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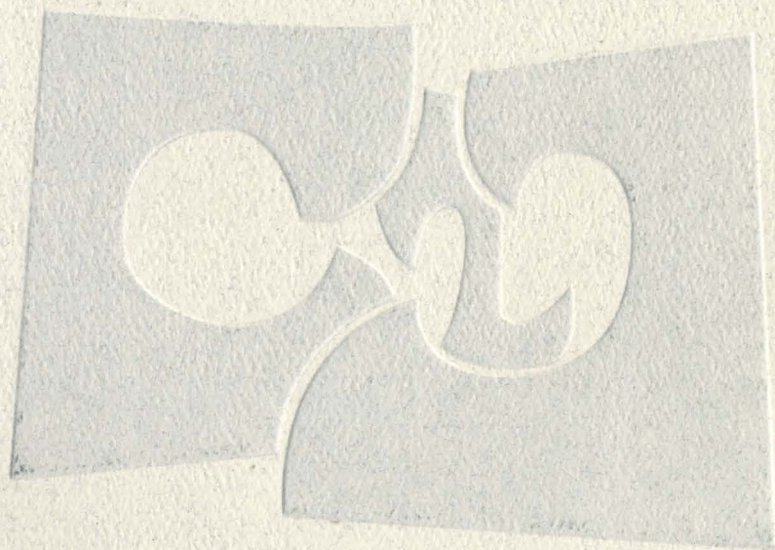
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SAINT CLOUD STATE UNIVERSITY

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GRADUATE BULLETIN
1992-1994

ST. CLOUD, MN 56301-4498



GRADUATE BULLETIN 1992-94

IMPORTANT

Graduate students are expected to become thoroughly familiar with the contents of this Bulletin and are to assume responsibility for complying with the provisions that pertain to them. All provisions within this Bulletin are subject to change without notice.

LOCATION:

121 ADMINISTRATIVE SERVICES

TELEPHONE: (612) 255-2113

ADMISSIONS INFORMATION NUMBER:

1-800-369-4260

OFFICE HOURS:

Regular Academic Quarter

8:00 a.m. until 4:30 p.m.

After 4:30 p.m.—by appointment

Summer Quarter

7:30 a.m. until 4:00 p.m.

Evening Schedule

The Graduate Studies office will be open until 6:30 p.m. during evening registration.

Dennis Nunes

Dean, School of Graduate and Continuing Studies

INFORMATION AND ANSWERING SERVICE

Area Code 612

Atwood reception desk

7:00 a.m.-11:00 p.m.255-3822

Maintenance emergencies255-3166

Campus Security HELP255-4357

Weekdays255-4357

Evenings, weekends /holidays.....255-4357

EMERGENCY INFORMATION:

FAST-CALL EMERGENCY

On-campus dial9-911

Off-campus dial911

AMBULANCE251-8505

CITY FIRE DEPARTMENT251-3473

HOSPITAL.....251-2700

POLICE.....251-1200



UNIVERSITY TELEPHONE NUMBERS

University switchboard	255-0121
Academic Affairs	255-3143
Admissions	255-2243
Atwood Memorial Center	255-3822
Business Office	255-3133
Career Planning/Placement.....	255-2151
Continuing Studies	255-3081
Financial Aid	255-2047
Graduate Studies	255-2113
Housing Office	255-2166
Learning Resources Services	255-2084
Public Relations/Publications	255-3151
Records and Registration	255-2111

NOTICE

Although every effort is made to ensure this bulletin's correctness, regulations of the university and its program requirements change from time to time during the period any student is attending St. Cloud State University.

Accordingly if regulations or program requirements of the university in any way conflict with information contained in this bulletin, the current regulations and program requirements govern. The university reserves the right to change any of its regulations or program requirements affecting operation of the university and its program requirements; such changes will become effective when required by applicable statutes, university regulations or program requirements.

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KEY TO SYMBOLS

Quarterly course designations are provided to assist in program planning. Courses are scheduled to be offered in the quarter specified; however, circumstances and problems may necessitate change. Consult the current class schedule for further information.

BUILDING KEY

The following abbreviations are used throughout the SCSU campus.

AS	Administrative Services Building
AH	Alumni and Foundation Center
AC	Atwood Memorial Center
BTH	Benton Hall (Women's and Men's Residence)
BKS	Bookstore—2nd Avenue S. & 8th Street
BH	Brown Hall (Offices and Classrooms)
BB	Business Building
CCS	Continuing Studies Center
CRH	Carol Hall (Administrative Offices)
CSH	Case Hall (Men's Residence)
CH	Centennial Hall (Learning Resources & Center for Information Media)
COLN	Colbert House North
COLS	Colbert House South
ECC	Engineering and Computing Center
EH	Eastman Hall
EB	Education Building
GC	Garvey Commons (Food Services)
HaH	Halenbeck Hall (Physical Education and Health Education)
HaHS	Halenbeck Hall South (Physical Education)
HH	Headley Hall (Industry and Technology)
HM	Heating and Maintenance Building
HiH	Hill Hall (Women's Residence)
HOH	Holes Hall (Women's and Men's Residence)
KVAC	Kiehle Visual Arts Center
LH	Lawrence Hall (Faculty Offices)
MS	Mathematics and Science Center
MH	Mitchell Hall (Women's Residence)
PA	Performing Arts Center (Music, Theatre)
R	Riverview Building (English)
SBH	Sherburne Hall (Women's and Men's Residence)
SI	Security Information Building
SMH	Shoemaker Hall (Women's and Men's Residence)
STH	Stearns Hall (Women's and Men's Residence)
SH	Stewart Hall (Administration and Classrooms)
WH	Whitney House (Department and Faculty Offices)

QUARTER OFFERED

Fall	F
Winter	W
Spring	S
Summer	SUM
Offered upon sufficient demand	DEMAND
Offered alternate years	ALT

ABBREVIATIONS

Coreq.	Corequisite
Cr.	Credit
Gr.	Graduate
Lab.	Laboratory
Prereq.	Prerequisite
Undgr.	Undergraduate
ACCT	Accounting
AMST	American Studies
ANTH	Anthropology
APSY	Applied Psychology
ART	Art
ASTR	Astronomy
BCIS	Business Computer Information Systems
BIOL	Biological Sciences
CDIS	Communication Disorders
CFS	Child and Family Studies
CHEM	Chemistry
CJS	Criminal Justice Studies
COMM	Mass Communications
CSCI	Computer Science
ECON	Economics
ED	Education
EDAD	Educational Administration
ENGL	English
ENGR	Engineering Science
ESCI	Earth Sciences
FREN	French
GEOG	Geography
GER	German
GERO	Gerontology
HETS	Health Education and Traffic Safety
HIST	History
HURL	Human Relations
IM	Information Media
IND	Industrial Education
MATH	Mathematics
MGMF	Management and Finance
MKGB	Marketing and General Business
MUS	Music
MUSE	Music Education
MUSM	Music Musicianship
MUSP	Music Performance
PE	Physical Education
PHIL	Philosophy
PHYS	Physics
PNI	Public and Nonprofit Institution
POL	Political Science
PSY	Psychology
REC	Recreation
RUSS	Russian
SOC	Sociology
SPAN	Spanish
SPC	Speech Communication
SPED	Special Education
SSCI	Social Science
SST	Social Studies
STAT	Statistics
SW	Social Work
TECH	Technology
TH	Theatre

ACADEMIC CALENDAR 1992-1993

1992 SPRING QUARTER

Monday, March 9	General registration. Evening classes begin.
Tuesday, March 10	Day classes begin.
Friday, March 13	Late fee assessed.
Monday, March 16	Deadline for class changes.
Monday, March 30	Deadline for graduation applications.
Monday, April 13	Second half of quarter classes begin.
Wednesday, April 15	Founder's Day
Friday, April 17	Spring Holiday (No Classes.)
Monday, April 20	University Workshops (No Classes.)
Tuesday, April 28	Deadline for dropping courses.
Wednesday, April 29	Deadline for submission of field study, thesis, creative work, starred paper, or portfolio to have preliminary or final conference scheduled.
Friday, May 1	Honors Day
Monday, May 18	
Thursday, May 21	Final examinations.
Friday, May 22	Spring Commencement.

1992 SUMMER QUARTER

First Summer Term

Monday, June 8	Classes begin.
Thursday, June 11	Deadline for class changes and fee payment. Late fee assessed.
Friday, June 12	Deadline for graduation applications.
Wednesday, June 24	Deadline for submission of field study, thesis, creative work, starred paper, or portfolio to have preliminary or final conference scheduled.
Friday, July 3	Independence Day (No classes; offices closed.)
Monday, July 6	Deadline for dropping courses.
Friday, July 10	First Summer Term ends at 4:00 p.m.

Second Summer Term

Monday, July 13	Classes begin.
Thursday, July 16	Deadline for class changes and graduation applications. Late fee assessed.
Wednesday, July 29	Deadline for submission of field study, thesis, creative work, starred paper, or portfolio to have preliminary or final conference scheduled.
Monday, August 10	Deadline for dropping courses.
Thursday, August 13	Final Class Day.
Friday, August 14	Summer Commencement.

1992 FALL QUARTER

Tuesday, September 8 -	Faculty Workshop.
Wednesday, September 9	Faculty Workshop; New Student Days; Registration.
Thursday, September 10	New Student Days; Registration.
Friday, September 11	Day and Evening Classes begin.
Monday, September 14	Late fee assessed.
Thursday, September 17	Deadline for class changes.
Monday, September 21	Deadline for graduation applications.
Monday, October 5	Columbus Day. (Classes in session.)
Monday, October 12	Second half of quarter classes begin.
Tuesday, October 13	Deadline for dropping classes.
Tuesday, October 27	Deadline for submission of field study, thesis, creative work, starred paper, or portfolio to have preliminary or final conference scheduled.
Friday, October 30	Veteran's Day. (No classes.)
Wednesday, November 11	
Thursday, November 19 -	Final examinations.
Tuesday, November 24	Fall Commencement.
Wednesday, November 25	

The university calendar is subject to modification or interruption due to occurrences such as fire, flood, labor disputes, interruption of utility services, natural disasters, civil disorder and war. In the event of such occurrences, the university will attempt to accommodate its students. It does not, however, guarantee that courses of instruction, extra-curricular activities or other university programs or events will be completed or rescheduled. Refunds will be made to eligible students in accordance with State University Board policy.

1992-1993 WINTER QUARTER

Monday, December 7	General registration. Evening classes begin.
Tuesday, December 8	Day classes begin.
Friday, December 11	Late fee assessed.
Monday, December 14	Deadline for class changes.
Wednesday, December 23	Christmas vacation begins 5:00 p.m.
Friday, December 25	Christmas Day. (Offices closed.)
Friday, January 1	New Years Day. (Offices closed.)
Monday, January 4	Classes resume.
Thursday, January 7	Deadline for graduation applications.
Monday, January 18	Martin Luther King Day. (No classes.)
Tuesday, January 19	Second half of quarter classes begin.
Tuesday, February 2	Deadline for dropping courses.
Wednesday, February 10	Deadline for submission of field study, thesis, creative work, starred paper, or portfolio to have preliminary or final conference scheduled.
Monday, February 15	Presidents' Birthday. (Classes in session.)
Monday, March 1	
Thursday, March 4	Final examinations.
Friday, March 5	Winter Commencement.

1993 SPRING QUARTER

Monday, March 15	General registration. Evening classes begin
Tuesday, March 16	Day classes begin.
Friday, March 19	Late fee assessed.
Monday, March 22	Deadline for class changes.
Monday, April 5	Deadline for graduation applications.
Monday, April 12	University Workshops (No Classes.)
Monday, April 13	Second half of quarter classes begin.
Wednesday, April 21	Founder's Day
Tuesday, May 4	Deadline for dropping courses.
Wednesday, May 5	Deadline for submission of field study, thesis, creative work, starred paper, or portfolio to have preliminary or final conference scheduled.
Friday, May 7	Honors Day
Monday, May 24	
Thursday, May 27	Final examinations.
Friday, May 28	Spring Commencement.

1993 SUMMER QUARTER**First Summer Term**

Monday, June 14	Classes begin.
Thursday, June 17	Deadline for class changes and fee payment. Late fee Friday, June 18
Wednesday, June 30	Deadline for graduation applications.
Monday, July 5	Deadline for submission of field study, thesis, creative work, starred paper, or portfolio to have preliminary or final conference scheduled.
Monday, July 12	Independence Day Holiday. (No classes; offices closed.)
Friday, July 16	Deadline for dropping courses.
	First Summer Term ends at 4:00 p.m.

Second Summer Term

Monday, July 19	Classes begin.
Thursday, July 22	Deadline for class changes and application for graduation. Late fee assessed.
Wednesday, August 4	Deadline for submission of field study, thesis, creative work, starred paper, or portfolio to have preliminary or final conference scheduled.
Friday, May 7	Honors Day
Monday, August 16	Deadline for dropping courses
Thursday, August 19	Final Class Day.
Friday, August 20	Summer Commencement.

GRADUATE STUDY

MISSION

The graduate studies programs at St. Cloud State University have the mission of providing high quality, accessible graduate degree programs that are responsive to the need for professional development and educational enrichment. The offerings reflect a wide range of master's programs as well as a selected number of specialist and other post-master's programs that serve students and practitioners throughout the state and upper midwest. The graduate programs should be integrated with the research and development functions of the university. The goals of graduate study at this university are:

- A. To increase the professional skills and academic competence of students who show promise of making important contributions to their profession.
- B. To prepare students for further graduate study.
- C. To meet the specialized needs of students whose educational or career goals can best be served by programs which provide advanced study in two or more related disciplines.
- D. To foster an attitude of intellectual inquiry and to develop research skills that may be applied in a professional context.

ADMINISTRATION OF THE GRADUATE PROGRAM

Administration of the graduate program is delegated by the president of the university to the graduate dean who meets with the Faculty Association graduate council to consider all policy matters affecting the programs of graduate study at St. Cloud State University. The Faculty Association graduate council consists of fifteen members elected on a prorated basis by graduate faculty members in the Colleges of Business, Education, Fine Arts and Humanities, Science and Technology, and Social Sciences.

The Faculty Association graduate council has the responsibility to discuss and recommend policy changes within the broad context of graduate education.

ACCREDITATION AND MEMBERSHIPS

St. Cloud State University is a member of many academic and professional associations, including the North Central Association of Colleges and Schools, American Council on Education, American Association of State Colleges and Universities, American Association of Colleges for Teacher Education and Council of Graduate Schools in the United States. It is accredited by the North Central Association of Colleges and Schools and the National Council for Accreditation of Teacher Education. The College of Business is accredited by the American Assembly of Collegiate Schools of Business. The art department is accredited by the National Association of Schools of Arts and Design. The communication disorders department is accredited by the American Speech-Language-Hearing Association. The mass communications department is accredited by the

Accrediting Council on Education in Journalism and Mass Communications. The music department is accredited by the National Association of Schools of Music. Counseling and Related Services is accredited by the International Association of Counseling Services, Inc. The rehabilitation counselor education program is accredited by the Council on Rehabilitation Education.

ADMISSION PROCEDURES AND POLICIES

PROCEDURES

A student who wishes to pursue a program of graduate study at St. Cloud State University should contact the graduate studies office, St. Cloud State University, 720 South 4th Avenue, St. Cloud, MN, 56301-4498, for application materials. All application materials should be returned to the Office of Graduate Studies far enough in advance of the proposed date of registration to allow adequate time for complete processing of the application prior to registration. The following materials are required (All materials are collected for the express purpose of St. Cloud State University. They are not transferable to the student or to another institution.):

1. Completed "Application for Admission to Advanced Study" accompanied by a \$15 non-refundable matriculation fee made payable to St. Cloud State University.
2. Recommendations. The graduate studies office will send the required form to the references listed on the application form.
3. Official transcripts. Two copies of the applicant's official transcripts must be sent directly to the graduate studies office by each college or university previously attended. Applicants who apply before receiving the baccalaureate degree are required to submit supplementary transcripts showing that the degree has been conferred. **Transcripts submitted personally by the student are not acceptable.** (Official transcripts, submitted from other institutions, are for use in the applicant's admission process and pursuit of the degree at St. Cloud State University. These transcripts, or copies of them, cannot be issued to the student or other institutions. Graduates of St. Cloud State University are not required to send transcripts of credit earned at this institution.) International students must provide an English translation of all educational transcripts.
4. Entrance test score. Students seeking the Master of Arts degree, Master of Science degree, Sixth Year program, or the Specialist degree are required to take and submit official scores for the *Graduate Record Examination, General Test*. Subject tests are required by some major departments. (See Admissions Test Information.) Students seeking the Master of Business Administration degree and the Master of Science in accounting must take the *Graduate Management Admission Test*. Exceptions to this

policy are included in the section entitled, "Admission Test Information."

When all these materials are complete, the graduate studies office conducts the initial evaluation. Applicants who satisfy the requirements of the graduate school are processed to the appropriate graduate department for their recommendation. Students should respond immediately to all departmental correspondence regarding their admission to graduate school. Following receipt of the departmental recommendation, the graduate studies office notifies the applicant of the action taken on the graduate application submitted for admission. When an applicant is accepted for graduate study, an adviser is assigned by the department. The adviser helps the student formulate a plan of study leading to the accomplishment of the student's objectives in pursuing graduate work.

For additional departmental admission information, students should refer to the appropriate departmental requirements and course listings.

ADMISSION OF INTERNATIONAL STUDENTS

In addition to all the steps listed above, international students must complete two additional procedures.

1. All applicants whose language of origin is not English are required, as part of the admissions process, to present evidence of their level of English proficiency. For more information about this requirement see the section entitled Admission Test Information.
2. All applicants who are not citizens of the United States or who do not have a resident alien card (green card) must provide a completed Confidential Financial Information form and submit it to the Office of Graduate Studies along with documentation of finances to be eligible for an I-20 or other documentation needed to obtain a visa to attend St. Cloud State University.

POLICIES

Admission to Master's Degree Programs. To be considered for admission to a master's degree program an applicant must have been granted a baccalaureate degree from an accredited college or university and have achieved a 2.75 grade point average over the last two years of undergraduate education (6 full quarters or equivalent) OR have achieved an acceptable score on the required entrance examination. All students, however, must furnish a score on the appropriate entrance test required.

Applicants who do not meet the standard admission requirements may be permitted to demonstrate their scholarship and qualify for acceptance by completing a limited program of graduate course work. This option is not available to candidates wishing to pursue the Master of Business Administration degree. Further information pertaining to this alternative may be obtained from the graduate dean.

Higher standards for admission to the degree program may be established by a department.

Applicants who hold a baccalaureate degree

from an unaccredited college or university may be considered for acceptance to a master's degree program. A careful examination of the applicant's previous record and the entrance examination scores are used as the basis for recommendation for admission. (Applicants who are admitted under these conditions will be re-evaluated upon completion of 12 graduate credits earned at St. Cloud State University.)

Admission to Double Major; Second Major; Major Equivalent.

These terms are defined as follows:

Double Major. This term applies to the completion of two majors earned within one degree program.

Second Major. This term applies to students whose graduate degree was earned through St. Cloud State University and who subsequently elect to complete another major.

Major Equivalent. This term applies to students whose graduate degree was earned through another institution, but who elect to complete a second major through St. Cloud State University.

Students who wish to complete a major in a second field may do so by satisfying the following requirements:

1. The student must be fully accepted for graduate study by the department and the graduate studies office.
2. The student must submit an approved program of study which meets all of the requirements of the degree program. Courses taken as a part of the first degree may be applied to these requirements. However, not less than 15 additional (new) credits must be earned at St. Cloud State University. The program must be completed with a satisfactory grade point average as defined in the graduate regulations.
3. The student must satisfactorily complete a final written/oral in the major field in which the double major, second major, or major equivalent is being pursued.
4. The student must satisfy all other requirements as specified at the time of acceptance into the program, or as described in the graduate regulations.

Admission to Specialist Degree Programs. To be considered for admission to a specialist degree, an applicant must have been granted a master's degree in the appropriate field from an accredited college or university. Test scores on the Graduate Record Examination general section are required. Two official transcripts of the applicant's undergraduate and graduate education should be sent directly from the granting institution to the graduate studies office.

Specific grade point averages covering the master's degree program have been established for admission by each academic department which offers the Specialist degree program. See the program description under the appropriate departmental listings for the specific requirements.

Students holding a specialist or higher degree complete a *minimum* of 24 credits, including field study, for the specialist equivalent.

Admission to the Sixth Year Program. The Sixth

Year program is available only in educational administration. Admission to the program requires completion of a master's degree in educational administration or the equivalent with a grade point average of 3.00. The Graduate Record Examination general test is required. Two copies of both the undergraduate and graduate transcripts should be sent directly from the granting institution to the graduate studies office.

Students holding a specialist or higher degree complete a *minimum* of 24 credits, including the final comprehensive examination for the sixth year equivalent.

ADMISSION TEST INFORMATION

All applicants for admission to a graduate degree program are required to take the appropriate admission examination.

The Graduate Management Admission Test (GMAT) is required for admission to the Master of Business Administration program and the Master of Science programs in accounting and business education and office administration.

The Graduate Record Examination (GRE) is required for all other Master of Arts, Master of Science, Specialist degree and Sixth Year programs.

Acceptance of Graduate Record Examination scores more than five years old requires a review by the graduate dean and the department chairperson.

Substitution of the Miller Analogies Test for the Graduate Record Examination is subject to approval of the graduate dean. Approval of the department chairperson also is needed when a Subject Test section of the Graduate Record Examination is required. Substitutions may be given for applicants who hold an advanced degree from an accredited graduate institution or under other exceptional circumstances.

These tests should be taken at least three months prior to the date the student intends to begin classes. Pre-registration directly with the educational testing service is required several weeks in advance of test administration dates. Detailed information regarding the test and registration forms may be obtained from the graduate studies office or from the educational testing service at the following addresses.

GRE:

Graduate Record Examination
Educational Testing Service
CN 6000
Princeton, NJ 08541-6000
Phone: 609-771-7670

GMAT:

Graduate Management Admission Test
Educational Testing Service
CN 6103
Princeton, NJ 08541-6103
Phone: 609-771-7330



TOEFL: Foreign Students. All applicants whose language of origin is other than English must take the Test of English as a Foreign Language and request that the score be sent to the graduate studies office. This score is submitted as evidence of the applicant's ability to utilize English as a language of instruction. Under normal circumstances a score of 550 on the TOEFL (80 on the Michigan Placement Test) is required for admission to a graduate degree program. Course grades in English at other American universities or schools of intensive English do not constitute proof of English proficiency. Admission to the university does not preclude the university from requiring non-native speakers of English to do more course work in English as a foreign language.

The Test of English as a Foreign Language does not replace the Graduate Record Examination or the Graduate Management Admission Test entrance tests. The TOEFL is required of all foreign students in addition to the GRE or GMAT. When requesting information which pertains to the TOEFL, write directly to: TOEFL Services, Educational Testing Service, CN 6151, Princeton, New Jersey, USA 08541-6151; telephone: 609-882-6601.

Foreign students are required to follow the same procedures for entrance into graduate school as all other applicants. For entrance and admission requirements to a master's degree program at this university, please read pages 7-8 of this bulletin.

Post Admissions Process: All new students whose language of origin is not English are required to take an English placement test. The test results are available to their academic advisers so that the individual student's language ability can be considered when academic schedules are made out. If the test score is low, the student may be required to take a course in English as a Second Language, or attend the tutorial center.



REGISTRATION

Registration procedures are established by the Office of Records and Registration and published with the quarter or summer schedules.

Students intending to pursue course work toward a graduate degree who have not completed all admission requirements and who have not been formally accepted into a degree program must register as special students subject to all regulations of that category.

Special Student. This is a classification for those students who do not intend to pursue a graduate program at this institution or who wish to register for course work prior to their formal acceptance into a graduate program. A maximum of 9 credits earned as a special student or the credits completed in the first quarter of registration (whichever is greater) may be applied to a graduate degree program. Credit may be applicable to a degree program by meeting all requirements for admission to graduate study and submitting a petition to the graduate studies office. A special student is admitted to classes only after degree students have been accommodated.

Only students who have completed a baccalaureate degree may register for graduate-numbered courses (500-600) as a special student. Special students are considered to be pursuing post-graduate study and are not classified as graduate students. However, all special students who register for graduate credit are subject to the academic regulations and policies contained in the Graduate Bulletin.

Registration by Undergraduate Students. Undergraduate students who are in their last quarter and who have 12 quarter hours or less to complete for graduation from this university, may petition to enroll in graduate courses (500 level only) not to exceed the normal load. Courses open only to graduate students are numbered 600-699. (Petition forms are available in the graduate studies office.) Approval of the petition is based on the potential admissibility of the student to the graduate program. The maximum load permitted is 16 quarter hours of undergraduate and graduate credit combined. **Graduate courses completed prior to receiving the undergraduate degree cannot be used toward the undergraduate degree.**

GENERAL INFORMATION

GRADUATE TUITION AND FEES*

Tuition for on-campus and off-campus courses:

	Fall 1991	Effective Fall 1992
Regular Year Graduate—Resident	\$57.20	\$62.90 per quarter credit
**Graduate—Non-Resident	\$82.50	\$90.75 per quarter credit

FEES* Student Activity Fees, Student Union Fees and Health Service fees are assessed to students on the basis of \$6.60 per credit hour, with a maximum charge of \$79.20 per quarter. Exceptions: Fees will not be charged for:

1. Off-campus regular courses.
2. Courses numbered 588, 595, or 695 (temporary workshops).
3. Permanent Workshops.
4. Courses numbered 510 (tours).

The Student Activities Committee will consider other requests for exclusion from the fee structure, forwarding recommendations to the president. **NOTE:** There is no reduction in tuition or fees for students who audit courses.

GRADUATE ASSISTANTSHIPS. Graduate assistants pay in-state tuition and are eligible for tuition assistance equal to approximately one-half the tuition for graduate credits, not to exceed tuition for six (6) graduate credits per quarter. Tuition assistance is not available during summer. After registering for graduate classes and receiving a fee statement the graduate assistant should inform the Cashier's office that they are on an assistantship. A \$100.00 payment will be required to maintain enrollment in their selected courses. After approximately the tenth day of classes a new fee statement will be issued indicating the amount of tuition assistance which has been deducted from the tuition and the balance which is due.

NON-PAYMENT OF MONIES DUE THE UNIVERSITY. The student must discharge all financial and other obligations to the university. Students who have financial obligations to the university will not be permitted to register, receive grade reports, or receive or have official transcripts issued until such obligations are satisfactorily discharged.

*Tuition and fees are subject to change by action of the State University Board.

**Reciprocal agreements regarding in-state tuition fees have been reached with North Dakota, South Dakota and Wisconsin. Residents of those states are eligible to be charged in-state tuition fees at St. Cloud State University provided a reciprocity application is completed and that the application is approved by their home state. Reciprocity applications are available at the Office of Records and Registration and should be completed well in advance of registration.

SENIOR CITIZENS. Minnesota residents 62 years of age or older may enroll in courses at St. Cloud State University without paying tuition or fees, providing space is available after tuition-paying students have enrolled. An administration fee of \$6 per credit hour is required when a course is taken for credit. The student also must bear the cost of laboratory fees, books and materials.

ACADEMIC YEAR. St. Cloud State University operates on the quarter system.

There are two five-week summer terms during the summer quarter, each offering a broad spectrum of the regular academic year courses. Credits earned during the summer terms may be applied toward fulfillment of requirements of graduate programs in the same manner, and are subject to the same regulations, as credits earned during the academic year.

The Summer Bulletin may be obtained by writing to the Director of Summer School, Office of Graduate Studies. Other quarterly schedules may be obtained by writing to the Office of Admissions.

EVENING CLASSES. St. Cloud State University offers a number of graduate courses on campus during evenings of the regular school year. These courses may be used to satisfy graduate degree requirements.

Each quarter a listing of on-campus evening courses is published. Copies may be obtained by writing the School of Graduate and Continuing Studies.

PART-TIME EMPLOYMENT. There are many opportunities for students who desire part-time employment. A limited number of these are available on campus. The Office of Scholarships and Financial Aid assists graduate students seeking part-time employment.

Graduate students who carry the full academic load should not plan to devote any time to outside employment. In cases where outside employment is necessary the student's academic load should be reduced accordingly.

A number of assistantships are available. Interested students should contact the chairperson of the major department for further information and details for application requirements. Stipends vary according to percentage of time devoted to the work assignment.

STUDENT LIFE AND DEVELOPMENT

LIVING ACCOMMODATIONS. Graduate students may contact the Housing Office, Carol Hall, St. Cloud State University, 720 South 4th Avenue, St. Cloud, MN 56301-4498 to make application for on-campus housing. A contract and information regarding housing will be sent. Please complete and submit this material to the Housing Office. A \$25 room reservation deposit should accompany your housing application. Residents pay in advance quarterly for room and board and sign a contract for the

housing application. Residents pay in advance quarterly for room and board and sign a contract for the entire academic year (exception—Shoemaker Hall is a room only contract with board option available.)

Graduate students recently accepted by the university will receive information from the Housing Office shortly after acceptance. We also assist graduate students in locating suitable off-campus housing. A listing file is maintained in the Housing Office. Students wishing to locate suitable housing in the community are requested to visit our office well in advance of actual need.

RESIDENCE HALL FACILITIES. Most of the residence halls are of recent construction and include features and furnishings designed for comfortable, convenient living in an atmosphere conducive to academic achievement. All halls have areas set aside for study, activities, typing and laundry. The university furnishes the mattress, drapes, wastebasket, study desk, adequate study lighting, room chairs and closet space. Residents provide their own linen, blankets and bedspread for a twin size bed. Linen service may be purchased from a private launderer.

RATES AND AGREEMENTS. Room and board fees in residence halls are approximately \$2,400.00 per academic year for a double room. Charges for room and board are payable in advance by the quarter. Students may pay on a monthly basis if arrangements are made through the Business Office. Information about payment dates is included with each hall assignment.

All residence hall contracts for room and meals are for the full school year. The halls will be closed and no meals will be served during the days between quarters and during university holidays as listed in the graduate and undergraduate *Bulletins*. The reservation fee also serves as a damage deposit fee and is refunded when the student properly checks out of a residence hall. The damage deposit fee must be kept at \$25 while a student is in residence. A \$50 administrative fee will be forfeited unless the student notifies the Housing Office 60 days before fall quarter or 45 days before the beginning of winter or spring quarter of his/her intent to leave the campus. Room and board charges are subject to change by the action of the State University Board. No discount is made for absences. Room without board is available for summer quarter students at \$125 each per term when two share a room and \$160 for a single room. Meals may be obtained ala carte at Atwood Center.

HANDICAPPED STUDENT SERVICES. Handicapped Student Services is a service designed to assist disabled students with their special problems. Alternate test taking, interpreters, notetaking, and a variety of other services are offered. These services will be provided upon request in room 106 of Atwood Center or call 255-3111.

HEALTH SERVICE. Graduate students who pay student activity fees are eligible for the same health service privileges as the undergraduate students. Preventive and remedial health services are provided. These services include physical examinations, communicable disease control measures, some labo-

ratory services, consultation concerning individual health problems, some hospital and medical care, and health education.

