ART EDUCATION. (3 cr, §ArEd 5318; A-F only)

Traditional and contemporary practices of art education in various nations; comparisons to American public school art education and implications for change.

5078. APPLICATION OF AESTHETIC THEORY IN EDUCATION. (3 cr, §ArEd 5389; A-F only)

Contemporary theories of art; their psychological and philosophical foundations. Open to teachers, supervisors, and administrators concerned with art in general education at all levels.

5080. INTERNSHIP: ART EDUCATION. (2 cr, §ArEd 5600; prereq #)

Professional assignment for degree candidates under joint supervision of departments and cooperating agency.

5085. PRACTICUM: ART EDUCATION. (2 cr, §ArEd 5605; prereq #)

Independent project under direction; gathering data, developing proposals, experimenting with evaluating innovative practices.

5086. STUDENT TEACHING IN ART EDUCATION.

(3, 6, or 12 cr, §ArEd 3600; prereq 5150, 5110 or Elem 3101 or SeEd 3150; ¶3184; S-N only)
Observation, participation, and supervisory experiences with various types and levels of art classes.

5090. PROFESSIONAL PROBLEMS IN ART EDUCATION. (3 cr, §ArEd 5900; prereq MEd student, #)

Independent study for M.Ed. candidates integrating learning from art education, art, and education.

5100. ELEMENTARY SCHOOL CURRICULUM.

(3 cr, §Elem 5100; prereq Elem 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, §Elem 5101; prereq elem tchg exper, #)

Leadership in procedures; operational processes; major considerations in planning and organizing; interpersonal relationships, and evaluation of improvement programs.

5102. PREPARATION OF CURRICULUM MATERIALS FOR ELEMENTARY SCHOOLS.

(3 cr, §Elem 5102; prereq 5100 or 5130 or CISy 5600 or SeEd 5113)
Selecting and organizing units, courses of study, and curriculum guides and writing materials, individually and in groups.

5110. INTRODUCTION TO ELEMENTARY SCHOOL TEACHING. (3 cr, §Elem 3101, §Elem 5000; prereq ¶5183, elem ed major or CLA music ed major or □)

Introduction to the elementary school; curriculum, organization, instruction, management, and professional decision making.

5113. CLASSROOM MANAGEMENT IN THE ELEMENTARY SCHOOL. (3 cr, §Elem 5145, §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.

5130. INTRODUCTION TO CURRICULUM STUDIES. (3 cr, §CISy 5600; A-F only)

Definitions of curriculum, historical and current issues; principles and theories of curriculum; alternate models and methods of design and evaluation.

5133. CURRICULUM PLANNING AND DESIGN. (3 cr, §CISy 5605; A-F only)

Critical examination of theoretical and practical bases of interdisciplinary curriculum design; models and evaluation of interdisciplinary curricula.

5136. HISTORY OF CURRICULUM IN THE UNITED STATES. (4 cr, §CISy 5607; A-F only)

Formation of public school subjects and curriculum theory in United States from European roots and early development in 19th century to contemporary issues of reform; social, political, and economic implications of curriculum history.

5137. THE MULTICULTURAL GENDER-FAIR CURRICULUM. (4 cr, §Elem 5225)

Planning for development and implementation of a multicultural and gender-fair perspective in elementary and secondary classrooms. Individual teacher goals, professional issues, and resources and teaching strategies for successfully exploring new perspectives.

5138. CLASSROOM COMMUNICATION: MULTICULTURAL AND MORAL PERSPECTIVES. (4 cr; MEd or grad student or #)

Factors leading to effective communication in ethnically diverse classroom, preschool-adult. Communication techniques and classroom structures that have cultural and moral implications. Opportunity to expand intercultural communication skills through tutoring and in-class practice.

5145. CURRICULUM TOPICS. (1-4 cr [max 6 cr], §CISy 5100)

Special topics and current trends in curriculum; issues of subject integration, curriculum contexts, development, implementation, and evaluation.

5149. AMERICA'S SCHOOLS IN THE 20TH CENTURY. (3 cr, §CISy 5730, §EdPA 5370; prereq ed or grad student or #)

Analysis and interpretation of events and issues that have shaped America's schools in the 20th century; current proposals for education reform and their antecedents.

5150. SECONDARY SCHOOL TEACHING. (3 cr, §SeEd 5250; prereq ed or CLA music ed student or #; ¶5185 or regis in an approved area practicum)

Teaching in the secondary school; curricular, instructional, managerial, leadership, and professional functions.

5153. THEMATIC INSTRUCTION FOR MIDDLE SCHOOLS. (2 cr, §AdEd 5191, §Ed 5191, §Elem 5191, §SeEd 5291)

Logical and contextual relationships among mathematics, science, and social studies as taught in middle schools.

5155. CLASSROOM INSTRUCTION. (3 cr, §CISy 5902; prereq MEd or grad student)

Identifying goals, selecting instruction strategies, and developing assessment procedures for K-12 students. Incorporates issues related to multicultural education and reflective teaching.

5156. TECHNIQUES OF INSTRUCTION. (3 cr, §SeEd 5132)

Develop individual competencies, apply current psychological research to classroom instruction, define objectives in terms of achievable student competencies.

5160. SUPERVISION OF ELEMENTARY, SECONDARY, AND POSTSECONDARY INSTRUCTION. (3 cr, §CISy 5800; prereq 5130 or CISy 5600)

Achievement of appropriate teaching expectations focusing on problems of personnel responsible for their improvement.

5161. SUPERVISORY STRATEGIES. (3 cr, §Elem 5109; prereq #)

Overview of the responsibilities of the supervising teacher; material development and practice in basic supervisory skills and functions.

5162. PEER COACHING. (3 cr, §CISy 5801; prereq MEd or grad student; A-F only)

Teachers coaching teachers; emphasis on acquiring concepts, skills, and dispositions necessary for observing classroom instruction and providing constructive feedback.

5170. CLASSROOM MANAGEMENT IN THE SECONDARY SCHOOL. (3 cr, §SeEd 5145, §Elem 5145)

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.

5172. TEACHING STUDENTS WITH LEARNING DIFFICULTIES. (3 cr, §Elem 5107)

Diagnosis of pupil difficulty; development and prevention; tests as aids to teaching; following up a testing program, socioemotional problems associated with learning difficulties.

5180. CLINICAL EXPERIENCE IN ELEMENTARY SCHOOL TEACHING. (12 cr, §Elem 5212)

Supervised classroom teaching in an elementary school.

5183. APPLYING INSTRUCTIONAL METHODS IN THE ELEMENTARY SCHOOL. (2 cr each offering [max 4 cr], §Elem 5211)

Supervised experience in elementary school classrooms.

5185. ORIENTATION IN THE SECONDARY SCHOOLS. (0-2 cr, §SeEd 5251; §5150)

Supervised observation in classroom and related school activities.

5187. PRACTICUM: IMPROVEMENT OF TEACHING IN ELEMENTARY OR

PREKINDERGARTEN SCHOOLS. (3 cr, §Elem 5602; prereq MEd student in elem ed or early childhood ed)

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.

5190. DIRECTED INDIVIDUAL STUDY IN CURRICULUM AND INSTRUCTION. (1-6 cr, §CISy 5509; prereq #)

Produce and evaluate curricular materials, review and analyze literature concerning particular issues and problems, assess curriculum processes.

5195. DIRECTED STUDY IN ELEMENTARY AND SECONDARY EDUCATION. (Cr ar [max 6 cr], §SeEd 5351; prereq ed or grad student, #)

Individual or group work on curricular, instructional, or evaluation problems.

5250. CURRENT TRENDS IN EARLY CHILDHOOD EDUCATION. (3 cr, §Elem 5376;

prereq kindergarten or primary tchg exper or #)
Continuing needs of children in our changing culture; current practices and recent research.

5251. EARLY CHILDHOOD EDUCATION: MATERIALS AND RESOURCES. (3 cr, §Elem 5377; prereq 5250 or Elem 3376 or Elem 3377)

Experience in the selection and use of commercial and teacher-made educational materials and media common to early childhood education programs.

5252. CONTEMPORARY PROGRAMS FOR YOUNG CHILDREN. (1-3 cr [max 3 cr], §Elem 5378; prereq early childhood ed MEd student)

Child growth and development aspects of preschool children in light of need for curriculum intervention programs; current trends, program evaluation, recent research.

5253. COGNITIVE AND CREATIVE LEARNING IN EARLY CHILDHOOD EDUCATION. (3 cr, §Elem 3379; prereq CPsy 1301 or CPsy 5301)

Developmental approach to planning cognitive, language, and creative curriculum.

5281. STUDENT TEACHING IN THE NURSERY SCHOOL. (3-6 cr, §Elem 3604; prereq approval of major adviser and director of student tchg)

Three to five half-days each week in supervised teaching in the nursery school.

5310. MICROCOMPUTER USES IN ELEMENTARY CLASSROOMS. (3 cr, §CISy 5206, §Elem 5140)

Using microcomputers to enhance instruction across the curriculum.

5315. USING LOGO IN THE CLASSROOM. (3 cr, §Elem 5141, §MthE 5173; prereq 5360 or 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.

Course Descriptions

5330. INTRODUCTION TO INSTRUCTIONAL SYSTEMS. (1-3 cr, §CISy 5000; A-F only)

Introduction to major theories and areas of research relevant to instructional design.

5331. INSTRUCTIONAL SYSTEMS; TRENDS AND ISSUES. (1-3 cr [max 9 cr], §CISy 5100; A-F only)

Current trends and issues in instructional systems and educational technology.

5335. INTRODUCTION TO INSTRUCTIONAL SYSTEMS AND TECHNOLOGY. (3 cr, §CISy 5151; A-F only)

Examination of historical foundations, contemporary issues, and research base of instructional systems.

5336. A SYSTEMATIC APPROACH TO DESIGNING INSTRUCTION. (3 cr, §CISy 5201; A-F only)

Instructional materials design in accordance with systems principles, including design of a specific unit of courseware.

5337. PRINCIPLES AND PROCEDURES IN DESIGNING INSTRUCTION. (4 cr, §CISy 5209; A-F only)

Major models of instructional development; generic components; design models; review of instructional design and learning environments.

5351. COMPUTER-BASED TOOLS FOR TEACHERS. (3 cr, §CISy 5208)

Using technology for material generation, record keeping, and classroom management tasks in K-12 classrooms.

5355. INTRODUCTORY EDUCATIONAL TECHNOLOGY METHODS. (1-6 cr, §CISy 5080; no more than 3 cr may be applied to MA or PhD program)

Introduction to educational technology (hardware and software) systems. Techniques for evaluating and selecting hardware and software to meet instructional needs. Strategies and techniques for integrating educational technology to meet curricular goals and objectives.

5356. ADVANCED EDUCATION TECHNOLOGY METHODS. (1-6 cr, 3 cr applied to MA, PhD, §CISy 5090; prereq 5355 or 5360 or CISy 5003 or CISy 5080 or #; S-N only)

Current educational technology systems, selecting hardware and software, and strategies for integrating technology into curricular areas. Developing technology integration plans for classroom instruction.

5360. INTRODUCTION TO COMPUTERS AND THEIR USES. (1 cr, §CISy 5003; 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.

5361. INTRODUCTION TO MULTIMEDIA. (1 cr, §CISy 5004; A-F only)

Using multimedia technologies; hardware, software, terminology, and applications in instruction.

5362. INTRODUCTION TO INSTRUCTIONAL COMPUTER PROGRAMMING. (3 cr, §CISy 5006; prereq 5360 or CISy 5003 or #)

Designing computer-based instruction. Students need not have a mathematics or science background.

5363. COMPUTER-BASED INSTRUCTION: INTRODUCTION TO DESIGN. (3 cr, §CISy 5205; prereq 5362 or CISy 5006 or #)

Computer uses in education and training; models for designing computer-based instruction with particular emphasis on interface design.

5364. COMPUTER-BASED INSTRUCTION: DESIGN AND DEVELOPMENT. (3 cr, §CISy 5212; prereq 5362 or CISy 5205 or #)

Advanced principles and research in computer-based design and development.

5365. COMPUTER-BASED GAMES AND SIMULATIONS. (3 cr, §CISy 5216; prereq 5364 or CISy 5212 or #)

Design, implementation, and evaluation of instructional computer-based simulations.

5366. COMPUTER-BASED INSTRUCTIONAL GAMES. (3 cr, §CISy 5218; prereq 5364 or CISy 5212 or #)

Design, implementation, and evaluation of instructional computer-based games.

5367. INTERACTIVE VIDEO INSTRUCTION. (4 cr, §CISy 5207; prereq 5361, 5336 or 5337 or 5363 or CISy 5004, CISy 5201 or CISy 5205 or CISy 5209 or #)

Multimedia technologies; design and development of interactive instruction.

5400. SURVEY OF CHILDREN'S LITERATURE. (3 cr, §Elem 5210; prereq ed student or #)

Techniques of and materials for teaching with children's literature in the elementary school.

5401. LITERATURE FOR THE ELEMENTARY SCHOOL. (3 cr, §Elem 5300)

Evaluative survey of books for children; research related to children's reading interests; selection of literature.

5402. SURVEY OF SPECIAL COLLECTIONS IN CHILDREN'S LITERATURE. (3 cr, §Elem 5305; prereq 5401 or Elem 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.

5403. CREATIVE WRITING FOR AND BY CHILDREN. (3 cr [max 6 cr], §Elem 5318; prereq 3400 or 3420 or Elem 3300 or Elem 3316 or elem 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.

5410. TEACHING READING IN THE ELEMENTARY SCHOOL. (3 cr, §Elem 5331; prereq 9 cr ed)

Objectives, materials, and teaching procedures; current practices and curricula; class and individual projects.

5411. READING DIFFICULTIES: ASSESSMENT AND INSTRUCTION. (3 cr, §Elem 5334; prereq 5410 or 5450 or Elem 5331 or SeEd 5344)

Causes, prevention, and correction; remedial practices useful to the classroom teacher, school counselor, and reading specialist.

5412. DIAGNOSIS OF READING DIFFICULTIES. (3 cr, §Elem 5335; prereq 5411 or Elem 5334)

Relationship to psychological factors and clinical remedial correction.

5413. TEACHING STUDENTS WITH READING DIFFICULTIES. (3 cr, §Elem 5336; prereq 5172 or 5411 or Elem 5334 or Elem 5107)

Assessment and tutoring of individual children who have difficulty learning in school.

5414. BEGINNING READING INSTRUCTION. (3 cr, §Elem 5337; prereq 3410 or Elem 3331 or elem 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.

5415. TEACHING READING IN THE INTERMEDIATE GRADES. (3 cr, §Elem 5338; prereq 3410 or Elem 3331 or elem tchg exper or #)

For teachers and specialists interested in problems of teaching reading beyond the decoding stage; emphasis on comprehension strategies, basic study skills, reading in the content areas, and using literature in the reading program.

5416. WORKSHOP: CURRICULUM IMPLEMENTATION IN ELEMENTARY SCHOOL READING. (1-9 cr [max 9 cr], §Elem 5339; prereq elem tchg exper or #)

Analysis of new instructional materials, techniques, recent trends, and innovations in elementary reading instruction.

5420. TEACHING WRITING IN THE ELEMENTARY SCHOOL. (3 cr, §Elem 5315; prereq init lic/MEd or grad student)

Theory and research dealing with the writing process, applications to developing an elementary school writing curriculum.

5425. TEACHING LANGUAGE ARTS IN THE ELEMENTARY SCHOOL. (3 cr, §Elem 5316; prereq 3420 or Elem 3316 or elem tchg exper)

Improvement of instruction, study of trends in English education.

5440. TEACHING LITERATURE IN SECONDARY SCHOOLS. (3-5 cr, §SeEd 5321)

Current theory and methods of instruction; research and response to literature and reading; adolescent literature; growth assessment; curriculum design and evaluation.

5441. LITERATURE FOR ADOLESCENTS. (3 cr, §SeEd 5320)

Reading and analysis of fiction and nonfiction; methods for critically assessing quality and appeal; appropriate for secondary English and social studies teachers and librarians.

5450. TEACHING READING IN CONTENT AREAS. (3-5 cr, §SeEd 5344)

Methods of accommodating student abilities and facilitating reading in regular content classes.

5451. SECONDARY REMEDIAL READING INSTRUCTION. (3 cr, §SeEd 5175; prereq 5410 or 5450 or Elem 5331 or SeEd 5344)

Principles and techniques for developing and conducting programs for secondary students seriously deficient in reading skills.

5460. TEACHING WRITING IN SECONDARY SCHOOLS AND COLLEGES. (3-5 cr, §SeEd 5322)

Historical and contemporary context; analysis of composing processes; prewriting and revision; audience analysis; comprehension and coherence; selected problems in assigning and evaluating writing.

5461. DIAGNOSING AND ASSESSING WRITING IN SECONDARY SCHOOLS. (3 cr, §SeEd 5323; prereq ed jr or sr or grad)

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.

5470. CLASSROOM RESEARCH IN LITERARY EDUCATION. (3 cr, §SeEd 5176)

Review and analysis of current studies; design and analyses for school-based research.

5471. PERSPECTIVES ON ENGLISH STUDIES IN SCHOOLS. (3 cr, §SeEd 5194)

Nature, development, and future direction; evaluation of the "given-ness" of English studies in the context of widespread ambiguities of tradition, class, and culture.

5472. TEACHING FILM AND TELEVISION. (3 cr, §SeEd 5326)

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.

5473. LANGUAGE, CULTURE, AND EDUCATION. (4 cr, §SeEd 5404, §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.

5480. SCHOOL-RELATED PROJECTS IN ENGLISH EDUCATION AND READING. (1-6 cr [max 6 cr], §SeEd 5659; prereq MEd student in English educ)

Individual or group work on curricular, instructional, or evaluation problems and projects applicable to school situations.