CO-CURRICULAR ACTIVITIES. Graduate students are invited to participate in undergraduate activities (including drama, orchestra, band, and vocal music groups) which do not involve intercollegiate competition.

The university has an intramural athletic department that offers all students opportunities to participate in recreational activities of an athletic nature.

The major programming agencies bring to the campus a variety of entertainment furnished by nationally recognized artists representing music, dance, drama, and lecture. The programs are financed by the student activity fee; there is no admission charge to any activity except the performing artists series and major pop concerts.

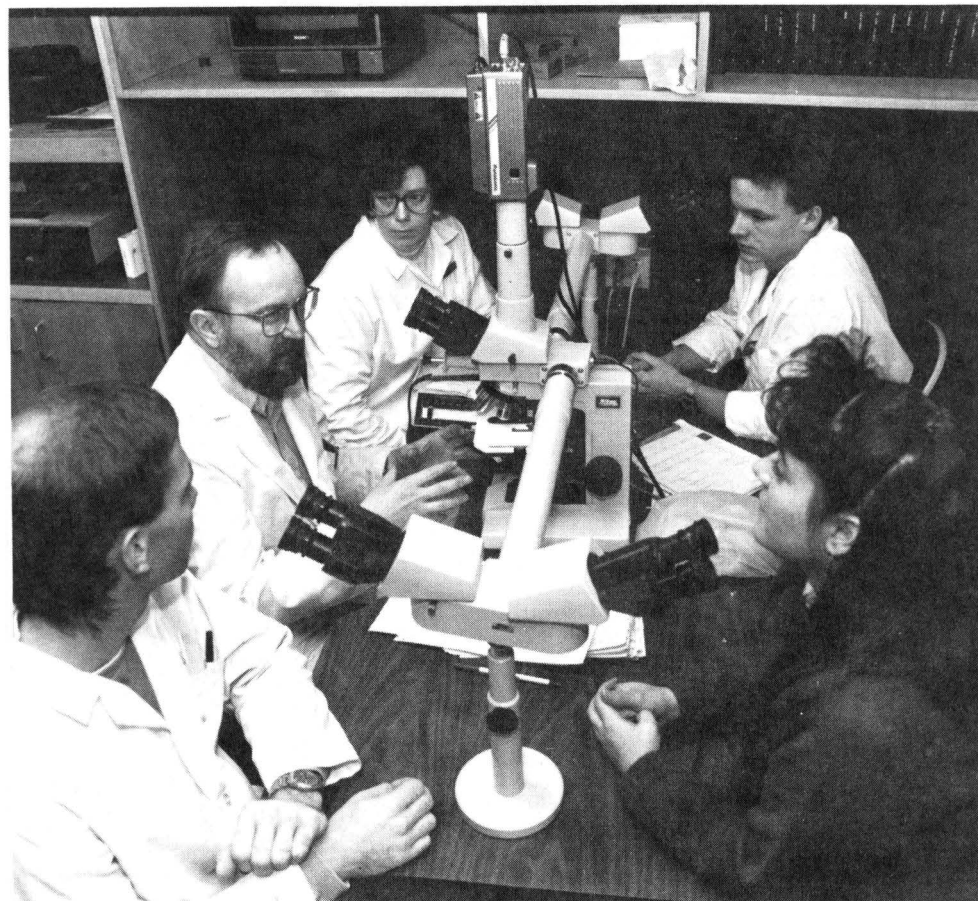
Opportunities for participation in student activities cover a large area of interest. Graduate students are urged to maintain a well-balanced co-curricular program to supplement their academic endeavors. St. Cloud State University will not assume a liability for injuries or damage which may be sustained by individuals or their personal equipment while they are participating in any or all phases of the intramural program.

STUDENT RECORDS AND DIRECTORY INFORMATION

Pursuant to the Family Educational Rights and Privacy Act of 1974, students at St. Cloud State University are entitled to review records, files, documents and other materials containing information directly related to them which are maintained by the university. In accordance with regulations issued by the Secretary of Education, students may request a hearing to challenge the content of education records to ensure that the records are not inaccurate, misleading or otherwise in violation of their rights. A student may insert in his or her records a written explanation requesting the contents of such records if suggested corrections or deletions are not made by the university.

Access and review is subject to the following conditions:

1. The university has 45 days to comply with a student's written request to review his or her records.
2. All information declared confidential by the Act or excluded from the definition of "education records" in the Act is not available for inspection.
3. After reviewing records, a student may request the unit maintaining the record to remove or modify information the student believes is misleading, inaccurate or inappropriate. If the request is refused, the student may insert in the records a written explanation respecting the contents objected to or the student may file an appeal with the office in charge of the records. This appeal will be heard by a person or committee appointed by the director of the office involved.



The Act further states that certain information can be construed to be directory information which is available to the public. These are the items the university declares to be directory information available to the public: name, address, telephone listing, date of birth, major field of study, class schedule, class status (freshman, sophomore, etc.), participation in officially recognized activities and sports, weight and heights of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended. A student has the right to inform the university that any or all of the above information should not be released without his or her prior consent. Students who wish to restrict the release of this information must complete a written request to that effect at the Office of Records and Registration. After the required written request has been made, appropriate offices will be notified so that they can begin to comply with the request as soon as possible.

Any information other than the items listed above will not be released by the university without

the student's specific written permission except as provided by law.

AFFIRMATIVE ACTION /EQUAL OPPORTUNITY

St. Cloud State University is committed to providing equal education and employment opportunities to all persons regardless of race, color, creed, sex, age, religion, marital status, national origin or status with regard to public assistance or physical disability or any other group or class against which discrimination is prohibited by State or Federal law, including Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973 and Section 402 of the Vietnam Era Veterans Readjustment Assistance Act of 1974. Inquiries concerning the application of Affirmative Action, Equal Opportunity or Title IX at St. Cloud State University should be referred to the Affirmative Action Officer, 255-3143. Inquiries about Title IX and Section 504 of the Rehabilitation Act of 1973 should be referred to the 504 Coordinator, 255-3111.

GRADUATE PROGRAMS

SUMMARY OF GRADUATE PROGRAMS. St. Cloud State University awards the following graduate degrees: Master of Arts, Master of Business Administration, Master of Science, and the Specialist degree. The Sixth Year Program is available in educational administration. The Fifth Year Program in teacher education also is offered.

THE MASTER OF ARTS DEGREE (M.A.) offers the candidate the opportunity to specialize in a particular subject matter field. It is open to students with undergraduate liberal arts backgrounds as well as students who have completed teacher education programs. Programs of study leading to the Master of Arts degree have been approved for the following majors: art, biology, English, history, and mathematics. All Master of Arts programs require a thesis, creative work, or starred paper(s). Information concerning the program requirements for a particular major may be found with the course offerings for the department.

THE MASTER OF BUSINESS ADMINISTRATION DEGREE (M.B.A.) program develops professional managers for public and private sectors. It stresses conceptual, analytical and behavioral skills relevant to organization and leadership, provides students the opportunity to develop specialized competencies reflecting individual aptitudes and interests, and explores the relationships between organizations and their environment. A concentration consistent with the student's particular interest is available in accounting, business computers and information systems, economics, international business, management and finance, marketing, real estate, and insurance.

THE MASTER OF SCIENCE DEGREE (M.S.) is designed to provide preparation in a variety of professional fields. Included are programs in accounting, biology, child and family studies, communication disorders, communication management, community counseling, criminal justice, elementary school education, elementary school administration, English, geography, gerontology, health education, history, industrial studies, information media, mathematics, middle school/junior highschool education, music, physical education, psychology: behavior analysis, reading consultant, reading teacher education, rehabilitation counseling, school counseling, secondary school administration, senior high school education, social science, and special education. Eligibility for programs in teacher education is limited to students whose undergraduate preparation qualifies them for teacher licensure.

SPECIAL STUDIES PROGRAMS (M.A. or M.S.). The master's degree with a major in Special Studies is intended to meet the specialized needs of students whose educational or career goals can be best served by carefully designed programs which provide advanced study in two to three related academic disci-

plines. To be considered for approval, Special Studies programs must provide a clear focus on a field of study which combines the contributions of these academic disciplines in a multi-disciplinary major.

To request consideration of a special studies program, the student must prepare a written proposal which contains the following elements: proposed title for the multi-disciplinary major, a discussion of the contributions of the disciplines which would comprise the program, a preliminary list of potentially applicable courses, and a summary of the student's educational and career objectives, philosophy and background. Each special studies applicant is interviewed by a four-member committee chaired and appointed by the graduate dean. The committee reviews the program proposal and makes a recommendation based upon the appropriateness of the proposal as a field for graduate study, the availability of adequate curricular and other resources to insure a strong program, and the qualifications of the individual applicant.

For further information concerning application procedures and program requirements, contact the graduate dean.

THE SPECIALIST DEGREE is designed to serve a qualitative need for highly trained specialists in various fields. The emphasis in a Specialist degree program is placed on the development of competencies needed for a specific job category. A program for this degree is designed to meet the needs of students in professional areas where a master's degree is not sufficient. The program requires one full year of graduate study beyond a master's degree.

Specialist degree programs are offered by the Center for Information Media, the Center for Educational Administration and Leadership, and the Department of Special Education. The graduate program offered by the Center for Information Media has been developed to support persons in media, library science and audiovisual education for all levels of responsibility. The Specialist degree program offered by the Center for Educational Administration and Leadership is designed for three distinct groups: the elementary school principal, the secondary school principal including the junior high school principal, and the superintendent of schools. The Specialist degree program offered by the Department of Special Education is designed for special education administration.

For information regarding specific requirements for the Specialist degree, consult the programmatic section of this bulletin for the major of your interest.

A sixth year program in school administration is also available. For further information, refer to the educational administration department section of this bulletin.

FIFTH YEAR PROGRAM IN TEACHER EDUCATION. A planned fifth year program is available for those teachers who do not desire to work for a mas-

ter's degree or for those who do not otherwise qualify to work for a master's degree. Through careful advising it is anticipated that the fifth year of work will be integrated with the first four years of the student's preparation. A minimum of 45 credits is required, about one-third of which must be taken at the graduate level. The minimum grade point average required for successful completion of this program is 2.25 (C+). For further details on the Fifth Year program, see page 22.

PROGRAM APPROVAL

Program approval is required for all master's and specialist degree candidates. Students are required to develop a program of studies which must be approved by the student's adviser and the graduate dean.

Program approval may take place at any time after the student has been admitted to a graduate program, but prior to the completion of 24 credits applicable to the graduate program (including transfer credits). Each student must contact the graduate studies office to request the program forms.

To be eligible, the student must have:

1. Satisfied all conditions attached to admission.
2. Satisfactorily completed the departmental examination(s). (Contact adviser or the graduate studies office to determine if required.)
3. Maintain a 3.0 grade point average in the major field, the total program and all graduate course work taken at this university.

The graduate studies office reviews the student's record to determine eligibility for an approved program according to the criteria listed above, and notify the adviser of the student's status.

The student should develop a proposed program of course work in consultation with the assigned adviser, according to procedures established by the major department. The student should review the program requirements outlined in this bulletin. Upon being approved, all three copies of the program should be returned to the graduate studies office by the adviser.

The Dean, School of Graduate and Continuing Studies, reviews the proposed program and gives final approval. In cases where changes are required, before final approval is given, the dean consults with the adviser and the student. In planning their program, students must be aware of the following program options:

PROGRAM OPTIONS

Masters:

Departments offering the Master's degree may provide one or more of three different options.

Plan A: Under Plan A, a thesis or creative work is required. Plan A requires a minimum of 45 credits including the credits earned for the thesis or creative work. A final oral examination is required, and a final written comprehensive examination also may be required at the option of the department.

Plan B: Under Plan B, a minimum of 48 credits is required. Some departments require one or more starred papers. Students completing Plan B programs without starred papers must complete a final written comprehensive examination. Students completing starred papers are required to complete a final oral examination and, at the option of the department may also be required to complete a final written comprehensive examination.

Plan C: Under Plan C, a minimum of 54 credits is required. Students under Plan C programs must complete a final oral examination focusing on a portfolio of projects and papers which are submitted in accordance with the requirements of the program, and a final written comprehensive examination may also be required at the option of the department. Students are encouraged to engage in a continuing planning process with their adviser to develop an acceptable portfolio of projects for the final oral examination.

Specialist:

All Specialist degree programs require a field study. Specialist degree programs require a minimum of 45 credits including the credits awarded for the field study.

Under each of the program options, the departmental requirements may exceed the minimum established as graduate school policy. Please review the departmental requirements and the sections on academic regulations and final evaluation procedure for additional information relating to the program requirements.

Once the program has been approved, any deviation from it must receive prior approval of the adviser and the graduate dean through the petition process. These petitions for change are available in the graduate studies office and must be submitted via the adviser to the graduate studies office.

When the program is given final approval, the student receives notification that it meets the requirements for the Master's or Specialist degree program.

FIELD STUDIES, THESES, CREATIVE WORKS, AND STARRED PAPERS

PRELIMINARY THESIS OR FIELD STUDY CONFERENCE. Students on Plan A (thesis) or the Specialist degree program must arrange for a preliminary thesis or field study conference. This conference may be scheduled at any time after the student has been fully accepted into a graduate program, if the graduate grade point average is at least 3.0, and after the student's program of study has been approved by the graduate dean, but at least one quarter prior to the final oral examination. In consultation with the student's adviser, an outline of the proposed thesis or

field study is prepared and four copies are submitted to the graduate studies office two weeks prior to the time requested for the research conference. The student should then request the graduate studies office to schedule a preliminary thesis or field study conference. The student's adviser, one other graduate faculty member from the major department, and one graduate faculty member from a related field (selected by the graduate dean) comprise the faculty representation. These conferences are not held during final examination week.

PREPARATION OF THESIS OR FIELD STUDY.

The following procedures and regulations govern the preparation of a thesis or a field study:

1. A master's thesis or a field study for the Specialist degree is carried out under the supervision of the research committee, appointed at the preliminary research conference, and consisting of the student's adviser, a graduate faculty member from the major department, and another graduate faculty member from a related department (approved by the graduate dean) chosen on the basis of his/her potential advisory value in the area of the research undertaken. This committee comprises the membership of the student's final evaluation committee.
2. Registration for a master's thesis or field study is completed in the same manner as all other course work; however, the credits for thesis or field study may be spread over more than one registration period. The student is required to have an arranged course form signed by his/her adviser when he/she comes to register for the course. These can be obtained through the Office of Records and Registration. Consult the department program requirements and course lists for the correct course number and credits.
3. The satisfactory completion of the research is reported as "S" (satisfactory). If all requirements for the research have not been met by the end of the quarter or term in which it was registered, the work is reported as "in progress." A master's thesis must be completed within the 7-year time limit set for the completion of a master's degree. A field study must be completed within the 7-year time limit set for the completion of a specialist degree.
4. Four copies of the thesis or field study, each containing an abstract, must be filed with the graduate studies office no later than three weeks before the completion of work for the appropriate degree. Before the material is submitted, it must have the approval of the respective committee. When the final evaluation committee has approved the research in its final form, four copies are submitted to the graduate studies office for binding. An additional thesis or field study is required if the student wants a personal copy. All copies are bound in black buckram covers, and the title is printed in gold lettering on the front cover and binding edge.
5. Three additional copies of the abstract of not more than 400 words are submitted to the

graduate studies office; the abstract will include the signature of the chairperson indicating approval before it is submitted to the graduate studies office. All abstracts are reprinted and submitted for publication, and therefore, must follow the format of St. Cloud State University which is illustrated in *A Manual for the Preparation of Field Studies, Theses, Creative Works, or Starred Paper(s)*.

6. The student should contact the graduate studies office to obtain *A Manual for the Preparation of Field Studies, Theses, Creative Works, or Starred Paper(s)*. This manual provides detailed information and instructions.
7. Standards for the preparation of field studies (for the Specialist degree), theses, creative works, and starred paper(s) are those published by the graduate studies office, in *A Manual for the Preparation of Field Studies, Theses, Creative Works, or Starred Paper(s)*, and those embodied in *Form and Style in Thesis Writing* by Campbell, Ballou, and Slade, published by Houghton Mifflin, unless otherwise specified by the department and approved by the graduate studies office. When a conflict exists in standards, format, or style, the manual published by the graduate studies office takes precedence over any other manual approved for department use.

CREATIVE WORK—Statement of Qualifications

A student interested in completing creative work (in lieu of the traditional master's degree thesis or as may be required by a specific department) must show evidence of creative ability before being accepted as a candidate for the advanced degree. This evidence submitted by the students from the departments of art, English, and music (creative projects, play-writing, performance or production, etc.) must be presented to a designated committee for critical review and approval. Four copies of the creative work must be filed with the graduate studies office at least two weeks prior to the date set for the *final oral examination*. An additional copy of the creative work is required if the student wants a personal copy.

The creative work includes a written statement of artistic intent and such supporting materials as are applicable. Other than form and style of the text, the binding of the contents of the creative work must be in accordance with standard thesis requirements.

The statement of artistic intent may contain such information as a description of the work undertaken, the technique(s) involved in the work, and related subject matter. This information and data are approved, bound, and placed on file as described in *A Manual for the Preparation of Field Studies, Theses, Creative Works, or Starred Paper(s)* which is available in the graduate studies office.

In certain areas of the fine arts, a student may be required to produce evidence of creative skill by submitting critical reviews, letters of recommendation, and/or demonstration(s). For further information, contact the appropriate department chairperson.

Preliminary Conference. A preliminary conference may be scheduled at any time after the student has

been fully accepted into a graduate program and after the student's program of study has been approved by the graduate dean, but at least one quarter prior to the final oral examination. The purpose of the conference is to serve as an evaluation of the creative work accomplished prior to the time of the conference and to provide direction for the final creative work.

In consultation with the student's adviser, an outline of the proposed creative work will be prepared and four copies submitted to the graduate office two weeks prior to the time requested for the qualifying conference. The student should then request the graduate office to schedule a qualifying conference. The student's adviser, one other graduate faculty member from the major department, and one graduate faculty member from a related field (approved by the graduate dean) comprise the faculty representation on the committee. Qualifying conferences are not scheduled during final examination week.

The qualifying conference and the final oral examination cannot be held during the same quarter.

Registration for Creative Work. Registration for a creative work (698) takes place in the same manner as for all other course work. These credits, however, may be earned over more than one registration period.

STARRED PAPERS. Certain Plan B programs require that starred paper(s) be written in conjunction with approved graduate courses in the student's major area of concentration. These courses must be identified on the approved program forms.

Preliminary Starred Paper Conference. Students pursuing a Plan B program which requires starred papers must arrange for a preliminary starred paper conference. This conference may be scheduled at any time after the student has been fully accepted into a graduate program and after the student's program of study has been approved by the graduate dean, but at least one quarter prior to the final oral examination. In consultation with the adviser, the student should prepare a preliminary outline of the proposed research papers, and should submit four copies to the graduate studies office at least two weeks prior to the preliminary starred paper conference. At that time, the student should request the graduate studies office to schedule the preliminary starred paper conference. The student's adviser, one other graduate faculty member from the major department, and one graduate faculty member from a related field are selected by the graduate dean and shall comprise the faculty representation. Preliminary starred paper conferences are not scheduled during the final examination week.

PLAN C, PROJECT/PORTFOLIO. Plan C programs require that a significant professional project or a portfolio of projects be prepared in conjunction with approved graduate courses in the student's major area of concentration.

Preliminary Project/Portfolio Conference. Students pursuing the Plan C Project/Portfolio should arrange for a preliminary conference with their graduate committee. This conference may be scheduled at any time after the student has been fully accepted into a graduate program and after the student's program of study

has been approved by the graduate dean, but at least one quarter prior to the final oral examination. In consultation with the adviser, the student should prepare a summary of the proposed project or portfolio of projects, and should submit four copies to the graduate studies office at least two weeks prior to the date of the conference. At that time, the student should request to schedule the preliminary project/portfolio conference. The student's adviser, one other graduate faculty member from the major department and one graduate faculty member from a related field selected by the graduate dean comprise the faculty representation. A preliminary project/portfolio conference is not scheduled during the final examination week. A preliminary conference cannot be held in the same quarter as the final oral examination.

FINAL EVALUATION PROCEDURE

A candidate for the Master's or the Specialist degree completes the final evaluation during the last quarter of the graduate program. Students who have earned less than a 3.0 (B) average in the major, over their entire program, and in all graduate credits earned are not permitted to complete the final examination.

The final evaluation procedures vary according to the program option selected.

Plan A: A student selecting Plan A must complete a thesis or creative work and must complete a final oral examination. A final written examination also may be required at the option of the department. For further information about these examinations, consult the sections titled *final oral examination* and *final written examination* which follow.

Plan B: Plan B programs are of two types: *Programs which require starred papers.* Students completing starred papers must complete a final oral examination. A final written examination also MAY be required at the option of the department. For further information about these examinations consult the sections titled *final oral examination* and *final written comprehensive examination* which follow.

Programs which do not require starred papers. Students completing Plan B programs which do not require starred papers are required to satisfactorily complete a final written comprehensive examination. For further information, refer to the section titled *final written comprehensive examination* which follows.

Plan C: Students completing Plan C programs must complete a final oral examination over the portfolio of materials which have been developed in consultation with the adviser. A final written comprehensive examination may also be required at the option of the department. For further information see the sections titled *final oral examination* and *final written comprehensive examination* which follow.

FINAL ORAL EXAMINATION. Final oral examinations are required of all students whose programs require the completion of a thesis, field study, creative work, starred paper(s), or the Plan C portfolio. A candidate who fails the final oral examination in the first attempt may, with the approval of the adviser, take the examination a second time, but the candidate may not retake the final oral examination during the same quarter in which the exam was failed (the two summer terms are classified as one quarter). A third chance to pass the examination is not permitted. The specific requirements vary according to the nature of the project submitted.

Theses and Field Studies: At least three weeks prior to the close of the quarter in which graduation is anticipated, the student must request the graduate studies office to schedule a final oral examination. At this time four copies of the thesis or field study, each containing an abstract, must be submitted to the graduate studies office for approval of the form and style.

The final oral examination is conducted by the final evaluation committee, consisting of three members. Membership consists of adviser, another graduate faculty member from the major department, and one graduate faculty member appointed by the graduate dean. A majority vote of the final evaluation committee is required to pass the final oral examination.

Theses and field studies are approved, bound, and placed on file as described in *A Manual for the Preparation of Field Studies, Theses, Creative Works, or Starred Paper(s)* which is available in the graduate studies office.

Starred Papers: At least three weeks prior to the close of the quarter in which graduation is anticipated, the student must request the graduate studies office to schedule a final oral examination. At this time four copies of the starred paper(s) must be submitted to the graduate studies office for approval of the form and style.

The final oral examination is conducted by the final evaluation committee, consisting of three members. Membership consists of adviser, another graduate faculty member from the major department, and one graduate faculty member appointed by the graduate dean. A majority vote of the final evaluation committee is required to pass the final oral examination.

The starred paper(s) are approved, bound, and placed on file as described in *A Manual for the Preparation of Field Studies Theses, Creative Works, or Starred Paper(s)* which is available in the graduate studies office.

Creative Work: Arrangements for the final evaluation conference must be made through the graduate studies office. The final evaluation conference must take place during the last quarter or term of the student's graduate program.

The final evaluation committee consists of three members who shall judge the artistic merits of the creative work. These three committee members are

the same faculty representatives who served on the qualifying conference. A fourth voting member may be selected from another department within the university if deemed appropriate by the major adviser and/or the graduate dean.

Four copies of the creative work must be submitted to the graduate studies office at least two weeks prior to the date of the final evaluation conference. Final evaluation conferences are not scheduled during final test week.

The members of the final evaluation committee must sign the approval page to indicate their acceptance of the creative work. Four copies of the final creative work must be submitted and approved for binding. The creative work is approved, bound, and placed on file as described in *A Manual for the Preparation of Field Studies, Theses, Creative Works, or Starred Paper(s)*, available in the graduate studies office.

Plan C, Project/Portfolio: At least three weeks prior to the close of the quarter in which graduation is anticipated, the student must request to schedule the final oral examination. At this time the student must prepare a summary of the materials to be included in the project/portfolio. If the material is a single comprehensive project, the summary should be in the form of an abstract. If the material is a portfolio of smaller projects, the summary should be in the form of a brief synopsis of each of the projects.

The department may exercise its option to retain any or all materials prepared for the professional project/portfolio.

FINAL WRITTEN COMPREHENSIVE EXAMINATION. Candidates for the Master's degree under Plan B in which a starred paper is not completed are required to pass a final written comprehensive examination based on the major. Final written comprehensive examinations may be required under all other program plans at the option of the department. This examination is developed, administered, and evaluated by members of the staff responsible for the major program. All candidates must notify their adviser of their intention to complete the final written comprehensive examination at the beginning of the quarter in which completion of all degree requirements is anticipated. The candidate's adviser is the chairperson of this examination committee, which is appointed by the department chairperson, and which consists of at least three members. A majority vote of the examining committee is required to pass the final written comprehensive examination. A candidate who fails in the first attempt may, with the approval of the adviser, take the examination a second time, but the candidate may not retake the examination during the same quarter in which the exam was failed (the two summer terms are classified as one quarter). A 3.0 (B) grade point average in the major, over the entire program, and in all graduate credits is a prerequisite for taking the final comprehensive examination. A third chance to pass the examination is not permitted.

GRADUATION OR COMPLETION

APPLICATION FOR GRADUATION OR COMPLETION. A candidate for the Master's or the Specialist degree, should file an application for graduation accompanied by a \$15.00 non-refundable fee. This application is submitted to the graduate studies office at the beginning of the quarter or term in which the work for the degree is anticipated to be completed. Deadline dates for application for graduation are listed in the Academic Calendar section of this bulletin.

Students completing a Sixth Year or Fifth Year program file an application for completion accompanied by a \$15 non-refundable fee. This application for completion of the program is submitted to the graduate studies office at the beginning of the quarter or term in which the work is anticipated to be completed. Deadline dates are the same as those for application for graduation as listed in the Academic Calendar.

SUMMARY OF REQUIREMENTS FOR GRADUATION. It is the responsibility of the graduate dean to certify that a student has met all the following requirements for the degree sought.

1. Application for graduation accompanied by a \$15.00 non-refundable fee must have been submitted at the beginning of the quarter which the degree is to be granted.
2. The student must have satisfactorily completed all courses required on the approved program. All changes must be substantiated by an approved petition.
3. The student must have maintained a 3.0 (B) average in the major, in the total program, and in all graduate courses taken at St. Cloud State University.
4. The student must have satisfactorily completed the required final examination(s), written, oral, or both.
5. A student completing a thesis, field study, creative work, or starred paper(s) must have submitted four approved copies to the graduate studies office for binding, together with the required binding fee. Three additional abstracts must have been submitted by those completing a thesis or field study.

CONFERRING OF DEGREES. Degrees are conferred and commencement exercises held at the close of each quarter. While attendance at these exercises is not compulsory, students are urged to participate. Students will receive instructions from the academic affairs office regarding commencement exercises and from the graduate studies office regarding the hooding ceremony.

ACADEMIC REGULATIONS

Graduate students are expected to become thoroughly familiar with the processes and regulations contained in this bulletin and are responsible for complying with its provisions.

CREDIT EARNED BEFORE ADMISSION. Only 9 quarter hours of graduate credit earned at St. Cloud State University prior to formal acceptance by the department to a graduate program, or the credits completed in the first quarter of registration (whichever is greater) will be permitted to apply toward completion of a student's graduate program. (Credits earned the first and second summer term are considered as one quarter of graduate work.) In unusual circumstances, credit earned in excess of these figures may be considered for approval by the graduate dean by the petition procedure.

CREDIT BY CORRESPONDENCE OR EXAMINATION. Credits earned through a correspondence course, from either St. Cloud State University or another institution, are not accepted toward a graduate degree. St. Cloud State University does not provide an option whereby graduate credits can be earned by examination.

COURSE NUMBERING SYSTEM. Courses numbered from 500-699 may be used to satisfy the requirements of graduate degrees. Courses open only to graduate students are numbered 600-699. Many courses carry double numbers, e.g., 450-550. These courses are open to advanced undergraduate and to graduate students. To receive graduate credit, the student must register for the 500 number. Double-numbered courses require a clear differentiation between the undergraduate and graduate levels. This may be accomplished through differential credit (4 credits undergraduate, 3 credits graduate), additional assignments, or a differentiated marking system.

COURSE LOAD. Course load for graduate students is defined as follows: full-time—a minimum of 8 credits per quarter; 3/4 time to 1/2 time—a minimum of 6 credits per quarter. Any exceptions must be recommended by the student's adviser and approved by the graduate dean.

The maximum credit load (undergraduate, graduate and transfer credits combined) is 16 credits per quarter during the regular academic year and a maximum of 9 credits per summer term.

GRADUATE ONLY COURSE WORK. Effective fall quarter 1980, at least one-half the minimum requirements of curriculums leading to a Master of Science degree and to a Sixth Year program or Specialist degree must be met through courses, seminars, and other learning experiences offered only to graduate students. Master of Arts degree programs must have a minimum of 15 credits earned in courses, seminars, and other learning experiences offered only to graduate students.

MARKS. The following marks are used in reporting the achievement of graduate students at this institution: A (excellent), B (good), C (acceptable), and D and F (unsatisfactory or failure). S (satisfactory) and U (unsatisfactory) are used for certain specialized courses in which a more precise mark is not deemed appropriate. Other non-credit marks which are recorded on official transcripts include: I (incomplete), V (audit), W (withdrawn), and X (in

progress). A grade of N is recorded when the instructor has failed to submit a grade for the student.

The completion of theses, field studies, some independent study projects, and certain special courses is not normally anticipated during the quarter in which the credit is registered. Where the work is projected to extend over two or more quarters, the grade will be recorded as X (in progress), until such time as the work is completed. If the X grade is not removed before five years has elapsed, or the student has graduated, whichever comes first, the X (in progress) will be changed to W (withdrawn).

When the student has completed all of the requirements for a master's thesis, creative work or a specialist degree field study, the adviser submits a mark of S (satisfactory).

When a student who is otherwise doing satisfactory work in a course is unable, for reasons beyond control, to complete all course requirements during the term, a grade of I (incomplete) is recorded. Such incompletes must be removed by the student within one quarter, except that an incomplete given in spring quarter must be removed by the end of the following fall quarter. If it is not removed within the time limit, the I (incomplete) is changed to F.

If the student has not met all of the requirements of a master's thesis or a specialist degree field study by the end of the quarter or term in which it was registered, the research is reported as X (in progress). A master's thesis must be completed within the seven-year time limit set for the completion of a master's degree. A field study must be completed within the seven-year time limitation set for a specialist degree.

STANDARD OF SCHOLARSHIP. Calculation of grade point averages is based on a 4-point scale in which A=4, B=3, C=2, D=1, and Fail=0. S grades are not included in the calculation of the grade point average, however, U grades are included on the basis that U=0. Marks earned in courses accepted in transfer are not included in the calculation of the grade point average.

Candidates for a master's degree must maintain a 3.00 grade point average in the major field, the total program, and all graduate course work taken at this university.

Candidates for a specialist degree in information media and special education administration must maintain a 3.00 or higher average in the major field, the total program, and all graduate course work taken at this university. Candidates for a specialist degree in educational administration must earn a 3.25 grade point average over the course work taken in the Specialist degree program, and a 3.00 grade point average in all graduate course work taken at this university.