5485. DIRECTED EXPERIENCES IN TEACHING ENGLISH. (6-12 cr, §SeEd 3621; prereq 5491 or SeEd 5350, #)

Course Descriptions

5491. CURRENT DEVELOPMENTS IN ENGLISH EDUCATION. (1-6 cr [max 12 cr], §SeEd 5350)

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.

5500. TEACHING SCIENCE IN THE ELEMENTARY SCHOOL. (3 cr, §Elem 5346; prereq elem ed init lic/MEd student or #)

Materials, resources, and methods of teaching science at the elementary level.

5501. WORKSHOP: CURRICULUM IMPLEMENTATION IN ELEMENTARY SCHOOL SCIENCE. (1-3 cr [max 12 cr], §Elem 5347; prereq elem tchg exper)

Offered in summers with focus on a single program for each offering: treating concept foundations, goals, and teaching and evaluation procedures.

5502. WORKSHOP: OUTDOOR SCIENCE EDUCATION. (3 cr, §Elem 5348; prereq elem tchg exper)

Classroom and fieldwork activities dealing with models, materials, and methods in the outdoor setting; consideration of broad topics such as ecological relationships, cyclic processes, and change as well as more specific topics such as rocks and minerals, plants and animals, and stargazing.

5503. ELEMENTARY SCHOOL SCIENCE: CURRICULUM AND SUPERVISION. (3 cr, §Elem 5349; prereq elem tchg exper or #)

Program foundations including elements from philosophy, psychology, the science disciplines; design of in-school curriculum improvement models; program evaluation; pupil reporting procedures.

5504. ELEMENTARY SCHOOL SCIENCE: MATERIALS AND RESOURCES. (3 cr, §Elem 5350; prereq elem tchg exper or #)

Using educational materials and media common to the teaching of modern elementary school science.

5505. INTEGRATING SCIENCE AND HEALTH EDUCATION. (3 cr, §Elem 5351; prereq ed or grad student or #)

Techniques and background for integrating instruction of science and health.

5506. TEACHING HEALTH IN THE ELEMENTARY SCHOOLS. (1 cr, §Elem 5213; prereq elem ed init lic/MEd student or #)

Techniques of and materials for teaching health at the elementary level.

5507. TEACHING GEOLOGY IN ELEMENTARY SCHOOLS. (3 cr, §Elem 5352; prereq admission to ed grad program or #)

Methods of teaching geology in the elementary school, including hands-on activities, demonstrations, audiovisuals, and field trips.

5530. SCIENCE EDUCATION FOR THE MIDDLE SCHOOL. (3 cr, §SeEd 5700; prereq sci ed student or #)

Planning effective science education for middle school students.

5531. TEACHING SECONDARY SCHOOL SCIENCE: A CONSTRUCTIVIST APPROACH.

(4 cr, §SeEd 5702; prereq 5530, 5580 or SeEd 5700, SeEd 5701, ¶SeEd 5581; admission to init lic/MEd sci ed program or #)

Methods of secondary school science teaching.

5532. CURRENT DEVELOPMENTS IN SECONDARY SCHOOL SCIENCE TEACHING.

(3 cr, §SeEd 5390; prereq ed MA or MEd or PhD or #)

Curricula, methods, materials of instruction, evaluation.

5533. STUDIES IN SCIENCE EDUCATION. (3 cr, §SeEd 5397; prereq 8500 or SeEd 8887, MEd student, #)

Improvement of science teaching through application of research findings.

5534. FOUNDATIONS OF SCIENCE EDUCATION. (3 cr, §SeEd 5706; prereq admission to ed MA or MEd or PhD)

Analyzing present practices in light of historical and philosophical foundations of science education.

5535. SCIENCE EDUCATION ASSESSMENT. (3 cr, §SeEd 5398; prereq sci ed grad or #)

Strategies for specifying science education outcomes and techniques for assessing them.

5536. INTERACTIONS OF SCIENCE AND MATHEMATICS. (3 cr, §MthE 5174, §SeEd 5274; prereq math ed or sci ed student or #)

Unifying concepts and central themes common to mathematics and physical science. Fundamental concepts and principles, problem solving in an interdisciplinary environment, and laboratory activities for junior and senior high school classes.

5537. WORKSHOP: SCIENCE EDUCATION. (1-12 cr [max 12 cr], §SeEd 5394; prereq ed MA or MEd or PhD or #)

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.

5572. SEMINAR: REFLECTING ON CLINICAL EXPERIENCE IN SCIENCE TEACHING. (3 cr, §SeEd 5705; prereq ¶5582 or ¶SeEd 5704, 5531, 5581 or SeEd 5702, SeEd 5703, #)

Reflections and issues related to clinical experience in teaching science.

5580. APPLYING SCIENCE EDUCATION. (2 cr, §SeEd 5701; prereq ¶5530 or ¶SeEd 5700, sci ed student or #)

Teaching science education in the middle school.

5581. APPLYING SCIENCE METHODS IN HIGH SCHOOLS. (4 cr, §SeEd 5703; prereq 5530, 5580 or SeEd 5700, SeEd 5701, init lic/MEd student or #; ¶5331)

Practicum in conducting, analyzing, and reflecting on science teaching in secondary schools.

5582. CLINICAL EXPERIENCE IN SCIENCE TEACHING. (6 or 12 cr, §SeEd 5704; prereq 5531, ¶5572, 5581 or SeEd 5702, SeEd 5703, #)

Supervised clinical experiences in secondary school science teaching.

5583. SCHOOL-BASED PROJECTS IN SCIENCE EDUCATION. (1-12 cr [max 12 cr], §SeEd 5395; prereq sci ed MEd)

Individual or group work on curricular, instructional, or evaluation problems and projects applicable to school situations.

5619. TEACHING SECOND LANGUAGES AND CULTURES IN ELEMENTARY SCHOOLS. (4 cr, §Elem 5319)

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.

5620. SECOND LANGUAGES AND YOUNG CHILDREN: LIKE CHILD'S PLAY. (4 cr, §Elem 5321)

Innovative curricular models; how young children acquire language and effects of bilingualism on child development; rationales, advantages, and pedagogical theories of various program models from full immersion to programs emphasizing cultural understanding. Visits to classrooms, bilingual and immigrant families, interviews with variety of specialists in the field.

5631. SECOND LANGUAGE CURRICULUM. (3 cr each qtr [total 9 cr], §SeEd 5801; prereq init lic/MEd student)

The nature of school and second language curriculum; a variety of curricular orientations and their implications for instruction and evaluation.

5632. SECOND LANGUAGE INSTRUCTION. (3 cr per qtr [9 cr total], §SeEd 5802; prereq init lic/MEd student)

Spans one academic year; component of teacher education program. Developing skills for selecting, organizing, and providing effective second language learning opportunities through observation, practice, and reflection.

5633. SECOND LANGUAGE RESEARCH. (2-6 cr per qtr [max 6 cr], §SeEd 5803; prereq 6 cr MEd taken after licensure completion)

Classroom-based examination of teaching and student learning throughout an academic year.

5640. FOUNDATIONS OF BILINGUAL EDUCATION. (4 cr, §SeEd 5216)

Development of bilingual schooling in the United States: 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.

5641. PROGRAMS AND CURRICULA IN BILINGUAL EDUCATION. (4 cr, §SeEd 5217)**5642. ASSESSMENT OF LEARNERS WITH LIMITED ENGLISH PROFICIENCY.** (4 cr, §SeEd 5218)

Social, political, and educational context. Evaluation vs. research and implications for bilingual schooling, curriculum development, and materials section; existing methods for assessing language proficiency and academic achievement.

5645. SCHOOLING OUTCOMES FOR A MULTIETHNIC SOCIETY. (4 cr, §SeEd 5221; A-F only)

Analysis of schooling experiences for students of African-American, Hispanic, Asian, and American Indian backgrounds. Changing perspectives concerning ethnic student achievement, research that examines factors influencing school achievement, and prospects for change.

5650. SECOND LANGUAGES AND CULTURES EDUCATION: INTRODUCTION AND OVERVIEW. (4 cr, §SeEd 5186)

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.

5652. TEACHING CULTURE: THEORY AND APPLICATION. (4 cr, §SeEd 5122; prereq init lic/MEd or grad student)

Analysis of the concept; related factors and materials for classroom use; culture shock; empathy; culture conflict, awareness, learning.

5654. PARENT INVOLVEMENT IN SECOND LANGUAGE PROGRAMS. (3 cr, §SeEd 5220)

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.

5655. TECHNOLOGY IN SECOND LANGUAGE LEARNING AND TEACHING. (4 cr, §SeEd 5184)

Analysis of applications to delivery of both instruction and curriculum; examination and planning for research on using technology in language acquisition.

5656. READING AND WRITING IN A SECOND LANGUAGE. (4 cr, §SeEd 5219)

Reading comprehension and composing processes in a second language; relationship between first and second language comprehension and composing processes, reading and writing, and culture and reading comprehension and writing; politics of literacy; assessment of second language literacy.

5657. SPEAKING AND LISTENING IN A SECOND LANGUAGE. (4 cr, §SeEd 5385)

Theories and methods in teaching language as communication in oral and aural modes; planning student interaction; classroom organization for learning and acquisition. Students complete reflective analyses of lessons.

Course Descriptions

5658. SECOND LANGUAGE TESTING, ASSESSMENT, AND EVALUATION. (4 cr, §SeEd 5382)

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.

5660. SPECIAL TOPICS IN THE TEACHING OF SECOND LANGUAGES AND CULTURES. (1-10 cr [max 10 cr], §SeEd 5191)

Related specifically to the needs of the in-service teacher; topics, location, and duration will be highly flexible.

5662. CRITICAL ISSUES IN SECOND LANGUAGE CURRICULUM. (4 cr, §SeEd 5189)

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.

5669. SCHOOL- AND PROFESSIONAL-BASED EXPERIENCES IN SECOND LANGUAGES AND CULTURES. (1-12 cr [max 12 cr], §SeEd 5185; prereq MEd student)

Opportunity for teachers to work together on curricular, instructional, or evaluation problems; internship experiences; participation in professional activities.

5680. PRACTICUM: TEACHING SECOND LANGUAGES AND CULTURES IN ELEMENTARY SCHOOLS. (3 cr, §Elem 5320; prereq 5619 or ¶5619, Elem 5319, #)

Minimum of three hours weekly of supervised teaching and observation in elementary schools.

5684. CLINICAL EXPERIENCES IN SECOND LANGUAGES. (4 cr per qtr [12 cr total], §SeEd 5804; prereq init lic/MEd student)

Spans one academic year; component of teacher education program. Teaching and learning experiences in elementary and secondary language classrooms.

5690. DIRECTED STUDY IN SECOND LANGUAGES AND CULTURES. (cr or [max 6 cr], §SeEd 5351; prereq ed or grad student)

Individual or group work on curricular, instructional, or evaluation problems.

5700. TEACHING SOCIAL STUDIES IN THE ELEMENTARY SCHOOL. (3 cr, §Elem 5361; prereq 5510 or Elem 3101 or equiv, init lic/MEd student)

Content and organization of social studies programs; programs of understanding, improving the learning situation, and effective use of materials.

5730. SOCIAL STUDIES FOR THE IN-SERVICE ELEMENTARY/MIDDLE SCHOOL TEACHER. (3 cr, §Elem 5361; prereq 5110 or Elem 3101, init lic/MEd student)

Content and organization of social studies programs; programs of understanding, improving the learning situation, and effective use of materials.

5740. INTRODUCTION TO SOCIAL STUDIES EDUCATION. (4 cr, §SeEd 5152; prereq init lic/MEd student)

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.

5741. ADVANCED METHODS OF TEACHING THE SOCIAL STUDIES. (4 cr, §SeEd 5150; prereq init lic/MEd student)

Advanced methods for social studies teachers; prerequisite to other graduate level courses in social studies education.

5742. REFLECTIVE SEMINAR: POSTBACCALAUREATE. (3 cr per qtr [max 6 cr], §SeEd 5153; prereq init lic/MEd student)

Issues, materials, and instructional techniques related to current topics of relevance to social studies teachers.

5746. TEACHING ABOUT THE NEWSPAPER IN THE CLASSROOM. (1-3 cr [max 4 cr], §Elem 5227, §SeEd 5227)

Institution of the newspaper; articulation of a series of useful instructional strategies, curriculum development techniques, and teaching materials.

5747. GLOBAL EDUCATION: CONTENT AND PROCESS. (3 cr, §Elem 5164, §SeEd 5164)

Helps classroom teachers and administrators assess current methods and materials and select appropriate evaluation instruments by examination of existing content and methods in global education.

5760. SOCIAL STUDIES FOR THE INSERVICE MIDDLE/SECONDARY SCHOOL TEACHER. (3 cr, §SeEd 5152; prereq in-service tchr or #)

Analysis of teaching strategies and contemporary curriculum materials; technique of instruction useful in inquiry; strategies of analysis; classroom behavior and evaluation. Required of all M.Ed., M.A., and Ph.D. candidates.

5763. ECONOMIC EDUCATION PROGRAMS. (1-3 cr, §SeEd 5167; prereq Econ 1002 or equiv or #)

Conceptual framework of economic education through analyzing its research, objectives, philosophy, scope, and curricular sequence.

5764. INQUIRY PROJECT: SOCIAL STUDIES. (1-6 cr [max 6 cr], §SeEd 5151; prereq #)

Opportunity to work individually or in teams on curricular, instructional, or evaluation problems within the school.

5780. PRACTICUM; SECONDARY SOCIAL STUDIES EDUCATION. (1-7 cr [max 7 cr], §SeEd 3152; prereq init lic/MEd student)

Pre-student teaching experience to develop teacher competencies; supervised observation and participation in classroom and related school activities.

5782. STUDENT TEACHING IN SECONDARY SOCIAL STUDIES. (3-15 cr [max 15 cr], §SeEd 3641; prereq init lic/MEd student)

5821. TEACHING MATHEMATICS IN THE ELEMENTARY SCHOOL. (3 cr. §Elem 3391; prereq 5110 or Elem 3100, Elem 3101, Math 1005, Math 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.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8075. SEMINAR: ART EDUCATION

8079. RESEARCH IN ART EDUCATION

8099. PROBLEMS: ART EDUCATION

8130. CURRICULUM AND INSTRUCTION CORE: CRITICAL EXAMINATION OF CURRICULAR CONTEXTS

8131. CURRICULUM AND INSTRUCTION CORE: TEACHING THEORY AND RESEARCH

8132. CURRICULUM AND INSTRUCTION CORE: RESEARCH METHODS IN CURRICULUM AND INSTRUCTION

8133. SEMINAR: TEACHING IN COLLEGES OF EDUCATION

8134. PRACTICUM: TEACHING IN COLLEGES OF EDUCATION

8135. CURRICULUM STUDIES SEMINAR

8136. CURRICULUM REFORM AND SOCIAL CHANGE

8140. CURRICULUM IMPLEMENTATION AND LEADERSHIP

8147. THE DOMAIN OF CURRICULUM THEORY AND RESEARCH: ALTERNATIVE PARADIGMS AND METHODS

8190. PROBLEMS: IMPROVEMENT OF INSTRUCTION

8191. CURRICULUM LEADERSHIP: INTERNSHIP

8195. PROBLEMS: SECONDARY SCHOOL SUPERVISION

8198. PROBLEMS: TEACHER EDUCATION

8199. PROBLEMS: CURRICULUM STUDIES

8290. PROBLEMS: TEACHING KINDERGARTEN

8340. INSTRUCTIONAL SYSTEMS RESEARCH AND THEORY

8341. DESIGNING INSTRUCTIONAL MATERIALS: RESEARCH AND THEORY

8361. ADVANCED COURSEWORK AND DESIGN: ISSUES

8370. ADVANCED DESIGNS IN COURSEWORK: VIDEO

8390. PROBLEMS: INSTRUCTIONAL SYSTEMS

8391. INSTRUCTIONAL SYSTEMS SEMINAR

8400. RESEARCH IN SPECIAL COLLECTIONS OF CHILDREN'S LITERATURE

8411. RESEARCH FOUNDATIONS FOR READING INSTRUCTION

8412. RECENT RESEARCH IN READING

8413. SEMINAR: READING RESEARCH AND INSTRUCTION

8420. RESEARCH IN ENGLISH COMPOSITION IN ELEMENTARY SCHOOLS

8425. RESEARCH ON DEVELOPMENT IN SPELLING, HANDWRITING, AND LISTENING

8470. INTRODUCTION TO RESEARCH IN ENGLISH EDUCATION AND READING

8471. ADVANCED TOPICS IN ENGLISH EDUCATION AND READING

8492. READINGS IN ENGLISH EDUCATION AND READING

8493. -PROBLEMS: TEACHING ENGLISH AND READING

8500. RESEARCH FOUNDATIONS OF SECONDARY SCHOOL SCIENCE TEACHING

8500. RESEARCH FOUNDATIONS OF ELEMENTARY SCHOOL SCIENCE TEACHING

8501. THE ELEMENTARY SCHOOL SCIENCE PROGRAM: ARTICULATION AND COORDINATION

8570. SEMINAR: RESEARCH IN SCIENCE EDUCATION

8590. PROBLEMS: CURRICULUM CONSTRUCTION IN SCIENCE EDUCATION

8630. RESEARCH IN SECOND LANGUAGES AND CULTURES EDUCATION

8631. RESEARCH SEMINAR: SECOND LANGUAGES AND CULTURES EDUCATION

8632. RESEARCH SEMINAR: SECOND LANGUAGES AND CULTURES EDUCATION

8633. RESEARCH SEMINAR: SECOND LANGUAGES AND CULTURES EDUCATION

8640. SECOND LANGUAGES TEACHING IN THE CLASSROOM: THEORY AND APPLICATIONS

8650. SEMINAR: SPECIAL TOPICS IN SECOND LANGUAGES AND CULTURES RESEARCH

8694. PROBLEMS: SECOND LANGUAGES AND CULTURES EDUCATION

8698. READINGS IN SECOND LANGUAGES AND CULTURES EDUCATION

Course Descriptions

8740. SEMINAR: TRENDS AND ISSUES IN SOCIAL STUDIES EDUCATION

8742. SEMINAR: RESEARCH IN SOCIAL STUDIES EDUCATION

8750. PROBLEMS: SOCIAL STUDIES EDUCATION

8750. PROBLEMS: SOCIAL STUDIES EDUCATION

Mathematics Education (MthE)

5000. SURVEY OF K-12 MATHEMATICS CURRICULA. (1 cr; prereq ¶5600, math ed student or #; does not apply to MEd or grad programs)
Introduction to goals, content, materials, philosophy, and instructional methods of the mathematics programs.