Candidates for the Sixth Year program in educational administration must earn a 3.00 grade point average over the course work taken in the program, and a 3.00 grade point average in all graduate course work taken at this university.

Courses in which a mark of D, F or U was earned will not be accepted for graduate credit; however, the honor point deficiency created by

such marks must be made up by marks of A in other courses. If a course is repeated, both marks are used in determining the total grade point average.

The scholarship standards established for each program must be satisfied at each of three formal check-points for program completion; application for program approval, application to take the final examination(s) required for the degree, and for graduation.

Continued registration may be denied at any time during the program based on unsatisfactory scholarship.

Graduate students, accepted as candidates for the Master's degree, Specialist degree, or Sixth Year program, whose records show less than a 3.00 average (3.25 for the Specialist in educational administration) at the completion of the approved program of courses may be permitted to register for a maximum of 8 additional quarter hour credits to be earned in courses approved by the petition procedure. If, after the completion of these 8 additional credits, the average is still less than a 3.00 (3.25 for the Specialist in educational administration), the student will be allowed to take additional graduate level work for the purpose of raising the average mark to qualify for the Master's degree, Specialist degree, or Sixth Year program.

RESIDENCE REQUIREMENT. Candidates for the Master's degree, Specialist degree, or Sixth Year program must earn a minimum of 30 quarter hours in on-campus classes (day and night combined). Graduate courses offered at resident centers established by the university are considered on-campus credit.

Individual departments may establish residence policies requiring a period of full-time study. Each student should consult with the major department to determine specific departmental requirements.

VALIDATION OF COURSES. Graduate courses taken at St. Cloud State University more than seven years prior to the date of graduation must be validated if used in meeting degree requirements. Graduate courses more than seven years old taken at other universities may not be validated as explained in the section titled Transfer Policy which follows. A course in which a student received a grade of "C" or less cannot be validated for use on the student's graduate program, and a maximum of one-half of the total program credits may be validated. For procedural information on how to *submit courses for validation* contact the graduate studies office.

TRANSFER POLICY. A maximum of 15 quarter hours of graduate work completed at other accredited colleges and universities or extension credit earned from this university may be considered for application to the program. To be considered for transfer, the credits must have been residence credits earned at an institution approved to offer graduate degree programs in the major field where the credit was earned, at the time the credit was earned, must be appropriate to the student's program, must be approved by the adviser and the graduate studies office, and must be recorded on the approved program forms. The student must request that two offi-

cial transcripts be sent directly to the graduate studies office by the institution awarding the credit. (Official transcripts, submitted from other institutions, are for use in the applicant's admission process and pursuit of the degree at St. Cloud State University. These transcripts, or copies of them, cannot be issued to the student or other institutions.) The grade recorded for these credits must be B or above or an S or P in S/U or P/F grading systems. No transfer credit can be accepted that was earned more than seven years prior to completion of the degree.

With the prior approval of the graduate adviser and the graduate dean, a maximum of 24 quarter hours of appropriate graduate credit may be transferred from other universities of the Minnesota State University System and applied to a program at St. Cloud State University.

When transferring credit to a specialist degree program, a minimum of 30 of the last 45 credits must be taken at this institution.

After the student's program of study has been approved, no additional transfer credits will be accepted unless the student has received prior approval via the petition process.

Any questions or concerns about the transferability of credit earned at other institutions should be directed to the graduate office before a student enrolls for that credit.

TIME LIMIT. All credits (including transfer credits) used in meeting requirements for a master's degree must be earned within seven years prior to the awarding of the degree.

All credits used in meeting the requirements for the Specialist degree and the Sixth Year program must be completed within the seven-year period prior to the awarding of the degree.

DROP POLICY. A student may change registration for course work prior to the start of classes. These withdrawals will not be recorded on the student's record.

To determine the last date on which students may withdraw with a mark of W, the student should check the appropriate regular or summer class schedule.

ELIMINATION FROM A PROGRAM. A student may be eliminated from a graduate program for cause based on the recommendation of the adviser/graduate committee and the department chairperson, and the decision of the graduate dean.

INDEPENDENT STUDY. Each department offers independent study opportunities for advanced students wishing to pursue a special problem in the major area of concentration. These courses carry the designation: (name of department or program) 600, Special Problems. A maximum of 4 credits of special problems is permitted on a graduate degree program.

WORKSHOP LIMITATION. Workshop courses may be applied to graduate degree programs within the following limitations:

- Master of Arts/Science
 - Plan A – 6 workshop credits
 - Plan B – 9 workshop credits
 - Plan C – 15 workshop credits
- Specialist degree
 - 6 workshop credits
- Sixth Year program
 - 9 workshop credits
- Fifth Year program
 - 15 workshop credits

Workshops covered by this regulation include permanent workshops that carry a special department number, temporary workshops that carry 595 or 695 numbers, and continuing education workshops that carry a 588 number and that require special approval for inclusion in a degree program.

501 CREDIT BY ARRANGEMENT. Under certain circumstances, upper division courses (300 or 400-level) may be applied to master's degree requirements. To obtain approval, the student must submit a petition for approval by the instructor, the adviser, the department chairperson, and the graduate dean prior to registering for the course, if the course has not been approved on the proposed program of study. The student also must make arrangements to complete the special graduate requirements of the course and a credit-by-arrangement form is needed in order to register for the 501 course.

Students who receive approval must register for (name of department or program) 501 (title of course).

A maximum of 9 credits earned under the 501 course number may be applied to a master's degree program.

This procedure is open only to students admitted to a graduate degree program.

FIELD TRIPS. No more than 9 credits earned through field trips may be counted toward completion of a master's degree. If field trips are registered as Independent Study 600, no more than 4 credits is applicable to a degree program.

AUDIT. Students may enroll for courses for audit by securing the permission of the instructor of the course and the Dean, School of Graduate and Continuing Studies. Auditors pay the regular fees.

Auditors are not permitted to take the course examinations nor are they given credit for the courses audited. They must complete a separate registration and pay the regular course fees.

CORRESPONDENCE COURSES. Graduate correspondence courses are not offered by St. Cloud State University. Graduate credit earned through correspondence is not accepted in transfer.

PROFESSIONAL EDUCATION CORE

The basic intent of the professional education core is to include one course from each of three broad professional education areas in the Master of Science degree programs: educational foundations, curriculum, and instruction. Courses presently approved for each of these areas include:

Educational Foundations

- ED 603 Legal Aspects of Church/State Separation in Education, 3 Cr.
- ED 604 School/Community Organizations and the Teacher, 3 Cr.
- ED 605 The Adolescent and the School, 3 Cr.
- ED 606 Problems in American Education, 3 Cr.
- ED 607 The Student, the Teacher and the Law, 3 Cr.
- ED 608 Children's/Student's Rights, 2 Cr.
- ED 609 Comparative Education, 3 Cr.
- ED 610 The School and the Social Order, 3 Cr.
- ED 611 History of American Education, 3 Cr.
- ED 612 Philosophy of Education 3 Cr.
- ED 613 Influential Ideas in American Education, 3 Cr.
- ED 632 Senior High School Seminar, 3 Cr.

Curriculum

- ED 602 Evaluation of the School Program, 3 Cr.
- ED 625 Junior High School Seminar, 3 Cr.
- ED 647 Secondary School Curriculum, 3 Cr.
- ED 648 Curriculum Construction, 3 Cr.
- ED 649 Practicum in Curriculum Construction and Development, 3 Cr.

Instruction

- ED 624 Schools for the Early Adolescent, 3 Cr.
- ED 628 Modern Trends in Secondary Education, 3 Cr.
- ED 631 Senior High School Theories and Practices, 3 Cr.
- ED 637 Cooperative Learning, 3 Cr.
- ED 638 Advanced Cooperative Learning, 3 Cr.
- ED 639 Global Education, 3 Cr.
- ED 640 The Classroom Teacher and Mainstreaming, 3 Cr.
- ED 645 School Discipline, 3 Cr.
- ED 654 Strategies, Development and Evaluation of Instruction, 3 Cr.
- ED 655 Teaching Strategies for Practitioners, 3 Cr.
- ED 662 Nonverbal Communication and Education, 3 Cr.

Other courses may be approved for professional education with the prior approval of the secondary education adviser and the graduate dean.

THE FIFTH YEAR PROGRAM IN TEACHER EDUCATION

The Fifth Year Program in Teacher Education is intended to provide a systematic basis for study beyond the baccalaureate degree for teachers who do not plan to qualify for a master's degree. Work included in the Fifth Year program is selected to strengthen the student in area(s) taught or to be taught. As nearly as possible, a student's Fifth Year program is planned to provide an integrated five-year program of preparation for teaching. The Fifth Year program is available in nearly all of those teaching fields where master's degree programs are offered.

ADMISSION. Students seeking admission to the Fifth Year program must complete the following:

- a. the application form, accompanied by a \$15 non-refundable fee to the graduate studies office;
 - b. two official copies of the undergraduate transcript sent from the college or university where the work was completed.
- All transfer work must be substantiated by two copies of official transcripts sent from the college or university where the work was taken.
- An applicant is granted admission to the Fifth Year program if a baccalaureate degree is held in teacher education from a college or university accredited by the National Council for Accreditation of Teacher Education, or the appropriate regional accrediting agency, or from an institution

recognized by the state university of the state in which the college or university is located, and if the student has earned a 2.00 grade point average over all undergraduate course work completed.

If the applicant holds a baccalaureate degree from an unaccredited institution, admission to the Fifth Year program may take place upon the submission of evidence that a valid teaching license is held in the state where the applicant teaches; and upon successful completion of 15 quarter hours of creditable work at this university.

Upon formal admission to the program, the student is assigned an adviser. The adviser assists in planning a program that has clear relevance to professional goals of the student.

PLANNING THE FIFTH YEAR PROGRAM. Before completion of 16 quarter hours of course work on the Fifth Year program, the student, with counsel from the adviser, must outline the courses to be completed to meet the Fifth Year program requirements. The necessary forms may be obtained from the graduate studies office or the student's adviser. The program forms must be prepared in triplicate. After the adviser has endorsed each of the three copies, the student sends them to the graduate studies office for processing and distribution. The three copies are sent, respectively, to be placed in the applicant's file in the graduate studies office, to the adviser, and to the applicant. Any subsequent changes in the applicant's Fifth Year program must have the prior approval of the student's adviser and the Dean, School of Graduate and Continuing Studies via the petition process.

In order to complete the Fifth Year Program, the candidate must have met the following requirements:

1. The student must have earned a minimum of 45 quarter hours of creditable work: in secondary school programs, 15 of these credits must have been taken in courses open only to graduate students; in elementary school programs, 15 of these credits must have been taken at the graduate level.
 - a. The student must have earned a minimum of 33 quarter hours in the major and related areas.
 - b. The student must have earned a minimum of 9 quarter hours in professional education.
 - c. The student must have taken ED 614, Interpretation of Research, 3 Cr. or ED 615, Introduction to Research, 3 Cr.
2. At the beginning of the term or quarter when the student plans completion of the required course work, an application for completion of the program, accompanied by a \$15.00 non-refundable fee must be filed with the Dean, School of Graduate and Continuing Studies.

CREDITS APPLICABLE. Of the 45 credits required to complete the program, a minimum of 15 credits must be earned in residence at St. Cloud State University.

A combined total of 30 extension, transfer, T.V.

and four credits with marks of C or better may be accepted on the Fifth Year program; however, not more than 15 credits can be accepted in transfer.

- A. Graduate and advanced undergraduate credits earned at other accredited colleges and universities after the awarding of a bachelor's degree (maximum, 15 credits).
- B. Extension from St. Cloud State University (maximum, 15-30 credits).
- C. Tours and T.V. (maximum, 9 credits).
- D. Workshops (maximum, 15 credits).

COURSE LOAD. The maximum load (undergraduate and graduate credits combined) for fifth year program students is 16 credit hours per quarter.

COURSE NUMBERING SYSTEM. Courses numbered in the 300, 400, 500, and 600 series are creditable in the Fifth Year program. Courses carrying numbers in the 100s and 200s may not be included in this program.

FEES. Students enrolled in the Fifth Year program pay undergraduate fees when they enroll in undergraduate (300- and 400-numbered) courses and graduate fees when they enroll in 500- or 600-numbered courses.

MARKS. The academic achievement of students is recorded by the following system of marks: A (excellent), B (good), C (average), D (not acceptable), and F (failing). The mark X is given during the early quarter or quarters of a course which must be taken in a series of more than one quarter or term before any credit is earned. S means satisfactory performance in courses for which no more precise mark is generally available. U means unsatisfactory. Courses not completed during the regularly scheduled period are recorded as I (incomplete). Such incompletes must be removed by students within the next quarter in order to receive credit for the course. For auditing, the mark recorded is V.

STANDARD OF SCHOLARSHIP. Candidates for the Fifth Year program must maintain a grade point average of at least 2.25 in the major and in the total program.

Courses in which a mark of D or F was earned are not credited toward completion of the Fifth Year Program.

A fifth year student may repeat one time a course which was failed or in which a D was received. When a course is repeated, both the old and the new marks appear on the student's record. Both marks earned are used in computing the grade point average.

Only courses taken at St. Cloud State University are used in computing the grade point average.

TIME LIMIT. All credits used in completing the Fifth Year program must be earned within 10 years of the completion of the program.

COMPLETION OF THE FIFTH YEAR PROGRAM. The satisfactory completion of an approved Fifth Year Program in Teacher Education is verified by an appropriate statement on the transcript.

ALL-UNIVERSITY COURSES



EDUCATIONAL TOURS

(Name of Department or Program) 510. **Educational Tours.** Tours taken under supervision of the university. Exact nature of course are defined by the department or program involved, subject to approval of the administration. 1-8 Cr.

WORKSHOPS

Workshops are of two types.

(Name of Department or Program) 595 and 695. (Special title for each offering). Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option. (See Academic Regulations.)

(Name of Department or Program) 588. (Special title for each offering). Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate

dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.

EXPERIMENTAL COURSES

Departments may offer graduate courses on an experimental basis. Proposals for these courses must contain a syllabus with a title and description for the student's record and be approved through the curricular process as established by the Faculty Association and the administration.

Double-numbered courses are assigned numbers by the department from those available at the 400-500 level. Graduate-only courses are assigned numbers from the block set aside for this purpose.

(Name of Department or Program) 690-694. **Selected Topics in (Name of Department or Program):** (Select special title for each offering). May be repeated to a max. of 9 Cr. 1-4 Cr.

INDEPENDENT STUDY

600. **Special Problems.** Independent study for advanced students wishing to work out a special problem in the major area of concentration. 1-4 Cr.

COLLEGES

COLLEGE OF BUSINESS 124 BUSINESS BUILDING/255-3213

James Kelly, Dean



Departments Offering Graduate Degree Courses

Accounting, M.S.
Business Computer and Information Systems
Management and Finance
Marketing and General Business
M.B.A. program offered jointly by all the departments

Master's degree programs are accredited by the American Assembly of Collegiate Schools of Business and the North Central Association of Colleges and Schools.

OBJECTIVES

Master of Business Administration (M.B.A.)

The purpose of the Master of Business Administration degree is to develop qualified business administrators for positions of management responsibility in a changing society. Specifically, the M.B.A. program is designed to prepare graduates who have attained:

A. a comprehension of business policy formulation and implementation.

- B. an awareness of the influences of political, social, legal and regulatory, environmental, and technological issues on business.
- C. a comprehension of the use of quantitative data and analytical techniques as they pertain to business administration.
- D. a working knowledge of the functional areas in business.
- E. the capability to communicate effectively, both orally and in writing.
- F. an awareness of ethical, global, and cultural issues.

Admission Policy. The applicant for admission to the Master of Business Administration program must meet the following requirements:

1. a baccalaureate degree from an accredited college or university.
2. an acceptable score on the Graduate Management Admission Test (GMAT).
3. evidence of undergraduate scholarship.
4. demonstration of aptitude for successful graduate business study.

Admission is competitive and selection is based on an evaluation of the total factors.

5. Students in the last quarter or semester of their

baccalaureate program may be provisionally accepted into the program. These students must show completion of the undergraduate degree before they can enroll in graduate classes.

Information about the GMAT can be obtained at the graduate studies office and the office of the Dean, College of Business.

The candidate for the Master of Business Administration degree must satisfy the requirements for all master's degree programs as set forth by the School of Graduate Studies.

Applicants who have successfully met admission requirements may enroll in the M.B.A. program as full-time day students or on a part-time basis in evening courses. Full-time students also should expect to complete part of the program in the evening.

Master of Science—Accounting (M.S.)

The Master of Science degree in accounting is oriented to those students who desire advanced education in accounting. The goal of the program is to prepare graduates who will have the special skills required to meet the needs of the accounting profession. These skills include:

- A. financial accounting theory and practice.
- B. auditing theory and practice.
- C. tax accounting.
- D. managerial accounting.
- E. professional research.
- F. communication skills.
- G. management advisory services.

Phase I—M.B.A.

M.B.A. candidates admitted into the program must have completed the equivalent of the following foundation courses before starting Phase II graduate courses:

BCIS 340. Management Information Systems. Conceptual foundations of MIS; the roles of computer-based information systems in organizations; systems development phases and methodologies; management issues in MIS. 4 Cr. F, W, S, SUM.

BCIS 341. Operations Research I. Deterministic models such as assignment problems, transportation problems, problems of traveling sales representatives, linear programming, dynamic programming and inventory models. Prereq.: MBA 549. 4 Cr. F, W, S, SUM.

ECON 559. Economic Analysis. The equivalent of Economics I and II. The economic process, national income analysis, money and the banking system, theory of income distribution, pricing systems, resource allocation. Primarily for M.B.A. students. 4 Cr. F, DEMAND.

MBA 539. Business Law and the Legal Environment. The politico-legal framework within which business operates is examined using case studies of business as it is affected by law and social pressures and needs. Examination of policy and rationale of contracts, sales product liability, anti-trust, employer-employee relations, and various related legal topics. (For admitted graduate students only.) 4 Cr. F.

MBA. 549. Quantitative Analysis for Business. Selected topics from the quantitative methods area

with major emphasis on applications in business. (For admitted graduate students only.) Prereq.: MATH 131 or equivalent. 4 Cr. F.

MBA 569. Management of Organizations. Critical examination of behavior within organizations, and organization design, as they relate to the management of organizations. (For admitted graduate students only.) 4 Cr. S.

MBA 591. Principles of Accounting. External and internal financial reporting systems and their roles in planning, control, and evaluation of management action. (For admitted graduate students only.) 4 Cr. W.

MGMF 363. Production and Operations Management. Transformation of inputs (material, labor, management and capital) into outputs (goods and services) in manufacturing and service organizations, management, design, analysis, and control of productive systems. 4 Cr. F, W, S, SUM.

MGMF 371. Managerial Finance. Financial analysis and methods involved for financing various enterprises. 4 Cr. F, W, S, SUM.

MKGB 320. Introduction to Marketing. Analysis, planning and control of marketing functions viewed as a total operating system. 4 Cr. F, W, S, SUM.

Courses used to satisfy Phase I requirements may not be used to reduce the course requirements under Phase II. An average of B or above is required for course work taken in Phase I.

Phase II—M.B.A.

1. The following must be completed by all M.B.A. students. These courses are open only to graduate students admitted to Phase II.

MBA 629. Marketing Plans and Decision-Making. Analysis and planning for decision making in marketing; development of consumer oriented policy in the areas of product, price, logistics, and promotion. 4 Cr. S.

MBA 632. Decision-Making Techniques. Theory of business decision-making applications of analytical tools to business problems. Case study. 4 Cr. F.

MBA 633. Topics in Management Information Systems. Selected topics in MIS include strategic planning, management of information systems, data base management, systems analysis and design, communications and distributed systems, knowledge based systems. May be repeated to a max. of 8 Cr. 1-4 Cr. DEMAND.

MBA 663. Production and Operations Management. Case studies of companies from selected industries that emphasize the direction of operating systems comprising people, material, facilities and information that create goods and/or services. 4 Cr. W.

MBA 670. Corporate Strategies. Analyses, case studies and outside readings in contemporary management problems. (This course must be taken in the last quarter of the M.B.A. program.) 4 Cr. F, S.

MBA 671. Financial Management Policy. Problems confronting corporate financial management in analyzing financial requirements. Prereq.: ECON 677 or permission of instructor. 4 Cr. S, SUM.

MBA 673. Management of Human Resources. Analysis of principles applicable to problems arising out of individual and group employment relations; theories of selecting, developing, motivating, and accounting

for human resources. 4 Cr. W.

ECON 677. Business Economics. Economic analysis as an aid in business management and control. 4 Cr. W.

MBA 683. Managerial Accounting. Development of cost functions, cost-volume-profit relationships, performance measurement and evaluation and the allocation of scarce resources as an aid to the internal decision-making process. 4 Cr. W, SUM.

MBA 684. Corporate Financial Reporting. Accounting systems and their role in the evaluation of assets, the determination of income, and the measurement of equities with concentration on the interpretation of published accounting statement. 4 Cr. F.

2. In addition to the required courses outlined above, the candidate must elect with the adviser's approval 12 graduate quarter credits. The candidate may use these electives to develop an emphasis in one or more of the following areas:

- Accounting
- Business Computer Information Systems
- Economics
- Finance
- International Business
- Management
- Marketing

The M.B.A. program requires graduate students to complete a minimum of 48 quarter credits with an average of B or better.

M.B.A. students may include an international business emphasis in their graduate program by selecting 12 credits from the following courses:

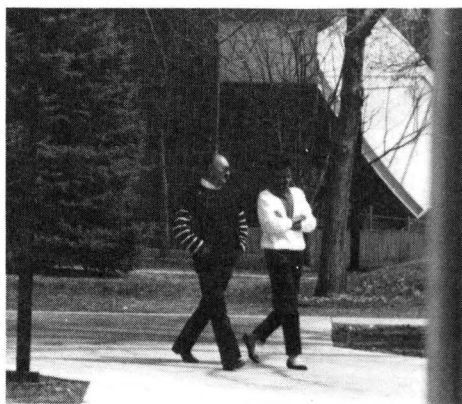
MBA 625. Multinational Marketing Research. Designed to provide the student with marketing research techniques, methods and processes for international markets. Provides understanding of market research in multicultural environmental markets. 4 Cr. W.

MBA 627. Multinational Marketing Management. Stresses the management of multinational corporations in dealing with international markets. It focuses on the problem of planning, implementing, controlling, and evaluating their international marketing programs. Also emphasizes the role of international competition in the world markets. 4 Cr. F.

MBA 675. Multinational Business Management. Encompasses the understanding of cultural, economic, socio-political and technological factors in managing multinational corporations. Focuses on comparative management approaches suitable for managing human and material resources. Emphasis could be on current issues and effective management in multinational corporations. 4 Cr. F.

MBA 676. Multinational Financial Management. Encompasses the understanding of financial flows in multinational corporations operating in a world-wide or regional environment. Includes capital budgeting (asset allocation), financing within own or foreign nations, and regulations and taxes affecting flows of monies across international boundaries. Prereq.: International Economics and undergraduate finance. 4 Cr. DEMAND.

MBA 693. International Accounting. A comparative review of accounting theory and practice, taxation, and special reporting problems of several major industrial countries. Environmental, political, and cultural considerations emphasized. 4 Cr. F.



3. A final written comprehensive examination must be satisfactorily completed during the quarter the student determines to graduate. Further information will be found in the section titled "Final Written Comprehensive Examination" on page 23.

Course listings appropriate to this section may be found in the following departments: Accounting, Management and Finance, Marketing and General Business, Business Computer Information Systems, and Economics.

SUGGESTED SCHEDULING PLAN

The following course sequence is recommended:

Phase I *	Phase II *
Fall	Fall
MBA 539	MBA 632
MBA 549	MBA 683
ECON 559	2 Electives
Winter	Winter
MBA 591	MBA 663
BCIS 340	MBA 684
BCIS 341	MBA 673
	ECON 677
Spring	Spring
MBA 569	MBA 629
MGFM 363	MBA 671
MGFM 371	1 Elective
MKGB 320	MBA 670
	Comprehensive Exam

An average of B or above is required for course work taken in Phase I and Phase II. Candidates should make every effort to complete Phase II in the order suggested. Students may not enroll in any 600 level course unless prerequisites have been met.

MASTER OF SCIENCE (M.S.)

For information on the Master of Science degree program with a major in accounting, see the Department of Accounting. (Departments are listed alphabetically after the introductory sections of this bulletin.)

*Students enrolled as full-time students may complete the M.B.A. program in two years or less, depending on the number of Phase I requirements completed prior to admission.

COLLEGE OF EDUCATION

A110 EDUCATION BUILDING/255-3023

Owen Hagen, Acting Dean
David Carl, Assistant Dean



Departments and Centers Offering Graduate Degree Programs

- Applied Psychology
 - Behavior Analysis, M.S.
 - Community Counseling, M.S.
 - Rehabilitation Counseling, M.S.
 - Secondary School Counseling, M.S.
- Center for Child and Family Studies
 - Administration, M.S.
 - Early Education, M.S.
 - Parent Educator, M.S.
 - Special Needs Children, M.S.
- Center for Educational Administration and Leadership
 - Elementary School Administration, M.S.
 - Secondary School Administration, M.S.
 - Community Education, M.S.
 - School Business Management, M.S.
 - General School Administration (Superintendency) Specialist
- Health Education and Traffic Safety
 - Health Education, M.S.
- Center for Information Media
 - Educational Media, M.S.
 - Human Resources Development/Training, M.S.
 - Information Technologies, M.S.
 - Information Media, Specialist
- Physical Education, Recreation and Sport Science
 - Physical Education, M.S.
- Special Education
 - Special Education, M.S.
 - Special Education Administration, Specialist

Teacher Development

- Curriculum and Instruction—Elementary School Education, M.S.
- Curriculum and Instruction—Middle School/Junior High School Education, M.S.
- Curriculum and Instruction—Senior High School Education, M.S.
- Curriculum and Instruction—Reading Teacher Education, M.S.
- Reading Consultant, M.S.

Departments and Centers Offering Supporting Graduate Courses

- Center for Human Relations and Multicultural Education
- Psychology

OBJECTIVES

With pride in a rich heritage of teacher education, the College of Education vigorously reaffirms its commitment to the preparation of teachers, administrators and other school service personnel, and education scholars. The expanding range of interests and needs among members of the communities with which College of Education personnel are involved continues to broaden the character and mission of the College to include program emphases in a wide array of human resources development and academic areas. College programs and activities must be sufficiently broad in scope, interdisciplinary, and flexible in application to meet these expanding community interests and to maximize the potential contribution of the College of Education.

Through its centers, departments, and service, the College of Education offers a wide variety of programs and services intended to meet the present and future needs and interests of its students as well as those of the community and region which it serves.

Supervised professional clinical experiences are integral to education programs. Students participate in a variety of observations, internships, and student teacher experiences designed to help them develop appropriate skills and understanding. Various models of education are available for students' learning and participation: the CATE (Cooperative Approach to Teacher Education) program, the Resident Teaching in Special Education program, and Student Teaching, are examples.

In addition to the primary purpose of the College of Education, the departments of Applied Psychology, Child and Family Studies, Health Education, Physical Education, Recreation and Sport Science, Human Relations, Psychology, Special Education, and Teacher Development offer courses contributing to the general education program for all university students, as well as programs leading to the Master of Science degree.

COLLEGE OF FINE ARTS AND HUMANITIES

101 KIEHLE VISUAL ARTS CENTER/255-3093

Michael E. Connaughton, Dean

Bonnie Buzza, Assistant Dean



OBJECTIVES

Graduate programs in the College of Fine Arts and Humanities serve various persons and needs: those preparing for professional careers in one of the arts; certified elementary, secondary, vocational or junior college teachers; graduate students preparing for a career in research and teaching on the university level; and college and university graduates who wish to continue their personal or professional development.

Departments Offering Graduate Degree Programs

Art, M.A.
 Communication Disorders, M.S.
 English, M.A. and M.S.
 Mass Communications
 Communication Management, M.S.
 Music, M.S.

Departments Offering Supporting Graduate Courses

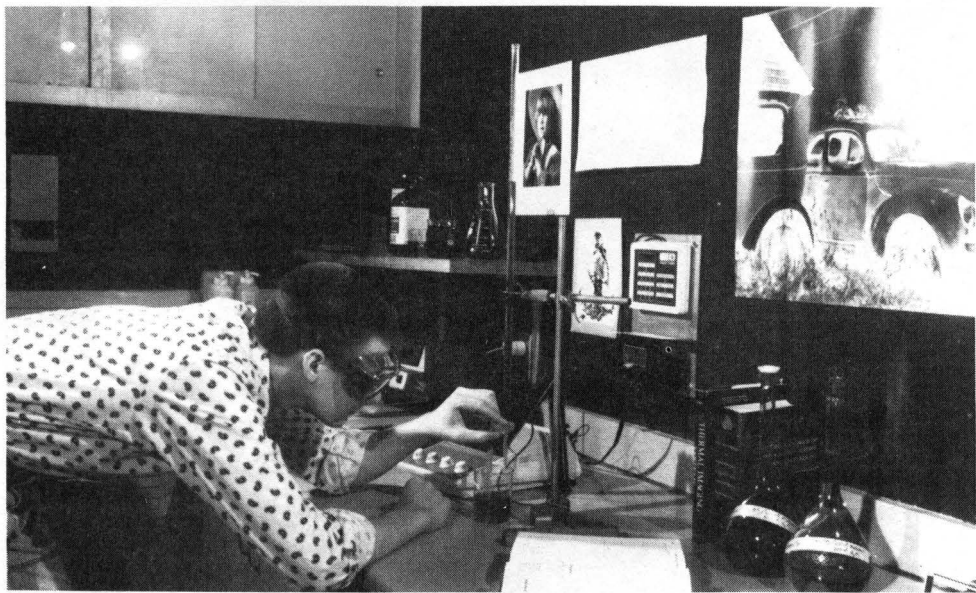
Foreign Languages and Literature
 Philosophy
 Speech Communication
 Theatre

COLLEGE OF SCIENCE AND TECHNOLOGY

145 MATHEMATICS AND SCIENCE CENTER/255-2192

G. Richard Hogan, Dean

Dale A. Williams, Assistant Dean



OBJECTIVES

Through its nine departments, the College of Science and Technology provides education in a variety of professional skills at the graduate levels. Its purpose is to prepare students to assume various roles in society and provide them with the skills and knowledge necessary not only for useful and gainful employment or further graduate study, but also for an understanding of the varieties of the human condition, its experiences, and its possibilities.

As in its undergraduate programs, the College of Science and Technology strives to:

1. Foster independence of thought by encouraging an analytical attitude toward ideas and ways of doing things.
2. Promote innovative thinking and the acceptance of both continuity and change as two fundamental principles that guide the life of any society.
3. Provide the foundation of knowledge and learning so necessary if both criticism and innovation are to be serious, well-considered, and responsible.
4. Develop broader perspectives on the issues affecting the student's personal life, community, nation and world so he/she may act with the wisdom and civility that should be the hallmark of a democratic society.
5. Educate the student in the knowledge and skills important today in a wide array of occupations in the public and private sectors and at both professional and pre-professional levels.

- a) Owing to the need in many occupations for increased knowledge about the social and physical world within which people carry out their occupational responsibilities, the College seeks to acquaint the student with 1) the social, historical, and philosophical factors in people's values, attitudes, needs, and behavior; and 2) the physical processes and geographic realities that underlie and affect resources availability and utilization.
- b) The College seeks to give students the tools, or methods, with which to gather, analyze, and evaluate information, as well as the skills to communicate their thinking to others.

Departments Offering Graduate Degree Programs

Biology, M.A. and M.S.

Industrial Studies, M.S.

Mathematics and Statistics, M.A. and M.S.

Departments Offering Supporting Graduate Courses

Chemistry

Computer Science

Earth Sciences

Physics, Astronomy and Engineering Science

Technology and Industrial Engineering

COLLEGE OF SOCIAL SCIENCES

101 WHITNEY HOUSE/255-4790

Raymond Merritt, Dean

David Carr, Assistant Dean



Departments Offering Graduate Degree Programs

Criminal Justice, M.S.

Economics

Social Science: Economic Education, M.S.

Geography, M.S.

Gerontology, M.S.

History, M.S.

History, M.A.

Public History, M.A.

Interdisciplinary Studies

Social Science, M.S.

Departments and Programs Offering Supporting Graduate Courses

Interdisciplinary Studies

American Studies, Social Studies

Political Science

Sociology/Anthropology

Social Work

OBJECTIVES

The graduate programs and courses in the College of Social Sciences are designed to meet the needs of both full- and part-time students, providing the skills and knowledge needed for professional advancement, further graduate study, or for enrichment of understanding. The focus of the college's programs is applied knowledge, preparing graduates to address the needs of the state, the region, and the nation.

Special resources and opportunities available to students in the College include: a diverse range of internship and practicum experiences, opportunities to participate in on-going research, a state-of-the-art computer assisted computer telephone interviewing (CATI) and geographic information systems facilities. The following facilities provide support for graduate study: The Economic Development Administration University Center, the Social Science Research Institute, the Social Sciences Microcomputer Laboratory, the Philip L. Tideman Cartographic Center, and the Evelyn Payne Hatcher Museum of Anthropology.

DEPARTMENTS, CENTERS AND PROGRAMS

Accounting (ACCT)

310 BUSINESS BUILDING/255-3038

Chairperson: Quentin Gerber

Graduate Faculty: R. Carlson, Cleveland, Gerber, Kruse, Lere, D. Lu, Mooney, Roser, Schwieger, Sundby

MASTER OF SCIENCE— ACCOUNTING

Admission Policy. The applicant for admission to the Master of Science in accounting program must meet the following requirements:

1. a baccalaureate degree from an accredited college or university.
 2. an acceptable score on the Graduate Management Admission Test (GMAT).
 3. evidence of undergraduate scholarship.
 4. demonstration of aptitude for successful graduate business study.
 5. evidence of microcomputer facility with an electronic spreadsheet and a word processor.
- Admission is competitive and selection is based on an evaluation of the total factors.

Information about the GMAT can be obtained at the graduate studies office and the dean's office, College of Business.

The candidate for the Master of Science degree in accounting must satisfy the requirements for all master's degree programs as set forth by the graduate studies office.

Applicants who have successfully met admission requirements may enroll in the Master of Science degree in accounting program as full-time day students or on a part-time basis in evening courses. Full-time students should also expect to complete part of the program in the evening.

Graduate Degree Requirements

Plan B, 48 Cr.

I. General: 24 Cr.

MBA 670 Corporate Strategies, 4 Cr.

Courses selected by the student and adviser (at least 12 Cr. at 600 level), 20 Cr.

II. Prescribed: 20 Cr.

ACCT 680 Professional Research, 4 Cr.

ACCT 682 Cost Accounting Theory, 4 Cr.

ACCT 692 Advanced Financial Accounting Seminar, 4 Cr.

ACCT 693 Advanced Tax Seminar, 4 Cr.

ACCT 694 Advanced Auditing Seminar, 4 Cr.

III. Accounting Elective from 500-600 level courses, 4 Cr.

IV. Candidates are required to successfully complete one starred paper with a final oral examination.

FOUNDATION COURSES

Applicants accepted into the M.S. in accounting program must have completed the following courses (or equivalent) prior to starting graduate courses:

MBA 539. Business Law and Legal Environment. (For admitted graduate students only.) 4 Cr. F.

MBA 549. Quantitative Analysis for Business. Prereq.: MATH 131 or equivalent. 4 Cr. F.

MBA 591. Financial Control. (For admitted graduate students only.) 4 Cr. W.

MBA 569. Management of Organizations. (For admitted graduate students only.) 4 Cr. S.

ECON 559. Business Analysis. (For admitted graduate students only.) 4 Cr. DEMAND.

For complete course descriptions, see the Undergraduate Bulletin.

BCIS 340. Management Information Systems. 4 Cr. F, W, S, SUM.

MKGB 320. Introduction to Marketing. 4 Cr. F, W, S, SUM.

MGMF 363. Production Management. 4 Cr. F, W, S, SUM.

MGMF 371. Managerial Finance. 4 Cr. F, W, S, SUM.

ACCT 390. Managerial Accounting. 4 Cr. F, W, S, SUM.

ACCT 381. Intermediate Accounting I. 4 Cr. F, W, S, SUM.

ACCT 382. Intermediate Accounting II. 4 Cr. F, W, S, SUM.

ACCT 383. Intermediate Accounting III. 4 Cr. F, W, S, SUM.

ACCT 384. Not-For-Profit and International Accounting. 4 Cr. F, W, S, SUM.

ACCT 388. Accounting Information Systems and Control. 4 Cr. F, W, S, SUM.

ACCT 482. Business Taxation. 4 Cr. F, W, S.

ACCT 486. Auditing Theory. 4 Cr. F, S, SUM.

MKGB 436. Business Law. 4 Cr. F, W, SUM.

An average of B or above is required for all foundation and advanced graduate courses.

COURSE DESCRIPTIONS

581. Advanced Accounting. Theory and practice of accounting for business combinations; consolidated financial statements and partnerships. Prereq.: "C" or better in 383. 4 Cr. F, S, SUM.

582. Business Taxation. Federal income taxation of business organizations including corporations and partnerships. Property transactions and other general business topics also covered. Prereq.: 292. 4 Cr. F, W, S.

583. Personal Taxation. Federal income taxation of individuals including the topics of gifts, estates and trusts. Prereq.: 292. 4 Cr. F, W, S, SUM.

586. Financial Auditing. Nature of the audit function; nature of the audit evidence; audit standards and procedures; professional ethics; audit reports. Prereq.: C in 383, 388. 4 Cr. F, S, SUM.

587. Operational Auditing. Nature of internal and operational auditing, auditing in an EDP environment and the use of statistical sampling in auditing. Prereq.: C in 383, 388. 4 Cr. W.

590. Advanced Managerial Accounting. Current trends and issues of managerial accounting, emphasizing the design, development and use of profit planning and cost control models. Prereq.: 390; BCIS 148 (or MCS 302); BCIS 241; MATH 231. 4 Cr. S or DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

605. Business Seminar—Accounting. Selected topics related to accounting theory and practice. Consent of department chairperson. 4 Cr. F.

680. Professional Research. A research seminar for graduate students. 1-4 Cr. DEMAND.

681. Income Determination Theory. The evolution of accounting thought as it relates to income determination, i.e., the balance sheet, the service, the value, and the information theory approaches. 4 Cr. DEMAND.

682. Cost Accounting Theory. Cost accounting concepts and techniques with emphasis on the goals of the firm and the possible aid in achieving these goals through cost control, cost analysis, budgets, and forecasting. 4 Cr. F.

692. Advanced Financial Accounting Seminar. Advanced study of institutions which currently impact on the development of financial accounting and reporting standards. 4 Cr. W.

693. Advanced Tax Seminar. Study of federal tax system involving theory and evolution, including comprehensive coverage of taxation of corporate



distributions, liquidations and reorganizations, estates and trusts, and tax research. 4 Cr. S.

694. Advanced Auditing Seminar. Advanced study of auditing in an EDP environment. Planning, evaluation of internal controls, use of computer audit techniques, statistical sampling, documentation, and communication of audit findings will be emphasized. 4 Cr. W.

American Studies (AMST)

341 STEWART HALL/255-2140

Director: William T. Morgan

Also see Interdisciplinary Studies Department.

COURSE DESCRIPTIONS

550 Urban Heritage. Examination of the American City considered from the viewpoints of aesthetic value; social history with special emphasis upon housing and the role of preservation considered from social aesthetic, and historical aspects. 4 Cr. S.

570. Architecture and the American Environment. Traces the development of American architecture from Colonial times to the present by analyzing building techniques, style, aesthetics, and relation of buildings to American society. Graduate students are

required to research a problem in architectural history that relates to work carried out by a public historian. Attention also is given to the method of researching, photographing, and writing of National Register forms. 4 Cr. F.

590. Contemporary American Culture. The exploration of one of the variety of cultures in contemporary America through its political, philosophical, literary and artistic creations and its relationship to the overall diversified cultural pattern. A general elective. 4 Cr. W, S.

Applied Psychology (APSY)

A253 EDUCATION BUILDING/255-3131

Chairperson: Robert Murphy

Coordinator—Behavior Analysis : Gloria Gasparotto

Coordinator—Counseling Psychology: David Lesar

Graduate Faculty: Gasparotto, Hoover, Hotz, Jensen, Lesar, Marcattilio, Mason, McGrew, Merchant, Murphy, Nunes, Peterson, Petrangelo, Preble, Redding, Renn, Rockenstein, Rudrud, Schulze

MASTER OF SCIENCE—

Psychology: Behavior Analysis

This program is designed for those students who desire advanced academic and professional training in behavior analysis. Students may specialize by taking electives in areas such as: developmental disabilities, behavior therapy, organizational behavior management, chemical dependency, behavioral medicine, or the experimental analysis of behavior. Students are thus prepared for employment in a variety of agencies, private practice and consulting or doctoral training. This program is designed for both full- and part-time students, though some courses may be offered only during the day. Also, all students must complete a two-quarter internship (30 hours/week). For current information regarding the Minnesota Board of Psychology requirements for licensure as a Psychological Practitioner, contact the Behavior Analysis Program Coordinator.

PROGRAM INQUIRIES

For program information, write Coordinator, Behavior Analysis Program, Department of Applied Psychology, St. Cloud State University, 720 South 4th Ave., St. Cloud, MN 56301-4498. Telephone: (612) 255-3131. Recent changes in the MN licensure laws for psychologists will result in changes in our programming in the coming years.

APPLICATION DEADLINES

Entry to this program is limited to fall quarter. The decision dates regarding acceptance are April 1 and June 1. Applications should be submitted by one of these dates. Completed applications consist of the application form for admission to graduate studies, the application form for admission to this program, three completed recommendation forms, scores on the general aptitude area of the Graduate Record Examination, and official transcripts of all undergraduate and graduate work. It is recommended that applications for departmental graduate assistantships meet the April 1 deadline. In addition, all applicants for departmental assistantships are required to contact the Office of Scholarships and Financial Aid to apply for a federal work-study assistantship (contact the office for details and deadlines).

Plan A or B, 71 Cr.

I. Research: Min., Plan A, 18 Cr.; Plan B, 12 Cr.

Plan A, Prescribed:

APSY 641 Single Case Design, 3 Cr.

APSY 642 Research Planning and Reporting, 3 Cr.

APSY 678 Introduction to Graduate Statistics, 3 Cr.

APSY 699 Thesis, 9 Cr.

Plan B, Prescribed:

APSY 576 Research Design in Applied Psychology, 3 Cr.

APSY 641 Single Case Design, 3 Cr.

APSY 642 Research Planning and Reporting, 3 Cr.

APSY 678 Introduction to Graduate Statistics, 3 Cr.

II. Major: Min., Plan A or B, 47 Cr.

Prescribed Core: Min., 15 Cr.

APSY 533 Applied Behavior Analysis I, 3 Cr.

APSY 534 Applied Behavior Analysis II, 3 Cr.

APSY 535 Experimental Analysis of Behavior I, 3 Cr.

APSY 645 Program Support Skills, 3 Cr.

PSY 589 Psychology of Learning, 3 Cr.

Pre-Internship Core: Min., 11 Cr.

APSY 519 Professional and Scientific Ethics in Psychology, 3 Cr.

APSY 643 Social Skill Development: A Behavioral Approach, 2 Cr.

APSY 655 Measurement Techniques, 3 Cr.

APSY 659 Psychodiagnosis and Treatment Planning, 3 Cr.

Prescribed Internship: Min., 12 Cr.

APSY 697 Supervised Internship in Behavior Analysis, 12 Cr.

Additional Core Requirements: Min., 9 Cr.

APSY 584 Introduction to Psychopharmacology, 3 Cr.

OR

APSY 652 Medical and Biological Factors in Counseling, 3 Cr.

APSY 653 Psychosocial Aspects of Counseling, 3 Cr.

PSY 640 Advanced Developmental Psychology, 3 Cr.

III. Electives: Min., Plan A, 6 Cr.; Plan B, 12 Cr.

(Electives are to be preapproved by adviser.)

Specific program requirements and course sequences are provided in the Student Handbook which is available from the Applied Psychology department.

MASTER OF SCIENCE— Counseling Psychology

The program in counseling is designed to permit the student to select from among three emphases: community, rehabilitation, and secondary school counseling. It also is possible to receive a certificate for chemical dependency counseling on the graduate level. The required courses for this certificate may

be electives within a counseling emphasis or added courses to the program.

PROGRAM INQUIRIES

For updated program information, write Coordinator, Counseling Psychology, Education Building A-253, St. Cloud State University, 720 South 4th Avenue, St. Cloud, MN 56301-4498. Telephone: (612) 255-3131. Recent changes in the Minnesota licensure laws for psychologists will result in changes in our programming in the coming years.

APPLICATION DEADLINES

Completed applications for admission to graduate studies, including the receipt of all letters of recommendation, and steps 1 through 3 leading to the interview process, listed under "Procedures for Admission to Graduate Programs in Counseling" must be completed by both you and your recommenders by:

April 15 for spring interview
June 15 for summer interview

(Summer interviews will be held only if there are program vacancies still available. Applicants are encouraged to complete materials for spring interviews.)

NOTE:

1. Full time entry to the program is limited to the fall quarter only.
2. It is the sole responsibility of the applicant to ensure that all materials, including all letters of recommendation required by the graduate studies office are received on time. Applicants with incomplete materials will not be interviewed/admitted to the program.
3. Students may complete nine (9) credits prior to admission. Any credits taken beyond these nine credits, before admission to graduate studies, will not be counted toward a counseling degree. Transfer credits from other institutions are not affected by this regulation.

ADMISSION TO GRADUATE PROGRAMS IN COUNSELING

PROCEDURE

To be considered for admission, the applicant must complete the admission procedures as outlined under "Admission to Graduate Study." In addition, the student must complete the following requirements: (Contact the applied psychology secretary for procedure.)

1. Provide evidence of undergraduate scholarship. A minimum 2.75 grade point average over the last two years of undergraduate education or 480 on the verbal section or 1000 overall (verbal and quantitative sections combined) on the Graduate Record Examination. Applicants who do not meet the standard admission requirements may be permitted to demonstrate their scholarship and qualify for acceptance by completing a limited program of graduate course work backed by evidence of successful experience in a human service field. Further information pertaining to this alternative may be obtained from the graduate dean.

2. Complete a personal data form obtained at the Department of Applied Psychology.
3. Successfully complete a personal interview with representatives of the profession, advanced students in the program and the counseling faculty. Careful attention will be given to previous work experience, academic background, scholarship, emotional maturity, interpersonal skills and commitment to the counseling profession. Admission is competitive and selection is based on an evaluation of all factors. For the specific interview dates, and an appointment, contact the applied psychology department secretary. If attendance at an interview is totally impractical, the program coordinator may designate an alternate method.
4. If admitted, each student must send one black and white passport type photograph to the coordinator of counseling psychology for identification purposes.

OTHER PROGRAM REQUIREMENTS

Part-Time Students

Following admission to graduate studies, all part-time students must complete a minimum of 12 graduate quarter hours per year of course work, approved by their adviser, in order to be admitted to or maintain candidacy in the counseling program. Students must complete the pre-practicum core courses early in the program of studies.

It is department policy to assist part-time students to complete a counseling program while continuing concurrent employment if adviser contact is maintained.

Required Orientation Program

All new students (both part-time and full-time) must attend the fall orientation meeting held in late September or early October. (See the Applied Psychology Department secretary for details.)

Financial Aid

Limited aid may be available through the department in the form of graduate assistantships. Graduate assistantships require full-time student status and include some work responsibilities for a stipend and partial tuition waiver. An application must be submitted to the coordinator of the counseling psychology program. It is recommended that applicants for departmental graduate assistantships meet the April 15 deadline. In addition, all applicants for departmental assistantships are required to contact the Office of Financial Aid to apply for a federal work-study assistantship (contact that office for deadlines).

Advisement

Each new student will be assigned an adviser, shortly after the interview process. The student should make contact with the assigned adviser as soon as possible to plan a program of study. Not all advisers are immediately available for conferences, particularly if the student is admitted during summer session. In these cases, any counseling psychology adviser can assist you.

Double Major

A student may wish to complete a double major to facilitate greater employability. The "second major" must be completed with a minimum of 15 new credits which are not included or required in the first major or program.

The Pre-Practicum Core Courses

All counseling emphases include a common core of course work prerequisite to the supervised counseling practicum experience.

- APSY 651 Counseling Theories, 3 Cr.
- APSY 665 Measurement Techniques, 3 Cr.
- APSY 667 Career Development, 3 Cr.
- APSY 668 Counseling Procedures, 3 Cr.
- APSY 519 Ethics in Psychology, 3 Cr.

A minimum grade of B is required in each of the above.

Supervised Counseling Practicum

This experience directly follows the pre-practicum core courses and provides for the application of theories and techniques to counseling experience. Each part-time student must apply in writing to the coordinator of counseling psychology for placement in a counseling practicum at least nine months before beginning the practicum. Late applicants might not be admitted. This may result in delayed internship and graduation.

Candidacy

Admission to graduate studies does not constitute candidacy for a counseling degree. Rather, a student who has been admitted to graduate study is advanced to degree candidacy upon the recommendation of the counseling psychology faculty. Advancement to degree candidacy requires that the candidate must have:

- a. completed between 12 and 24 quarter hours of graduate study at St. Cloud State University with a minimum grade point average of 3.0;
- b. submitted to the coordinator of counseling programs a current transcript and three (3) completed, program forms signed by the student and the adviser;
- c. clearly demonstrated the aptitude and ability to pursue graduate work, exhibited a commitment to counseling as a profession; and
- d. demonstrated potential for a successful career in the field of study selected.

Admission to degree candidacy is not an automatic process, but rather the advancement to candidacy is approved by the faculty only after careful evaluation of all pertinent factors.

Supervised Counseling Internship

This experience follows the counseling practicum and will provide clinical agency experience in a work setting. Community and rehabilitation counseling students must complete a 2 quarter minimum, 600-hour internship; school counseling students must complete a 400-hour internship. The candidate must apply in writing to the internship coordinator by completing an internship placement request form before February 15—for all placements during the following academic year. This means a minimum of 7 months before beginning internship. (See the applied psychology department secretary for details.)

Final Comprehensive Evaluation (Plans A and B)

The student is required to complete a final written comprehensive examination regardless of which plan the student chooses to follow. Students with a double major complete the common portions of the examination as well as both sections relating to the two separate majors.

To be eligible for evaluation, the candidate must complete the procedures outlined earlier in this bulletin under "Graduate Study—Final Evaluation Procedures" during the final quarter of study. Deadline for application to take the comprehensive examination for each quarter is the second Friday of that quarter. Examinations are given on the nearest Friday to midpoint of the quarter. (The midpoint is indicated in the University Calendar as the date the second half of the quarter begins.)

The Curriculum

The following programs reflect the curriculum available at the time the bulletin was printed, but does not necessarily represent the requirements at the time an applicant applies for a program. It should be noted that some additions, deletions, or changes may have been approved through the curriculum process after the printing of this bulletin and it is the responsibility of applicants to check on changes which might affect their program.

COUNSELING PSYCHOLOGY — Community Counseling Emphasis

The purpose is to educate individuals to work in a human service agency as a counselor and/or consultant. This program provides a common basis of training for all community counseling students and some opportunity to specialize in the areas of faculty members' expertise.

As courses currently are scheduled, this program may be completed in six quarters of full-time study by starting classes during fall quarter.

Course work includes both day and evening classes. The number of credits outlined below represents minimum requirements. The counseling psychology faculty may require additional quarter hours to overcome individual deficits. For current information regarding the Minnesota Board of Psychology requirements for licensure as a Psychological Practitioner, contact the counseling program coordinator.

Plan A, 75 Cr.; Plan B, 75 Cr.

I. Research: Min., Plan A, 12 Cr.; Plan B, 9 Cr.

Plan A: Prescribed

- APSY 576 Research Techniques in Applied Psychology, 3 Cr.
- APSY 678 Introduction to Graduate Statistics, 3 Cr.
- APSY 679 Research Planning, 3 Cr.
- APSY 699 Thesis, 3 Cr.

Plan B: Prescribed

- APSY 576 Research Techniques in Applied Psychology, 3 Cr.
- APSY 678 Introduction to Graduate Statistics, 3 Cr.
- APSY 679 Research Planning, 3 Cr.

II. Major: Min., Plan A or B, 57 Cr.

- A. Prescribed Pre-Practicum Core: Min., 15 Cr.
 APSY 651 Counseling Theories, 3 Cr.
 APSY 665 Measurement Techniques, 3 Cr.
 APSY 667 Career Development, 3 Cr.
 APSY 668 Counseling Procedures, 3 Cr.
 APSY 519 Professional and Scientific Ethics in Psychology, 3 Cr. (May be taken as a Coreq. with APSY 669)
- B. Prescribed Community Counseling Emphasis: Min., 30 Cr.
 APSY 584 Introduction to Psychopharmacology, 3 Cr.
- OR
- APSY 652 Medical and Biological Factors in Counseling, 3 Cr.
 APSY 653 Psychosocial Aspects of Counseling, 3 Cr.
 APSY 659 Psychodiagnosis and Treatment Planning, 3 Cr.
 APSY 666 Small Group Counseling Process, 3 Cr.
 APSY 669 Supervised Counseling Practicum, 6 Cr.
 APSY 671 Introduction to Marriage and Family Counseling, 3 Cr.
 APSY 673 Advanced Counseling Procedures, 3 Cr.
 APSY 698 Practice in Small Group Process, 3 Cr.
 PSY 640 Advanced Developmental Psychology, 3 Cr.
- C. Prescribed Internship: Min., 12 Cr.
 APSY 696 Supervised Internship in Counseling: Community, 12 Cr.
- III. Electives: Min., Plan A, 6 Cr.; Plan B, 9 Cr. (Electives are to be preapproved by adviser.)

- Plan B: Prescribed
 APSY 576 Research Techniques in Applied Psychology, 3 Cr.
 APSY 678 Introduction to Graduate Statistics, 3 Cr.
 APSY 679 Research Planning, 3 Cr.
- II. Major: Min., Plan A or B, 57 Cr.
- A. Prescribed Pre-Practicum Core: Min., 15 Cr.
 APSY 651 Counseling Theories, 3 Cr.
 APSY 665 Measurement Techniques, 3 Cr.
 APSY 667 Career Development, 3 Cr.
 APSY 668 Counseling Procedures, 3 Cr.
 APSY 519 Professional and Scientific Ethics in Psychology, 3 Cr. (May be taken as a Coreq. with APSY 669)
- B. Prescribed Rehabilitation Counseling Emphasis: Min., 30 Cr.
 APSY 529 Introduction to Vocational Evaluation, 3 Cr.
 APSY 650 Introduction to Rehabilitation, 3 Cr.
 APSY 652 Medical and Biological Factors in Counseling, 3 Cr.
 APSY 653 Psychosocial Aspects of Counseling, 3 Cr.
 APSY 656 Placement in Rehabilitation, 3 Cr.
 APSY 659 Psychodiagnosis and Treatment Planning, 3 Cr.
 APSY 669 Supervised Counseling Practicum, 6 Cr.
 APSY 673 Advanced Procedures, 3 Cr.
 PSY 640 Advanced Developmental Psychology, 3 Cr.
- C. Prescribed Internship: Min., 12 Cr.
 APSY 696 Supervised Internship in Counseling, 12 Cr.
- III. Electives: Min., Plan A, 3 Cr.; Plan B, 6 Cr. (Electives are to be preapproved by adviser.)

COUNSELING PSYCHOLOGY— Rehabilitation Counseling Emphasis

The purpose of this program is to educate individuals to provide and coordinate services for persons with mental, emotional, physical, and/or social disabilities which interfere with productive functioning and self-fulfillment. The program provides a balance between technical rehabilitation knowledge and basic counseling competency, and is accredited by the Council on Rehabilitation Counselor Education (CORE).

As courses currently are scheduled, this program may be completed in six quarters of full-time study by starting classes in fall quarter.

The number of credits outlined below represents minimum requirements. The counseling psychology faculty may require additional quarter hours to overcome individual deficits.

Plan A or B, 72 Cr.

- I. Research: Min., Plan A, 12 Cr.; Plan B, 9 Cr.
 Plan A: Prescribed
 APSY 576 Research Techniques in Applied Psychology, 3 Cr.
 APSY 678 Introduction to Graduate Statistics, 3 Cr.
 APSY 679 Research Planning, 3 Cr.
 APSY 699 Thesis, 3 Cr.

Students with three or more years of full-time experience in vocational rehabilitation settings may substitute some courses with consent of their adviser. Recommendations by the rehabilitation counseling psychology faculty will be given only for those courses in which the experienced student demonstrates the competencies encompassed in the courses for which substitution is requested.

COUNSELING PSYCHOLOGY— School Counseling Emphasis

To enroll in the school counseling program, a student must hold or be eligible for a Minnesota teacher's license at the level at which one is seeking school counseling licensure or must complete additional practicum and internship requirements. Contact the coordinator of counseling psychology for alternative program requirements for non-licensed applicants.

For institutional endorsement for a secondary or elementary school counseling license in Minnesota, the following are required:

1. Minnesota teaching license at the appropriate level or expanded practicum and internship requirements.
2. One year of successful teaching experience at the appropriate level or extended internship.

3. Completion of master's degree in school counseling in an approved program.
4. Two thousand hours of accumulated work experience outside field of education.
5. Completion of Psychology 362 and 463 or equivalent.
6. Completion of Education 447 or equivalent for secondary licensure or Education 346 for elementary licensure.
7. Completion of Health 405 or equivalent.
8. Completion of Human Relations 496 and 497 or equivalent.

Course work includes both day and evening classes. In addition, the number of credits outlined below represents minimum requirements. The counseling psychology faculty may require additional quarter hours to overcome deficits. The following program meets the requirements of the Minnesota State Department of Education for licensure as a secondary school counselor.

Plan A or B, 72 Cr.

I. Research: Min., Plan A, 12 Cr.; Plan B, 9 Cr.

Plan A: Prescribed

- APSY 678 Introduction to Graduate Statistics, 3 Cr.
- APSY 576 Research Design in Applied Psychology, 3 Cr.
- APSY 679 Research Planning, 3 Cr.
- APSY 699 Thesis, 3 Cr.

Plan B: Prescribed

- APSY 576 Research Methods in Applied Psychology, 3 Cr.
- APSY 678 Introduction to Graduate Statistics, 3 Cr.
- APSY 679 Seminar: Research Planning, 3 Cr.

II. Major: Min., Plan A or B, 59 Cr.

A. Prescribed Pre-Practicum Core: Min., 15 Cr.

- APSY 651 Counseling Theories, 3 Cr.
- APSY 665 Measurement Techniques, 3 Cr.
- APSY 667 Career Development, 3 Cr.
- APSY 668 Counseling Procedures, 3 Cr.
- APSY 519 Professional and Scientific Ethics in Psychology, 3 Cr. (may be taken as a Coreq. with APSY 669)

B. Prescribed School Counseling Emphasis: Min., 36 Cr.

- APSY 521 Organization and Administration of Guidance Services, 3 Cr.
- APSY 540 Cross Cultural Counseling, 3 Cr.
- APSY 592 Guidance for the Handicapped, 3 Cr.
- APSY 666 Small Group Counseling Process, 3 Cr.
- APSY 669 Supervised Counseling Practicum, 6 Cr.
- APSY 671 Introduction to Marriage and Family Counseling, 3 Cr.
- APSY 674 Consultation, 3 Cr.
- APSY 676 Developmental and Preventative Procedures, 3 Cr.
- APSY 698 Practice in Small Group Process, 3 Cr.
- PSY 640 Advanced Developmental Psychology, 3 Cr.

III. Electives: Min., Plan A, 1 Cr.; Plan B, 4 Cr.

(Electives are to be preapproved by adviser.)

The student must select electives, with consent of adviser, on the basis of his/her specific area of professional planning in secondary or elementary school counseling.

Students with full time experience in a school counseling setting may substitute some courses with consent of adviser. Departmental approval is given only for those courses in which the experienced student demonstrates the competencies encompassed in the courses for which substitution is requested.

For Licensure Only

Individuals already possessing a master's degree may qualify for licensure-only status. Middle School Counseling Licensure requires either an elementary or secondary school counseling license and at least 10 more credits: ED 624 and 627 and 4 additional internship credits at the middle school level. Please consult the coordinator of counseling psychology for further information regarding any of the school licensure programs.

Graduate-Level Chemical Dependency Certificate

The certificate program provides academic and experiential training to prepare persons in the master's program in psychology for entry-level chemical dependency practitioner/counselor positions.

Minimum: 50 credits

- HETS 230 Theories of Chemical Dependency, 4 Cr.
- HETS 340 CD Issues: Special Populations
- HETS 501 (330) Diagnosis, Intervention, Counseling the Chemically Dependent Person, 4 Cr.
- HETS 505 Mood Modifying Substances in Contemporary Society, 3 Cr.
- HETS 501 (401) Field Work, 3 Cr.
- OR
- APSY 501(401)Field Work, 3 Cr.
- HETS 581 Human Sexuality, 3 Cr.
- OR
- APSY 525 Human Sexuality, 3 Cr.
- HETS 696 Internship, 12 Cr.
- OR
- APSY 696 Internship, 12 Cr.
- APSY 528 Psychodynamics of the Family, 3 Cr.
- APSY 530 Introduction to Community Counseling, 3 Cr.
- APSY 584 Introduction to Psychopharmacology, 3 Cr.
- APSY 651 Counseling Theories, 3 Cr.
- APSY 666 Small Group Counseling Process, 3 Cr.
- APSY 668 Counseling Procedures, 3 Cr.
- APSY 698 Group Practice, 3 Cr.

Program Inquiries

For program information, write Department of Applied Psychology, St. Cloud State University, 720 South 4th Avenue, St. Cloud, Minnesota 56301-4498. Phone: (612) 255-3131.