5010. TEACHING MATHEMATICS: ARITHMETIC STRUCTURES. (3 cr, §5081; prereq 5000, ¶5610, math ed student or #; does not apply to MEd or grad programs)
Pedagogy, content, and instructional strategies for teaching arithmetic. Content and issues relevant to the K-8 mathematics curriculum. Instructional materials and technology appropriate for secondary school arithmetic.

5020. TEACHING MATHEMATICS: ALGEBRAIC STRUCTURES. (3 cr, §5082; prereq 5010, 5610, math ed student or #; ¶5620 required; does not apply to MEd or grad programs)
Pedagogy, content, and instructional strategies for teaching algebra. Content and issues relevant to the algebra curriculum. Instructional materials and technology appropriate for algebra.

5030. TEACHING MATHEMATICS: GEOMETRIC STRUCTURES. (3 cr, §5083; prereq 5020, 5620, math ed student or #; ¶5630 required; does not apply to MEd or grad programs)
Pedagogy, content, and instructional strategies for teaching geometry. Content and issues relevant to the geometry curriculum. Instructional materials and technology appropriate for geometry.

5040. TEACHING MATHEMATICS: ADVANCED TOPICS. (3 cr; prereq 5030, 5630, math ed student or #; may be applied to MEd or grad programs)
Pedagogy, content, and instructional strategies for teaching advanced topics: trigonometry, analysis, calculus, probability, statistics, discrete mathematics. Content and issues relevant to the advanced mathematics curriculum. Instructional materials and technology appropriate for advanced mathematics.

5081. TEACHING SECONDARY SCHOOL ARITHMETIC. (3 cr; prereq math ed 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. (3 cr; prereq math ed 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. (3 cr; prereq math ed 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]; not open to math ed 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.

5150. TOPICS IN RECREATIONAL MATHEMATICS. (3 cr; prereq ed or grad student or #)
Survey including magic squares; palindromes, repunits, repdigits from number theory; geometric dissections, topological recreations, cryptarithms; uses as problem solving modes in mathematical classrooms.

5151. CALCULATOR USE IN THE ELEMENTARY AND MIDDLE SCHOOL. (1-3 cr [max 3 cr]; prereq ed or grad student or #)
Structure and function of handheld calculators. Materials and instructional techniques for integrating calculators into daily lessons; evaluating commercial materials; examining research on the use of the calculator in instructional settings.

5152. GEOMETRY FOR PRIMARY GRADES. (1-3 cr [max 3 cr]; prereq ed or grad student or #)
Geometric content and pedagogy for primary grades. Levels of geometric thought, formation of spatial abilities; early childhood concepts from topology, transformational geometry, Euclidean geometry, and applications; dimensional models, construction, planal tessellations.

5153. GEOMETRY IN THE INTERMEDIATE GRADES. (1-3 cr [max 3 cr]; prereq ed or grad student or #)
Instructional approaches and physical materials related to teaching informal and intuitive geometric concepts in the intermediate and middle school grades. Fundamental concepts of measurement and geometric relationships in one, two, and three dimensions; measurement systems; estimation; geometric figures and their properties; transformations and symmetry; congruence and similarity.

5155. RATIONAL NUMBER CONCEPTS AND PROPORTIONALITY. (1-3 [max 3 cr]; prereq ed or grad student or #)
Relationships between the role of rational number concepts and the development of proportional reasoning skills. Psychological, instructional, and pedagogical issues concerned with the development of these conceptual areas.

5157. PROBABILITY AND STATISTICS IN THE ELEMENTARY SCHOOL. (1-3 cr [max 3 cr]; prereq ed or grad student or #)

Emerging role of probability and statistics in the elementary school. Principles for systematic observation and techniques for collecting, organizing, representing, and interpreting data.

5160. DEVELOPING LEADERSHIP IN ELEMENTARY MATHEMATICS. (1-3 cr [max 3 cr]; prereq ed or grad student or #)

Current developments in the psychology and pedagogy of mathematics education as they relate to the evolving nature of mathematics education objectives. Emerging role of technology in the mathematics curriculum. Effective techniques for developing supervisory abilities.

5170. TEACHING PROBLEM SOLVING, REASONING, AND PROOF. (3 cr; math ed or grad student or #)

Fundamental concepts and principles of problem solving, reasoning, and proof. Emphasis on activities and applications appropriate for junior and senior high classes. Pedagogical experiences to prepare teachers to teach problem solving, reasoning, and proof in classrooms.

5171. TEACHING PROBABILITY AND STATISTICS. (3 cr; prereq math ed or grad student or #; at least one math course in probability or statistics or combinatorics recommended)

Fundamental concepts and principles of probability. Emphasis on activities and applications appropriate for junior and senior high school classes. Pedagogical experiences to prepare teachers to integrate quantitative literacy accurately and effectively in classrooms.

5172. HISTORICAL TOPICS IN THE MATHEMATICS CLASSROOM. (3 cr; prereq math ed or grad student or #)

Historical underpinnings of school mathematics content and methodology. Cross-cultural contributions in the development of mathematical ideas; development of lessons, activities, and materials for school use.

5173. LOGO IN THE MATHEMATICS CLASSROOM. (3 cr; prereq CI 5360 or CISy 5003 or equiv, math ed or grad student or #)

Using LOGO in the mathematics classroom to develop skills in thinking, planning, and problem solving; LOGO philosophy and the use of microworlds; using advanced features as well as turtle graphics; developing classroom materials.

5174. INTERACTIONS OF SCIENCE AND MATHEMATICS. (3 cr, §CI 5536, §SeEd 5274; prereq math ed or sci ed student or #)

Unifying concepts and central themes common to mathematics and physical science. Emphasis on developing understanding of fundamental concepts and principles, problem solving in an interdisciplinary environment, and laboratory activities appropriate for junior and senior high school classes.

5301. INSTRUCTIONAL LEADERSHIP IN ELEMENTARY SCHOOL MATHEMATICS. (3 cr; prereq #; not open to math ed 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 CI 5821 or 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 math tchg exper or #)

Methods, materials, and curriculum development; principles of learning; review of research; preparation and evaluation of tests, units, and materials of instruction.

5313. TEACHING AND SUPERVISION OF MATHEMATICS IN THE MIDDLE SCHOOL. (4 cr; prereq elem or sec 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 CI 5821 or Elem 3391 or #)

Printed and programmed materials, audiovisual 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 CI 5821 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 CI 5821 or Elem 3391 or #)

Units of instruction emphasizing mathematical concepts essential for vocational competence; experimental materials and methods to improve performance of low achievers.

Course Descriptions

5366. TECHNOLOGY-ASSISTED MATHEMATICS INSTRUCTION. (3 cr; prereq CI 5362 or CISy 5006 or equiv, math ed or grad student or #)

Technology, including computers, programmable and graphing calculators, and video, as instructional tools in mathematics; design and evaluation of technology-based mathematics lessons; the effect of technology on the mathematics curriculum; managing the technology-enriched classroom.

5540. SEMINAR: TEACHING SECONDARY MATHEMATICS. (3 cr; prereq 5030, math ed student or #; ¶5640 required; does not apply to in-service MEd or grad programs)

Analysis of half-day student teaching. Development of observational, classroom management, and communication skills. Application of instructional techniques from 5010, 5020, 5030, 5040.

5550. SEMINAR: REFLECTIVE TEACHING OF MATHEMATICS. (3 cr; prereq 5540, 5640, math ed student or #; ¶5650 required; applies to MEd for licensure students only)

Analysis of full-day student teaching. Integration of major theoretical positions with clinical perspectives to clarify the relationship between theory and practice. Application of instructional techniques from previous mathematics education courses.

5600. INTRODUCTION TO MATHEMATICS EDUCATION. (1 cr; prereq math ed student or #; ¶5000 required; does not apply to MEd or grad programs)

Supervised observation and participation in classroom and related school activities; a pre-fall exploratory experience.

5610. CLINICAL EXPERIENCES IN TEACHING ARITHMETIC. (2 cr; prereq 5600, math ed student or #; ¶5010 required; does not apply to in-service MEd or grad programs)

Observation and participation in arithmetic classes. Supervised microteaching and peer teaching. Development of observational, classroom management, and communication skills. Application of instructional techniques from 5010.

5620. CLINICAL EXPERIENCES IN TEACHING ALGEBRA. (2 cr; prereq 5610, math ed student or #; ¶5020 required; does not apply to in-service MEd or grad programs)

Classroom observation integrates clinical observations, microteaching, peer teaching, laboratory activities, and seminar discussions. Emphasis on developing instructional strategies appropriate for teaching algebra.

5630. CLINICAL EXPERIENCES IN TEACHING GEOMETRY. (2 cr; prereq 5620, math ed student or #; ¶5030 required; does not apply to in-service MEd or grad programs)

Observation of and participation in geometry classes. Supervised microteaching and peer teaching. Development of observational, classroom management, and communication skills. Application of instructional techniques from 5030.

5640. HALF-DAY STUDENT TEACHING IN MATHEMATICS. (6 cr; prereq 5030, 5630, math ed student or #; ¶5540 and enrollment in math ed init lic/ MEd program required; does not apply to MEd or grad programs)

Student teaching in secondary mathematics classes.

5650. FULL-DAY STUDENT TEACHING IN MATHEMATICS. (12 cr; prereq 5540, 5640, math ed student or #; ¶5550 and enrollment in math ed init lic/ MEd program required)

Student teaching in secondary mathematics classes.

5680. PRACTICUM: 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

Educational Policy and Administration (EdPA)

3099. INVENTING THE FUTURE. (4 cr)

Futures as professional field, skills in developing personal and organizational futures; representative views of future through literature, lectures, and videotapes; trends in organizations, learning, global relationships, communications, spirituality, and home lives. Futures portfolios; explore one organization's futures development.

3120. CHILDHOOD EDUCATION: WESTERN CIVILIZATION. (4 cr)

Imagery, ideas, theories, and practices of child rearing and organized education in Western civilization, ancient to modern. Emphasis on pictorial documentation of children, childhood, and education; analysis of word-image relations in conceiving childhood and the education of children.

5090. SCHOOL AND SOCIETY. (3 cr; prereq sr or init lic/MEd student or CLA music ed major or □)

Readings in social science and philosophy relevant to thinking about the role of school in a changing American society.

5099. DIRECTED STUDY. (Cr or [max 9 cr]; prereq #)

Individual or group work on topics or problems in social and philosophic foundations of education.

5101. HISTORICAL FOUNDATIONS OF MODERN EDUCATION. (3 cr)

Background course for all other courses in the history and philosophy of education. Analysis and interpretation of important elements in modern education derived from the Greeks, the Romans, the Middle Ages, and the Renaissance.

5102. EDUCATION IMAGERY IN EUROPE AND AMERICA. (3 cr)

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.

5103. SUPERVISION AND ADMINISTRATION OF SPECIAL EDUCATION. (3 cr, §EPsy 5660; prereq #)

Procedures in establishing and improving educational programs for exceptional children.

5120. HISTORY OF CHILDHOOD EDUCATION. (3 cr)

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)

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.

5128. WORKSHOP: EDUCATIONAL ADMINISTRATION. (1-6 cr)

Opportunities through laboratory approach for experienced administrators to concentrate their study on common administrative and supervisory problems.

5130. LEADERSHIP DEVELOPMENT SEMINAR. (3 cr)

Assessment and development of skills required of the educator in the areas of planning, decision making, and human relations; introduction to contemporary issues in educational administration.

5131. COMPARATIVE EDUCATION. (3 cr)

European, Asiatic, and American systems and philosophies of education; possibilities of international education.

5139. LABORATORY IN DECISION MAKING. (3 cr)

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)

Issues and skills relevant to an administrator who directs a preschool program or the student planning a leadership position in early education.

5141. CRITICAL ISSUES IN CONTEMPORARY EDUCATION. (3 cr)

Introduction to ideas involved in current theory and practice.

5142. MINORITIES IN HIGHER EDUCATION. (3 cr; prereq #)

Access and equity issues related to the participation of minority populations in American institutions of higher education. Emphasis on analyzing educational status of minority students and faculty in two- and four-year colleges as presented in research literature.

5155. HISTORY OF WESTERN EDUCATIONAL THOUGHT. (3 cr)

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)

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.

5167. THE AMERICAN MIDDLE SCHOOL. (3 cr)

Sources of the movement; purposes, functions, and limitations; fundamental problems, types, and curricular implications of reorganization.

5169. ETHNIC GROUPS AND COMMUNITIES: PERSPECTIVES ON FAMILIES, CHILDREN, AND YOUTH. (3 cr)

Roles of young people in widely varied communities. Comparative aspects of youth commitment to society, economic value of youth, youth-adult conflict. Focus on well-defined analyses of contextual roles and complexity of policy for appropriate educational and community development.

5170. AMERICAN PRAGMATISM AND EDUCATION. (3 cr)

Analysis and interpretation of the educational philosophy of pragmatism (experimentalism); readings from Dewey, Kilpatrick, Bode, Counts, Childs, and others.

5171. ANTHROPOLOGY AND EDUCATION. (4 cr, §Anth 5145)

Cross-cultural perspectives in examining educational patterns, the implicit and explicit cultural assumptions underlying them; methods and approaches to cross-cultural studies in education.

5173. CASE STUDIES FOR POLICY RESEARCH. (3 cr; prereq ed or grad student or #)

Introduction to the use of qualitative case study research method and its application to questions of educational practice. Class project required. Emphasis on design of studies that employ open-ended interviewing as primary data collection technique.

5174. ETHNOGRAPHIC RESEARCH METHODS. (4 cr; prereq 5171 or SPFE 5171 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.

Course Descriptions

5175. SYSTEMS THINKING FOR INNOVATIVE PROFESSIONALS. (3 cr)

Fundamental aspects of creative systems analysis and thinking. Basic visual model of learning systems and their relationship to innovative thinking and practice. Students develop systems skills applicable to the evolution of their own profession.

5176. ETHNOGRAPHIC RESEARCH SKILLS

LABORATORY. (2 cr; prereq ¶5174 or SPFE 5174) Introduction to processes of creating evaluative design; supervised practice in data analysis, use of theory, proposal writing, reporting.

5180, 5181. SEMINAR: ADMINISTRATION OF SPECIAL EDUCATION. (3 cr per qtr, §EPsy 8760-8761; prereq 5103, EdAd 5103 or EPsy 5660 or #)

Problems of administration and organization of special education programs.

5182. COMPARATIVE PHILOSOPHIES OF EDUCATION. (3 cr)

Competing philosophies of education.

5190. SOCIOLOGY OF EDUCATION. (4 cr, §Soc 5953)

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.

5200. DESIGN AND MANAGEMENT OF EDUCATION SERVICES. (3 cr)

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.

5201. FORMAL ORGANIZATIONS IN EDUCATION. (3 cr)

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.

5202. POLITICS OF EDUCATION. (3 cr)

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.

5204. FINANCING ELEMENTARY AND SECONDARY SCHOOLS. (3 cr)

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.

5207. HISTORY OF CURRICULUM IN U.S. PUBLIC SCHOOLS. (4 cr, §CI 5136, §CI 5607)

Formation of public school subjects and curriculum theory in United States from their European roots and early development in 19th century to contemporary issues of reform discussed in relation to past. Social, political, and economic implications of curriculum history.

5209. EDUCATION IN FUTURE SOCIAL SYSTEMS. (3 cr)

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)

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)

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.

5212. SCHOOL BUDGETING. (3 cr)

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)

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)

Basic techniques required to generate, maintain, and make accessible the computer-based management information system in education.

5215. THE PRINCIPALSHIP. (3 cr)

Role of the principal: qualifications, duties, and problems.

5216. RECENT RESEARCH IN ELEMENTARY SCHOOL ADMINISTRATION. (3 cr; prereq 5215 or EdAd 5215)

Pertinent research literature.

5222. INTRODUCTION TO POLICY RESEARCH. (3 cr)

Examination of political, philosophical, environmental, and methodological issues that accompany policy research in education; applicability of quantitative and qualitative methods.

5223. LAW AND THE HANDICAPPED. (2-4 cr, §EPsy 5605)

Analysis of recent litigation and legislation; emphasis on implementation of right to education, right to treatment, labeling, due process, and related issues.

5224. LEGAL IMPLICATIONS OF ACTS BY SCHOOL BOARDS, ADMINISTRATORS, AND TEACHERS. (3 cr)

Constitutional, statutory, and common law bases of school administration; principles growing out of fundamental legal procedures.

5225. EDUCATIONAL POLICY AND THE LAW. (3 cr)

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)

Planning educational facilities for public and private school systems and institutions of higher education.

5227. PUBLIC SCHOOL PERSONNEL PROGRAMS. (3 cr)

Selection, assignment, evaluation, and development of school personnel; salary and conditions of service; policies of administrative, instructional, and noninstructional personnel.