Admission Procedure

Enrollment in the certificate program is limited to students admitted to the master's program in counseling psychology. The student also must complete the following requirements for admission into the certificate program:

1. a personal data form with an accompanying letter of application.
2. three letters of recommendation.
3. written verification of one year of abstinence from drugs if chemically dependent and in recovery.
4. a successful personal interview with the coordinators of the certificate program and representatives from chemical dependency treatment centers. Attention will be given to previous work and life experiences, scholarship, emotional maturity, interpersonal skills, and commitment to the field of chemical dependency. Admission interviews are conducted each quarter.

Internships

The internship experience involves 400 hours of supervised training in an inpatient chemical dependency treatment center in central Minnesota and surrounding communities. Sites include public and private treatment facilities for adolescents and adults, regional human service centers, and veterans' hospitals. Acceptance for internship requires approval of the internship review committee following the completion of all course work. An additional 300 hours of supervised training in a non-CD treatment setting is required to complete the requirements of the student's counseling emphasis area.

COURSE DESCRIPTIONS

509. Program Evaluation. Designed to familiarize students with prevalent approaches to program evaluation and to acquaint them with their characteristics, strengths and limitations, etc. Lecture. 3 Cr. F, W, S.

519. Professional and Scientific Ethics in Psychology. The study of current ethical standards for psychologists as set by national and state associations, organizations, agencies, courts and legislative bodies. Enrollment is limited to seniors and to others by permission of instructor. 3 Cr. F, W, S.

521. Organization and Administration of Guidance Services. A study of the system and components of a secondary school guidance program; includes philosophy and management principles. 3 Cr. DEMAND.

522. Foundations of School Psychology. Overview and introduction to the field of school psychology. Discussion of history and an emphasis on rules and functions that school psychologists serve in educational institutions. 3 Cr. F.

523. Counseling Older Persons. Train students in basic counseling skills for older persons. Focus will be upon counseling needs regarding special needs of: expressing feelings of loss, identifying new life goals, and adjusting to the emotional stresses of aging. Prereq.: SSCI 208 or PSY 345 or SOC 350 or consent of instructor. 3 Cr. DEMAND.

525. Psychology of Human Sexuality. A comprehensive overview including psychosexual development, sexual behavior and response patterns, the psychodynamics of sexual responsibility, and individual enrichment. This course includes some sexuality explicit materials. Prereq.: permission of instructor. 3 Cr. W, S.

527. Sexual Attitude Reassessment Seminar. An intensive experiential seminar providing an opportunity to reassess personal sexual attitudes through large and small group sessions. Topics are introduced through a variety of multi-media methods which include some sexually explicit materials. Prereq.: permission of instructor. 1-4 Cr. W, S.

528. Psychodynamics of the Family. Focuses on the psychological interrelationships between and among members of a union as they face developmental stages of life. Selected theories of personality and counseling will be studied in relation to the problems and issues in families. 3 Cr. SUM, DEMAND.

529. Introduction to Vocational Evaluation. Provides students with an overview of methods of vocational evaluation which will include principles of vocational evaluation, work samples, situational assessment, and report writing. Special emphasis is placed upon laboratory experiences. Prereq.: 362 or 665 or equivalent. 3 Cr. DEMAND.

530. Seminar. Selected topic in special areas in psychology. May be repeated to max. of 15 Cr. 1-4 Cr. DEMAND.

531. Positive Behavioral Discipline. Use of the principles of behavior analysis in facilitating student academic and social performance in the classroom. 3 Cr. DEMAND.

532. Instrumentation I: Laboratory Equipment. The use of psychological laboratory equipment including electromechanical and solid-state control, interface, environmental and data-recording devices. 3 Cr. DEMAND.

533. Applied Behavior Analysis I. Introduction to the principles and techniques of behavior analysis in applied settings with particular emphasis on the design, implementation, measurement and evaluation of behavior analysis procedures. Prereq.: 231. 3 Cr. F.

534. Applied Behavior Analysis II. Advanced applied behavior analysis techniques. Emphasis on design, assessment and evaluation of behavior change procedures. Current issues. Prereq.: 231, 433-533. 3 Cr. W.

535. Experimental Analysis of Behavior I. An experimental analysis of complex behavioral repertoire based upon the principles of behavior analysis. Analysis of complex sequences of behavior, conditioned reinforcement, concurrent operants, stimulus control, avoidance behavior and punishment. Prereq.: 231. 3 Cr. DEMAND.

536. Experimental Analysis of Behavior II. Advanced consideration of following topics as well as others: classical conditioning autoshaping, response-independent reinforcement, behavioral pharmacology, behavioral contrast, matching to sample, schedules of reinforcement. Prereq.: 231, 435. 3 Cr. DEMAND.

540. Cross Cultural Counseling. An introduction

to counseling with persons of differing cultural values and lifestyles backgrounds. 3 Cr. DEMAND.

565. Stress Management. Designed to provide an understanding of the nature of stress disorders, knowledge about assessment procedures, and strategies with which to control stress reactions. 3 Cr. DEMAND.

566. Life Style Assessment and Planning. Designed to examine human life style issues and their relationship with developing optimum human potential. Participants assess their own life's activities and philosophies with intent to develop a plan for improving their quality of living. 3 Cr. DEMAND.

574. Interpersonal Dynamics. Survey of research, experimentation, and theory of relationships between the individual and the group; interpersonal communication, influence, group structure and function, leader-member relations. 3 Cr. F, SUM.

576. Research Methods in Applied Psychology. Designed to teach students how to read, understand and evaluate research. Provides students with the ability to understand group and single subject research designs, and statistical terms. 3 Cr. S, SUM.

584. Introduction to Psychopharmacology. Information about how drugs have their effects as well as specific effects of drugs. Factors, pharmacological and behavioral, altering a drug's action. Prereq.: PSY 115. 3 Cr. W, S.

585. Psychology of Spiritual Development. Relates some of the insights of contemporary applied psychology to the classical outlines of spiritual development relevant to various world spiritual/philosophical traditions. Applications focus will include counseling, educational, organizational, social, business and personal growth dimensions. 3 Cr. S.

591. Psychology of Sport. Examining sport in terms of participant/spectator motivation and performance. Special emphasis is given to the relationship of sport to human development and adjustment. 3 Cr. DEMAND.

592. Guidance for the Handicapped. Special problems. Counseling with children and parents. Psychological, aptitude, achievement tests. 3 Cr. W, S, SUM.

593. Individual Appraisal. Methods of individual appraisal; psychological measurement of individuals; instruments used to appraise intellectual efficiency, aptitude and achievement, sensory capacities and efficiency, sensory-motor coordination, group status, personal history; synthesizing data and report writing. Prereq.: 463 or 665. 3 Cr. SUM.

594. Introduction to Clinical Psychology. Overview of the clinical approach to assessment of individuals and techniques for behavioral change as used in clinical, educational, and industrial settings. Prereq.: 492/592. 3 Cr. DEMAND.

596. Psychology of Exceptional Children. Clinical observation of children who have special problems of growth and development, physical and mental handicaps; mentally gifted; behavior disorders. Prereq.: SPED 505. 3 Cr. F, S, SUM.

597. Psychology of Mental Retardation. Etiology, characteristics, classification, diagnosis, assessment. Social control. Role of family, school, community agencies. 3 Cr. F, W, S, SUM.

COURSES FOR GRADUATE STUDENTS ONLY

617. Psychological Assessment I. Overview of instruments to assess personality, interests and attitudes. Techniques of personality assessment, personality reports from other mental health specialists, mental health screening such as mental status interviewing, and selection, administration and interpretation of interest and attitude tests. Prereq.: 593. 3 Cr. DEMAND.

618. Psychological Assessment II. Overview of instruments to assess personality, interests and attitudes. Prereq.: 617. 3 Cr. DEMAND.

641. Single-Case Design. The analysis and utilization of single case experimental designs and data analysis procedures, for evaluating behavioral change strategies employed in applied behavior-intervention programs. 3 Cr. DEMAND.

642. Research Planning and Reporting. Effective ways to read and critique journal articles, select a research problem, review the literature, prepare a research proposal, and write and report research procedures and results. Emphasis on behavioral research. Prereq.: 641. 3 Cr. W.

643. Social Skill Development: A Behavioral Approach. Theory and applications in the assessment and design of behavioral programs for social skills training. Prereq.: 434-534. 2 Cr. DEMAND.

644. Academic Skills Training: A Behavioral Approach. Theory and applications in the assessment and design of behavioral programs for academic skills training will be covered. Prereq.: 434-534. 2 Cr. DEMAND.

645. Program Support Skills. Procedures for developing funding proposals, providing consultative and staff development services and conducting program evaluations. 3 Cr. DEMAND.

647. Introduction to Community Counseling. An introduction to the field community counseling with emphasis on: principles, ethics, philosophy, issues and current problems in the area of community counseling. Also included: various community counseling settings and role of the counselor within these settings. 3 Cr. W.

648. Career Development for Women's Lifespan. Study of career development for women as life-long process. Examination of past influences, present theories and future trends based on research. Remediation techniques and methods, assertive planning will be emphasized. Coreq.: 649. 3 Cr. SUM, DEMAND.

649. Affirmative Counseling of Women. Examines trends and new approaches for affirmative counseling practices for women's lifespan based on research findings and the current scene. Coreq.: 648. 3 Cr. SUM, DEMAND.

650. Introduction to Rehabilitation. Orientation to the rehabilitation process including a survey of the history, principles, philosophy and legal aspects of rehabilitation and related fields. 3 Cr. F.

651. Counseling Theories. Consideration of selected theories of counseling with consideration given to application in various counseling settings. 3 Cr. F.

652. Medical and Biological Factors in Counseling. Examination of medical and biological factors related to counseling including the etiology, prog-

nosis, methods of treatment and effects of various disorders. 4 Cr. W.

653. Psychosocial Aspects of Counseling. Study of the psychosocial aspects of mental health and rehabilitation counseling with an emphasis on the effect these factors have on the counseling process. 3 Cr. SUM.

655. Seminar in Rehabilitation Counseling. Special topics in the field. 1-3 Cr. May be repeated to max. of 9 Cr. DEMAND.

656. Placement in Rehabilitation. Procedures for placing the job-ready client, study of sources of information about jobs, job analysis, and personnel policy. 3 Cr. DEMAND.

659. Psychodiagnosis and Treatment Planning. An examination of the diagnostic process and treatment planning in psychology and rehabilitation. Emphasis on the use of DSM-III-R, ICD9, IWRP and caseload management techniques. 3 Cr. W.

663. Applied Theories of Learning. Principles of psychology of learning and experimental findings; application to problems encountered in teaching and learning; examination of theories of learning. 3 Cr. DEMAND.

665. Measurement Techniques. Application of measurement theory in counseling. This includes an examination of major appraisal instruments. 3 Cr. F.

666. Small Group Counseling Process. Didactic instruction and practice in small group process. Lecture and laboratory. 3 Cr. DEMAND.

667. Career Development. Consideration of some of the more outstanding theories, materials, procedures and problems pertinent to the counselor's work in the area of career development and decision making. 3 Cr. DEMAND.

668. Counseling Procedures. Techniques, procedures, and practices employed in counseling; including practice in counseling. 3 Cr. F.

669. Supervised Counseling Practicum. Advanced application of theory and techniques to counseling. Prereq.: 651, 665, 667, and 668. 3-6 Cr. May be repeated to max. of 9 Cr. DEMAND.

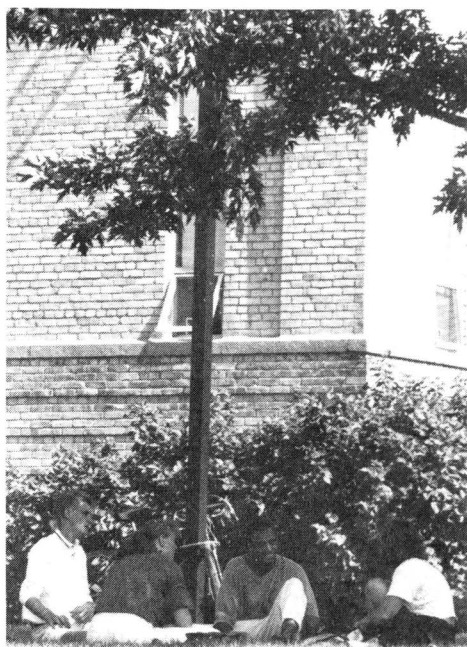
671. Introduction to Marriage and Family Counseling. An introduction to this emerging field and profession. Introduction to some of the basic approaches and issues involved in the field. Prereq.: 651, 668. 3 Cr. W.

672. Family Counseling: Theory and Techniques. Designed for students who are interested in marriage and family counseling, the course helps them gain an understanding of counseling theory and technique as applied to the field of marriage and family counseling. Prereq.: 671. 3 Cr. S.

673. Advanced Procedures. Knowledge and skills in assessment of client problems, establishing counseling goals, and applying counseling strategies to assist the client in resolving problems. Prereq.: 668. 3 Cr. DEMAND.

674. Consultation. Examination of various consultation models and use of these models in several settings. Knowledge and skills as well as personal/professional attributes needed by the consultant. 3 Cr. DEMAND.

676. Developmental/Preventative Procedures. An overview of the developmental theories of Erickson, Havighurst and Kohlberg. Demonstrations and con-



struction of procedures designed to enhance normal psycho-social development. 3 Cr. DEMAND.

678. Introduction to Graduate Statistics. A review and extension of correlation and regression analysis; introduction of probability and sampling theory; estimating population parameters; testing hypotheses. Familiarity with descriptive statistics assumed. 3 Cr. F, W, S, SUM.

679. Seminar: Research Planning. Consideration of research design and tools. Development of project outline within the interest area of each student and presentation for critical review to members of the seminar. 3 Cr. F.

685. Individual Intelligence Testing. Assessment of individual intelligence examined historically, with emphasis on selection, administration, interpretation of tests of general intelligence with emphasis on Stanford-Binet and Wechsler tests. Prereq.: 593, 617. 3 Cr. DEMAND.

689. Seminar: Research Reporting. Reporting of research planned in 679 and subsequently implemented. Preparation of reports in accordance with APA publication standards and presentation to seminar. Prereq.: 679. 3 Cr. DEMAND.

696. Supervised Internship in Counseling. Supervised agency clinical experience. Prereq.: 669. May be repeated to max of 18 Cr. 1-16 Cr. F, W.

697. Supervised Internship in Behavior Analysis. Supervised experience in a community agency. Prereq.: 519, 533, 534, 642, 643, 645, 659, and 664. 6-12 Cr. F, W, S, SUM.

698. Practice in Small Group Process. Supervised practice in conducting small group counseling sessions. Prereq.: 666. 3 Cr. S.

699. Thesis. 3-9 Cr. F, W, S, SUM.

Art (ART)

111 KIEHLE VISUAL ARTS CENTER/255-4283

Chairperson: James Roy

Graduate Faculty: Aiken, Brown, Coen, Ellingson, Gutteter, Halberg, Mills, Roy, Sherarts

These programs are designed for both full-time and part-time students. Students must expect to complete their course loads by enrolling mainly in day-time courses. Parts of the programs may be completed in evening and summer quarter classes.

MASTER OF ARTS

The applicant for admission to this program must have the equivalent of an undergraduate major in art. For unconditional admittance, the student must have an undergraduate grade point average of 2.8 or above; applicants whose undergraduate grade point average is less than 2.8 may be admitted conditionally. The applicant also must submit a portfolio of original work. Contact the chairperson, Department of Art, for specific instructions of what should be included in the portfolio and how it should be submitted.

At least 15 credits must be earned in art courses in which enrollment is limited to graduate students.

Plan A: Min., 46 Cr.

- I. Min. of 18 Cr. earned in one major field of studio art. Majors available in ceramics, painting, printmaking, photography, fibers, sculpture, glassworking, and jewelry. Min. of 9 Cr. earned in one minor field of studio art. Minors available in any of the above major areas. Min. of 12 Cr. earned in art history. Min. of 4 Cr. of electives earned in art history or studio art. Min. of 3 Cr. of creative work (ART 698) in the candidate's major field of study. This is accomplished by a written analysis or description of the work and an abstract thereof.
- II. A quarterly review of studio work completed in the major field of study must show satisfactory achievement. The candidate will complete a successful exhibit of creative work during the last quarter of residence. The department reserves the right to keep work from the exhibition. This work becomes part of the permanent collection of the departmental gallery.

MASTER OF SCIENCE—

Art Education

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution and must have completed at least an undergraduate minor in art in order to choose it as a major at the graduate level. In some cases, it may be necessary for the applicant to complete some prerequisite undergraduate work even though the student may have completed an undergraduate major or minor.

At least one-half of the Master of Science degree

program must be earned in courses in which enrollment is limited to graduate students.

Plan A, 46 Cr.

- I. Research: Min., 12 Cr.
 - ED 615 Introduction to Research, 3 Cr.
 - ART 685 Research in Art Education, 3 Cr.
 - ART 699 Thesis, 6 Cr.
- II. Major: Min., 18 Cr.
 - Prescribed:
 - Minimum of 18 Cr. to be selected with major adviser.
- III. Professional Education: Min., 9 Cr.
 - Credits to be selected with approval of professional education adviser.
- IV. Electives: Min., 10 Cr.

COURSES DESCRIPTIONS

530. Ancient and Classical Art. The art of the great ancient civilizations including Egyptian, Mesopotamian, Aegean, Greek, Etruscan, and Roman. 4 Cr. DEMAND.

531. Early Christian and Medieval Art. Christian art from the catacombs of Rome to the Gothic Cathedrals of Western Europe and the art of the Byzantine empire. 4 Cr. DEMAND.

532. Renaissance Art. The art of the Italian Renaissance beginning with Giotto and including the masters of 15th and 16th century northern Europe. 4 Cr. DEMAND.

533. Baroque and Rococo Art. European art of the 17th and 18th centuries including El Greco, Rembrandt, Bernini, etc. 4 Cr. DEMAND.

534. European 19th Century Art. Neo-Classicism, Romanticism, Realism, Impressionism, and Postimpressionism are emphasized. 4 Cr. DEMAND.

535. History of American Art I. Art of America from the Indian cultures through the United States of the pre-Civil War period. 4 Cr. DEMAND.

536. History of American Art II. Painting, sculpture, architecture, prints, and crafts from the Civil War to present. 4 Cr. DEMAND.

537. Modern Art, 1900-1945. Movements and concepts of modernism in the first half of the 20th century, including Fauvism, Cubism, Constructivism, de Styl, Dada, Surrealism. 4 Cr. W.

538. Art in Minnesota. Painting, sculpture and architecture in the Minnesota Territory and state from the establishment of white settlement (around 1830) to the present. 2-4 Cr. S.

539. Women in the Visual Arts. Art of women artists of all historical periods and diverse cultures. Includes an introduction to the "women's art movement," performance art, collaborative art-making processes, and art made by women for social change. 4 Cr. W.

572. Ceramics Studio Equipment and Kiln Construction. Design and construction of clay working equipment, use of refractories and fuels in kiln technology. Prereq.: 370 or 371. 3-9 Cr. DEMAND.

573. Ceramic Studio Operation and Management. Apprenticeship and studio visitation. Prereq.: 470 or 471. 3-9 Cr. DEMAND.

574. Specified Culture or Area of Ceramic Art History. Guest lecturer. Prereq.: 270, 320. 4 Cr. DEMAND.

592. Art History for Educators. An introduction to Art History designed especially for K-12 education students and teachers, which will combine both informational content on major artists, periods and styles within their cultural context with applied studio/lab experiences. Students will also participate in the location and utilization of appropriate age-related resources on Art History and the development of individualized curriculum to implement the incorporation of Art History in the classroom. 4 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

606. Photography I. A studio-research course designed to increase the student's familiarity with contemporary notions of photographic art in relationship with his/her personal work and historical perspective. Prereq.: 2 courses in undergraduate photography or permission of the department chairperson. 3-9 Cr. F, W, S.

607. Photography II. Application of photography as a research tool in documenting reality with emphasis on the variables of perception and the technology of the media. Prereq.: 606. 3-9 Cr. F, W, S.

615. Life Drawing I. Practice in pictorial composition with various techniques and media of expression. Emphasis on anatomy of human body. 3-9 Cr. F, W, S.

616. Life Drawing II. Advanced practice in pictorial composition with various techniques and media of expression. Emphasis on anatomy of human body. 3-9 Cr. DEMAND.

620. Advanced Theory. Foundations of criticism, form analysis, psychology, and philosophy of art. 4 Cr. DEMAND.

630. Art Seminar. Lectures, readings and discussions on selected artists and their works. 1-4 Cr. May be repeated to max. of 9 Cr. F, W, S.

641. Painting I. Advanced expression in the painting media; organization, color and technique. Prereq.: 2 undergraduate courses in painting or permission of the department chairperson. 3-9 Cr. F, W, S.

642. Painting II. Continued work in painting media leading to development in individual expression. Prereq.: 541. 3-9 Cr. F, W, S.

643. Watercolor Painting. Practice in transparent watercolor painting, case in, tempera, and combined media. 2-6 Cr. DEMAND.

651. Prints and Composition I. Advanced experience in printing methods and composition. Developing previously learned techniques. Prereq.: 2 undergraduate courses in printmaking or permission of the department chairperson. 3-9 Cr. F, W, S.

652. Prints and Composition. Advanced experiences in printing methods and composition. Intense concentration in a selected printing method. Prereq.: 651. 3-9 Cr. F, W, S.

661. Sculpture I. Advanced work in three-dimen-

sional organization of form; individual concentration toward competent expression in sculpture media. Prereq.: 2 undergraduate courses in sculpture or permission of the department chairperson. 3-9 Cr. F, W, S.

662. Sculpture II. Continued work in sculpture media with emphasis on casting metals. Prereq.: 661. 3-9 Cr. F, W, S.

670. Ceramic Sculpture. Creative expression in the ceramic media, composite construction. Prereq.: intermediate, undergraduate proficiency in ceramics and permission of the department chairperson. 3-9 Cr. F, W, S.

671. Throwing. Advanced work utilizing the potter's wheel, glazing and firing. Prereq.: 2 undergraduate courses in ceramics or permission of the department chairperson. 3-9 Cr. F, W, S.

672. Ceramics. Continued work in the ceramic media with emphasis on clay and glaze technology, kiln supervision. Prereq.: 670 or 671. 3-9 Cr. F, W, S.

676. Fibers. Advanced creative experiences in design and production on various looms; characteristics of looms, principles of textile construction, and materials of the weaver. Prereq.: 2 undergraduate courses in weaving or permission of the department chairperson. 3-9 Cr. F, W, S.

677. Fibers II. Emphasis upon the unique surface quality and surface decoration possibilities with fibers may include screening, canning, resist, batik, stitching, applique, quilting, etc. Prereq.: 676. 3-9 Cr. F, W, S.

681. Metals. Advanced experience in jewelry design, silversmithing, and casting by the lost wax method. Prereq.: 2 undergraduate courses in jewelry and enameling or permission of the department chairperson. 3-9 Cr. F, W, S.

682. Metals II. Advanced experiences in jewelry design, silversmithing, and casting by the lost wax method. Prereq.: 681. 3-9 Cr. F, W, S.

685. Research in Art Education. Current experiments in art education and closely related fields. Required of students working for a master's degree in art. 3 Cr. DEMAND.

686. Current Problems in Art Education. Statement, analysis and evaluation of art problems evidenced in contemporary living, in school, home and community. 3 Cr. DEMAND.

688. Glassworking I. Advanced work in glassworking techniques with emphasis on individual concentration toward competent expression in glass. Prereq.: 2 undergraduate courses in glassworking or permission of the department chairperson. 3-9 Cr. F, S.

689. Glassworking II. Continued advanced work in glassworking. Prereq.: 688. 3-9 Cr. F, S.

690. Special Areas—Visual Arts (Topical). Experiences in special areas of the visual arts. Credits and meetings by arrangement. 1-4 Cr. May be repeated with different topics to max. of 9 Cr. DEMAND.

696. Supervision of Elementary School Art. Methods and practices of supervision in relation to art programs in the elementary school. Prereq.: 290, 390, 490. 3 Cr. DEMAND.

698. Creative Work. 3-9 Cr. F, W, S, SUM.

BIOLOGICAL SCIENCES (BIOL)**262 MATHEMATICS AND SCIENCE CENTER/255-2039****Chairperson:** John McCue**Graduate Faculty:** Clapp, Cohn, Cronn, DeGroot, Ezell, Grewe, R. Gundersen, Hauslein, Hopwood, V. Johnson, Knutson, Kramer, S. Lewis, McCue, McGuire, Mork, Musah, Peck, D. G. Peterson, C. Pou, Schrank, Simpson, Torrence, S. F. Williams, Woodard**M.A./M.S. Degree Programs in Biology:** These programs are designed for both full-time and part-time students. Completion of an M.A. program requires attendance in day-time courses; some required courses may be offered in the evening and/or summer quarter. An M.S. program can be completed through evening instruction and summer quarter attendance.**MASTER OF ARTS**

The applicant should have earned a minimum of 48 credits in biology and 12 credits in chemistry before admission to this program. In some cases it may be necessary for the student to complete additional prerequisite undergraduate work. At least 15 credits are required in the major program in courses in which enrollment is limited to graduate students. A student may elect an emphasis in one of the following areas: aquatics, biotechnology, botany, cell biology, ecology, entomology, fisheries, genetics, ichthyology, immunology, limnology, microbiology, ornithology, parasitology, physiology, plant ecology, or wildlife management. A minimum of 18 credits (which may include BIOL 600, 601, 603, 699) in one of the above areas must be completed to declare an emphasis. All students must successfully complete a departmental final written examination. Guidelines for the steps required to complete this degree are available in the biology office. Students are encouraged to obtain this information no later than the first quarter of enrollment.

Plan A, 45 Cr. (Thesis)

- I. Courses in Biological Sciences: Min., 30 Cr.
 - A. Prescribed: Min., 15 Cr. in courses such as BIOL 600, 601, 603, 630, 696, and 699 to include:
 - BIOL 630 Seminar in Biology (Topical), Min., 3 Cr.
 - BIOL 699 Thesis, 6-9 Cr.
 - B. Electives: Min., 15 Cr. must be earned in approved biology courses other than those listed above.
- II. Related Fields: Max., 15 Cr. may be earned in approved related fields.
- III. Satisfactory completion of a departmental written examination.

Plan B, 52 Cr. (Non-thesis)

- I. Courses in Biological Sciences: Min., 37 Cr.
 - A. Prescribed: Min., 9-12 Cr. in courses such as BIOL 600, 601, 603, 630, 696 to include:
 - BIOL 603 Research in Biology (Topical), Min., 3 Cr.

BIOL 630 Seminar in Biology (Topical), Min., 3 Cr.

- B. Electives: Min., 25 Cr. must be earned in approved biology courses other than those listed above.
- II. Related Fields: Max., 15 Cr. may be earned in approved related fields.
- III. Satisfactory completion of a departmental written examination.

MASTER OF SCIENCE

The applicant must have completed an undergraduate teacher education program from an accredited teacher preparation institution and must have completed a minimum of 48 undergraduate credits in biology. In some cases it may be necessary for the student to complete additional prerequisite undergraduate work. At least one-half of the Master of Science degree program must be earned in courses in which enrollment is limited to graduate students. Plan A and B students must successfully complete a comprehensive final written examination.

Plan A, 45 Cr.; Plan B, 48 Cr.

- I. Research: Min., Plan A, 9-12 Cr.; Plan B, 3 Cr.
 - BIOL 696 Research Reporting, 3 Cr.
 - or
 - ED 615 Introduction to Research, 3 Cr.
 - BIOL 699 Thesis, 6-9 Cr. (Plan A only)
- II. Major: Min., Plan A, 18 Cr.; Plan B, 24 Cr.
 - Credits to be selected with major adviser.
- III. Professional Education: Min., Plan A or B, 9 Cr.
 - Consent of secondary education adviser.
- IV. Electives: Min., Plan A, 3-6 Cr.; Plan B, 12 Cr.
- V. Satisfactory completion of a comprehensive final written examination

Plan C, 54 Cr.

- I. Research: Min., 3 Cr.
 - BIOL 603 Research in Biology (Topical), 3 Cr.
- II. Major: Min., 24 Cr.
 - Credits to be selected with major adviser.
- III. Educational Foundations: Min., 6 Cr.
 - Consent of secondary education adviser.
- IV. Electives: Min., 6 Cr.
 - Credits to be selected from major, related or cognitive fields, general studies, or statistical methods.
- V. Applications and Implementation: Min. 15 Cr.
- VI. Candidates are required to complete successfully a final exam, oral and/or written, covering the materials included in a professional portfolio to be developed as sanctioned by the adviser. The examination will be conducted by two members of the Department of Biological Sciences and one member from outside the department.

COURSE DESCRIPTIONS

505. Radiation Biology. Introduction to radiation, laws governing its use, medical uses, and its effects on humans. Lab. Prereq.: 201, CHEM 201 or 215. 4 Cr. W.

506. Taxonomy of Grasses and Grasslike Plants. Collection and identification of grasses and grasslike plants; mainly of the Poaceae, Cyperaceae and Juncaceae families. Lab. Prereq.: 343 or 345. 4 Cr. DEMAND.

508. Cell Biochemistry and Physiology. A continuation of cell biology (BIOL 303) with an emphasis on biochemic and physiologic regulation of eukaryotic cells and tissues. Also discussions of newsworthiness advances in this area. Prereq.: 303, CHEM 251. 4 Cr. S.

509. Biological Techniques. Collection, preparation, and display of biological materials. Lab. 2 Cr. DEMAND.

512. Biology of Human Aging. Study and discussion of changes in the physiology of biological processes at the organism, organ, cell and subcellular levels. Students will prepare paper on selected topic in area of biology of human aging. 3 Cr. W, SUM.

513. Electron Microscope Techniques. Specimen preparation, mechanics and operation of the transmission and scanning electron microscopes. Lab. Prereq.: 303. 4 Cr. DEMAND.

514. Applied Instrumentation in the Biological Sciences. The application of instrumentation in monitoring, quantifying and isolating biological entities. Lab. Prereq.: 332, 344, CHEM 251. 4 Cr. F, W.

515. Aquarium Science. Setting up and maintaining aquaria; testing and trouble shooting; nutrition and feeding; infections and infestations. 1 Cr. DEMAND.

517. Cell and Tissue Culture Techniques. Laboratory oriented experience in plant and animal cell/tissue culture techniques. Prereq.: 344. 2 Cr. S.

519. Wildlife Parasitology. Host-parasite interactions, techniques for the collection, identification, and preservation of specimens. Lab. Prereq.: 201, 203. 4 Cr. DEMAND.

520. Seminar in Biology (Topical). Oral presentations and discussions by students under the guidance of a faculty member. May be repeated to a max. of 6 cr. 1-4 Cr. F, W, S.

521. Practicum (Topical). Supervised experience in selected areas such as laboratory management, greenhouse management, animal room management, aquarium management, museum/herbarium curator. Department approval required for enrollment. May be repeated to a max. of 4 Cr. 1-4 Cr. F, W, S, SUM.

522. Ichthyology. The systematics, anatomy, physiology, and natural history of fishes, with special emphasis on local freshwater forms. Lab. Prereq.: 203. 4 Cr. S.

523. Nature Study for Teachers. Classroom and field techniques useful in the identification of living organisms and the study of biotic and abiotic environmental factors. Prereq.: 326 or consent of instructor. 3 Cr. SUM.

524. Common Plants of Minnesota. Introduction to the common plants of Minnesota, their recognition and habitats. Not applicable to biology M.A. program. Field trips. 4 Cr. SUM.

525. Common Animals of Minnesota. Recognition, habitats, and interrelationships of selected Minnesota animals. Not applicable to biology M.A.

programs. Lab. 4 Cr. S.

527. Winter Nature Study. Identification, natural history and adaptations of plants and animals in the winter environment. Lab and field studies. Prereq.: a basic course in biology. 4 Cr. W.

528. Medical Parasitology. Survey of parasites of humans with emphasis on the pathophysiological effects of the host-parasite relationship. Lab. Prereq.: 203. 3 Cr. S.

529. Marine Biology. The ocean and marine organisms; their relation to humans. Prereq.: 301. 3 Cr. W ALT.

530. Medical Genetics. Genetic principles and applications in the medical field. Prereq.: 332. 3 Cr. S.

532. Molecular Genetics. Molecular biology of the gene and genetic processes in procaryotes and eucaryotes. Prereq.: 332. 4 Cr. F.

533. Aquatic Plant Ecology. Ecology and field identification of aquatic vascular plants. Lab. Prereq.: 301 or consent of instructor. 4 Cr. F.

534. Freshwater Algae. Morphology, taxonomy enumeration, biomass measurement and ecology of lakes, ponds, streams, bogs, and soils. Lab. Prereq.: 202. 4 Cr. F.

535. Comparative Animal Physiology. Comparative study of functional mechanisms in the various phyla. Prereq.: 203, 303, CHEM 215. 3 Cr. DEMAND.

536. Plant Physiology. An introduction to whole plant growth and development, including aspects of water relations, mineral nutrition, transport, photomorphogenesis, natural and synthetic plant growth regulators, vegetative and reproductive growth. Lab. Prereq.: 202, 303, CHEM 215 or 201. 4 Cr. W.

537. Plant Morphology. Survey of plant kingdom with emphasis on structure and form of primitive plants. Lab. Prereq.: 202. 4 Cr. W ALT.

538. Freshwater Invertebrates. Natural history, collection, and classification of local species. Lab. Prereq.: 203. 4 Cr. S.

539. General Parasitology. Animal parasites and their relation to diseases of humans and other animals. Lab. Prereq.: 201. 4 Cr. F.

540. Mycology. Structure, development, and identification of fungi with emphasis on species of economic importance. Lab. Prereq.: 202. 4 Cr. DEMAND.

541. Terrestrial Plant Ecology. Relations between plants and their environment; field studies of plant communities and succession. Lab. Prereq.: 301, one course or concurrent registration in 343 or 345. 4 Cr. F, ALT.

542. Embryology. Prenatal development of human body; laboratory emphasis on chick and pig. Lab. Prereq.: 203. 4 Cr. S.

543. Animal Behavior. Behavior of animals as interpreted through comparative studies and experimentation. Lab. Prereq.: 203 or consent of instructor. 4 Cr. W.

545. Medical Microbiology I. Morphology, classification, techniques of culture and rapid identification of pathogenic microorganisms. Lab. Prereq.: 344. 4 Cr. F, S.

546. Immunology. Introduction to humoral and cellular responses of the immune system. Includes ori-

gins and organization of lymphoid tissues, induction and regulation of responses, as well as mechanisms of immuno-pathology. Prereq.: 303. 4 Cr. F, W.

547. Laboratory Methods in Immunology. Antibody detection and estimation (qualitative and quantitative techniques), cellular immunity procedures. Lab. Prereq.: 446-546 or concurrent enrollment. 2 Cr. F, W.

549. Limnology of Lakes and Watersheds. The study of lake phytoplankton, zooplankton, and benthos; their toxonomic composition, biomass, productivity, and species interactions; and watershed runoff influence. Lab. Prereq.: 348, 433 or 434. 4 Cr. S.

550. Limnology of Streams. Physical, chemical and biological features and dynamic interrelations of flowing water, emphasis on problem solving, sampling and analytical techniques. Lab. Prereq.: 348, and 438-538. 4 Cr. S.

551. Animal Ecology. Distribution, life histories, habitat requirements, and environmental interrelations of vertebrates and invertebrates. Lab. Prereq.: 301. 4 Cr. S.

552. Water and Sewage Microbiology. Microbiology of water. Purification of water and treatment of sewage. Lab. Prereq.: 344, CHEM 251. 4 Cr. DEMAND.

553. Invertebrate Zoology. Classification, phylogeny, anatomy, physiology, and natural history of invertebrates. Lab. Prereq.: 203. 4 Cr. W ALT.

554. Wildlife Management. General principles of wildlife management with detailed studies of selected species. Lab. Prereq.: 301. 4 Cr. F.

555. Physiology of Bacteria. Study of growth, metabolism, and differentiation of bacteria. Lab. Prereq.: 344, CHEM 251. 4 Cr. S.

556. Methods and Materials for Teaching Life Science. Modern techniques and curricula for teaching secondary school life science. 4 Cr. F, W.

558. Plant Anatomy. The structure, organization and development of the plant body of higher plants. Lab. Prereq.: 202. 4 Cr. W ALT.

559. Biological Evolution. History, evidence, and processes of biological evolution (microevolution, speciation, macroevolution). Theories on the origin of life. Prereq.: 202, 203, 332. 3 Cr. W.

560. Sociobiology. Role of genetics and evolution in animal behavior; principles of sociobiology. 3 Cr. DEMAND.

561. Cytogenetics I. Culture, harvest, staining and identification of human chromosomes; microscopy, photomicrography and darkroom techniques. Microscope analysis of normal and grossly abnormal chromosomes. Prereq.: 332. Approval of instructor required for enrollment. 4 Cr. DEMAND.

562. Medical Entomology. Study of arthropods of medical importance with emphasis on vector biology and disease ecology. Lab. Prereq.: 203. 2-4 Cr. DEMAND.

563. Endocrinology. A study of the physiology of the endocrine glands and the molecular mechanisms by which they regulate physiological process. Prereq.: 303. 3 Cr. W ALT.

564. Human Anatomy and Physiology I. Structure and metabolic activity of organ systems including muscular, skeletal, nervous and integumentary. Lab.

Prereq.: 303. 4 Cr. F, W, SUM.

565. Human Anatomy and Physiology II. Structure and metabolic activity of organ systems including circulatory, respiratory, digestive, urinary, endocrine and reproductive. Lab. Prereq.: 464-564. 4 Cr. W, S, SUM.

566. Immunohematology. The immunology of blood groups and its application to blood transfusions, hemolytic disease of the newborn, and detailed blood group typings. Lab. Prereq.: 446-546. 3 Cr. W.

567. Hematology I. Blood cell formation and function; tests and procedures pertinent to clinical hematology. 2 Cr. F.

568. Water Quality Management. Water quality monitoring program establishment and data analysis. Sampling strategy, laboratory testing, quality control, and report preparation. LC50 determined by fish toxicity testing. Lab. Prereq.: CHEM 215. 4 Cr. W.

569. Soil Microbiology. The role of micro-organisms in the soil, their identification, culture and environmental significance. Lab. Prereq.: 303, 344. 4 Cr. DEMAND.

570. Fisheries Biology. Collecting and sampling, description of population characteristics, computer-assisted estimation of population parameters, fundamentals of management, and effects of water quality. Lab. Prereq.: 301. 4 Cr. F.

571. Medical Microbiology II. Taxonomy, morphology, cultural and biochemical activities, and pathogenesis of micro-organisms; basic mycology and virology; emphasis on humans as required for medical technology. Prereq.: 445-545. 3 Cr. F.

572. Biotechnology I. Introduction to the basic theory and techniques involved in biotechnology and recombinant DNA work. Lab. Prereq.: 414, 432, 484, CHEM 353. 4 Cr. W.

573. Biotechnology II. Theory and advanced techniques in gene isolation and identification. Lab. Prereq.: 472. 4 Cr. S.

574. Fall Ornithology. Migration patterns, fall plumage, feeding behavior, population studies. Lab. Prereq.: 347. By permission only. 4 Cr. F.

576. Field Biology of the Boundary Waters Canoe Area. Six to eleven days of backpacking and/or canoeing in the BWCA. Forest ecology, flora, fauna, and wilderness management. Extra fees. By permission only. 2-4 Cr. SUM.

577. Biology Topics. Selected topics in biology for teachers of science. May be repeated to a max. of 8 Cr. Lab. 1-4 Cr. DEMAND.

580. Ethnobotany. Biology of plants and plant products that contribute to human culture. Both past and present uses as well as future potential, are considered. Prereq.: Junior, Senior, or Graduate level standing in any major offered at SCSU. 3 Cr. DEMAND.

581. Cytogenetics II. Advanced culture, harvest and staining techniques applied to the study of human chromosomes. Microscope analysis of minor band chromosome abnormalities. Cytogenetics of cancer. Research and Industrial applications. Prereq.: 461-561. 4 Cr. DEMAND.

584. Virology. Structure, life cycles, classification, virus-host relationships, lysogeny transformation,



tumor induction. Prereq.: 303, 344. 3 Cr. W.

585. Laboratory Methods in Virology. Techniques of virus isolation, production, purification, enumeration and experimentation. Lab. Prereq.: 484-584 or concurrent enrollment. 2 Cr. W.

586. Pathophysiology. Various abnormalities of human physiology; covering such abnormalities as seen in immunology, bacterial and viral invasion and disorders of various systems. Prereq.: 344, 465-565. 4 Cr. DEMAND.

587. Hematology II. Hematologic diseases, pathological findings and their interpretations, and introduction to coagulation chemistry. Prereq.: 467-567. 2 Cr. W ALT.

589. Paleobiology. Survey of ancient life from the Precambrian microorganism through Cenozoic macrofossils. Topics such as track fossils, preservation of fossils, ancient animals/plants, extinctions, etc.; all will be considered. Lab. Prereq.: 203. 4 Cr. F, ALT.

590. Selected Topics in Biology. Designed for intensive study in a special biology topic. Topic will be announced in class schedule. May be repeated to a max. of 8 Cr. 1-4 Cr. DEMAND.

591. Field Studies in Biology (Topical). Selected field trips to study the flora, fauna and ecology of native habitats such as the Grand Canyon and the Florida Keys. Arranged instructional sessions may be required before or after the trip. Travel expenses required. By permission only. May be repeated with approval of adviser to a max. of 12 Cr. 1-4 Cr. DEMAND.

597. History of Biology. Origin and development of major ideas of biological thought. 2-3 Cr. F.

598. The Nature of Biological Science. Clarification of terms in biology, identifying basic assumptions, the basis and origins of biology, the interactions of society and biology, problems and hopes of applied biology. 2-3 Cr. S.

COURSES FOR GRADUATE STUDENTS ONLY

601. Readings in Biology (Topical). 1-4 Cr. F, W, S, SUM.

602. Modern Biological Concepts. Survey course in which modern concepts in physiology, genetics, and ecology are developed through selected laboratory experiences, reading, and discussion. Not applicable to biology M.A. program. 3 Cr. DEMAND.

603. Research in Biology (Topical). 1-8 Cr. May be repeated; a max. of 8 Cr. may be applied toward a master's degree program. F, W, S, SUM.

610. Special Topics in Biology. A lecture or a lecture/laboratory course in a special area of the biological sciences. Prereq. may be required. May be repeated to a max. of 12 Cr. 1-4 Cr. DEMAND.

620. Advanced Biology (Topical). Advanced course in areas such as parasitology, virology, immunology, genetics, botany, ecology, entomology, microbiology, zoology, physiology, limnology. Prereq.: an undergraduate course in the area. May be repeated with different subject areas to a max. of 12 Cr. 2-4 Cr. DEMAND.

630. Seminar in Biology (Topical). Oral presentations by students under the guidance of a faculty member. May be repeated to a max. of 4 Cr. 1-2 Cr. F, W, S.

647. Advanced Ornithology. Functional morphology and breeding biology of birds. Lab. Prereq.: 347. 4 Cr. S.

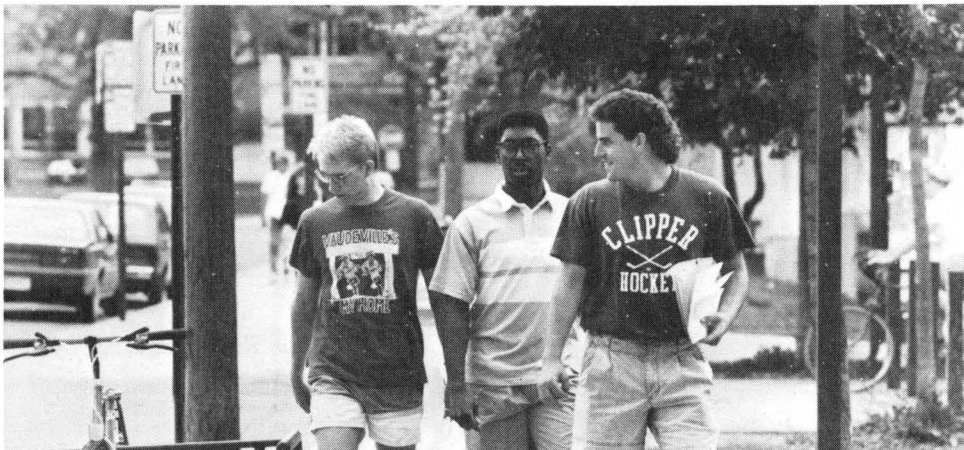
666. Biogeography. Past and present distribution of biotic communities in relation to environmental and historic factors. Prereq.: 441-541. 3 Cr. DEMAND.

696. Research Reporting. Research analysis and reporting. Students will be graded on an S/U basis. 3 Cr. DEMAND.

699. Thesis. 6-9 Cr. F, W, S, SUM.

Business Computer Information Systems (BCIS)

210 BUSINESS BUILDING/255-2174



Chairperson: Ming-te Lu

Graduate Faculty: Heath, D. Krueger, R. Myer, M. Lu, Phan, L. Robinson, Song, Tsai, Weinberg, Yoshimoto

Also see M.B.A. requirements, pages 26-27.

COURSE DESCRIPTIONS

538. International Business Seminar. Designed to serve as an integrated capstone for international business. It includes understanding of the problems faced by international business, policy and decision-making processes as well as control and evaluation of international business. Prereq.: MKGB 427; MGMT 470. 4 Cr. S.

540. Business Statistics III. Review of statistical inference, analysis of variance with two or more variables of classification, multiple regression and correlation, analysis of covariance and non-parametric methods. Prereq.: 241. 4 Cr. W.

543. Data Base Concept and Development. Investigation and application of data base concepts including data base administration, data base technology, and selection and acquisition of data base management systems. Application program development in a data base environment with an emphasis on loading, modifying, and querying the data base using a host language. Prereq.: 350 and a programming course. 4 Cr. F, W, S.

545. Applied Software Development Project. Application of computer programming and system development concepts, principles and practices to a comprehensive system development project. A team approach is used to analyze, design, and document realistic systems of moderate complexity. Use of project group dynamics in the solution of information systems problems. Prereq.: 350, 543 or consent of instructor. 4 Cr. DEMAND

546. Information Technology for Competitive Advantage. Basic concepts of information technology affecting the industrial environment, cost reduc-

tion, product differentiation, competitive scopes, and new products/services development. Prereq.: 340 or consent of instructor. 4 Cr. S.

550. Information Systems Management. Organizational structure of a management information system; information systems management; personnel selection, training, motivation and evaluation; acquisition, analysis, administration and control of hardware and software; managerial control of MIS; computer's impact on administration and control of MIS. Prereq.: 350, 543. 4 Cr. F, W, S.

551. Telecommunication and Distributed Data Processing. Introduction to data communication and teleprocessing, centralized, decentralized, and distributed systems; impact of distributed systems on hardware, software, data, procedures, and personnel. Prereq.: 350. 4 Cr. F, S.

552. Expert Systems Applications in Business. Basic concepts and components of expert systems; benefits and limitations, knowledge representation methods, uncertainty handling, business and managerial applications, expert systems tool selection, systems development life cycle, and organization considerations. Prereq.: 350. 4 Cr. W.

554. Decision Support Systems. Analysis of information support systems for semi-structured tasks for management decision making. Framework of decision support system. Design, implementation, and evaluation of decision support systems. Prereq.: 150, 241. 4 Cr. F, W, S.

555. Business Research. Fundamentals of research methodology, including planning, organizing, and executing a research project; sampling techniques; basic concepts and techniques in the design of experiments; interpretation of data; art and strategy of presenting findings. Prereq.: 241. 4 Cr. DEMAND.

559. Topics in Information Systems. Recent developments in concepts, theory, practices in the analysis and design of management information systems. Prereq.: 350 or consent of instructor. 4 Cr. DEMAND.

Chemistry (CHEM)

358 MATHEMATICS AND SCIENCE CENTER/255-3031

Chairperson: Richard James

Graduate Faculty: Arndts, Carpenter, Cooper, Dendinger, James, Kennedy, Lee, Magnus, McKenna, McMullen, Mitchell, Weiskopf

This department currently does not offer a major program. Service courses for other graduate programs are offered in daytime and summer schedules.

COURSE DESCRIPTIONS

For courses with a laboratory, the number of lecture hours (listed first) and laboratory hours per week are given in parentheses following the course title.

515. Radiochemistry. (2, 4) Nuclear stability and structure; decay systematics and energetics; interactions of radiation with matter; nuclear energy; detection, measurement and characterization of radiation; application to chemical and biochemical problems. Lab. Prereq.: 216, basic calculus desirable. 4 Cr. F.

525, 526, 527. Physical Chemistry I, II, and III. (4, 0) Application of fundamental laws and theoretical principles to atomic and molecular structure, gases, liquids, solids, solutions, phase equilibrium, chemical reactions (equilibrium and kinetics), quantum mechanics and electrochemical processes; to understand the macroscopic in terms of molecular behavior. Prereq.: 325, PHYS 233 or 236, MATH 233 or 243. 4 Cr. per quarter. 525-F, 526-W, 527-S.

528, 529, 530. Physical Chemistry Laboratory. (0, 3) These are laboratory courses to complement the physical chemistry lecture sequence. A quantitative measurement of properties and phenomena of chemical interest and their interpretation by use of chemical principles. Prereq.: 525, 526, 527 or concurrent registration. 1 Cr. per quarter. 528-F, 529-W, 530-S.

534. Advanced Inorganic Chemistry I. (4, 3) Development of the concepts of inorganic chemistry; electronic structures of atoms; crystal structure; chemical bonding including molecular orbital theory; nomenclature, bonding and structure of coordination compounds. Lab. Prereq. or concurrent registration: 525, or consent of instructor. 5 Cr. F.

535. Advanced Inorganic Chemistry II. (4, 0) Application of the concepts of inorganic chemistry as applied to chemical elements and compounds. Further work in coordination chemistry including the ligand field theory. Prereq.: 534. 4 Cr. W.

540. Instrumental Analysis. (3, 6) Major instrumental methods of chemical analysis including spectroscopic, electrometric, and chromatographic methods. Prereq.: 425, 426, or concurrent registration or consent of instructor. 5 Cr. W.

541. Computers in the Chemistry Laboratory. (3, 2) The principles and practice of interfacing laboratory instruments with computers for increased efficiency and effectiveness of measurements. Prereq.: 325, BASIC language ability, 440 desirable. 4 Cr. S.

550. Qualitative Organic Analysis. (1, 12) Identifi-



fication of several simple and mixed organic compounds by physical and organic qualitative methods. Lab. Prereq.: 293, 540. 4 Cr. DEMAND.

553. Biochemistry I. (3, 4) Structures, properties, and function of biomolecules; proteins and amino acids, nucleic acids, carbohydrates, lipids, vitamins. In addition, enzymes and enzyme mechanisms are covered. Prereq.: 252 or 292, or consent of instructor. 4 Cr. F.

554. Biochemistry II. (3, 0) Basic concepts of bioenergetics and metabolic processes. Major energy producing and energy storage pathways of carbohydrates, lipids, and amino acids, together with the interrelationships and control of these pathways. Prereq.: 353, 453, or 553, or consent of instructor. 3 Cr. W.

555. Biochemistry III. (3, 3) Basic concepts involved with the biosynthesis and control of various biochemical molecules, including amino acids, proteins, nucleic acids. Prereq.: 454 or 554, or consent of instructor. 4 Cr. S.

556. Methods and Materials for Teaching Physical Science. Modern techniques and curricula for teaching secondary school physical science. 4 Cr. F, W.

560-569. Selected Topics in Chemistry. Non-sequence courses designed for intensive study of a special topic. Topic will be announced in class schedule. Departmental approval required for enrollment. 1-4 Cr. DEMAND.

572. Advanced Organic Chemistry. (4, 0) Topics such as condensations, rearrangements, conservation of orbital symmetry, polymers, benzenoid and non-benzenoid aromaticity. Prereq.: 293, 534, or consent of instructor. 4 Cr. DEMAND.

575. Polymer Chemistry. (3, 3) Synthesis and reactions of polymers with an emphasis on the thermodynamics and kinetics of polymerization. Emphasis on fabrication and physical characterization of polymers in the laboratory. Prereq.: 252 or 293; 425. 4 Cr. S.

581. Chemical Thermodynamics. (4, 0) Concepts of both classical and modern thermodynamics applied to problems encountered in chemistry. Prereq.: 526. 4 Cr. DEMAND.

590. Seminar. Lectures, readings, discussions on selected topics. May be repeated. 1 credit per quarter to a max. of 4 Cr. F, W, S.

699. Thesis. 3-9 Cr. F, W, S, SUM.

Child and Family Studies (CFS)

B118 EDUCATION BUILDING/255-3124

Director: Glen Palm

Graduate Faculty: Blaska, Boswell, Mattick, Mayala, Palm

MASTER OF SCIENCE— Child and Family Studies

Four Master of Science Child and Family Studies degree options; Early Education, Administration, Special Needs Children, and Family Studies, are offered within this program.

Child and Family Studies: Early Education, is a degree that is primarily for those persons who would like to gain advanced knowledge and skills about curriculum, methods and materials, and teaching/learning styles specifically pertaining to young children. Both Plan A and Plan B options are available to students who seek this degree.

Child and Family Studies: Administration, is a degree that has been designed for persons with experience in working with young children and who would like to assume administrative or director roles in early childhood programs. Both Plan A and Plan B options are available to students who seek this degree.

Child and Family Studies: Special Needs Children is a degree that has been jointly developed with the Special Education Department. This degree is for those persons who would like to assume teaching positions in programs for young children with handicapping conditions or in programs working with parents of such children. Either Plan A or Plan B options are available.

Child and Family Studies: Family Studies is a degree for early childhood family education teachers and other graduate students seeking a family emphasis.

Applicants for these degrees must meet the requirements for admission to the Graduate School at St. Cloud State University. It is anticipated that persons may come with a variety of background training and experience. It is desirable, but not required, that students have completed an undergraduate degree in a related major area.

The CFS program is designed with the intent to individualize instruction as much as possible to allow for differences in students' backgrounds, interests and abilities. The students will be expected to demonstrate their understandings and skills in numerous field contacts. Some course work will be taken as concurrent blocks of lecture and field experiences.

Graduate Teacher Licensure

Programs leading to recommendation for licensure as a teacher, a special education: early childhood teacher, early childhood family education or as a parent educator are available. The Parent Education Vocational Teaching License also can be obtained. It is possible to combine course work and to receive more than one license. Students interested in licensure at the graduate level should write to: Director,

Center for Child and Family Studies, Education Building, St. Cloud State University, 720 South 4th Avenue, St. Cloud, MN 56301-4498. Students who wish to pursue licensure, but who do not intend to complete a master's degree must complete an application to graduate school either for the fifth year program or the master's degree program of studies.

Students seeking admission to the Fifth Year Program in Teacher Education/Early Childhood follow the application procedures and the credit requirements listed in the Graduate Bulletin. *The CFS graduate program is designed for both full-time and part-time students. Most courses are offered in the evening with a limited offering of weekend classes. The graduate summer school offerings typically include courses applicable to teaching licensure.*

DEGREE REQUIREMENTS

Plan A students complete thesis. 46 Cr.

Plan B students write two starred papers in conjunction with selected graduate courses. 51 Cr.

Master of Science in Child and Family Studies: Administration

The student's assigned graduate advisor will provide information for completing the plan of study and identifying coursework needed for the major with this option.

Master of Science in Child and Family Studies: Early Education

The student's assigned graduate advisor will provide information for completing the plan of study and identifying coursework needed for the major with this option.

Master of Science in Child and Family Studies: Special Needs Children

The student's assigned graduate advisor will provide information for completing the plan of study and identifying coursework needed for the major with this option.

Master of Science in Child and Family Studies: Family Studies

Plan A students complete thesis.

Plan B students complete two starred papers in conjunction with selected graduate courses.

Plan A, 46 Cr.; Plan B, 51 Cr.

I. Research Core: Required: Plan A, 9 Cr.; Plan B, 3 Cr. Choose from the following courses or "equivalent" with adviser's approval.

ED 602 Evaluation of the School Program, 3 Cr.

ED 614 Interpretation of Research, 3 Cr.

ED 615 Introduction to Research, 3 Cr.

APSY 678 Introduction to Graduate Statistics, 3 Cr.

CFS 699 Thesis, 3-6 Cr. (Plan A only)

II. Child and Family Studies Core: Plan A, 25 Cr.; Plan B, 30 Cr.

- *CFS 521 Developmental Milestones of Children, 3 Cr.
- CFS 661 Practicum in Development of Young Children, 2 Cr.
- *CFS 522 Parent and Family Studies, 3 Cr.
- CFS 662 Practicum in Parent and Family Studies, 2 Cr.
- *CFS 631 Infant and Toddler Development, 3 Cr.
- CFS 621 Advanced Development of Young Children, 3 Cr.
- CFS 622 Advanced Studies of Parents and Families in the Community, 3 Cr.
- **CFS 633 Educational Strategies with Young Handicapped Children, 3 Cr.
- **CFS 623 Analysis of Early Education, 3 Cr.
- **CFS 523 Early Education, 3 Cr.
- **CFS 560 Student Teaching, 4 Cr.

OR

- **CFS 673 Field Experience and Research in Early Education, 1-4 Cr.

III. Parent Education and Family Life Specialization Block: Plan A, 12 Cr.; Plan B, 18 Cr.

- *CFS 515 Foundations of Early Childhood and Family Education, 4 Cr.
- *CFS 525 Methods of Parent and Family Education, 3 Cr.
- *CFS 635 Parents as Adult Learners, 2 Cr.
- *CFS 662 Practicum in Parent and Family Studies, 1 Cr.
- *CFS 645 Group Process in Parent Education, 2 Cr.
- *CFS 665 Student Teaching in Parent Education, 3 Cr.

OR

- *CFS 672 Field Experiences or Research: Parent and Family Studies, 1-4 Cr.
- SOC 572 Sociology for the Family, 3 Cr.
- SOC 573 Sociology for the Elderly Family, 3 Cr.
- APSY 528 Psychodynamics of the Family, 3 Cr.

Students may also take additional or equivalent courses in other departments with the approval of their adviser.

PERMANENT WORKSHOP DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to Academic Regulations under "Workshop Limitation" to determine the maximum number of workshop credits which may be applied to graduate degrees.

502. Workshop: Healthy Families (Part I). Examines the positive characteristics and traits of "healthy" well-functioning families. The term "healthy" refers to the mental well-being of families and not related to diseases or physical ailments. 1 Cr. DEMAND.

503. Workshop: Healthy Families (Part II). Attention will be given to identify the strengths of your own "healthy" system and how that influences your lifestyle choices of today. Prereq.: 502. 1 Cr. DEMAND

504. Workshop: Birth Order in the Family. Implications of birth order on the family; implications of the family constellation. Prereq.: permission of instructor. 1 Cr. DEMAND.

506. Workshop: Looking at Learning. Seminar to study the structure of subjective experience. Education is considered a meaningful encounter between two persons in which the subjective experiences of both are crucially important. Prereq.: Permission of instructor. 1 Cr. DEMAND

COURSE DESCRIPTIONS

505. Issues and Topics of Child/Family. Various topics to be examined and studies in child/family relevant to current issues, child/family programs, teaching methods. May be repeated to max. of 8 Cr. 1-8 Cr. DEMAND.

511. Foundations in Early Childhood Special Education. Special education law relating to ECSE; program alternatives and approaches; individualized instruction; theoretical perspectives relating to ECSE. 3 Cr. F.

515. Foundations of Early Childhood and Family Education. History of early childhood and family education, philosophy, principles of early childhood and family education emphasizing the relationships of the child, family and community. 4 Cr. W.

521. Developmental Milestones of Children. Development of normal and exceptional children. Theories of child development, impacts of early experience, developmental assessment and planning. Prereq.: one undergraduate course in child/human development or equivalent competency. Coreq.: 661 or 671. 3 Cr. F.

522. Parent and Family Studies. Models of parent and family, including special needs, education. Ways to involve parents, methods of parent education, family unit studies. Coreq.: 662 or 672. 3 Cr. W.

523. Early Education. Teaching techniques, curriculum selection and construction, and evaluation of instructional materials appropriate for early education programs. 3 Cr. F.

524. Administration of Early Education. The course is designed to give students the skills necessary to direct and operate programs in early childhood education. Current legislation is studied. 3 Cr. DEMAND.

525. Methods of Parent and Family Education. Overview of various methods and curricula used in the field of parent and family education, including theories about adult learners and group process, review, and evaluation of existing programs and curricula, and the development and adoption of parent and family education curricula for specific populations. 3 Cr. S.

*Courses required for a new Parent Educator License.

**The Early Childhood Family Education License requires the same courses as the Parent Education License, plus those marked **.

560. Student Teaching in Early Education. Supervised teaching in Head Start program, home training programs, nursery schools, public school programs and other settings. Required for licensure in Prekindergarten. Coreq.: 523. X grading option. 4-8 Cr. S, SUM.

577. Basic Skills/Severely Handicapped Young Children. Program design and strategies to meet the needs of young children with severe handicaps. 3 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

605. Issues and Topics in Early Childhood and Family Studies. A variable content course designed to address specialized areas of study related to early childhood education, child development, parent education, parenting practices, legislation, child advocacy or other topics which are of current concern to faculty and/or students. 1-6 Cr. DEMAND.

621. Advanced Development of Young Children. An in-depth study of developmental milestones, children at risk, pediatric experiences, and the effects of children's development on others. Prereq.: 521. May be taken twice on approval of adviser. 1-6 Cr. DEMAND.

622. Advanced Studies of Parents and Families in the Community. In-depth study of home/community coordination and education. Development of skills and sensitivities for dealing with families, family based child care, and research and development of parenting programs. Prereq.: 522. May be taken twice with approval of adviser. 1-6 Cr. DEMAND

623. Analysis of Early Education. Evaluation, planning, designing learning environments, equipment/facilities, teaching roles, socialization of children in early childhood education. Prereq.: 523. May be taken twice on approval of adviser. 1-6 Cr. S.

631. Development of Infants and Toddlers. This course focuses on developing a profile of young children in the first three years of life. A major philosophy of this class is to function under the assumption that the infant is competent. The roles and actions of caregivers will be discussed in relation to infant/toddler interaction. Evaluating and assisting the special needs of infants/toddlers is also a major component of this class. Prereq.: 521. Coreq.: 661 or 671. 3 Cr. S.