5240. SEMINAR: CLINICAL EXPERIENCES IN EDUCATIONAL ADMINISTRATION. (1-9 cr, §8240)

For educational administration majors engaged in clinical experiences.

5245. ETHICS, MORALITY, AND VALUES IN EDUCATION. (3 cr)

Key issues of professional practice.

5246. COMPUTERS IN EDUCATIONAL POLICY AND ADMINISTRATION. (3 cr)

Hands-on microcomputer introduction to computers and software applications for administrative/policy tasks in educational institutions.

5250. AMERICAN HIGHER EDUCATION. (4 cr)

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.

5260. INTRODUCTION TO EDUCATIONAL PLANNING. (3 cr)

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.

5263. LEADERSHIP IN EDUCATION. (3 cr; prereq admission to MEd program)

Laboratory experience to assess and enhance leadership skills of educators and others who work in organizations serving youth. Includes self assessment, decision making, communication, and other leadership skills.

5265. ADMINISTERING THE HIGH SCHOOL PROGRAM. (3 cr)

Emphasis on the principal as instructional leader; practices and procedures used in building a master schedule; analysis and evaluation of the school program and services.

5266. 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.

5267. GROUP DYNAMICS AND SHARED DECISION MAKING. (3 cr, §EPsy 5155; EPsy 5150 recommended; CEE only)

Review of theory and research on group dynamics. Laboratory experiences to develop skills in leading small groups.

5268. EDUCATIONAL ADMINISTRATION FOR ACADEMIC EXCELLENCE. (3 cr; prereq affiliation with Renaissance school; CEE only)

Laboratory for school leaders to concentrate on common administrative and supervisory problems of improving academic performance of students and teachers. Principles successful in motivating for academic excellence.

5269. ADVANCED EDUCATIONAL LEADERSHIP.

(3 cr; prereq 5268, affiliation with Renaissance school) Laboratory approach for school leaders to increase and enhance their leadership skills.

5272. PROBLEMS: EDUCATIONAL POLICY AND ADMINISTRATION. (1-3 cr per qtr, §8272)

For educational policy and administration students qualified to make intensive studies of a school system.

5274. TWO-YEAR POSTSECONDARY INSTITUTIONS. (3 cr, §VoEd 5274)

Present status, development, functions, organization, curriculum, and trends in postsecondary but nonbaccalaureate institutions.

5280. INTRODUCTION TO THE ECONOMICS OF EDUCATION. (4 cr)

Economic impact of education on educational markets, prices and production relationships, distribution of income, and investment and cost-benefit analysis in education.

5281. ECONOMIC ANALYSIS IN EDUCATIONAL EVALUATION. (3 cr)

Use and application of cost-effectiveness, cost-benefit, cost-utility, and cost-feasibility in evaluation of educational problems and programs.

5285. PRINCIPLES AND METHODS OF EVALUATION. (3 cr, §EPsy 5240)

Program evaluation; theory; practical examples; purposes, role, program descriptions, and evaluation strategies.

5292. THE LAW AND POSTSECONDARY EDUCATIONAL INSTITUTIONS. (3 cr)

Analysis of court opinions and federal regulations affecting postsecondary institutions.

Course Descriptions

5370. SCHOOLS OF THE UNITED STATES IN THE 20TH CENTURY. (3 cr, §CI 5149, §CISy 5370; prereq ed or grad student or #)

Analysis and interpretation of events and issues that shaped U.S. schools in the 20th century; current proposals for education reform and their antecedents.

5420. LEADERSHIP AND ADMINISTRATION OF STUDENT AFFAIRS. (3 cr, §EPsy 8420)

Scope, administration, coordination, and evaluation of programs in college and university student affairs.

5430. ORGANIZATIONAL APPROACHES TO YOUTH DEVELOPMENT. (3 cr, §VoEd 5430; prereq VoEd 5410 or #; A-F only)

Understanding organizational systems responsible for youth development in community and debating policy issues surrounding them.

5540. SEMINAR: THE COLLEGE STUDENT. (3 cr, §EPsy 5451; prereq 6 cr psych or ed psych)

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.

5601. INTERNATIONAL EDUCATION: TOPICS IN CLASSROOM PRACTICES AND PROCEDURES. (1-12 cr [max 12 cr], §AdEd 5601; prereq tchg licensure, #)

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, §AdEd 5603)

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, §AdEd 5605)

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, §AdEd 5607)

Educational innovations 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 and outcomes.

5609. CRITICAL ISSUES IN INTERNATIONAL EDUCATION AND EDUCATIONAL EXCHANGES. (4 cr; prereq #)

Comprehensive, multidimensional, and policy-oriented perspectives on international education and its several components found in practices of U.S. and other universities.

5701. THEORIES OF INTERNATIONAL DEVELOPMENT. (4 cr; prereq intl rel major or #)

Interdisciplinary approaches to understanding contemporary development theory and practice. Theoretical framework and case studies to illustrate complexities of development planning and implementation.

5931. MINNESOTA STUDIES IN INTERNATIONAL DEVELOPMENT (MSID) SEMINAR. (4 cr; prereq intl rel major or #)

Focus on intercultural living, learning, and undertaking research activities in developing nations in preparation for internships in overseas development agencies.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8170. SEMINAR: RESEARCH METHODS IN ANTHROPOLOGY AND EDUCATION

8220. QUANTITATIVE FOUNDATIONS FOR MANAGEMENT METHODS

8228. PROBLEMS: HIGHER EDUCATION

8229. SEMINAR: HIGHER EDUCATION

8230. SEMINAR: DISSERTATION RESEARCH IN HIGHER EDUCATION

8234. SEMINAR: EDUCATIONAL FINANCE

8238. SEMINAR: THEORY AND RESEARCH

8241. SEMINAR: INTERNSHIP IN EDUCATIONAL ADMINISTRATION

8242. SEMINAR: PUBLIC SCHOOL PERSONNEL PROGRAMS

8247. SEMINAR: SCHOOL DISTRICT POLITICS

8248. SEMINAR: METROPOLITAN SCHOOL GOVERNANCE

8250. THE HIGHER EDUCATION INSTITUTION: ORGANIZATION AND ENVIRONMENT

8251. DEVELOPMENT AND EVALUATION OF ACADEMIC PROGRAMS

8252. INSTRUCTION AND LEARNING IN HIGHER EDUCATION

8255. LEADERSHIP AND ADMINISTRATION IN HIGHER EDUCATION

8256. ECONOMICS OF HIGHER EDUCATION

8257. FINANCING HIGHER EDUCATION

8260. SEMINAR: SOCIAL AND PHILOSOPHIC FOUNDATIONS OF EDUCATION

8261. PROBLEMS: HISTORY AND PHILOSOPHY OF EDUCATION

8268. SEMINAR: SOCIAL AND EDUCATIONAL FUTURES

8270. PROBLEMS: ELEMENTARY SCHOOL ADMINISTRATION**8271. PROBLEMS: SECONDARY SCHOOL ADMINISTRATION****8273. FIELD STUDY****8340. POLICY SYSTEMS IN EDUCATION****8341. ANALYSIS OF EDUCATION POLICY SYSTEMS****8603. SEMINAR: INTERNATIONAL DEVELOPMENT EDUCATION****8605. PROBLEMS: INTERNATIONAL EDUCATION RESEARCH****Educational Psychology (EPsy)**

1601. AMERICAN SIGN LANGUAGE I. (5 cr)
Fundamentals of American Sign Language (ASL) as a second language. Emphasis on varieties of sign language and sign language practices, questions, commands, and simple sentences. Receptive and Expressive sign vocabulary building.

1602. AMERICAN SIGN LANGUAGE II. (5 cr; prereq 1601 or #)
Fundamentals of American Sign Language (ASL) as a second language beyond the basic level. Emphasis on locatives, classifiers, and temporal and distributional aspects. Receptive and Expressive sign vocabulary building at the conversational level.

1603. AMERICAN SIGN LANGUAGE III. (5 cr; prereq 1602 or #)
Expands on the conversational use of American Sign Language (ASL) as a second language, including grammar, deaf culture, short stories, and narratives. Receptive and Expressive use of ASL at the conversational level.

3132. PSYCHOLOGY OF MULTICULTURALISM IN EDUCATION. (4 cr; A-F only)
Experientially based activities emphasizing prejudice reduction, empowerment of individuals in educational settings, implicit cultural assumptions, multicultural content in educational curricula, and influences on knowledge by racial, ethnic, and social class positions of individuals and groups.

3260. BASIC AND APPLIED STATISTICS. (4 cr)
Visual and quantitative methods for presenting and analyzing data; common descriptive indices for univariate and bivariate studies; introduction to inferential techniques.

3601. AMERICAN SIGN LANGUAGE IV. (5 cr; prereq 1603)
Conversational use of American Sign Language (ASL) and culturally significant topics relating to the deaf community, complex use of ASL, grammatical features, and vocabulary expansion. Comprehension and expression of jokes, dialogues, and stories.

3602. AMERICAN SIGN LANGUAGE V. (5 cr; prereq 3601)
Common conversational use of American Sign Language (ASL) and culturally significant topics relating to the deaf community. Idiomatic use of sign language in conversation and expansion of vocabulary. Comprehension and expression of common conversational topics and idiomatic expressions.

3603. CULTURAL PERSPECTIVES OF DEAFNESS. (3 cr; prereq 1603)
Introduction to the deaf community's social norms, values, and folklore. International integration of social, religious, athletic, literary, and scholarly institutions.

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 the 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. PSYCHOLOGY OF ADULT LEARNING. (4 cr, §PsyF 5183)
Survey of psychological methods and principles in human learning; models of the 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.

Course Descriptions

5117. PROBLEM SOLVING 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.

5119. LEARNING AND COGNITIVE FOUNDATIONS OF EDUCATION. (4 cr; prereq ed student; one prior course in psych recommended; A-F only)

Principles of development, learning, cognition, individual differences, classroom management, instructional delivery, and related topics and their applicability to instruction and the organization of curricular materials.

5130. PERSONALITY AND SOCIAL DEVELOPMENT. (3 cr, §PsyF 5162; prereq 5 cr intro psych)

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.

5139. INTERPERSONAL AND PERSONALITY EFFECTS ON LEARNING. (4 cr; prereq sr or init lic/MEd student or CLA music ed major or □, one psych course; A-F only)

Major theories and research on schooling as it relates to human relations, small groups, face-to-face relations, and individual personality and social development.

5150. SOCIAL PSYCHOLOGY OF EDUCATION. (3 cr, §PsyF 5170)

Concepts and theories applied to educational problems and settings; lab 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.

5154. ORGANIZATIONAL DEVELOPMENT AND CHANGE. (3 cr, §8151; prereq 5150 or PsyF 5170 or equiv)

Review of theory and research procedures and methods for changing organizations; special reference to educational organizations.

5155. GROUP DYNAMICS AND SHARED DECISION MAKING. (3 cr, §8152, §EdPa 5267, §PsyF 5170; 5150 recommended)

Review of theory and research on group dynamics. Lab experiences to make applications to and develop skills in leading small groups.

5200. SPECIAL TOPICS: PSYCHOLOGICAL FOUNDATIONS. (3-6 cr [max 9 cr])

Analysis of psychological and methodological concepts relevant to current educational practice.

5220. EDUCATIONAL MEASUREMENT IN THE CLASSROOM. (4 cr, §PsyF 5120)

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.

5221. BASIC PRINCIPLES OF MEASUREMENT. (3 cr, §PsyF 5121; prereq 5260 or 8260 or PsyF 5110 or 8110)

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.

5222. MODERN MEASUREMENT THEORY AND PRACTICE. (3 cr; prereq 5221, 8260, 8261 or equiv)

Introduction to practices such as item banking; test scoring equipment; and theories of test items analysis, reliability, and validity.

5229. CLASSROOM ASSESSMENT METHODS.

(2 cr; concurrent student participation in practice tchg or similar field exper recommended; A-F only)

Concepts and techniques necessary for effectively diagnosing learning problems and assessing educational outcomes. Emphasis on constructing teacher-made assessment devices that are efficient, technically sound, and directly relevant to classroom decision making.

5240. PRINCIPLES AND METHODS OF EVALUATION. (3 cr, §PsyF 5125)

Introductory course in program evaluation; theory; practical examples; purpose, roles, program descriptions, and evaluation strategies.

5243. PRACTICUM: SURVEY AND OBSERVATIONAL RESEARCH METHODS. (3 cr; prereq 5220 or 5221 or equiv)

Planning, development, implementation, analysis, and reporting of survey and observational methods including questionnaires, interviews, and various observational techniques.

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)

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 COMPUTING USING MINITAB. (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)

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.

5417. CLINICAL USE OF TESTS IN PSYCHOLOGICAL SERVICES. (3 cr; prereq 5260 or PsyF 5110 or Psy 3801, 5221, PsyF 5121 or Psy 5862 or #)

Psychological theories related to test interpretation and counseling process; critical review and selection of standardized tests.

5420. LEADERSHIP AND ADMINISTRATION OF STUDENT AFFAIRS. (3 cr, §8420, §EdPA 5420; S-N only)

Scope, administration, coordination, and evaluation of programs in college and university student affairs.

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)

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 psych or ed psych)

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.

5531. CAREER SKILLS. (2 cr; prereq CSPP students or #)

Part of career counseling sequence for counseling majors and coordinated with career development theories and field placement. Application of theories from 5431 plus practice through case studies, role plays, simulations, assessments.

5600. CHILDHOOD LANGUAGE DEVELOPMENT: CLASSROOM IMPLICATIONS. (3 cr, §PsyS 5100)

Recent trends and findings in study of language acquisition and communication; classroom implications including 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.

5602. COMPUTER TECHNOLOGY IN SPECIAL EDUCATION. (3 cr)

Research on applying computer technology to special education in light of learning theory, principles of effective instruction, and instructional needs of special education populations.

Course Descriptions

5604. TRANSITION FROM SCHOOL TO WORK AND COMMUNITY LIVING FOR PERSONS WITH SPECIAL NEEDS. (4 cr, §PsyS 5104)

Organization and design of training programs to promote independent living, vocational and community adjustment of persons with disabilities and other at-risk populations; curriculum materials, methods, and organizational strategies for adolescent and adult learners, families, and community service providers.

5605. LAW AND THE HANDICAPPED: IMPLICATIONS FOR EDUCATION. (2-4 cr, §EdPA 5223, §PsyS 5105)

Analysis of recent litigation and legislation; emphasis on implementation of right to education, right to treatment, labeling, due process, and related issues.

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)

Needs of families including 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. (3 cr; prereq 5612 or PsyS 5112)

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.

5621. METHODS AND MATERIALS FOR STUDENTS WITH MILD TO MODERATE MENTAL RETARDATION. (4 cr, §PsyS 5121; prereq 5601 or PsyS 5101 or equiv)

Curriculum content, materials, and methods of instruction for students with mental retardation; preparing instructional instruments leading to both individual and group teaching expertise.

5622. PROGRAMS AND CURRICULA FOR LEARNERS WITH MODERATE TO SEVERE DISABILITIES. (4 cr)

Elementary and secondary school program design and curricula for learners with severe handicaps. Emphasis on preparing children and youth for integrated, normalized community environments in domestic living, leisure, and vocational domains. Developmentally appropriate programming. Structured observation of learners with severe disabilities.

5624. BIOMEDICAL AND PHYSICAL ASPECTS OF DEVELOPMENTAL DISABILITIES (3 cr, §PsyS 5124)

Selected information in genetics; anatomy, physiology, and kinesiology; central and peripheral nervous system; prenatal, perinatal, and postnatal development; physically disabling conditions; and management and educational procedures.

5625. EDUCATION OF INFANTS AND PRESCHOOL CHILDREN WITH DEVELOPMENTAL DISABILITIES. (3 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 disabilities.

5626. INSTRUCTION FOR LEARNERS WITH SEVERE HANDICAPS. (4 cr; prereq 5116, 5622)

Data-based strategies for school and nonschool instruction including basic measurement principles; assessment, design, implementation, and evaluation of instruction; concept and task analysis; natural and instructional cues, corrections and consequences.

5635. EDUCATION OF STUDENTS WITH PHYSICAL DISABILITIES. (4 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 SENSORY IMPAIRMENTS. (3 cr; prereq 5601)

Characteristics of learners with visual and auditory impairments. Design of instructional programs to remediate or circumvent disabilities, including the use of prosthetic devices. Consideration of related areas of performance that may be affected by sensory impairments.

5640. PSYCHOLOGICAL, SOCIAL, AND EDUCATIONAL ASPECTS OF DEAFNESS. (3 cr, §PsyS 5140)

Historical and current societal perceptions of deaf individuals; analysis of effects and patterns of hearing loss in children and adults; intelligence, personal and social adjustment, effect of psychological processes on acquisition of language, speech, and speech-reading skills.

5641. MODELS OF SERVICE DELIVERY TO STUDENTS WITH HEARING LOSS. (3 cr, §PsyS 5141)

Programmatic systems of support for infants, children, and youth who are deaf or hard of hearing; educational delivery system models, curriculum and material adaptation, consultation skills.

5643. LANGUAGE FOR DEAF/HARD-OF-HEARING CHILDREN. (4 cr, §PsyS 5143; prereq 5640 or PsyS 5140)

Functional language development in communicatively disabled persons; overview of language curricula and programming strategies, pertinent research and models of instruction for use in educational environment.

5644. LANGUAGE PROGRAMMING FOR CHILDREN WITH HEARING LOSS. (3 cr, §PsyS 5144; prereq 5643 or PsyS 5143 or #)

Programs and practices focusing on development of language in deaf and hard-of-hearing infants, children, and youth; comparative study of language development of deaf/hard-of-hearing and hearing persons.

5646. READING AND INSTRUCTIONAL PRACTICES WITH DEAF/HARD-OF-HEARING STUDENTS. (4 cr)

Knowledge and skills required to assess, plan, and implement instruction for individuals with hearing loss. Emphasis on theoretical and programmatic issues in reading and writing skill acquisition, curricular adaptations, and effective instructional approaches.

5647. AURAL AND SPEECH PROGRAMMING FOR CHILDREN WITH HEARING LOSS. (4 cr, §PsyS 5147)

Fundamentals of speech and hearing mechanisms; survey of instructional practices, technology-based assistive devices to develop auditory and speech skills. Strategies to adapt classroom environments.

5648. MODES OF COMMUNICATION FOR PERSONS WITH DISABILITIES. (3 cr, §PsyS 5148)

Theoretical and applied study of selection and application of alternative communication modalities; assessing and developing modes, including gestures, speech reading, cued speech, sign language, form boards, and technology-based systems.

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.

5656. EDUCATIONAL NEEDS OF STUDENTS WITH EMOTIONAL DISTURBANCES OR BEHAVIORAL DISORDERS. (3 cr)

Preparation for specialists: educational characteristics, educational intervention, teaching of social behavior, legal and ethical issues.

5657. EDUCATIONAL INTERVENTIONS FOR STUDENTS WITH EMOTIONAL DISTURBANCES OR BEHAVIORAL DISORDERS. (3 cr; prereq 5656)

Preparation for specialists: assessment and planning procedures, interagency cooperation, career preparation and transition for EBD students.

5660. SUPERVISION AND ADMINISTRATION OF SPECIAL EDUCATION. (3 cr, §PsyS 5160, §EdPA 5103)

Procedures in establishing and improving educational programs for exceptional children.

5670. INTRODUCTION TO EDUCATION OF CHILDREN WITH VISUAL DISABILITIES. (3 cr, §PsyS 5170)

Educational programs, services, and resources for blind and partially seeing children; historical background; philosophy; sociological and psychological problems.

5671. LITERARY BRAILLE. (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. ADVANCED BRAILLE. (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 CHILDREN WITH VISUAL DISABILITIES. (4 cr, §PsyS 5173; prereq 5670 or PsyS 5170)

Principles of preparing, selecting, and effectively using instructional materials and adaptive devices; adaptation of school environment; use of family, school, and community resources.

5674. ORIENTATION AND MOBILITY TECHNIQUES FOR STUDENTS WITH VISUAL DISABILITIES. (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. EDUCATIONAL MANAGEMENT OF CHILDREN WITH VISUAL DISABILITIES. (3 cr; prereq 5675 or #)

Advanced course in 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 psych or ed psych or sociology)

Educational needs of children handicapped by behavior related to deficiencies of physical and/or cultural environment; adaptations of educational programs.

Course Descriptions

5681. METHODS AND MATERIALS FOR INFANTS AND PRESCHOOL CHILDREN WITH DEVELOPMENTAL DISABILITIES. (4 cr, §PsyS 5181; prereq 12 cr ed or #)

Methods, materials, and conceptual models for maximizing educational development of young children with all types of disabilities.

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 #)

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.

5703. PRACTICUM EXPERIENCE: SPECIAL EDUCATION. (Cr ar; prereq #)

Supervised experience in teaching or related work in schools or other agencies serving exceptional children.

5704. WORKSHOP: INTERVENTIONS AND PRACTICES IN EDUCATIONAL AND HUMAN SERVICE PROGRAMS. (Cr ar)

Concepts, issues, and practices; development of educational and psychological support services in school and human service settings. For practicing professionals.

5709. COGNITIVE AND SOCIAL IMPAIRMENTS OF LEARNERS WITH SEVERE HANDICAPS. (3 cr; prereq 5622)

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)

Survey of characteristics and service needs of persons with developmental disabilities using multidisciplinary approaches. Changing concepts, models of services, issues related to promoting self-determination, independence, productivity, and integration into the community.

5714. INTERAGENCY COOPERATION FOR AT-RISK POPULATIONS. (3 cr, §EdPA 5104, §VoEd 5806)

Overview of interagency planning issues and practices for educational and human service organizations. Topics focus on the transition of students from school to work and community living, infant and preschool services, and use of locally based planning teams to achieve enhanced service coordination.

5849. ASSESSMENT OF THE PRESCHOOL CHILD. (3 cr, §PsyS 5549; prereq statistics or measurement or grad course in assessment)

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.

5850. CREATING FAMILY-SCHOOL-COMMUNITY PARTNERSHIPS FOR EDUCATIONAL SUCCESS. (4 cr)

Interactive, television/distance education course on theoretical and empirical bases for creating family-school-community partnerships; essential partnership variables; partnership models, programs, and strategies for K-12.

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

8113. PSYCHOLOGY OF COMPREHENSION AND READING

8115. PSYCHOLOGY OF INSTRUCTION

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

8153. SOCIAL AND PSYCHOLOGICAL INFLUENCES ON INDIVIDUAL BEHAVIORS

8169. RESEARCH PROBLEMS: SOCIAL PSYCHOLOGY

8210. METHODS IN EDUCATIONAL RESEARCH

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. STATISTICAL COMPUTING USING SPSSX
8289. RESEARCH PROBLEMS: COMPUTER APPLICATIONS
8402. INDIVIDUAL COUNSELING: THEORY AND PROCEDURES
8403. SOCIAL/CULTURAL CONTEXTS OF COUNSELING: THEORY AND PROCEDURES
8404. GROUP COUNSELING: THEORY AND PROCEDURES
8410. SEMINAR: COUNSELING ETHICS AND PROFESSIONAL DEVELOPMENT
8411. SEMINAR: ADVANCED COUNSELING RESEARCH
8412. SEMINAR: ADVANCED COUNSELING THEORY
8431. MASTERS SEMINAR: COUNSELING AND STUDENT PERSONNEL PSYCHOLOGY
8435. INTEGRATIVE SEMINAR
8450. PSYCHOLOGICAL ASPECTS OF COUNSELING SUPERVISION
- 8502-8503-8504. COUNSELING PRACTICUM I, II, III
8505. 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
8603. SERVICES FOR PERSONS WITH DEVELOPMENTAL DISABILITIES: RESEARCH AND POLICY ANALYSIS
8612. CURRENT ISSUES IN LEARNING DISABILITIES
8620. PSYCHOLOGICAL THEORY AND RESEARCH IN MENTAL RETARDATION
8621. FUNCTIONAL ANALYSIS OF BEHAVIOR AND COGNITION IN PERSONS WITH MENTAL RETARDATION
8651. THEORIES OF EDUCATING DISTURBED CHILDREN
8652. RESEARCH IN EDUCATION OF DISTURBED CHILDREN
8677. SEMINAR: ISSUES AND RESEARCH IN VISUAL IMPAIRMENT
8702. SEMINAR: SPECIAL EDUCATION
8706. SINGLE-CASE DESIGNS FOR INTERVENTION RESEARCH
8725. SOCIOCULTURAL THEORY AND RESEARCH ON HANDICAPPING CONDITIONS
- 8760, 8761. SEMINAR: ADMINISTRATION OF SPECIAL EDUCATION
8770. INTERVENTION STRATEGIES FOR PERSONS WITH DEVELOPMENTAL DISABILITIES: INTERDISCIPLINARY PERSPECTIVES
8810. ASSESSMENT IN SCHOOL PSYCHOLOGY I
8811. ASSESSMENT IN SCHOOL PSYCHOLOGY II
8812. ASSESSMENT IN SCHOOL PSYCHOLOGY III
8813. ASSESSMENT PRACTICUM IN SCHOOL PSYCHOLOGY
8815. THEORIES AND METHODS OF INSTRUCTIONAL INTERVENTION
8816. SCHOOL CONSULTATION AND INTERVENTION PLANNING
8817. SCHOOL PSYCHOLOGICAL INTERVENTIONS: AFFECTIVE DOMAIN
8818. INTERVENTION PRACTICUM IN SCHOOL PSYCHOLOGY
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
8853. NEW APPROACHES TO PSYCHOPATHOLOGY IN CHILDREN AND ADOLESCENTS

8900. RESEARCH PROBLEMS

8905. LANDMARK ISSUES AND GREAT CONTROVERSIES IN EDUCATIONAL PSYCHOLOGY

8910. DIRECTED STUDY

Kinesiology and Leisure Studies

Activity courses in physical education are offered on successive levels in each of the following areas:

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. The S-N option is available for all PE courses numbered through 1499.

Students who do not attend the first and/or second 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.

All courses involve participation requiring a high energy expenditure and are to be considered intensive except bowling, golf, and posture and individual exercise, which involve a lower level of energy expenditure and are considered moderately intensive. 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)

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)

For the beginner including breathing, floating, treading water, elementary back stroke, side stroke, and front crawl.

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.

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 bout 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 bout 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.

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.

1044. SELF-DEFENSE. (1 cr)

Fundamental skills; development of basic techniques and values from active participation in physical activity.

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.

1053. ICE SKATING. (1 cr)

Basic techniques: forward stroking, backward stroking, stops and turns.

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.

1059. TRACK AND FIELD. (1 cr)

Fundamentals and strategy in sprint, distance, and field events.

1060. TUMBLING AND FLOOR EXERCISE. (1 cr)

Development of basic skills.

1067. BASKETBALL. (1 cr)

Fundamentals of offense and defense; elementary team play and game strategy.

1070. ICE HOCKEY. (1 cr; prereq 1053 or equiv)

Basic skills of goal tending, individual and team defensive and offensive techniques and conditioning.

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. INTERMEDIATE 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.

1136. INTERMEDIATE RACQUETBALL. (1 cr; prereq 1036 or equiv)

Advanced techniques and shots in context of game strategy.

1138. INTERMEDIATE TENNIS. (1 cr; prereq 1038 or equiv)

Improvement of basic skills, increased emphasis on single and doubles strategy and competitive play.

1154. FIGURE SKATING. (1 cr; prereq 1053 or equiv)

Emphasis on basic school figures.

1157. INTERMEDIATE SKIING. (1 cr; prereq 1057 or equiv)

Individual and small group instruction to develop advanced skills.

1160. INTERMEDIATE TUMBLING AND FLOOR EXERCISE. (1 cr; prereq 1060 or equiv)

Intermediate skills.

1174. INTERMEDIATE 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.

1306. LIFEGUARD TRAINING. (1 cr; prereq ability to swim 440 yds)

Focus on knowledge and skills necessary to save own life or life of another.

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 physical educ, Δ)

For the nonprofessional student who wishes to study a topic or problem under tutorial guidance.

Kinesiology (Kin)

Courses numbered above 1500 apply to undergraduate, licensure, and certification programs in kinesiology and are listed under kinesiology in the Class Schedule. All courses that can be applied to licensure programs in coaching, developmental/ adapted physical education, and physical education are designated with Physical Education Licensure (PEL). Students taking courses with a high level of energy expenditure should check with a personal physician if they are unsure of their capacity to perform the required activities.

1871. INTRODUCTION TO KINESIOLOGY. (3 cr)

Professional and disciplinary dimensions of studying physical activity; theoretical application to human movement.

Course Descriptions

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.

3001. LIFETIME FITNESS AND HEALTH. (4 cr; A-F only)

Overview of personal health, nutrition, weight control, stress management, and regular fitness habits that provide a base of action and knowledge for surviving the rigors of school and living a longer and healthier life.

3110. HUMAN ANATOMY. (3 cr) (PEL)

Emphasis on bones, nerves, and muscles and their significance in physical education.

3111. MECHANICS OF MOVEMENT. (3 cr; prereq CBN 1027) (PEL)

Structure of the body, principles and mechanics of bodily movements.

3112. FIRST RESPONDER FOR ATHLETIC COACHES AND ATHLETIC TRAINERS. (1-6 cr; A-F only) (PEL)

Nationally recognized First Responder curriculum tailored to meet needs of the injured amateur or professional athlete. Lecture and skills format focuses on preparing coach and/or trainer to recognize, initially stabilize, and transport injured athlete. Successful completion entitles participant to First Responder certification. Course includes AHA CPR training.

3114. PREVENTION AND CARE OF INJURIES. (3 cr; prereq 3110 or CBN 1027) (PEL)

Policies for conditioning athletes in interscholastic and intercollegiate sports; safety controls.

3115. PHYSIOLOGICAL APPLICATION TO SPORTS. (3 cr, §3385, §3386, §PubH 3385, §PubH 3386; prereq Phsl 3051 or #) (PEL)

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.

3131. HISTORY AND PHILOSOPHY OF KINESIOLOGY AND SPORT. (4 cr; prereq kinesiology major or #)

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) (PEL)

Principles, policies, and procedures involved in the coaching of interscholastic sports.

3144. ADMINISTRATION. (2 cr, §3120; prereq kinesiology major, sr) (PEL)

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; prereq kinesiology major or #)

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 #) (PEL)

Professional preparation emphasizing philosophies, skills, strategies, and responsibilities.

3170. BASEBALL COACHING. (2 cr) (PEL)

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) (PEL)

Techniques, styles of offense and defense, conditioning and handling of players.

3172. FOOTBALL COACHING. (2 cr) (PEL)

Techniques and orientation, strategy, generalship, styles of offense and defense, methods of organizing practices and handling players.

3174. GYMNASTICS COACHING. (2 cr) (PEL)

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) (PEL)

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) (PEL)

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) (PEL)

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 #) (PEL)

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) (PEL)

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.

3327. TEACHING PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL. (3 cr; prereq elem ed major) (PEL)

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 #) (PEL)

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) (PEL)

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.

3624. STUDENT TEACHING: COACHING. (3 cr; prereq Δ) (PEL)

Student coaching experience under the supervision of a mentor coach. Required of candidates for coaching licensure or minor.

3625. SUPERVISED PRACTICAL EXPERIENCE. (1-12 cr [max 12 cr]; 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. DEVELOPMENTAL/ADAPTED PHYSICAL EDUCATION. (3 cr) (PEL)

Physical education for students with disabilities, emphasizing administration, assessment, curriculum, history, legal mandates, and resources.

5101. PHYSICAL ACTIVITIES FOR PERSONS WITH DISABILITIES. (3 cr) (PEL)

Adaptation of physical activities for persons with disabilities, emphasizing application of current movement science research.

5102. PRACTICUM: DEVELOPMENTAL/ADAPTED PHYSICAL EDUCATION. (1-6 cr [max 6 cr]; prereq 5100, 5101 or #) (PEL)

Observation of and participation in physical education instruction for students with disabilities; includes seminar component for discussion of current issues in developmental/adapted physical education and exchange of ideas and problems.

5111. SPORT FACILITIES. (3 cr; meets with Rec 5111)

Overview of sports facilities, including steps involved in developing indoor multipurpose facilities for recreational sports, physical education, and intercollegiate athletics on campus and public and private facilities off campus.

5120. ADVANCED BIOMECHANICS. (4 cr; prereq biomechanics, 3111 or #) (PEL)

Principles of mechanics applied to human movement, analysis of motor skills, application to individual projects.

5121. CONTRIBUTIONS OF BASIC SCIENCE TO KINESIOLOGY. (3 cr)

Recent research in related physical sciences; applications in selected areas.

5122. APPLIED EXERCISE PHYSIOLOGY. (3 cr; prereq 3386 or equiv or #) (PEL)

Application of concepts in human physiology to exercise physiology, sports training, and physical activities with particular reference to respiratory and cardiovascular systems.

5124. HUMAN FACTORS PHYSIOLOGY. (3 cr)

In-depth view of concepts, problems, and issues associated with ergonomic improvements to the design and operation of human work space. Appraisal and evaluation of existing ergonomic tools and methodologies. Hands-on experience in critiquing and redesigning existing systems, principles necessary for designing more efficient future systems.

5126. PSYCHOLOGICAL AND SOCIOLOGICAL DIMENSIONS OF PHYSICAL ACTIVITY. (3 cr)

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.

5127. OBSERVATION AND ANALYSIS OF TEACHING PHYSICAL ACTIVITY. (3 cr; prereq PEL and coaching licensure student or sr kinesiology major or MA candidate or #; A-F only)

Developing skill in using observation and supervision tools to analyze teaching of physical activity.

5132. MOTOR DEVELOPMENT. (3 cr, §5131, §CPsy 5322; prereq 3132 or #) (PEL)

Developmental aspects of motor skill acquisition from birth to physical maturity.

5135. MOTOR LEARNING AND HUMAN PERFORMANCE. (3 cr, §5130; prereq 3113 or 3135 or #) (PEL)

Mechanisms of human motor skill learning; emphasis on theories of motor learning and control of movement, motor memory, and individual differences.

Course Descriptions

5136. PSYCHOLOGY OF COACHING. (3 cr) (PEL)

Physiological aspects of coaching at all age and skill levels, including leadership and communication skills, motivation, and mental skills training for performance enhancement.

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, PHYSICAL PERFORMANCE, AND HEALTH. (3 cr; §HEEd 5412; 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.

5151. CURRICULUM. (3 cr; prereq sr, 3322, 3323 or #) (PEL)

For students without previous experience in curriculum; objectives, content, organization, evaluation, and trends.

5152. CURRICULUM DEVELOPMENT. (3 cr; prereq 5151 or #) (PEL)

Trends, issues, and problems at selected levels of interest: elementary, secondary, junior college; for experienced teachers.

5170. FOUNDATIONS OF KINESIOLOGY. (3 cr; prereq grad or MEd student)

Establishing guidelines for individual and group professional action; examining pertinent social forces, educational philosophies, and general ethics.

5371. SOCIOLOGY OF SPORT. (4 cr, §Soc 5371)

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.

5375. COMPETITIVE SPORT FOR CHILDREN AND YOUTH. (3 cr)

Cognitive, behavioral, and biological factors affecting competitive sport participants from early childhood through high school. Emphasis on translating sport science research into practical applications for youth sport coaches, teachers, and administrators.