632. Analysis of Families with Children with Handicaps. In-depth analysis and strategies concerning families with children with handicaps. Theories about family functioning, development of effective teaming, communication techniques, family support systems, and resources. 3 Cr. W.

633. Educational Strategies with Young Handicapped Children. Designed to review knowledge of basic concepts of individualized education for handicapped children and provide understanding of curriculum, materials, and methodology necessary for providing educational services to young handicapped children. 3 Cr. W.

634. Parents as Adult Learners. A study of parent

learning styles, adult development, and teaching parents of young children. Coreq.: 662. 2 Cr. F.

643. Educational Strategies for Infants and Toddlers with Handicaps. Teaching strategies for infants and toddlers; interpretation of assessment data; methods for intervention; program development; home visits and working as a team. Prereq.: 631. 3 Cr. S.

645. Group Process in Parent Education. In-depth analysis of group dynamics and effective group skills in parent education. Theories of group process and approaches to leadership. Communication within groups. Coreq.: 662. 2 Cr. W.

661. Practicum in Development of Young Children. Supervised practicum in early childhood programs. Will have experiences of observing and assessing, participating with and planning for children ages 0-8 years. Must be taken at same time as 521 or 621. 1-6 Cr. DEMAND.

662. Practicum in Parent and Family Studies. Supervised practicum working with parents and families participating in early childhood programs. Must be taken at same time as 522 or 622. 1-6 Cr. DEMAND.

663. Practicum in Early Education. Supervised practicum in early childhood programs. Will have experiences in early education settings with children from ages 0-8. 1-6 Cr. DEMAND.

665. Student Teaching in Parent Education. Supervised student teaching in Early Childhood Family Education sites with parents. 3 Cr. DEMAND.

671. Field Experiences or Research: Development of Young Children. Students must complete a variety of assignments that must be done with young children and their families. Does not require assignment to a specific setting. Must be taken at same time as 521 or 621. Prereq.: permission of program director. 1-6 Cr. DEMAND.

672. Field Experiences or Research: Parent and Family Studies. Opportunity to utilize a variety of settings to advance the students' understanding of parent and family education or involvement. Alternative to practicum for those who can document considerable previous experience in parent and family education. Must be taken at same time as 522 or 622. Prereq.: permission of program director. 1-6 Cr. DEMAND.

673. Field Experiences and Research in Early Education. Supervised field experience or long-term internships with child/family. By permission of adviser. 1-6 Cr. DEMAND.

674. Field Experiences or Research in Administration and Facilitation of Early Childhood Programs. Opportunity to participate in variety of administrative roles in early childhood programs. A practicum for students which will provide experience as an administrator or coordinator of early childhood programs. 1-6 Cr. DEMAND.

683. Practicum in Early Childhood: Special Education. Supervised practicum in teaching young (ages birth to 6) handicapped children. Prereq.: Permission of dept. 1-4 Cr. DEMAND.

699. Thesis. 6 Cr. F, W, S, SUM.

Communication Disorders (CDIS)

216 EDUCATION BUILDING/255-2092

Chairperson: Gerald LaVoi

Graduate Faculty: Jacobson, Kammermeier, LaVoi, Whites

The graduate program in communication disorders (CDIS) is accredited by the American Speech-Language and Hearing Association. Students earning a Master of Science degree in communication disorders will have completed the academic course work and clinical experiences that make them eligible to apply for the ASHA Certificate of Clinical Competence in Speech-Language Pathology. SCSU offers no graduate degree in audiology.

ADMISSION PROCEDURES AND STANDARDS

Application Deadline. Applications for admission should be submitted to the SCSU Office of Graduate Studies by January 15th. This early date allows applications to be processed and forwarded so they reach the Department of Communication Disorders no later than February 1st. Completed applications are taken through the departmental selection process during the first two weeks of February, and students begin to receive notification of acceptance after February 15th. Students who are offered admission to graduate study have two weeks in which to accept or reject the offer. The admission process continues until the available slots are filled. When all available slots are filled during the February admission process, applications will not be considered at other points in the academic year.

Undergraduate Preparation. Admission to the CDIS graduate program requires the completion of a baccalaureate degree. Students admitted to the CDIS graduate program who have an undergraduate major or minor in communication disorders will have their transcripts evaluated to determine if prerequisites have been completed. Prerequisite courses *not completed* at the undergraduate level may be required above the 68 credit degree requirement for a Master of Science in communication disorders.

Students having a baccalaureate degree in a discipline other than communication disorders may apply for admission to graduate study in CDIS. Students admitted under this condition cannot enroll in CDIS 600 level classes until prerequisite courses have been completed. It should be recognized that students with no undergraduate preparation in CDIS are likely to be less competitive in the admissions process. A year of study to complete undergraduate prerequisites would enhance chances for admission, but should not be misconstrued as a guarantee for admission to graduate study. The list of prerequisites is available through the CDIS department office.

Admission Standards. The departmental selection process is heavily based on applicants' undergradu-

ate grade point averages and scores earned on the Graduate Record Examination (GRE). Departmental admission standards require a 3.0 or better grade point average on CDIS course work completed at the undergraduate level. No minimum cut-off GRE score has been established for admission.

Number of Admissions. The Department of Communication Disorders grants admission to approximately 15 full-time students each academic year. The department also admits no more than 5 part-time students each year, with the number of part-time students not to exceed a total of 25 at any given time.

Financial Assistance. Application for admission is separate from the process of applying for financial assistance. Students should contact the Office of Financial Aids and/or the Office of Graduate Studies for information on the types of financial assistance available and the application processes involved. The Department of Communication Disorders is annually awarded graduate assistantships. To apply for a departmental assistantship, contact Dr. Martin Kammermeier, Director of CDIS Graduate Studies.

OPTIONS WITHIN THE MASTER OF SCIENCE DEGREE IN CDIS

Thesis/Non-thesis Option. Students admitted to the graduate program in communication disorders can select either a thesis (Plan A) or a non-thesis (Plan B) option.

Full-time/Part-time Option. Students can complete a Master of Science degree in communication disorders through either a full-time or a part-time program. Admission procedures, standards and application deadlines are the same for both programs of study. Students must indicate their intention to enter the full-time or part-time program at the time they seek admission. In order to change from part-time to full-time status, students must request to have their applications reconsidered on a competitive basis with other students applying for full-time admission. Part-time students can complete the Master of Science degree by enrolling in evening classes during the regular academic year and completing clinical requirements during summer sessions. To accommodate the needs of the part-time students, all graduate courses are offered as evening classes on a rotating basis.

Beginning Dates. Both the full-time and part-time students are strongly encouraged to begin their academic programs during either summer or fall quarter. Entrance at other points in the academic year may not be permitted.

Length of the Degree Program. Full-time students can complete the Master of Science degree in communication disorders in six to seven quarters, while

it normally takes part-time students five years to complete the degree. The length of time needed to complete the degree increases for students who have deficiencies in the undergraduate prerequisite courses, who have not accumulated at least 100 undergraduate clinical clock hours, who may elect to complete additional course work for teacher licensure purposes, and/or who elect to carry less than a normal academic course load.

Teacher Licensure Option. For students seeking a Minnesota Teaching License in communication disorders, requisite courses in the special education core, human relations, drug awareness and community/public health may be taken for either graduate or undergraduate credit. It should be understood that courses taken outside of CDIS for teacher licensure purposes are separate from and cannot be applied to the Master of Science degree in communication disorders.

Plan A or B, 68 Cr.

I. Research: Min., Plan A, 12 Cr.; Plan B, 6 Cr.

CDIS 620 Research in Speech-Language

Pathology and Audiology, 3 Cr.

CDIS 699 Thesis (Plan A only), 3-9 Cr.

APSY 678 Introduction to Graduate Statistics,
3 Cr.

II. Major: Min., Plan A or B, 56 Cr.

A. Professional Core

CDIS 636 Diagnostics in Speech-Language
Pathology, 3 Cr.

CDIS 677 Seminar: Professional Issues and
Ethics in Speech-Language Pathology, 2 Cr.

CDIS 642 Advanced Audiology, 3 Cr.

B. Disorders Courses

1. Language Area: Min. 2 of 3 courses

CDIS 566 Augmentative Communication
Systems, 3 Cr.

CDIS 635 Aphasia, 3 Cr.

CDIS 678 Seminar: Language Disorders in
Children, 3 Cr.

2. Speech Area: Min., 5 of 6 courses

CDIS 634 Cleft Palate, 3 Cr.

CDIS 637 Motor Speech Disorders, 3 Cr.

CDIS 638 Alaryngeal Speech, 3 Cr.

CDIS 670 Seminar: Voice Disorders, 3 Cr.

CDIS 671 Seminar: Phonological Disorders,
3 Cr.

CDIS 676 Seminar: Fluency Disorders, 3 Cr.

3. Special Topics: Disorders (May be repeated
to max. of 9 Cr.)

CDIS 515 Topics in Speech-Language Pathology
and Audiology, 3 Cr.

4. Clinical Practicum: Min., 18 Cr.*

CDIS 648 Graduate Practicum: University
Clinic, 3 Cr.

CDIS 650 Graduate Practicum: Internship,
9 Cr.

III. Electives: Min., 6 Cr. (selected with approval of
adviser) Plan A, 0 Cr.; Plan B 6 Cr.

*Additional practicum may be required if student fails to attain 375 clinical clock hours (cch) with a minimum of 250 cch at the graduate level within the 18 credits of required practicum. Practicum credits cannot be substituted for any courses in research or professional area.

COURSE DESCRIPTIONS

515. Topics in Speech-Language Pathology and Audiology. A study of specialized topics related to speech, language and hearing. Course will address areas of current interest to faculty and/or students (e.g., prevention of speech-language problems, microcomputer applications in communication disorders, training parents to work with their communicatively handicapped children). May be repeated to max. of 9 Cr. 1-3 Cr. SUM, DEMAND.

520. Experimental Phonetics. Relationship between the acoustic features of speech sounds and perceptions of speech. 3 Cr. F.

526. Neurological Bases of Speech and Language. Neuroanatomy and neurophysiology, especially as it relates to speech and language. Prereq.: 322. 3 Cr. F.

531. Voice Disorders. Types and causes of voice disorders, principles underlying their diagnosis and treatment. 3 Cr. S.

532. Stuttering. An overview of the literature in the area of stuttering with emphasis on its nature and possible causes. A brief introduction to approaches for assessing and treating the disorder will be presented. 3 Cr. S.

534. Articulation Disorders. The nature, etiology, and treatment of functional articulation problems. Prereq.: 220. 3 Cr. W.

540. Communication Disorders of the Aged. A study of the communication problems of the elderly. General considerations in the management of older persons with speech, language, and hearing problems will be outlined and discussed. 3 Cr. SUM, DEMAND.

541. Hearing Disorders. Symptoms and pathology of hearing disorders, their medical, surgical and audiological management; amplification; educational and psychological management. 3 Cr. F.

545. Clinical Management of Hearing Impaired Children, 0-21. Identification and diagnostic procedures; audiological aspects, amplification aids, equipment; educational programs, procedures and materials; parent counseling and support services; social aspects; deaf culture; current issues and trends. 3 Cr. W.

556. The Speech-Language and Hearing Clinician in the Public School. Operating procedures of the speech-language pathologist in the schools; federal and state legislation; organizing and evaluating programs. Prereq.: 230. 3 Cr. W.

559. Introduction to Language. A survey of theories and methods of investigation of the various disciplines concerned with the study of language. 3 Cr. F.

560. Language Development. Speech and language acquisition in normal children. 3 Cr. W.

561. Language Appraisal and Intervention. Etiology, theory and supporting research, and approaches to diagnosis and treatment of language impairments. 3 Cr. S.

566. Augmentative Communication Systems. To acquaint students in speech-language pathology and related fields with the various non-vocal communication techniques that have been developed for persons who do not use oral speech as their primary means of communication. Emphasis will be placed on determining the most appropriate augmentative

communication system for a particular client and teaching him/her how to use it effectively. 3 Cr. W.

568. Introduction to Children's Language. Language development from birth through adolescence emphasizing content and process. Recognition of language differences and deficits and suggestions for teaching language skills to pre-school and elementary school children. Not open to CDIS majors. 3 Cr. F.

584. Communication Disorders and the Classroom Teacher. Characteristics, causes and management principles of speech and hearing problems in children. Emphasis on management by classroom teachers. Not open to majors in communication disorders. 3 Cr. SUM, DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

620. Research in Speech-Language Pathology and Audiology. Evaluation of methods and results of original research; experimental design; statistical procedures. 3 Cr. W.

634. Cleft Palate. The communication problems of the individual with a cleft palate; embryology, etiology, anatomy, physiology of clefts, surgical, prosthodontic, orthodontic, speech therapy and audiological interventions. 3 Cr. F.

635. Aphasia. Speech and language problems related to stroke and other forms of brain trauma. Comparison of current tests for aphasia and approaches to therapy for the aphasic patient. Prereq.: 426-526. 3 Cr. W.

636. Diagnostics in Speech-Language Pathology. Evaluation and use of formal and informal diagnostic materials, with an emphasis on interpretation of tests results. Includes participation in diagnostic evaluations and preparation of clinical reports. 3 Cr. F.

637. Motor Speech Disorders. Study of diagnosis and therapy for problems of conceptual motor planning (dyspraxia) and motor performance (dysarthria). Prereq.: 426/526. 3 Cr. S.

638. Alaryngeal Speech. Study of theoretical and clinical issues in restoration of communication in the laryngectomized patient. 3 Cr. S.

642. Advanced Audiology. Review of audiograms and procedures. Recent developments in testing of pre-school children and babies; especially brain stem, site of lesion testing, hearing aids. 3 Cr. S.

648. Graduate Practicum: University Clinic. Application of theory and research to the treatment of clients with communication disorders. Must be repeated to min. of 6 Cr. 3 Cr. F, W, S.

650. Graduate Practicum: Internship. Further development of clinical skills through supervised interaction with selected student or patient populations in schools, hospitals or rehabilitation centers. Prereq.: two quarters of 648. 9 Cr. F, W, S, SUM.

652. Organization and Administration of Speech-Language Pathology Programs. Study and discussion of the organizational, administrative, economic, legal, ethical and social-service factors relevant to the delivery of speech-language pathology services in a variety of employment settings. 2 Cr. DEMAND.

670. Seminar: Voice Disorders. Study of current practices in the identification and management of voice disorders. 3 Cr. F.

671. Seminar: Phonological Disorders. Theoretical bases, evaluative procedures, and treatment strategies for phonological approaches to disorders of articulation. 3 Cr. S.

676. Seminar: Fluency Disorders. Discussion and evaluation of contemporary approaches to the management of fluency disorders in children and adults with emphasis on stuttering. 3 Cr. W.

677. Seminar: Professional Issues and Ethics in Speech-Language Pathology. Expanding knowledge of professional ethics through a case study approach; presentation and discussion of current professional issues of concern to speech-language pathologists and audiologists. 2 Cr. W.

678. Seminar: Language Disorders in Children. An in-depth study of issues related to the assessment and remediation of language problems exhibited by pre-school and school-aged children. Prereq.: consent of instructor. 3 Cr. S.

699. Thesis. 3-9 Cr. F, W, S.

Computer Science (CSCI)

139 ENGINEERING AND COMPUTING CENTER/255-4966

Chairperson: Annette Schoenberger

Graduate Faculty: Grover, Guster, R. Johnson, Julstrom, Mowe, Saeed, A.Schoenberger

COMPUTER SCIENCE (CSCI)

COURSE DESCRIPTIONS

512. Computer Graphics. Graphical data processing, introduction to psychophysical photometry and display parameters, picture models and data structures, display software. Prereq.: 395. 3 Cr. DEMAND.

520. Software Engineering I. Introduction to the history and goals of software development, software specification and specification languages, requirements and requirement languages. FSA specification

techniques. Prereq.: 392, 396. Coreq.: 530. 3 Cr. F.

521. Software Engineering II. Software engineering design tools, testing, verification and validation in the design of software and throughout the software life cycle. Prereq.: 520. Coreq.: 531. 3 Cr. W.

522. Software Engineering III. Quality assurance and control, software evolution. Performance emphasis on metrics and models. Prereq.: 521. Coreq.: 532. 3 Cr. S.

530, 531, 532. Software Engineering Project. A three-quarter sequence taken concurrently with CSCI 520, 521, 522. 2 Cr. per quarter. 530-F, 531-W, 532-S.

569. Introduction to the Theory of Computation. Finite state machines, algorithms, infinite machines, turing machines. Prereq.: 380, 392. 3 Cr. DEMAND.

573. Analysis of Algorithms. Computing time functions, maximum, minimum, and average computing time of various algorithms. Prereq.: 469; STAT 443. 3 Cr. DEMAND.

575. Advanced Topics in Computer Science. An in-depth study of one or more issues in contemporary computer science not covered in other computer science courses. Prereq.: Consent of instructor. May be repeated for up to max. of 6 Cr. 1-6 Cr. DEMAND.

578. Artificial Intelligence and Heuristic Programming. Heuristic versus deterministic methods, game playing programs, theorem proving programs, decision-making programs. Prereq.: consent of instructor. 3 Cr. DEMAND.

579. Theory and Design of Expert Systems. Introduction to the concepts and applications of expert systems. Knowledge acquisition and knowledge representation in a broad spectrum of expert systems. Design process of expert systems and the evolution of generations of expert systems. Programming in LISP. Prereq.: 578. 3 Cr. DEMAND.

582. Programming Languages Methods. High level object-oriented programming language concepts used in educational settings. Prereq.: Permission of instructor. 3 Cr. W.

585. Topics in Mini/Micro Computers. Microprogramming use of minis as simulators of microprocessors, cross-assemblers, data base management using minis, telecommunications and networks. Prereq.: 484. 3 Cr. DEMAND.

587. Mathematical Theory of Computer Language. Formal grammars, structure of formal languages, algorithms for top-down, bottom-up, left-right, other parsing techniques. Prereq.: 390, 469. 3 Cr. W.

589. Compiler Construction. One-pass compilation techniques, storage allocation, procedure and blocking, data types and transfer functions, languages designed for writing compilers. Prereq.: 487. 3 Cr. S.

597. Computer Networks. Computer network architecture. The OSI 7-layer reference model and communication protocols. Network services. Projects for current applications. Prereq.: 375, 395. 3 Cr. DEMAND.

598. Distributed Computer Systems. Distributed system architecture. Data communication. Distributed operating systems. Security mechanisms and distributed resource management. Projects for current applications. Prereq.: 597. 3 Cr. DEMAND.

MICROCOMPUTER SCIENCE (MCS) COURSE DESCRIPTIONS

550. Data/Voice Network Performance Analysis. Quantitative evaluation of data/voice networks; pinpointing bottlenecks and corrective strategies. Prereq.: 426, STAT 229 or admittance to statistics major or minor. 3 Cr. DEMAND.

551. Data/Voice Network Design. Students will develop their own design document specifying a hypothetical voice/data network through the use of

simulation and case studies. Prereq.: 550 or consent of instructor. 3 Cr. DEMAND.

571. Programming the Microcomputer. Microcomputer operations, system commands and introductory BASIC programming. 2 Cr. DEMAND.

572. Advanced BASIC Programming on the Microcomputer. Subscripted variables, functions, subroutines, formatting, data files, graphics. Prereq.: 571 or equivalent and instructor's approval. 2-4 Cr. DEMAND.

574. Pascal on the Microcomputer. Pascal language on microcomputer with structured program development. Prereq.: knowledge of a high level computer language such as BASIC and instructor's approval. 4 Cr. DEMAND.

COMPUTER SCIENCE (CSCI) COURSES FOR GRADUATE STUDENTS ONLY

610. Operating Systems and Computer Architecture. Study of computer architecture and factors influencing hardware and software design. Methods of accessing programs and data, synchronization of concurrent activities, protection, and reliability. Prereq.: Knowledge of programming and computer systems at undergraduate level. 3 Cr. DEMAND.

615. Large Computer Architecture. Study of large computer systems including pipelined machines and array processing. Prereq.: Knowledge of programming and computer systems at undergraduate level. 3 Cr. DEMAND.

620. Automata Theory I. Further study and analysis of finite and infinite machines in computer science. Prereq.: 469. 3 Cr. DEMAND.

621. Automata Theory II. Continued study and analysis of finite and infinite machines in computer science. Prereq.: 620. 3 Cr. DEMAND.

630. Modeling and Simulation I. A study of the construction of models which simulate real systems. Prereq.: MATH 443, 537. 3 Cr. DEMAND.

631. Modeling and Simulation II. Advanced study of models which simulate real systems. Prereq.: 630. 3 Cr. DEMAND.

678. Artificial Intelligence: Machine Vision and Manipulators. Human and machine vision. Image processing algorithms and architectures. Describing and programming robot manipulators. Integrating sensory information into manipulator control. Prereq.: 478. 3 Cr. DEMAND.

679. Artificial Intelligence: Symbolic and Natural Language Processing. Symbolic computation. Adaptive systems. Processing natural language. Representing meaning. The role of prior knowledge in natural language processing. Prereq.: 478. 3 Cr. DEMAND.

690. Research in Computer Science. Supervised graduate research on advanced computer science topics. Research analysis and reporting. 3 Cr. DEMAND.

699. Thesis. Prereq.: graduate standing in computer science and consent of the student's committee. 3-9 Cr. F, W, S, SUM.

Criminal Justice (CJS)

257 STEWART HALL/255-4101

Chairperson and Director of Graduate Program:

Robert Prout

Graduate Faculty: Becker, Kittel, Lawrence, Lesar, Merrick, Merritt, Murphy, Overy, Preble, Prout, Redding, Schreiber, Williamson

MASTER OF SCIENCE—

Criminal Justice

Before applicants can be admitted to the graduate program in criminal justice, they must meet the admission procedures for Graduate School at St. Cloud State University. This currently includes a 2.75 grade point average over their entire undergraduate program or over the last two years of undergraduate education (six full quarters or equivalent) OR having achieved an acceptable score on the Graduate Record Examination (as specified by the SCSU Graduate School).

Applicants who do not meet the standard admission requirements may be permitted to demonstrate their scholarship and qualify for acceptance by completing a limited program of graduate course work. Further information pertaining to this alternative may be obtained from the graduate dean and the director of the criminal justice graduate program.

1. The Master of Science degree in Criminal Justice is designed to serve the needs of several types of students:

- a. Persons with no prior criminal justice employment experience or with no undergraduate degree in the field of criminal justice who wish to prepare for careers in law enforcement, corrections, administration of justice, or an allied area.
- b. Persons who currently are employed full or part-time in criminal justice careers at the local, county, state, or federal level.
- c. Persons with career experience in the criminal justice system who have secured leaves of absence and/or wish to acquire new competencies before returning to their careers.
- d. Persons who have an interest in increasing their general knowledge and understanding of criminal justice, criminal justice research methods and resources, and microcomputing as tools for professional advancement.
- e. Persons pursuing related graduate degrees who wish to complement their primary area of specialization with selected graduate course work in criminal justice.
- f. Persons seeking scholarly preparation to teach or do research themselves in criminal justice programs, perhaps moving directly from the masters to doctoral study.
- g. Persons without a related undergraduate degree in criminal justice who wish to prepare to teach, consult, or do research in the field of criminal justice.

2. The curriculum is course-centered and traditional. Central to the Master of Science degree in criminal justice are the research courses and core courses required for all students. The specialization courses provide a solid base of knowledge in a specific sub-system of criminal justice, and enhance each student's opportunity to develop unique competencies.

Each student will have the option of choosing one of three specializations. The courses within the criminal justice administration and criminal justice counseling tracks are specified. Within the elective track, direct student involvement in course selection will be considered.

Criminal justice master's degrees may be completed with a thesis (Plan A), three starred papers (Plan B) or a professional portfolio of projects and papers (Plan C). Each plan requires a preliminary conference and a final oral examination. Each plan also requires successful completion of a comprehensive written examination over all course work in the research and core areas. The Comprehensive Written Examination must be completed after all course work and prior to the preliminary conference.

Plan A: Thesis

Students pursuing the Plan A option are required to complete a minimum of 20 credits in research courses, 4 credits in CJS 589, and a minimum of 24 credits in specialization courses for a minimum total of 48 credits. A master's thesis and final oral defense of the thesis are requirements for degree completion.

Plan B: Starred Papers

Students pursuing the Plan B option are required to complete a minimum of 11 credits in research courses, 4 credits in CJS 589, and a minimum of 36 credits in their specialization, for a minimum total of 51 credits. The final product prepared by the student is three starred topical papers on problems within the criminal justice system. Preliminary and final oral examinations over the starred paper topics are required.

Plan C: Professional Portfolio

Students pursuing the Plan C option are required to complete a minimum of 11 credits in research courses, 4 credits in CJS 589, 16 credits in application and implementations courses, and a minimum of 24 credits in their specialization, for a minimum total of 55 credits. The final product prepared by the student is a professional portfolio. Preliminary and final oral examinations over the professional portfolio are required.

Plan A (Thesis), 48 Cr.; Plan B (Starred Papers), 51 Cr.; Plan C (Professional Portfolio), 55 Cr.

One-half of the minimum requirements for entire program must be completed in 600 level courses.

I. Research: Min., Plan A, 20 Cr.; Plan B and C, 11 Cr.

Required: Plans A, B, and C

CJS 677 Framing and Analyzing Research Problems, 4 Cr.

APSY 678 Introduction to Graduate Statistics, 3 Cr.

CJS 679 Research in Criminal Justice, 4 Cr.

Required: Plan A only

CJS 699 Thesis, 9 Cr.

II. Core: Min., Plan A, B, or C, 4 Cr.

Required: Plan A, B, or C

CJS 589 Seminar in Criminal Justice, 4 Cr.

III. Applications and Implementations: Plan C only, 16 Cr.

CJS 644 Practicum, 16 Cr. in the criminal justice setting. Director of graduate program approval required.

IV. Specialization: Min., Plan A, 24 Cr.; Plan B, 36 Cr.; Plan C, 24 Cr. Director of the graduate program approval required before registering for courses.

Track 1: Criminal Justice Administration

CJS 511 Organization and Administration in Criminal Justice, 4 Cr.

CJS 515 The Correctional Community, 4 Cr.

CJS 520 Critical Issues in Law Enforcement, 4 Cr.

CJS 530 Criminal Law, 4 Cr.

CJS 531 Criminal Procedure, 4 Cr.

CJS 533 Ethical Studies in Criminal Justice, 4 Cr.

CJS 540 Law of Corrections, 4 Cr.

CJS 541 Probation and Parole, 4 Cr.

CJS 545 Crisis Intervention, 4 Cr.

CJS 546 Child Abuse and the Criminal Justice System, 4 Cr.

CJS 555 Private Security and the Criminal Justice Community, 4 Cr.

CJS 561 Juvenile Justice Processes, 4 Cr.

CJS 589 Seminar in Criminal Justice, 4 Cr.

CJS 600 Special Problems, 1-4 Cr.

CJS 601 History of Criminal Justice, 4 Cr.

CJS 644 Practicum, 4-16 Cr.

CJS 650 Readings, 1-4 Cr.

CJS 661 Juvenile Justice and Schools, 3 Cr.

CJS 681 Current Problems and Issues in Criminal Justice. May be repeated to a max of 8 Cr.

PHIL 584 Philosophy of Law and Punishment, 4 Cr.

POL 582 Public Personnel Administration, 4 Cr.

POL 583 Managing Local Governments, 4 Cr.

POL 584 Public Budgeting, 4 Cr.

POL 585 Administrative Law, 4 Cr.

Track 2: Criminal Justice Counseling

Required:

APSY 647 Introduction to Community Counseling, 3 Cr.

APSY 651 Counseling Theories, 3 Cr.

APSY 666 Small Group Process, 3 Cr.

APSY 668 Counseling Procedures, 3 Cr.

APSY 671 Introduction to Marriage and Family Counseling, 3 Cr.

Select remaining credits from:

CJS 511 Organization and Administration in Criminal Justice, 4 Cr.

CJS 515 The Correctional Community, 4 Cr.

CJS 520 Critical Issues in Law Enforcement, 4 Cr.

CJS 530 Criminal Law, 4 Cr.

CJS 531 Criminal Procedure, 4 Cr.

CJS 533 Ethical Studies in Criminal Justice, 4 Cr.

CJS 540 Law of Corrections, 4 Cr.

CJS 541 Probation and Parole, 4 Cr.

CJS 545 Crisis Intervention, 4 Cr.

CJS 546 Child Abuse and the Criminal Justice System, 4 Cr.

CJS 561 Juvenile Justice Processes, 4 Cr.

CJS 589 Seminar in Criminal Justice, 4 Cr.

CJS 600 Special Problems, 1-4 Cr.

CJS 601 History of Criminal Justice, 4 Cr.

CJS 644 Practicum, 4-16 Cr. (Plan B only)

CJS 650 Readings, 1-4 Cr.

CJS 661 Juvenile Justice and Schools, 3 Cr.

CJS 681 Current Problems and Issues in Criminal Justice. May be repeated to a max. of 8 Cr.

PHIL 584 Philosophy of Law and Punishment, 4 Cr.

Track 3: Elective

Course selection for the Track 3 specialization is based upon the needs of the student with adviser approval.

NOTE: CJS 511, 515, 520, 530, 531, 533, 540, 541, 545, 546, 555, or 561 and PHIL 584 may not be utilized in the student's program if the concomitant 400-level course was completed as an undergraduate student at SCSU.

COURSE DESCRIPTIONS**511. Organization and Administration in Criminal Justice.** An overview of the principles of organization and administration in criminal justice. Emphasis is placed on current theories of organization as they relate to the needs of the criminal justice process. 4 Cr. S, W.**515. The Correctional Community.** Critical examination of historical development, theories and institutions of punishment and social control. Analysis of contemporary issues: (1) the social systems of prisoners and guards; (2) institutional administration and legal issues in management; policy and strategies of intervention; (3) decision-making in sentencing and parole; and (4) treatment and custodial philosophies and programs. Emphasis will be on a systematic evaluation of research literature. 4 Cr. F, W, S.**520. Critical Issues in Law Enforcement.** An overview of the broad spectrum of critical issues facing contemporary law enforcement officials in a free society. Areas relating to ethnic tension, civil disobedience, police conduct, unionization, civil disturbances, and professionalism within law enforcement are discussed. 4 Cr. F, W, S.**521. Peace Officers Standards and Training, Parts 1, 4, 6, 7.** Study of principles of law enforcement, career influences, stress/crisis intervention, crime prevention, community relations, court testimony, and law enforcement communications, and cultural awareness. 2 Cr. W.**522. Police Officers Standards and Training, Parts 2, 3, 5.** Study of Minnesota Statutes relating to Minnesota Criminal Code, of Minnesota law enforcement

procedures relating to search, arrest, confessions, identification, and evidence, and of Minnesota Statutes relating to juvenile justice. 2 Cr. W.

530. Criminal Law. Principles of criminal liability, defenses to criminal prosecution, elements of major crimes. 4 Cr. F, W, S.

531. Criminal Procedure. Development of the law of criminal procedure from arrest through post-trial proceedings. 4 Cr. W.