5380. COMPUTER APPLICATIONS IN KINESIOLOGY. (3 cr; prereq kinesiology major or #)

Potential uses of computers in testing and research; introduction of such topics as hardware selection, interfacing of computers and data acquisition devices, and management of data for analysis and presentation.

5385. EXERCISE FOR SPECIAL POPULATIONS.

(3-6 cr; prereq undergrad-level physiol or biol; A-F only) Problems associated with exercise for persons with various conditions or diseases such as arthritis, cancer, diabetes, mental disorders, obesity, old age, or paralysis. Recommended exercise prescriptions and potential benefits for special populations.

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.

5455. RECREATIONAL SPORTS. (3 cr, §Rec 5455)

Recreational sports programming and participation; in-depth view of recreational sports, its foundations programs, and operational considerations.

5460. FOUNDATIONS OF SPORT MANAGEMENT. (3 cr, §Rec 5460; prereq recreation or kinesiology major or #)

Principles of sport management and fitness, including theories and techniques in marketing, administration, and management of sport enterprises. Organizational theory and policy with practical examples of sport management skills and strategies.

5510. WOMEN IN SPORT AND LEISURE. (3 cr, §Rec 5510)

Examination of historical, cultural, philosophical, and socio-psychological factors that have shaped the growth and development of women's involvement in sport and leisure, as well as obstacles preventing further involvement.

5521. PEDAGOGY I: ELEMENTARY PHYSICAL EDUCATION I. (6 cr; prereq init lic/MEd student)

Class planning, structuring, communicating, and management; evaluating the role of the K-6 physical educator in diverse settings.

5522. PEDAGOGY II: SECONDARY PHYSICAL EDUCATION II. (6 cr; prereq init lic/MEd student)

Class planning, structuring, communicating, and management; evaluating the role of the grade 6-12 physical educator in diverse settings.

5530. BIOLOGICAL AND PHYSICAL FOUNDATIONS OF EDUCATION. (1-2 cr [enroll for 2 cr unless regis concurrently in 3132]; A-F only)

Overview of biological and physical development from birth through adulthood and relationship of biological and physical development to education.

5540. TECHNOLOGY IN SPORT AND PHYSICAL EDUCATION. (3 cr; prereq kinesiology student or #; A-F only)

Current technology including computer video used to develop materials for physical education and sports science.

5561. CLINICAL EXPERIENCE I: PHYSICAL EDUCATION. (6 cr; prereq 5521, 5522, admission to init lic/MEd physical ed program or #) (PEL)

Supervised observation and teaching in school physical education.

5562. CLINICAL EXPERIENCE II: PHYSICAL EDUCATION. (9 cr; prereq 5561, admission to init lic/MEd physical ed program or #) (PEL)

Supervised observation and teaching in school physical education.

5563. CLINICAL EXPERIENCE III: PHYSICAL EDUCATION. (9 cr; prereq 5562, admission to init lic/MEd physical ed program or #) (PEL)

Supervised teaching in school physical education.

5620. PRACTICUM: PREVENTION AND CARE OF ATHLETIC INJURIES. (3 cr; prereq CBN 1027 or equiv)

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.

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.

5860. LEGAL ASPECTS OF SPORT AND PHYSICAL ACTIVITY. (4 cr, §Rec 5860; prereq 3143 or Rec 3550 or 5460)

Survey of legal considerations involved in sport and physical activity programs in schools, colleges, and the private sector.

5980. RESEARCH METHODOLOGY. (3 cr, §Hlth 5980; prereq ed or grad student) (PEL)

Methods and design for research in health, kinesiology, and recreation.

5981. PROBLEMS. (Cr ar; prereq MEd candidate, #) (PEL)

Focus on teaching of physical education.

5983. READINGS: KINESIOLOGY. (Cr ar [max 9 cr] prereq ed or grad student)

Independent study under tutorial guidance.

5985. APPLICATION OF RESEARCH. (3 cr)

Professional research for practitioner; interrelationships of purpose, methods, findings, conclusions, and implications.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8126. SEMINAR: PSYCHOLOGICAL AND SOCIOLOGICAL DIMENSIONS OF PHYSICAL ACTIVITY

8128. PSYCHOLOGY OF SPORT

8132. SEMINAR: MOTOR DEVELOPMENT

8135. SEMINAR: MOTOR LEARNING AND HUMAN PERFORMANCE

8320. SEMINAR: BIOMECHANICS

8328. SEMINAR: HISTORY OF SPORT AND PHYSICAL EDUCATION

8381. LABORATORY RESEARCH TECHNIQUES

8382. BIOMECHANICS: RESEARCH TECHNIQUES

8607. COMPARATIVE PHYSICAL EDUCATION AND SPORT

8980. GRADUATE RESEARCH SEMINAR

8981. RESEARCH PROBLEMS

8985. SEMINAR: CONTEMPORARY PROBLEMS

Recreation, Park, and Leisure Studies (Rec)

1520. ORIENTATION TO LEISURE AND RECREATION. (4 cr)

History and development of the park and recreation movement; sociological, economical, psychological, and political considerations of leisure and recreation in contemporary societies; orientation to the professional field.

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.

3150. LEADERSHIP IN OUTDOOR RECREATION.

(3 cr)

Identity and scope of outdoor recreation programs.

3210. THERAPEUTIC INFORMATION FOR RECREATORS.

(3 cr; prereq Anat 1004 or Anat 1027, Phar 5210, Δ)

Survey of physical disability, limitations, treatment, and health serving agencies.

3530. RECREATION AND PARK AREAS AND FACILITIES.

(4 cr; prereq 1520, rec major or Δ) Basic principles of planning leisure facilities; effective application of standards in planning, design, and construction.

Course Descriptions

3540. RECREATION PROGRAMMING. (4 cr; prereq 1520, rec major or Δ)
Principles of program planning and leadership in all aspects of recreation.

3550. PARK AND RECREATION ADMINISTRATION. (4 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, rec major or minor, Δ)
Supervised experiences in selected agencies.

3900. DIRECTED STUDY. (3 cr [max 9 cr]; prereq rec majors only, Δ)
Self-directed study preceded by classroom study and possession of basic competence.

5100. FOUNDATIONS OF RECREATION. (3 cr, §8120; prereq MEd or adult special or grad student)
Investigation of the historical, sociological, and educational bases of the recreative use of leisure time in contemporary society.

5111. SPORTS FACILITIES. (3 cr; meets with Kin 5111; A-F only)
Planning of areas and facilities for athletics, physical education, and sport with emphasis on current trends and problems in the field.

5160. CONSERVATION OF PARK RESOURCES. (3 cr; prereq 1520 or 5100 or Δ)
Environmental considerations in relation to recreation and leisure services.

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.

5210. INTRODUCTION TO THERAPEUTIC RECREATION. (3 cr; prereq 1520 or 5100, rec 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 5210 or Δ)
Recreation services for the ill, disabled, and other special populations.

5230. RECREATION AND PERSONS WITH DEVELOPMENTAL DISABILITIES. (4 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 #, 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 AND PERSONS WITH DISABILITIES. (4 cr; prereq 1520, 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.

5288. GRANT WRITING IN HUMAN SERVICES. (4 cr; A-F only)
Learn to identify, develop, and procure financial assistance for human services programs, including education, recreation, and social programs. Strategies for preparing competitive proposals for grant support through federal agencies and private foundations, corporations.

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 PROGRAMMING. (4 cr; prereq 3150 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)

In-depth analysis of processes and benefits of recreational sports programming and participation.

5460. FOUNDATIONS OF SPORT MANAGEMENT. (3 cr, §Kin 5460; prereq recreation or kinesiology major or #)

Principles of sport management and fitness, including theories and techniques in marketing, administration, and management of sport enterprises. Organizational theory and policy with practical examples of sport management skills and strategies.

5510. WOMEN IN SPORT AND LEISURE. (3 cr)

Historical, cultural, philosophical, and socio-psychological factors that shaped the development of women's involvement in sport and leisure.

5630. PRACTICUM: THERAPEUTIC RECREATION. (3-9 cr; prereq rec MEd or grad student)

Supervised experiences in program operation; administrative and supervisory duties.

5640. PRACTICUM: LEISURE SERVICES. (3-9 cr; prereq rec MEd or grad student)

Supervised experiences in program operation; administrative and supervisory duties.

5695. PRACTICUM: SPORT MANAGEMENT. (3-9 cr, §PE 5695; prereq 5455)

Theory and application of principles in developing and managing sport 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.

5860. LEGAL ASPECTS OF SPORT AND PHYSICAL ACTIVITY. (4 cr, §Kin 5860; prereq 3550 or 5460 or Kin 3143)

Survey of legal considerations involved in sport and physical activity programs in schools, colleges, and the private sector.

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

8320. SEMINAR: THEORETICAL PERSPECTIVES OF LEISURE BEHAVIOR

8370. SEMINAR: ADMINISTRATIVE PROBLEMS IN THERAPEUTIC RECREATION

8380. SEMINAR: ADMINISTRATIVE PROBLEMS IN RECREATION AND PARKS

8980. RESEARCH PROBLEMS

8981. RESEARCH PROBLEMS

Music Education (MuEd)

Other 3xxx music education courses, including those in music therapy, can be found in the *CLA Bulletin*.

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, elem ed major)

For non-music majors; methods and materials in teaching singing, rhythm, music reading, creativity, classroom instruments, fundamentals, music appreciation in K-6.

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.

Course Descriptions

5217. HISTORICAL FOUNDATIONS OF MUSIC EDUCATION. (3 cr; prereq #)

Analysis and interpretation of important elements in modern music teaching derived from the past.

5313. INFLUENCE OF MUSIC ON YOUTH BEHAVIOR. (3 cr)

How music influences human behavior; effects of commercial styles on children and youth. Particularly appropriate for teachers and parents.

5603. TECHNIQUES AND MATERIALS: ORFF-SCHULWERK APPROACH. (3 cr)

Demonstration and class practice in teaching and performance skills; recorder; movement, improvisation, singing, and creating 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.

5606. MOVEMENT-BASED METHODS FOR MUSIC EDUCATION. (3 cr; prereq music or music ed major or #)

Participation in movement activities; study of Dalcroze philosophy and techniques; applications of movement to music education; examination of relevant research.

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.

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; selecting 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.

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.

5655. NEW DIMENSIONS IN MUSIC EDUCATION. (3 cr)

Study of contemporary music education through analysis of recent curricular trends and current issues.

5666. MICROCOMPUTERS IN THE MUSIC CLASSROOM. (3 cr)

Using microcomputers to enhance instruction; materials for theory, ear training, composition, electronic music; developing a database for music libraries, instrument inventories, budgets.

5667. COMPUTER-BASED MUSIC INSTRUCTION. (3 cr; prereq 5666 or #)

Designing, developing, and implementing computer applications for music classroom, emphasizing the Hypercard environment with interactive audio, video, and MIDI.

5668. COMPUTERIZED MUSIC NOTATION. (3 cr)

Fundamentals of music notation and printing using Macintosh computer, MIDI keyboards, and Finale software. Preparing instrumental and vocal scores, part extraction, and page layout.

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 focuses on a single topic.

5801. INFLUENCE OF MUSIC ON BEHAVIOR.

(4 cr; prereq music therapy major or grad with music therapy emphasis or #)

Methods and principles of the behavioral sciences as they relate to music therapy.

5802. PSYCHOLOGY OF MUSIC II. (4 cr; prereq 3801)

Elements of music and their psychological effects, music ability and its measurement, and research methods applied in psychology of music studies. Individual research project required for graduate credit.

5804. MUSIC IN THERAPY. (3 cr; prereq music ed or music therapy grad or #)

Survey of principles and methods related to public school, hospital, and other community mental health and education settings; observation and laboratory sessions.

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 ed or grad 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

8700. SEMINAR: ADVANCED TOPICS IN MUSIC EDUCATION/THERAPY

8880. MASTER'S RESEARCH PROJECT

8990. RESEARCH PROBLEMS

Vocational and Technical Education

Adult Education (AdEd)

5103. ADULT EDUCATION WORKSHOP. (1-12 cr [max 12 cr], §Ed 5103; prereq practicing adult educator or #)

Study of topic appropriate to the activities and interests of the participants.

5104. SURVEY OF ADULT EDUCATION. (3 cr, §Ed 5104; 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, §Ed 5110)

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.

5201. INTRODUCTION TO THE UNDEREDUCATED ADULT. (3 cr, §Ed 5201)

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, §Ed 5202; prereq #)

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, §Ed 5203; prereq CI 5410 or Elem 5331 or #)

Teaching literacy skills to adults: basic theories, approaches, overview of methods and materials for implementation.

5204. LITERACY IN WORK SETTINGS. (3 cr, §Ed 5204, §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.

5205. FIELD EXPERIENCE IN ADULT EDUCATION. (4-8 cr [max 8 cr], §Ed 5205; prereq #)

Supervised fieldwork practice and seminars; presentations and evaluations of adult education practice.

5301. DESIGNING THE ADULT EDUCATION PROGRAM. (3 cr, §Ed 5301)

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, §Ed 5401)

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, §Ed 5411)

Identification, classification, and analysis of techniques used in teaching adults.

5421. DISTANCE EDUCATION. (3 cr)

Concept, theories, history, delivery systems, and present practices. Emphasis on practice in United States, but topics explored from international perspective.

5440. MULTIDISCIPLINARY PERSPECTIVES ON AGING. (4 cr, §CPsy 5305, §Ed 5440, §HSU 5009, §PA 5514, §SAHP 5009, §Soc 5960, §SW 5024)

Multidisciplinary introduction to aging and the aging process.

5501. CONTINUING EDUCATION AND THE PROFESSIONS. (3 cr, §Ed 5501)

Review of literature; analysis of philosophies, issues, and trends; emphasis on integrating personal growth, professional needs, and statutory requirements in continuing education programs.

5603. INTERNATIONAL EDUCATION AND DEVELOPMENT. (3 cr, §EdPA 5603)

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, §EdPA 5605)

Empirical research conducted in developing societies relating formal and nonformal education to national development in social, cultural, political, and economic sectors.

Course Descriptions

5607. APPLIED INTERNATIONAL DEVELOPMENT EDUCATION. (3 cr, §EdPA 5607)

Educational innovations 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, §Ed 5901)

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*)

8100. RESEARCH IN ADULT EDUCATION

8302. PROBLEMS: ADULT EDUCATION

8603. SEMINAR: INTERNATIONAL DEVELOPMENT EDUCATION

8605. PROBLEMS: INTERNATIONAL EDUCATION RESEARCH

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.

1002. PRINCIPLES OF CAREER PLANNING IN AGRICULTURE. (1 cr)

Self-assessment and analysis of interests, skills, abilities, values, and life goals. Analysis of various agricultural occupations, employment potential, and demands in relation to employee expectations for work. Industries will be examined using information interviews.

1003. PERSONAL AGRICULTURE CAREER PLANNING. (1 cr; prereq 1002)

Develop personal career plans based on an individual assessment of 14 learner objectives plus various aptitude, value, and personality trait inventories. Individual plans will reflect information obtained in interviews with firms about various occupations.

1042. CURRENT TECHNICAL COMPETENCIES. (3 cr)

Preparing mechanical/technical/technology teachers. Basic competencies in skills and knowledge used in planning, implementing, operating, and maintaining structural and mechanical systems. Experiential learning principles, applied problem solving, observation, practice.

3001. EXPERIENTIAL LEARNING: PRODUCTION AGRICULTURE. (1-14 cr [max 14 cr]; prereq #; S-N only)

Experiential learning in a production agriculture business. Planned, organized, monitored, and evaluated based on a pre-experience diagnosis of learning prerequisite to higher level courses in technical agriculture.

3002. EXPERIENTIAL LEARNING: AGRICULTURAL BUSINESS. (1-14 cr [max 14 cr]; prereq #; S-N only)

Experiential learning in an agricultural non-farm business. Planned, organized, monitored, and evaluated based on a pre-experience diagnosis of learning required to meet competency expectations for persons employed in agricultural businesses.

3029. DIRECTED EXPERIENCE IN AGRICULTURAL EDUCATION. (1-3 cr)

Observation of the activities of teachers of agriculture; familiarization with the staff, the curriculum, and the physical facilities and equipment in a department of vocational agriculture with opportunity to participate in the functions of a teacher.

3041. PRACTICUM: AGRICULTURAL EDUCATION TECHNOLOGY. (1-3 cr [may be repeated for max 5 cr])

Individualized study packages of one credit each of technology in agriculture, horticulture, off-farm agriculture, agricultural mechanics, adult and beginning farmer programs, youth organizations, program evaluation, and visual aids.

5000. PROFESSIONAL EXPERIENCE PROGRAM.

(4 cr; prereq #; S-N only; not for grad cr; CEE only) Professional experience in agribusiness firms or government agencies gained through supervised practical experience; evaluative reports and consultations with faculty advisers and employers.

5010. RURAL LEADERSHIP DEVELOPMENT.

(3 cr, §1010) Understanding role, function, and unique features of leaders in rural communities; importance of personal involvement in leadership roles; personal leadership and vision development for individuals and rural community groups.

5021. EDUCATION THROUGH EXTENSION METHODS. (3 cr; prereq grad or #)

Methods and techniques of formal and informal education used by Extension Service and other organizations.

5023. EXTENSION METHODS FOR DEVELOPING COUNTRIES. (3 cr)

Role, training, organization, and techniques of production specialists for agricultural production.

5024. EXTENSION HISTORY AND PHILOSOPHY. (3 cr)

Origin, philosophy, historical development, objectives, and organizational structure of the Extension Service.

5025. EXTENSION PROGRAM DEVELOPMENT. (3 cr)

Planning, implementing, and evaluating the program development process.

5026. EXTENSION ADMINISTRATION. (3 cr; prereq #)

Administration of the Extension Service organization at the county, area, and state levels.

5027. PRACTICUM: EXTENSION EXPERIENCES. (2-9 cr [max 9 cr])

Observation of and participation in activities of Extension Service staff at county and state levels; familiarization with staffing, program planning and development, and educational and administrative functions.

5028. TEACHING METHODS IN AGRICULTURAL EDUCATION. (5 cr)

Methods used 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 ed)

Philosophy, organization, and administration of instruction in agriculture departments in secondary schools.

5034. PROCEDURES IN TEACHING AGRICULTURE. (3 cr)

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 vocational-technical 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. (3 cr; prereq 6 cr in ag and applied econ, AgEd 5010 or #)

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; development of continuing programs.

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 use of curriculum materials based on farm business record data.

5055. METHODS IN FARMING SYSTEMS RESEARCH AND EXTENSION. (3 cr, §HEEd 5055, §Agro 5055)

Methodology for integrating research and extension programs designed to identify and solve farm family system problems using interdisciplinary and holistic approaches.

5056. APPLICATION OF FARMING SYSTEMS RESEARCH AND EXTENSION. (3 cr; prereq 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.

5078. FFA ORGANIZATION AND MANAGEMENT. (2 cr)

Development of FFA (vocational agribusiness education student organization) knowledge and organization; integration of activities into the curriculum; management of chapter operations.

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.

Course Descriptions

5082. CURRENT ISSUES IN AGRICULTURAL EDUCATION. (1-3 cr [max 9 cr]; prereq #)

Emphasizes study and clarification of current issues, strategies of response, implications of response actions, and related leadership roles.

5087. MENTORSHIP FOR BEGINNING

AGRICULTURE TEACHERS. (6 cr at 2 cr per qtr, continuous regis required in 3 consecutive qtrs; prereq less than 2 yrs exper as ag tchr, ¶5081, #)

One year program of professional development during the induction year of teaching agriculture in the public schools. Emphasis on solving problems, dealing with issues and concerns of new teacher, and making a smooth transition into the teaching profession.

5088. MENTORING BEGINNING AGRICULTURE TEACHERS. (3 cr; prereq #)

Professional development training for experienced teachers who serve as mentors for beginning teachers of vocational agriculture. Emphasis on dealing with problems, concerns, and issues of teachers during their critical period of induction into the teaching profession in applied settings.

5090. INDEPENDENT STUDY. (1-3 cr; prereq sr or #)

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. INTEGRATING PAPER: MASTER OF

EDUCATION. (3 cr; prereq MEd ag ed student)
Preparing a paper dealing with students in agricultural education applied to professional responsibilities.

5128. METHODS OF TEACHING. (3 cr; prereq non-ag ed major 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-ag ed major or #)

Methods and procedures in planning a curriculum to teach within a specific subject matter area; curriculum construction for use in native country setting.

5244. TOPICS IN PROGRAM PLANNING FOR EXTENSION EDUCATION. (1-6 cr [max 9 cr])

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])

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])

Teaching techniques involving media, telecommunications, computers, group process methods, experiential learning in extension education settings.

5247. TOPICS IN EVALUATING EXTENSION EDUCATION. (1-6 cr [max 9 cr])

Overall evaluation design; issues in choosing quantitative vs. 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 Industry Education (BIE)

(formerly *Business and Marketing Education and Industrial Education*)

1100. TECHNICAL DRAWING. (3 cr)

Overview of technical drawing principles and applications of business and industry; laboratory experience in mechanical and PC-CAD production of working drawings.

1101. TECHNICAL DESIGN AND PRODUCT DEVELOPMENT. (3 cr)

Introduction to principles and concepts of industrial research and development; laboratory experience in technical illustration, design methodology, and product development; environmental, societal, and entrepreneurial issues.

1110. INTRODUCTION TO PRODUCTION SYSTEMS. (4 cr)

Introduction to principles, methods, materials, and processes of industrial production. Laboratory experience in producing, processing, and testing industrial materials and products.

1120. COMMUNICATION TECHNOLOGY. (3 cr)

Instruction and laboratory experience in communication technology, including photography, video, wire communication, recording and storage systems, printing, and computer applications to communication.

1122. PHOTOGRAPHY. (3 cr; A-F only)

Study and application of basic photographic principles relating to black and white or color photography.

1130. PRINCIPLES OF ENERGY AND POWER. (4 cr)

Instruction and laboratory investigations in fundamentals of mechanical, fluid, and electrical power.

1300. INTRODUCTION TO INDUSTRIAL EDUCATION TEACHING. (2 cr; for fr and those contemplating the major)

Objectives, programs, and teaching career options of industrial education.

1301. INTRODUCTION TO VOCATIONAL-TECHNICAL TEACHING. (3 cr; A-F only)
Techniques for the occupationally certifiable individual who plans to enter the field of vocational teaching; required for initial state vocational licensure.

1302. SUPERVISED VOCATIONAL-TECHNICAL TEACHING. (3 cr; prereq #; A-F only)
Supervised teaching on the job for beginning teachers.

3058. OFFICE MANAGEMENT TECHNIQUES AND TECHNOLOGY. (3 cr, §5158)
Present and future management principles, financial management, personnel, communications, systems, and environment.

3059. WORD/INFORMATION PROCESSING CONCEPTS AND MANAGEMENT. (3 cr, §5159)
Personnel and organization in industry; input and output hardware; implementing word processing systems.

3060. PROFESSIONAL SALES MANAGEMENT. (3 cr, §5260)
Higher-order selling competencies reflecting client-centered and problem-solving abilities.

3061. RECORDS MANAGEMENT. (3 cr, §5161)
Managing business records; examining business records creation, maintenance, protection, and disposition.

3111. MANUFACTURING. (3 cr; prereq 1110)
Manufacturing concepts, principles, and applications. Instruction and laboratory experience in automated manufacturing, including computer-integrated manufacturing and robotics. Design, operation, and management of manufacturing systems and products.

3112. CONSTRUCTION. (3 cr; prereq 1110)
Introduction to principles, concepts, and techniques in civil, commercial, and residential construction. Laboratory experience in planning, designing, organizing, producing, and testing structures.

3121. GRAPHIC COMMUNICATION. (3 cr)
Instruction and laboratory experience surveying graphic communication/printing technology, including layout and design, typography, process camera, halftones, four-color process, computer graphics, electronic publishing, and image transfer via offset lithography and screen printing.

3131. INDUSTRIAL POWER SYSTEMS. (3 cr; prereq 1130)
Instruction in and laboratory investigation of applying and controlling mechanical, fluid, and electrical power in commercial and industrial settings.

3132. INDUSTRIAL ELECTRONICS. (3 cr; prereq 1130)
Instruction in and laboratory investigation of electronics as found in residential, commercial, and industrial settings.

3140. TRANSPORTATION SYSTEMS. (3 cr)
Instruction in and laboratory investigation of transporting people, material, and energy.

3150. TECHNICAL DEVELOPMENT: ADVANCED. (1-12 per regis [max 18 cr]; prereq #; A-F only)
Individualized advanced technical development in construction, communication technology, manufacturing, power and energy, and transportation.

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.

3900, 3901. INDEPENDENT STUDY. (3 cr per qtr, prereq #)
Self-directed study preceded by classroom instruction in basic research procedures.

5002. TEACHING PROMOTION DISPLAY. (3 cr)
Materials and methods; practice in using equipment.

5010. INTRODUCTION TO MICROCOMPUTER APPLICATIONS IN BUSINESS AND INDUSTRY EDUCATION. (3 cr; A-F only)
Instructional uses of microcomputers; representative business and marketing education applications, including word processing, databases, spreadsheets, and graphics.

5015. ADVANCED WORD PROCESSING PRACTICUM. (3 cr)
Completion of projects using advanced editing and printing capabilities.

5020. SPREADSHEET ANALYSIS USING MICROCOMPUTERS IN BUSINESS AND INDUSTRY EDUCATION. (3 cr; prereq 5010 or equiv; A-F only)
Using spreadsheet software; instructional applications in business areas.

5025. TEACHING MICROCOMPUTER BUSINESS GRAPHICS. (3 cr; prereq 5010 or equiv; A-F only)
Representative microcomputer-based business graphics software packages; use for making instructional presentations; use of simulated projects to teach applications in business and industry classrooms.

5030. DATABASE MICROCOMPUTER APPLICATIONS. (3 cr; prereq 5010 or equiv)
Using database software; instructional applications in business areas.

5035. TEACHING DESKTOP PUBLISHING. (3 cr; prereq 5010 or equiv)
Strategies for teaching page layout and design, creating text and graphics, merging files, printing, and equipment and software requirements.

5040. INTEGRATED MICROCOMPUTER APPLICATIONS IN BUSINESS AND INDUSTRY EDUCATION. (3 cr; prereq 5010, 5015, 5020, 5025, 5030 or equiv; A-F only)
Advanced business and industry computer applications integrating business and word processing, spreadsheets, business graphics, and database software.

5080. SPECIAL TOPICS IN TECHNICAL UPDATING. (1-6 cr)
Technological and procedural changes in business content. Topics vary with each offering.

Course Descriptions

5113. SPECIAL TOPICS IN MANUFACTURING.

(1-6 cr; A-F only)

Topic not covered by available courses.

5123. SPECIAL TOPICS IN COMMUNICATION.

(1-6 cr; A-F only)

Topic not covered by available courses.

5133. SPECIAL TOPICS IN POWER AND ENERGY.

(1-6 cr; A-F only)

Topic not covered by available courses.

5143. SPECIAL TOPICS IN TRANSPORTATION.

(1-6 cr; A-F only)

Topic not covered by available courses.

5150. TECHNICAL DEVELOPMENT: SPECIALIZED. (1-12 cr [max 18 cr]; prereq #; A-F only)

Integrating specialized technical instruction in advanced and emerging areas into industrial education courses.

5253. SUPERVISORY TRAINING. (3 cr, §HRD 5253;

prereq VoEd 5340 or equiv)

Problems, practices, programs, issues, and methodologies related to preparing supervisor trainers in business, office, and marketing occupations.

5261. SALES TRAINING. (3 cr, §HRD 5261)

Strategies and techniques useful in developing effective sales people.

5262. CUSTOMER SERVICE TRAINING. (3 cr, §HRD 5262)

Overview of customer service strategies used by successful organizations and training practices used to develop customer-oriented personnel.

5300. ORGANIZATIONAL NEEDS ASSESSMENT.

(3 cr; prereq CI 5336 or CIsy 5201, HRD 5750 or Ind 5330; A-F only)

Identification of organizational performance problems, problem causes, and recommended training solutions and other interventions to improve performance in business, industry, and schools.

5301. STUDENT AND TRAINEE EVALUATION SYSTEMS. (3 cr, §HRD 5301; A-F only)

Test development, performance and learning evaluation, affective evaluation, learning progress reporting systems.

5303. INSTRUCTIONAL AIDS. (3 cr; prereq ed or grad student)

Planning, construction, use.

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.

5325. FOUNDATIONS OF INDUSTRIAL EDUCATION. (3 cr)

History, objectives, development, and current practices of the field.

5344. FACILITIES AND MANAGEMENT. (3 cr;

prereq 1300 or 5630 or #)

Planning, evaluating, and managing industrial education shop and lab facilities.

5365. CURRICULUM DEVELOPMENT IN TECHNOLOGY EDUCATION. (4 cr)

The nature of technical knowledge. Differing conceptions of technology. The structure of thinking in science and technology. Alternative ways of conceptualizing, developing, delivering, and managing technology curricula.

5366. MANAGEMENT TRAINING AND DEVELOPMENT PRACTICES. (4 cr, §HRD 5366; prereq 5750, principles of management or supervision course or #)

Problems, practices, programs, and methodologies related to training and developing managers, including needs assessment, delivery modes, and evaluation. Site visits and critiques.

5400. INTRODUCTION TO BUSINESS AND MARKETING EDUCATION. (4 cr)

Conceptual models of marketing and business education useful in designing and delivering programs in secondary and postsecondary schools, adult education settings, and business and industry.

5440. BUSINESS OBSERVATION AND SEMINAR. (3-9 cr)

Current operating practices and career opportunities in business and industry combining planned experiences in work environments and related seminars.

5451. RESEARCH AND METHODS IN TEACHING TYPEWRITING/KEYBOARDING. (3 cr)

Applying research findings to classroom methodology and materials development.

5452. RESEARCH AND METHODS IN TEACHING THE BASIC BUSINESS SUBJECTS. (3 cr)

Applying research findings to classroom methodology in general business, economics, introduction to business, business law, and consumer education.

5453. CONSUMER EDUCATION: CURRICULUM, METHODS, AND MATERIALS. (3-4 cr, §FE 5153, §HEEd 5153)

Objectives, content, curricular organization, teaching methods, materials, and evaluation methods for the elementary, secondary, postsecondary, and adult levels.

5457. MATERIALS AND METHODS IN OFFICE EDUCATION. (3 cr)

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. Implementing word processing systems.

5462. RESEARCH AND METHODS IN TEACHING ACCOUNTING AND DATA PROCESSING. (4 cr, §5150, §5350)

Applying current research findings to teaching methodology and curriculum and materials development; computerized accounting applications.

5463. TEACHING KEYBOARDING AND WORD PROCESSING IN ELEMENTARY AND MIDDLE SCHOOLS. (3 cr)

Implementing computer keyboarding and word processing in elementary and middle schools. Effective teaching strategies; expected learner outcomes; evaluation methods; criteria for selecting hardware and software; managing and organizing computer labs.

5470. ORGANIZATION AND ADMINISTRATION OF BUSINESS AND INDUSTRY EDUCATION. (4 cr)

Organization and administrative structure in the United States; objectives, programs, practices, teacher selection and supervision, evaluative criteria for business and industry education departments.

5475. INSTRUCTIONAL MATERIALS LABORATORY FOR NONMAJORS. (3-6-9 cr; prereq tchg exper or #)

For students needing manipulative skills and using craftwork activities in their teaching; individual and group projects.

5480. INSTRUCTIONAL MATERIALS LABORATORY. (3-6-9 cr; prereq major, tchg exper or #)

Lab and shop experiences with new materials, processes, and equipment; development of complementary instructional materials.

5485. BUSINESS AND INDUSTRY EDUCATION WORKSHOP. (1-6 cr; prereq tchg exper, #; A-F only)

Areas of concentration vary with each offering.

5490. SPECIAL TOPICS IN INSTRUCTION. (1-6 cr)

Planning and providing content, evaluating instruction. Topics vary with each offering.

5495. SPECIAL TOPICS IN CURRICULUM. (1-6 cr)

Content development and evaluation of curriculum and curriculum materials. Topics vary with each offering.

5500. OCCUPATIONAL EXPERIENCE. (1-5 cr [max 15 cr]; prereq adviser approval; S-N only)

Observation and employment in business and industry focused on developing technical or occupational competencies; 100 clock hours of supervised work experience per credit.

5510. INTERNSHIP: BUSINESS AND INDUSTRY EDUCATION. (1-12 cr [max 12 cr]; S-N only)

Practical experience in a business or industry professional educator or supervisory role, culminating in an integrative paper.

5512. CLINICAL EXPERIENCE: THE SCHOOL SETTING. (4 cr; prereq init lic/MEd student or #; S-N only)

Examination of and experience with the school as a social-political setting; the role of vocational education in the school, the relation between adolescent development and curriculum, and the patterns of organizational and interpersonal communication within the school.

5514. CLINICAL EXPERIENCE: TEACHING. (4-8-12 cr; prereq 5512 or #; S-N only)

Teaching experience in a public school setting.

5605. CRITICAL ISSUES. (3 cr; prereq ed major or grad; A-F only)

Identification, analysis, and discussion of major current problems in the field.

5630. COURSE DEVELOPMENT. (3 cr; A-F only)

Identifying content, stating objectives, sequencing, planning lessons, and selecting methods and media for instruction.

5660. INSTRUCTIONAL METHODS. (3 cr)

Implementing instructional strategies and methods.

5700. FIELD-BASED PROJECTS. (1-6 cr [max 12 cr], prereq #; S-N only)

Curricular, instructional, developmental, or evaluative problems and projects applicable to local school or business and industry situations.

5752. TECHNICAL SKILLS TRAINING. (4 cr, \$HRD 5752; prereq HRD 5750 or #; A-F only)

Systems and process analysis and troubleshooting work behavior; design methods and developing training materials.

5900. DIRECTED STUDY. (1-6 cr [max 12 cr]; prereq #; S-N only)

In-depth individual learning or supplementation of areas not covered by regular courses.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8300. LITERATURE OF BUSINESS AND INDUSTRY EDUCATION

8700. RESEARCH SEMINAR

8900. RESEARCH PROBLEMS: BUSINESS AND INDUSTRY

Family Education (FE)

(formerly *Home Economics Education*)

3910. EDUCATIONAL METHODS FOR FAMILY EDUCATORS. (3 cr)

For professionals whose work includes educating people about families. Skills necessary to organize, implement, and evaluate presentations and programs for groups.

5001. SPECIAL TOPICS. (1-6 cr)

Study of topic not covered by available courses.

5002. THINKING, LEARNING, AND TEACHING IN WORK, FAMILY, AND COMMUNITY. (3 cr; A-F only)

Theory and practice relevant to stimulating and supporting thinking and learning within contexts of work, family, and community.

5003. INTERNSHIP: COMMUNITY/WORK SETTINGS. (3-12 cr [max 12 cr]; prereq #; max 3 credits applied to MEd and MA programs)

Planned work experience focusing on educational competencies in these settings; students assume defined responsibilities of the position.

Course Descriptions

5021. EDUCATION THROUGH EXTENSION

METHODS. (3 cr; prereq grad or #)
Methods and techniques of formal and informal education used by Extension Service and other organizations.

5023. EXTENSION METHODS FOR DEVELOPING COUNTRIES. (3 cr)

Extension methods to promote the rapid adoption of improved practices.

5024. EXTENSION HISTORY AND PHILOSOPHY.

(3 cr)
Origin, philosophy, historical development, objectives, and organizational structure of the Extension Service.

5025. EXTENSION PROGRAM DEVELOPMENT.

(3 cr)
Planning, implementing, and evaluating the program development process.

5026. EXTENSION ADMINISTRATION. (3 cr; 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])

Observation of and participation in activities of Extension Service staff at county and state levels; familiarization with staffing, program planning and development, and educational and administrative functions.

5153. CONSUMER EDUCATION: CURRICULUM, METHODS, AND MATERIALS. (3-4 cr, §BIE 5453, §BME 5153, §CI 5453)

Objectives, content, curriculum organization, teaching methods, materials, and evaluation methods for the elementary, secondary, postsecondary, and adult levels.

5244. TOPICS IN PROGRAM PLANNING FOR EXTENSION EDUCATION. (1-6 cr [max 9 cr])

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])

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])

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])

Overall evaluation design; issues in choosing quantitative vs. qualitative evaluation methods; developing skills and conceptual frameworks to apply theory to extension settings.

5300. FAMILY EDUCATION CURRICULUM. (3 cr)

Research and theory; developing programs for all ages, and evaluation of materials.

5310. METHODS OF TEACHING FAMILY EDUCATION. (3 cr)

Theory and relevant research; application to educational objectives, strategies, student needs, and program evaluation.

5315. EVALUATION IN FAMILY EDUCATION. (3 cr)

Collecting and interpreting evidence related to individual and program performance.

5320. ADULT EDUCATION IN FAMILY EDUCATION. (3 cr)

Planning a community program; teaching procedures; special problems.

5321. INTERNATIONAL PERSPECTIVES IN FAMILY EDUCATION. (3 cr)

Family education around the world; commonalities and differences in purpose, problems, history, methods of delivery, and context.

5404. INTRODUCTION TO EARLY CHILDHOOD FAMILY EDUCATION PROGRAM. (1 cr)

History, philosophy, and implementation of programs.

5405. CHILD DEVELOPMENT AND PARENT EDUCATION. (4 cr)

Objectives, content, curriculum, methods, organization, materials, and evaluation for teaching diverse groups about social, cultural, psychological, economic, and technical aspects of child development, parenting, and parent-child interaction.

5406. SPECIAL TOPICS IN PARENT AND FAMILY EDUCATION. (1-6 cr)

Study of issues and current literature focused on emerging topics relevant to parent and family education.

5407. FAMILY EDUCATION. (3 cr; A-F only)

Objectives, content, curriculum methods, materials, and evaluation for teaching diverse groups about family life.

5408. EDUCATION FOR WORK-FAMILY RELATIONSHIPS. (3 cr; A-F only)

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.

5416. PARENT EDUCATION: ADVANCED. (3 cr; prereq 5405 or #; A-F only)

Evolving perspectives of parent education: psychodynamic, conceptual change approaches; reflective and dialogic approaches for working with parents in understanding beliefs and examining their origins and consequences; issues related to diversity, self-awareness, and professional ethics.

5500. PROSEMINAR: FAMILY EDUCATION. (2 cr; required of all new grads)

Relation of the processes and standards of rational thought to professional competence and the goals of a graduate program of study.

5510. HISTORY, PHILOSOPHY, AND PROFESSIONAL PRACTICE OF FAMILY EDUCATION. (3 cr; prereq init lic/MEd family ed student or #)

Critical analysis of family education and the teaching of family education; identification of practical problems encountered by families; development of a personal orientation toward becoming a family education teacher.

5511. FAMILY EDUCATION INSTRUCTION IN SECONDARY SCHOOLS. (5 cr; prereq 5510; A-F only)

Examination of curriculum perspectives and development of curriculum, instructional methods, and student evaluation for family education in secondary schools.

5512. CLINICAL EXPERIENCE: THE SCHOOL SETTING. (4 cr, §Ind 5512; prereq init lic/MEd student or #)

Examination of and experience with the school as a social-political setting, the role of vocational education in the school, the relation between adolescent development and curriculum, and the patterns of organizational and interpersonal communication within the school.

5513. CLINICAL EXPERIENCE: EDUCATIONAL PRACTICE. (4 cr, §Ind 5512; prereq init lic/MEd student or #)

Development of curriculum and instructional materials for school classrooms and laboratories and the conducting of research in school settings.

5514. CLINICAL EXPERIENCE: TEACHING. (12 cr, §Ind 5512; prereq 5512, init lic/MEd student)

Teaching experience in a public school setting.

5600. PRACTICUM: ADULT EDUCATION. (1-9 cr; prereq 5320 or AdEd 5411, #)

Individual field assignments under supervision.

5900. INDEPENDENT STUDY IN FAMILY EDUCATION. (1-3 cr; [max 12 cr]; prereq #)

Self-directed study with faculty advice, as needed, in areas not covered by regular courses.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8520. SEMINAR: HISTORY AND PHILOSOPHY OF FAMILY EDUCATION

8530. SEMINAR: FAMILY EDUCATION

8900. PROBLEMS: FAMILY EDUCATION

Human Resource Development (HRD)

(formerly *Training and Development*)

5253. SUPERVISORY TRAINING. (3 cr, §BIE 5253; prereq VoEd 5340 or equiv)

Problems, practices, programs, issues, and methodologies related to preparing supervisor trainers in business, office, and marketing occupations.

5261. SALES TRAINING. (3 cr, §BIE 5261)

Strategies and techniques useful in developing effective sales people.

5262. CUSTOMER SERVICE TRAINING. (3 cr; §BIE 5262)

Overview of customer service strategies used by successful organizations and training practices used to develop customer-oriented personnel.

5301. STUDENT AND TRAINEE EVALUATION SYSTEMS. (3 cr, §BIE 5301; A-F only)

Test development, performance and learning evaluation, affective evaluation, learning progress reporting systems.

5366. MANAGEMENT TRAINING AND DEVELOPMENT PRACTICES. (4 cr, §BIE 5366; prereq 5750, principles of management or supervision course or #)

Problems, practices, programs, and methodologies related to training and developing managers, including needs assessment, delivery modes, and evaluation. Site visits and circuits.

5660. INSTRUCTIONAL METHODS. (3 cr, §BIE 5660)

Implementing instructional strategies and methods.

5750. TRAINING IN INDUSTRY AND BUSINESS. (3-4 cr; A-F only)

Appraisal of training function in industry and business; advancement of competencies in analysis, design, development, delivery, and evaluation of training.

5751. MOTIVATIONAL TRAINING PRACTICES. (3 cr; prereq 5750 or #)

Assessing need for, planning, developing, delivering, and appraising results of motivational training and development that involve motivational theory, principles, and practices.

5752. TECHNICAL SKILLS TRAINING. (4 cr, §BIE 5752; prereq 5750 or #; A-F only)

Systems and process analysis and troubleshooting work behavior; design methods and developing training materials.

5760. ORGANIZATIONAL DEVELOPMENT IN INDUSTRY AND BUSINESS. (3-4 cr; A-F only)

Introduction to major concepts, skills, and techniques.

5761. TEAM BUILDING IN BUSINESS AND INDUSTRY. (3 cr; prereq 5760 or #)

Theories of and techniques for building effective work teams. Developing skill in facilitating team-building activities.

Course Descriptions

5762. MANAGEMENT OF CONFLICT. (3 cr; A-F only)

Types, sources, and diagnosis of conflict styles; skills and strategies for managing interpersonal, intergroup, and intragroup conflict.

5770. SPECIAL TOPICS: HUMAN RESOURCE DEVELOPMENT. (1-4 cr)

Developments related to problems; practices; programs; methodologies in training and development. Content will vary with each offering.

5780. INTERNSHIP: HUMAN RESOURCE DEVELOPMENT. (Cr ar [max 15 cr]; prereq 5750)

Students apply and contract for human resource development positions in industry and business; individual contracts describe specific human resource development responsibilities to be fulfilled during internship.

5781. INTERNATIONAL FIELD STUDY IN HUMAN RESOURCE DEVELOPMENT. (4 cr; prereq 5750, 5760, 5793 or VoEd 8110 or #)

Training, organization development, career development, and quality improvement theories and practices found in a selected nation.

5790. STRATEGIC PLANNING IN HUMAN RESOURCE DEVELOPMENT. (3-4 cr; prereq 5750 or 5760; A-F only)

Human capital as component of industry and business strategic planning; analysis and articulation of practices.

5792. MANAGING HUMAN RESOURCE DEVELOPMENT. (3 cr; prereq VoEd 5750, VoEd 5760 or #)

Managing and leading human resource development activities in industry, business, and government to meet organizational objectives. Emphases on mission, staffing, resources, systems, process management, and reporting.

5793. INTERNATIONAL HUMAN RESOURCE DEVELOPMENT. (4 cr; prereq VoEd 5750, VoEd 5760 or #)

Problems, practices, programs, theories, and methodologies in human resource development as practiced internationally and in cross-cultural settings.

5794. CONSULTING IN HUMAN RESOURCE DEVELOPMENT. (3 cr; prereq 5750 or 5760 or #)

Marketing, subject matter expertise, organization, business principles, and communication skills.

5795. HUMAN RESOURCE DEVELOPMENT APPROACH TO QUALITY IMPROVEMENT. (4 cr; prereq 5750, 5760 or #)

Quality management and productivity improvement strategies from a training and organization development (OD) perspective. Specific OD interventions to implement three selected quality management strategies. Not a statistical process control class.

5798. CURRENT ISSUES IN HUMAN RESOURCE DEVELOPMENT. (4 cr; prereq 5750, 5760 or #)

Issues currently confronting practitioners in training and organization development, with examination of conflicting view points and resolution options.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8791. ADVANCED SEMINAR IN HUMAN RESOURCE DEVELOPMENT

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; prereq 1200 or prev developed content analysis)

Course planning, including assessment of student needs, development of lesson 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 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 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 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, §Ed 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.

5286. MARKETING OF EDUCATION AND TRAINING PROGRAMS. (3 cr)

Applying a comprehensive marketing model to the design and delivery of education and training programs to institutions, programs, and specific course offerings. Emphasis on market research, market segmentation, product positioning, alternative marketing mix strategies, and marketing planning.

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.

5310. ADVISING VOCATIONAL STUDENT ORGANIZATIONS. (2 cr)

The value and purpose of vocational student organizations in the curriculum. Tasks of the adviser in designing, operating and sustaining activities to enhance student leadership, personal development, and school to work transition.

5330. COORDINATION TECHNIQUES IN COOPERATIVE EDUCATION. (3 or 4 cr, §BME 5352, §HEEd 5106, §Ind 5310, §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.

5410. EXPERIENTIAL LEARNING: THEORY AND PRACTICE. (3 cr; A-F only)

Analyzing students' own learning process; how experience used in educational settings; sharing decision making and group dynamics.

5420. YOUTH IN THE WORLD. (3 cr, §YoSt 5100; prereq 5410 or #; A-F only)

Understanding youth using "everyday life" experiences as levels of reality; range of ideas, social institutions, and organizations that reflect the ways societies and institutions, and organizations that reflect the ways societies and cultures understand and influence youth.

5430. ORGANIZATIONAL APPROACHES TO YOUTH DEVELOPMENT. (3 cr, §EdPA 5340; prereq 5410 or #; A-F only)

Understanding organizational systems responsible for youth development in community and debating policy issues surrounding them.

5440. ISSUES: YOUTH DEVELOPMENT IN WORK, FAMILY, AND COMMUNITY. (3 cr; prereq 5410 or #; A-F only)

Understanding healthy development of adolescents as they interact with family, community, and workplace. Collaborative use of community resources.

5451. MICROCOMPUTER INSTRUCTIONAL UTILITY SOFTWARE. (2 cr; prereq microcomputer coursework or exper)

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.

Course Descriptions

5490. SEMINAR IN YOUTH DEVELOPMENT. (1 cr [6 max]; S-N only)

Concepts of healthy youth development as framework for discussing personal experience, portfolio development, and other program facets.

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.

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.

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 FOR VOCATIONAL SPECIAL LEARNERS. (2 cr)

Overview of techniques, issues, and practices used to analyze and describe jobs and job settings into which vocational special needs learners may be placed or for which vocational training or vocational assessment systems may be developed.

5806. INTERAGENCY COOPERATION FOR AT-RISK POPULATIONS. (3 cr, §EdPa 5104, §EPsy 5714)

Overview of interagency planning issues and practices for educational and human service organizations. Topics focus on the transition of students from school to work and community living, infant and preschool services, and use of locally based planning teams to achieve enhanced service coordination.

5900. USING VOCATIONAL EDUCATION RESEARCH. (3 cr; prereq admission to grad-level program or #)

Introduction to the role of vocational education research in professional practice, significant problems of practice for research, alternative modes of research, and synthesis and application of the results of research.

5920. INDEPENDENT STUDY. (1-6 cr; prereq Δ)

Self-directed study in areas of special interest.

For Graduate Students Only

(For description, see *Graduate School Bulletin*)

8100. VOCATIONAL EDUCATION TUTORIAL

8110. COMPARATIVE SYSTEMS IN VOCATIONAL EDUCATION

8120. HISTORY AND PHILOSOPHY OF VOCATIONAL EDUCATION

8130. CRITICAL ISSUES IN VOCATIONAL EDUCATION

8500. SEMINAR: GENERAL EDUCATION ASPECTS OF THE VOCATIONAL FIELDS

8810. INTERNSHIP: VOCATIONAL EDUCATION

8910. POSITIVISTIC RESEARCH IN VOCATIONAL EDUCATION

8920. INTERPRETIVE AND CRITICAL SCIENCE RESEARCH IN VOCATIONAL EDUCATION

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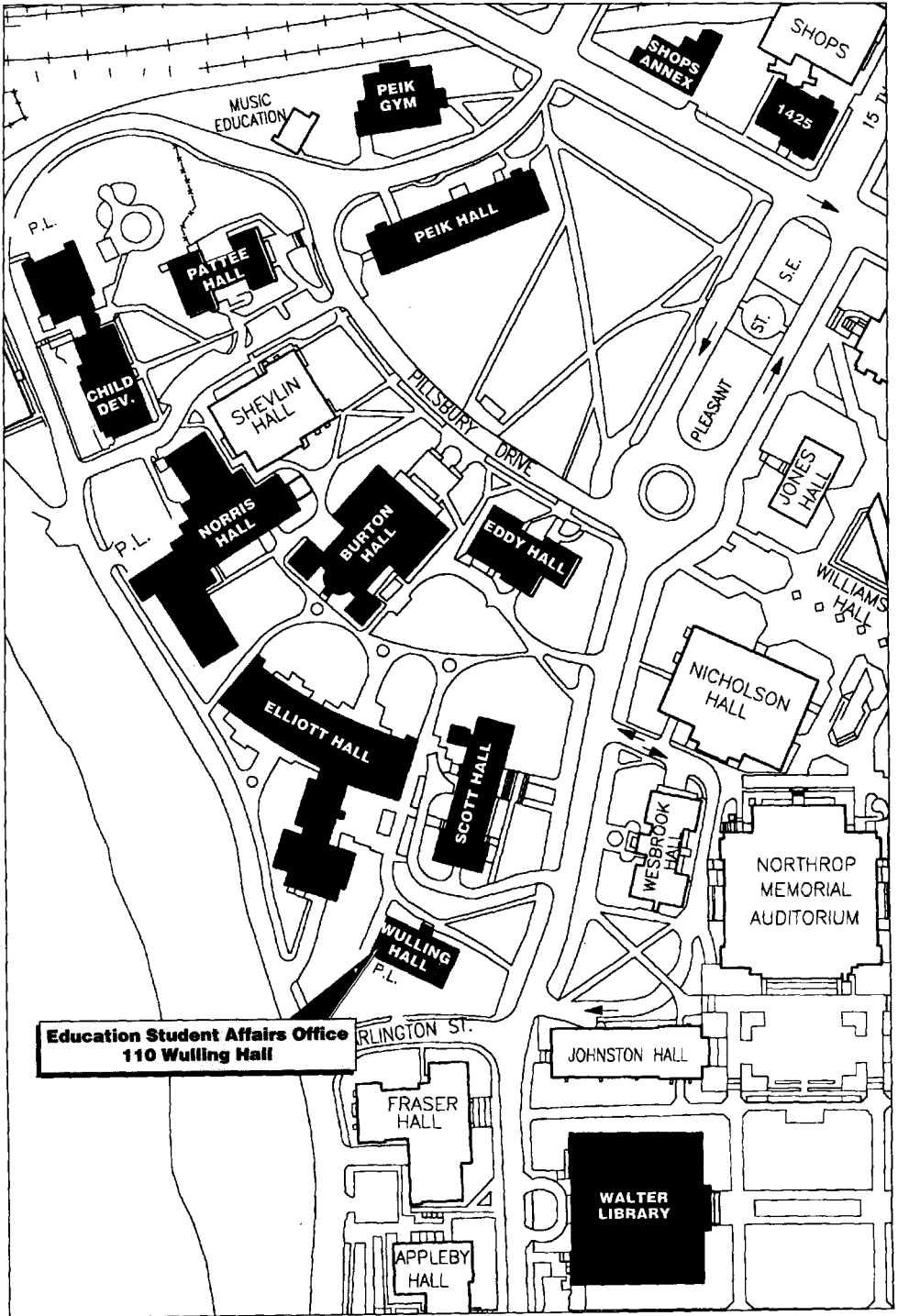
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