533. Ethical Studies in Criminal Justice. Development of ethical decisions relating to criminal justice issues. 4 Cr. F, W, S.

540. Law of Corrections. Study of laws regulating sentencing, authority of correctional agencies, prisoners' rights and remedies and community supervision. 4 Cr. DEMAND.

541. Probation and Parole. Examines probation and parole as institutions; by method of historical and functional analysis, examines dispositions, decision-making processes and occupations, pre-sentence investigations and evaluations. 4 Cr. DEMAND.

545. Crisis Intervention. Offers a survey perspective of the history, theory and methods of crisis intervention, especially as used in the criminal justice system, e.g., victims of crime, suicide, domestic violence. 4 Cr. DEMAND.

546. Child Abuse and the Criminal Justice System. A survey of the response to physical and sexual child abuse by the criminal justice system, including the law, law enforcement, prosecution, courts and corrections. 4 Cr. DEMAND.

555. Private Security and the Criminal Justice Community. The powers and authority of private security personnel. Stresses requirements and restrictions on private security. Includes criminal and civil liabilities faced by private security personnel. 4 Cr. DEMAND.

561. Juvenile Justice Processes. A tracing of the development of independent justice for youth; the current conflicts within the system; its weaknesses and strengths, as well as trends and direction of movement. Primary emphasis will be on Minnesota procedure. 4 Cr. DEMAND.

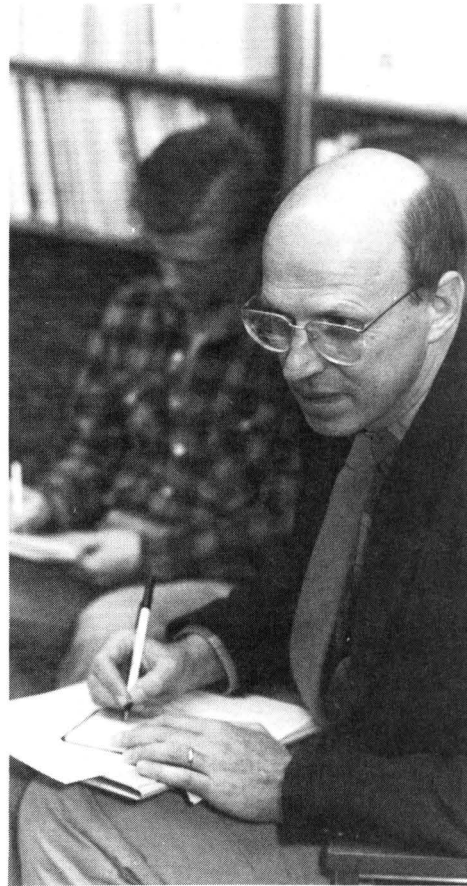
589. Seminar in Criminal Justice. Devoted to an exploration and analysis of special issues in the fields of corrections, law enforcement, and the general areas of the administration of justice: includes detailed examinations on vital issues and emerging trends which promise to affect the future. May be repeated to max. of 8 Cr. 4 Cr. F, W, S.

COURSES FOR GRADUATE STUDENTS ONLY

601. History of Criminal Justice. The historical development of America's criminal justice system from early English precedents to the late 20th century. 4 Cr. W, SUM.

644. Practicum. A supervised practicum in a criminal justice agency in which the student is not employed. Prior approval by director of criminal justice graduate program required. 4-16 Cr. DEMAND.

650. Readings. Directed study of specific topic in criminal justice. May be repeated with different topic to max. of 8 Cr. 1-4 Cr. DEMAND.



661. Juvenile Justice and Schools. The extent and nature of juvenile delinquency; relationship of school performance, behavior problems and delinquency; juvenile statutes, case law, and judicial decisions affecting school administration; correctional and educational policies and programs for delinquency prevention. 3 Cr. DEMAND.

677. Framing and Analyzing Research Problems. Introduces the fundamentals of computer on-line database searching; and the elements of a research problem formulation and analysis, including operational definition, scope, geographic and time limitations, the research model, research design, questionnaire data collection, outcome measures and analysis plan. 4 Cr. DEMAND.

679. Research in Criminal Justice. Fundamentals of research methodology, including research design, methods of inquiry, application and interpretation of data analyses, and their relationship to criminal justice policies and programs. Prereq.: APSY 678. 4 Cr. DEMAND.

681. Current Problems and Issues in Criminal Justice. Focus on a problem area or issue in the criminal justice system as explored through directed readings in the research literature. May be repeated to max. of 8 Cr. 2-4 Cr. W, S.

699. Thesis. 9 Cr. F, W, S, SUM.

Earth Sciences (ESCI)

41 MATHEMATICS AND SCIENCE CENTER/255-3260

Chairperson: Ivan Watkins

Graduate Faculty: G. Anderson, Nastrom, C. Nelson, Shurr, Soroka, Watkins, Weisman

The department does not currently offer a major program. Service courses for other graduate programs are offered in both the daytime and evening schedules.

COURSE DESCRIPTIONS

507. Minnesota Rocks and Waters. Geologic history, mineral resources and regional geology of Minnesota. Prereq.: 284 or consent of instructor. 4 Cr. S, SUM.

520. Seminar. Lectures, readings, discussion on selected topics. 1-4 Cr. May be repeated to max. of 9 Cr. F, W, S.

528. Glacial Geologic Processes. A survey of the mechanics of glaciers, the sediments and landforms they produce, followed by a discussion of the glacial geology of the upper midwest and Minnesota. Prereq.: 284. 3 Cr. W.

539. Stratigraphy and Earth History. Techniques of studying the stratigraphy of sedimentary rocks including correlation and mapping. Interpretations of ancient tectonic movements and sedimentary environments from these data. Prereq.: 285. 4 Cr. S.

536. Methods and Materials for Teaching Earth Science. Modern techniques and curricula for teaching secondary school earth science. 4 Cr. F, W.

577. Earth Sciences Institute. Selected topics in earth sciences for experienced teachers. 3-6 Cr. DEMAND.

Economics (ECON)

386 STEWART HALL/255-2227

Chairperson: Michael White

Graduate Faculty: Banaian, Bodvarsson, Edwards, Gallagher, Gleisner, Hampton, Hendricks, Kang, Larkin, Lofgreen, Luksetich, MacDonald, Masih, Moghaddam, Nold, White

A graduate program in economics is available, Master of Science: Social Science (economics). See degree requirements under Social Science, page 103.

MASTER OF SCIENCE—Social Science (Economic Education)

This program is designed for K-12 teachers and supervisors who desire to improve their basic understanding of economics in order to effectively initiate, implement, and evaluate systematic programs in economic education in elementary and secondary schools. The program is designed to provide a basic background for those who have had little or no formal training in economic education. Each specific program will be developed by the appropriate advisers taking into account the individual's background and teaching/supervisory objectives.

This program is designed for both full-time and part-time students. Completion of the program will require attendance in either daytime or summer classes.

Plan B, Min., 48 Cr.

I. Research: Min., 3 Cr.

- ED 614 Interpretation of Research, 3 Cr.
- or
- ED 615 Introduction to Research, 3 Cr.

II. Major: Min., 24 Cr.

A. Required:

ECON 610 Economic Education, 4 Cr.

ECON 631 Seminar in Economic Education, 3 Cr.

For Secondary School Personnel, in addition to above:

SST 640 Recent Trends in Teaching Social Studies in Secondary School, 3 Cr.

B. Elective Courses in Economics, Min., 12 Cr.
Courses selected must be approved by major adviser.

C. General Electives, Max., 7 Cr.

Any two graduate level courses from the following: IND 601, and/or any graduate offering from the following departments (with prior consent of major adviser): GEOG, ESCI, HIST, AMST, SST, CDIS, POL, SOC, ANTH.

III. Professional Education: Min., 18 Cr.

A. Elementary School Level Personnel Prescribed:

EDAD 696 Elementary School Supervision, 3 Cr.

ED 649 Practicum in Curriculum Construction and Development, 3 Cr.

B. Secondary School Level Personnel Prescribed:
ED 654 Improvement of Secondary School Instruction, 3 Cr.
ED 649 Practicum in Curriculum Construction and Development, 3 Cr.

C. All Programs

Prescribed:

EDAD 601 Research and Theory in Educational Administration, 3 Cr.

Electives in Professional Education: Min., 9 Cr.
The courses to complete this requirement are to be approved by appropriate professional education adviser. The combination of required and elective courses must include at least one course

in foundations of education, one course in curriculum development, and one course in instructional methodology.

IV. General Electives: Min., 3 Cr.

(All programs other than secondary major, consent of adviser.)

COURSE DESCRIPTIONS

505. Intermediate Macroeconomics. Study of flow of expenditures and income and their impact upon national income and price levels, with appropriate consideration of possible stabilization controls. Prereq.: 205, 206. 4 Cr. F, W, S, SUM.

506. Intermediate Microeconomics. Nature and scope of economic processes in free enterprise system; determination of prices, output and factor services in different market structures. Prereq.: 205, 206. 4 Cr. F, W, S, SUM.

520. Economics of Nonprofit Organizations. Economic theories of nonprofit and public organizations, their importance in the economy and the structure and performance of not-for-profit firms and public agencies. Prereq.: 205 and 206. 4 Cr. W, ALT.

532. Market Structure and Performance. A theoretical and empirical study of the relationship of market structure and firm behavior to market performance. Prereq.: 205 and 206. 4 Cr. W.

551. Resource and Environmental Economics. Analysis of problems of natural resource allocations, including air and water quality control. Economic efficiency, externalities, and long-run implications. Prereq.: 205, 206, or consent of instructor. 4 Cr. W.

552. Law and Economics. An economic analysis of the effects of law on market and non-market behavior which emphasizes the theory of externalities. The role of constitutions in establishing property rights is discussed, as well as the economic analysis of tort law. Prereq.: 205 and 206. 4 Cr. S, ALT.

559. Economic Analysis. The equivalent of Economics I and II. The economic process, national income analysis, money and the banking system, theory of income distribution, pricing systems, resource allocation. Primarily for M.B.A. students. 4 Cr. F, W, S, SUM.

560. Public Finance. The role of government in the economy with emphasis upon analysis of public revenues and expenditures, tax structure, intergovernmental fiscal relations, fiscal policy and public debt measurement. 4 Cr. F, W, S, SUM.

561. Public Economics: State and Local. The economics of state and local government. Public projects, tax and revenue structures, and intergovernmental relations. Some emphasis on Minnesota. Prereq.: 205, 206, or consent of instructor. 4 Cr. W.

565. Urban and Regional Economics. Analysis of regions, including the city as a regional center. Emphasis on regional development, location theory, central Place theory, financing. Some emphasis on Central Minnesota. Prereq.: 205, 206. 4 Cr. F, S.

570. Business Cycles and Forecasting. Factors causing fluctuations in business activity and national income; proposed methods of stabilization; business forecasting techniques. Prereq.: 205, 206. 4 Cr. F, W, S, SUM.

571. Money and Banking. A study of the monetary and banking system of the United States; bank credit, the banking system, Federal Reserve System, cen-

tral bank policy, and relationship between bank credit, money and price levels. Prereq.: 205, 206. 4 Cr. F, W, S, SUM.

572. Regulation and Antitrust. A course in the economic theory and practice of government regulation and control of business activity in the United States. Prereq.: 205, 206. 4 Cr. S.

573. Labor Economics. Labor as a factor of production; growth of collective bargaining and labor legislation, with their attendant effects upon society. Prereq.: 205, 206. 4 Cr. W.

574. International Economics. International economic relationships; commercial and financial policies; tariffs, exchange controls, international monetary standards, and international settlements. Prereq.: 205, 206. 4 Cr. F, W, S, SUM.

578. History or Economic Thought. Development of economic thought and analysis from Adam Smith to present. Prereq.: 205, 206. 4 Cr. W.

579. Human Resource Economics. An examination of the factors which influence the quantity and quality of labor and of the economic aspects of government policy toward labor as an individual entity. Prereq.: 205, 206. 4 Cr. DEMAND.

580. Seminar in Area Economic Studies. (Topical.) An examination of the economy and the current economic problems of selected regions, areas, or countries of the world. Prereq.: departmental approval. May be repeated with different topic to a max. of 9 Cr. 1-4 Cr. DEMAND.

581. Seminar. Selected topics in economic theory. Prereq.: departmental approval. May be repeated with different topic to a max. of 9 Cr. 1-4 Cr. F, W, S.

583. Contemporary Economic Problems. (Topical.) Consideration and possible solutions of problems arising from growth and development of modern institutions under the free enterprise system. Prereq.: departmental approval. May be repeated with different topic to max. of 9 Cr. 1-4 Cr. DEMAND.

585. Introduction to Econometrics. Economic model development and statistical testing procedures with emphasis on applied economic analysis. Major topics: economic model specification, properties of estimation procedures, statistical inference and economic analysis. Prereq.: 205, 206, STAT 229 or BCIS 240, MATH 441 or BCIS 241 or equivalent. 4 Cr. F.

ECONOMICS (ECON) COURSES FOR GRADUATE STUDENTS ONLY

601. Readings in Economics. (Topical.) Guided study of individual investigation of special economic problems and/or theoretical topics. Credits and meetings by arrangement. May be repeated with different topic to max. of 9 Cr. 1-4 Cr. DEMAND.

602. Readings in Economic Education. (Topical.) Guided study of individual investigation of the literature in the field and/or its applications. Credits and meetings by arrangement. May be repeated with different topic to max. of 9 Cr. 1-4 Cr. DEMAND.

605. Macroeconomic Theory. The determination of aggregate output, employment and prices with emphasis on the analysis of national and policy issues and their impacts on economic activity. Prereq.: 405, 406, or equivalent. 4 Cr. W.



606. Microeconomic Theory. Theory of behavior of individuals and firms with emphasis on optimization and markets. Prereq.: 405, 406, or equivalent. 4 Cr. F.

610. Economic Education. Examination of economic concepts found in the public school curricula, the economic theories necessary to understand these concepts, and development of models for examination of public policy issues. 4 Cr. DEMAND.

615. Econometrics. Use of economic theory and the techniques of statistical inference to specify, estimate and interpret economic models, with emphasis on applied economic analysis. Major topics: model specification, least squares and maximum likelihood estimates of single and simultaneous equations economic models, forecasting and simulation. Prereq.: 485. 4 Cr. W.

630. Seminar. Research and seminar presentation on selected economic topics. Prereq.: consent of department. May be repeated to max. of 9 Cr. 1-4 Cr. DEMAND.

631. Seminar in Economic Education. Research and seminar presentation of topics in economic education. Prereq.: consent of department. May be repeated. 3 Cr. DEMAND.

632. Research Methodology. Scientific methods in economic research; decision theory and decision-making tools; values in economics; problem identification and selection; hypothesis testing, assumptions, model selection. Prereq.: 405, 406 or equivalent. 4 Cr. DEMAND.

644. Internship. A supervised internship in a business, government, or nonprofit organization. Requires prior approval. 12 Cr. DEMAND.

645. Economic Problems of Underdeveloped Countries. A study of the social and economic development, and of the leading issues in economic growth theory. Selected cases of underdeveloped countries will be examined in detail. 4 Cr. DEMAND.

677. Managerial Economics. Economic analysis as an aid in management and control. 4 Cr. W, S.

679. Comparative Economics. An analysis of the functioning of different economic systems. Comparison of the principles of operation using theoretical systems as a framework for comparison of the social and economic objectives. 4 Cr. DEMAND.

699. Thesis. 4-8 Cr. DEMAND.

PUBLIC AND NONPROFIT INSTITUTION (PNI) COURSES FOR GRADUATE STUDENTS ONLY

601. Readings in Public and Nonprofit. Guided study of individual investigation of special problems and/or theoretical topics in public and/or nonprofit institutions. Prereq.: Admission to graduate program. May be repeated with different topic to a max. of 8 Cr. 1-4 Cr. DEMAND.

620. Seminar: Evaluating Nonprofit Performance. Research and seminar presentations assessing the organizational performance in terms of specific performance objectives of not-for-profit institutions. Prereq.: Core. 4 Cr. DEMAND.

630. Seminar in Public and Nonprofit Institutions. Advanced research and seminar presentation on selected topics dealing with theoretical issues and the management and evaluation of public and nonprofit institutions. Prereq.: Core. 4 Cr. DEMAND.

644. Internship. A supervised internship in a government agency or a private nonprofit institution. Requires prior approval. 12 Cr. DEMAND.

680. Seminar: Public Policy Analysis. Methods are presented for evaluating public policy before and after its implementation. Criteria for choosing alternative policies are discussed. Prereq.: Admission to graduate program. 4 Cr. DEMAND.

699. Thesis. 8 Cr. DEMAND.

Educational Administration and Leadership (EDAD)

A131 EDUCATION BUILDING/255-2160

Director: Charles Moore

Graduate Faculty: Krepel, Leach, McLaughlin, Moore

The Center for Educational Administration and Leadership (CEAL) develops leaders for Minnesota's schools – teachers, principals, superintendents, central office personnel, and board members – who are committed to providing the finest learning opportunities for PK-12 students. Courses offered by the CEAL focus upon developing the skills and personal traits necessary for successful school administration. In addition, field based learning experience are an integral, crucial aspect of the CEAL program.

Programs offered by the CEAL have been approved by the Minnesota Department of Education for meeting the professional preparation requirements for licensure for administrative positions in the following areas: elementary principal, secondary school principal, school district superintendent, and school business manager. CEAL also offers a program of studies in community education. In addition, the CEAL participates in the development of special studies programs which lead to graduate degrees in other areas of educational administration.

At the time of publication of the 1993-1995 St. Cloud State University Graduate Bulletin, the program offered by the Center for Educational Administration and Leadership are undergoing significant revision. The changes are designed to reflect the opportunities and challenges of the evolving field of educational administration. For information on programs of study offered through CEAL, or for information on CEAL courses, please contact the Center's Director at the number listed above.

COURSE DESCRIPTIONS

502. Overview of Community Education. Broad general background in area of community education. *Historical beginnings; current status; program and process elements including governance, finance, staffing considerations.* Special emphasis on its relation to recreation. 3 Cr. DEMAND.

598. Seminar in School Administration (Topical). Problems in organization and administration of schools. Areas of study determined by needs. Open only to experienced teachers and administrators. May be repeated to max. of 9 Cr. 1-4 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

602. School Business Management I. Organization and work of the school business office; budgeting; accounting, reporting, and auditing; central office records. 3 Cr. DEMAND.

603. School Business Management II. Supply and equipment administration; plant maintenance and operation; food services; pupil transportation; sup-

port personnel administration; health and safety program for school facilities; and risk management. Prereq.: 602. 3 Cr. DEMAND.

604. School Finance. Problems of school finance; local, state and federal sources of school income; and the relationship of school finance to the effectiveness of the instructional program. 3 Cr. DEMAND.

605. Internship: Elementary School Administration. Onsite administrative internship of a minimum of 200 clock hours in an elementary school under the cooperative supervision of a licensed administrator and university supervisor. (Application must be made at least one quarter in advance.) Prereq.: 649. 6 Cr. DEMAND.

606. Internship: Secondary School Administration. Onsite administrative internship of a minimum of 200 clock hours in a secondary school under the cooperative supervision of a licensed administrator and university supervisor. (Application must be made at least one quarter in advance.) Prereq.: 676. 6 Cr. DEMAND.

607. Internship: Community Education. Onsite practical field experiences in cooperation with selected community agencies. Emphasis on interrelatedness and implementation of community education concepts and strategies. (Application must be made at least one quarter in advance.) Prereq.: 502. 6 Cr. DEMAND.

608. Community Relations for School Administrators. Developing understanding of communication structures in the community; processes and procedures for working with various publics including parents, community agencies, special interest groups, media, business and industry; dissemination processes to the various publics. 3 Cr. DEMAND.

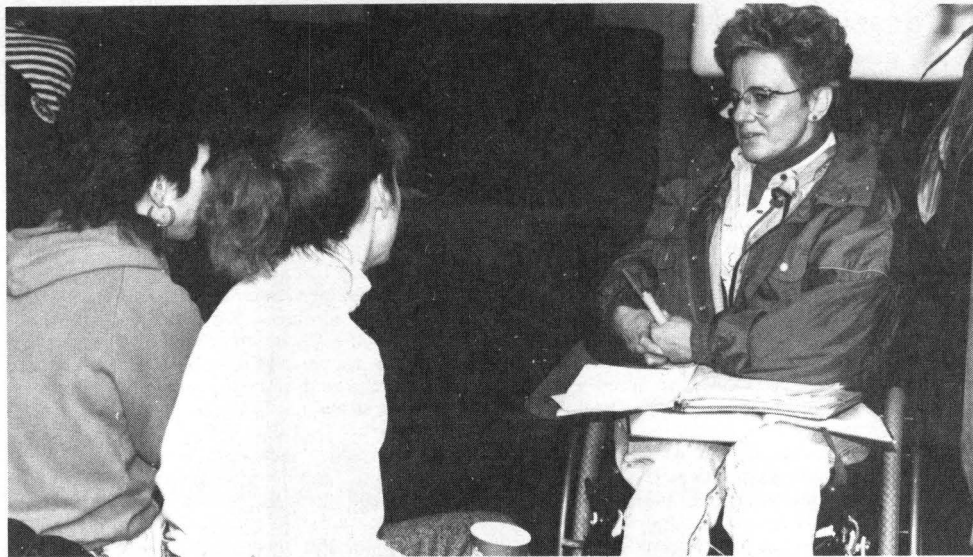
609. Middle School/Junior High School Administration. Problems peculiar to the administration and operation of a junior/middle school operation. 3 Cr. DEMAND.

610. Simulated Experiences in Educational Administration. Actual supervisory and administrative problem situations are dealt with through student participation in representations of the real problems. 3 Cr. DEMAND.

611. Internship: School Superintendency. On-site administrative internship of a minimum of 200 clock hours in a school district office under the cooperative supervision of a licensed superintendent and university supervisor. (Application must be made at least one quarter in advance.) For sixth year and specialist degree programs only. Prereq.: 611. 6 Cr. DEMAND.

612. Administrative Field Study Design and Analysis. Emphasis: types of field studies; topic selection; problem clarification; design and format; selection of statistical instruments; and computer data analysis. Prereq.: to 641. 3 Cr. DEMAND.

613. Internship: School Business Management. On-site administrative internship of a minimum of 100 clock hours in a school district business office



under the cooperative supervision of a designated school business officer and university supervisor. (Application must be made at least one quarter in advance.) Prereq.: 602, 603, and 604. 3 Cr. DEMAND.

615. Seminar: Introduction to Educational Administration. A student/staff seminar designed to orient the student to graduate study in educational administration. Focus on Self-evaluation Assessment. (Must be taken in the first 9 Cr. of master's level work in ed. ad.) 1 Cr. DEMAND.

618. Administration of the Community School. Emphasis: conceptual, human and technical skills; budgeting; statutes; roles and role relationships; coordination with community agencies and resources. 3 Cr. DEMAND.

619. School Superintendency. The role of the superintendent in providing leadership for the school board, staff, and community in the maintenance and improvement of the program of education. Major emphasis on superintendent and school board relations including the politics of educational policy making. 3 Cr. DEMAND.

620. Applied Research and Theory in Educational Administration. Experiences gained in this course should enable the graduate student to review, appraise, and apply research and theory to various aspects or problems in educational administration. 3 Cr. DEMAND.

621. Organizational theory in Educational Administration. Organizational structure and process in schools and school systems; communication, change, conflict management. 3 Cr. DEMAND.

640. School Plant Planning and Management. Plant planning and financing, bond elections, operation and maintenance of school buildings. 3 Cr. DEMAND.

641. Surveys and Field Studies. (For the Specialist degree only.) The theory, techniques, procedures, and results of school surveys and field studies. Written field study report required. Prereq.: 612.

Arranged. Registration required in the next quarter after completing 612. 6 Cr. DEMAND.

642. Starred Papers. Research projects in educational administration. 3 Cr. DEMAND.

649. Elementary School Principalship. Staff responsibilities; inter-staff relationships; elementary school program; pupil accounting; school facilities. 3 Cr. DEMAND.

650. School Law. Statutes and judicial decisions affecting public education. Legal authority, powers, and liabilities of school personnel with respect to school finance, curriculum, property, contracts, pensions, tenure, etc. 3 Cr. DEMAND.

674. Educational Administration: Overview. Current trends in theory and practice of school administration in the U.S.; behavioral foundations of administrative relationships, roles of local, state, and federal agencies and boards. (Must be taken in the first 12 hours of the program in ed. ad.) 3 Cr. DEMAND.

676. Secondary School Principalship. For students preparing for administration of secondary schools. Principles and practices in organization and administration of secondary schools. 3 Cr. DEMAND.

677. Personnel Administration in Education. Theories and principles; personnel policies and procedures; selection, appointment, and orientation; salary policies, evaluation, and professional welfare. 3 Cr. DEMAND.

696. School Supervision. Organization, purposes, and procedures of K-12 supervision including conceptual models of supervision; administrator's functions in diagnosis and improvement of instruction. 3 Cr. DEMAND.

697. Current Problems and Issues in School Administration. Content: a different administrative problem or issue each time offered. Students may register three times, each time for a different topic. 1-3 Cr. Max. of 6 Cr. DEMAND.

699. Thesis. 6 Cr. DEMAND.

Electrical Engineering (EE)

211 ENGINEERING AND COMPUTER CENTER/255-3252

Chairperson: Michael Heneghan

Graduate Faculty: B. Ellis, Higgins, Lekhukul, Narayana, Rankin, Zheng

COURSE DESCRIPTIONS

511. Control Systems. Mathematical preliminaries, mathematical modeling of systems, Linear Time Invariant systems, transfer functions, time domain analysis, root locus, frequency domain analysis and design. Prereq.: 301, 312; MATH 334. 3 Cr. F.

512. Digital Control Systems. Introduction, sampling of continuous-time systems, models of discrete-time systems, analysis and design of discrete-time systems, state-space approach to design, implementation. Prereq.: 511. 3 Cr. W.

521. Communications I. Analog communications systems, amplitude and frequency modulation, spectral analysis. Prereq.: 301; ENGR 338; STAT 443. 3 Cr. F.

522. Communication Systems II. Random processes, noise in continuous wave modulation, pulse digital modulation, baseband data transmission, band-pass data transmission. Prereq.: 521. 3 Cr. S.

551. Computer Architecture and Design. Organization at the register level of a traditional single processor computer. Hardware description language, computer interconnection structures, mainframe memory organization, introduction to advanced architectures. Design projects and a project paper. Prereq.: 353. 4 Cr. F, S.

555. Knowledge-Based Systems in Engineering. Introduction to the concepts and applications of Artificial Intelligence. Representation of knowledge, problem solving, programming in LISP and PROLOG. Design and construction of an Expert System. Lab and design project. Prereq.: CSCI 274, 283. 3 Cr. S.

COURSES FOR GRADUATE STUDENTS ONLY

611. Linear Systems Theory. Mathematical description of systems. Linear models - transfer function and state-space; stability theory of linear systems, control methods based on state-space models; linear time varying systems. Prereq.: 412. 3 Cr. F.

612. Optimal Control Systems. Introduction to optimization, classical optimization theory for dynamic systems, Linear Quadratic Regulator theory, additional topics on linear quadratic regulators. Prereq.: 611. 3 Cr. W.

613. Stochastic Control Theory. Introduction to Stochastic Control, stochastic state models, analysis of systems into random input, linear optimal stochastic control problem, prediction and filtering theory. Prereq.: 612. 3 Cr. S.

621. Random Signals and Noise. Probability, Random Processes, Autocorrelation and special functions. Response of linear systems to random inputs. Optimal linear filter design. Nonlinear estimator. Hypothesis testing. Bayes criterion. Detecting signals in noise. Prereq.: 422. 3 Cr. F.

622. Digital Signal Processing. Discrete time signals and systems. Application of the Z-transform to

discrete time systems. Discrete Fourier transform, linear convolution, and FFT algorithms. Design techniques for IIR and FIR digital filters. Discrete Hilbert transforms. Power spectrum estimation techniques. Selected applications of digital signal processing techniques in speech, sonar, radar, data processing and image processing. Prereq.: 422. 3 Cr. W.

623. Advanced Digital Communications. Integrated Services Digital Networks, speech-coding algorithms, Correlative coding, Echo cancellation, digital speech interpolation systems, adaptive equalization, digital modem technique. Interfacing analysis and performance. Digital TV-processing techniques. Mobile- radio and satellite communications. Prereq.: 622. 3 Cr. S.

651. Advanced Computer Architecture and Design. Advanced topics in computer system architecture: realtime computing systems, computer networks, parallel processors, multiprocessors, and methods for modeling and evaluation. Prereq.: 451/551. 3 Cr. F.

652. Parallel Architecture. Introduction and justification for parallel processing, choice of CPU, network topologies, designing a communications network, tight and loose coupling, language and operating systems. Prereq.: 651. 3 Cr. W.

655. Engineering Applications of Artificial Intelligence. Computer hardware for artificial intelligence, robotics and intelligent machines, real-time intelligent control, expert system interfacing, natural language interfacing. Prereq.: 651. 3 Cr. DEMAND.

661. Design of Integrated Circuits. Analysis, design, layout, and fabrication of integrated circuits. Physics and chemistry of processing. Comparisons of current technologies, including TTL, 1 2 L, MOS, and CMOS. Yields, manual and automatic testing. Economic considerations. Prereq.: 313, 353. 3 Cr. F.

662. VLSI Design. Computer-aided design of monolithic circuits at transistor, gate, circuit, register, and subsystem level. Strategies for routing and cell placement. NMOS, CMOS, bipolar. Design rules, error correlations, validation, testability, fault tolerance and yield control. Prereq.: 661. 3 Cr. W.

663. Design of CAD Tools. A study of the techniques used in designing an engineering software tool including choice of platform, specification of the tool, designing for portability, programming, and standards for interfacing. The course will include case studies of several packages. Design project. Prereq.: 662. 3 Cr. S.

680. Seminar in Electrical Engineering. Seminar in current topics in electrical engineering. Prereq.: Graduate standing and consent of the instructor. May be repeated to max. of 3 Cr. 1-3 Cr. DEMAND.

690. Research in Electrical Engineering. Prereq.: Graduate standing in Electrical Engineering and consent of the student's committee. May be repeated to max. of 9 Cr. 1-3 Cr. F, W, S, SUM.

699. Thesis. Prereq.: Graduate standing in Electrical Engineering and consent of the student's committee. May be repeated to max. of 9 Cr. 3-9 Cr. F, W, S, SUM.

English (ENGL)

106 RIVERVIEW BUILDING/255-3061

Chairperson: Richard Dillman

Graduate Faculty: Abartis, J. B. Anderson, Crow, Dillman, A. E. Falk, Gordon, Gorrell, Hibbard, Inkster, Jackson, Kalaidjian, P. Keith, Kilborn, Klepetar, J. Lundquist, Meissner, J. Parham, S. Parham, Perry, J. Robinson, Roney, Ross, Sebberson, Summers, Young

This program is designed for both full-time and part-time students. Full-time students must expect to complete much of their course load in evening classes. Graduate courses are also offered in summer school, but a student cannot be assured of completing degree requirements solely with summer school work.

MASTER OF ARTS

The M.A. degree in English is an appropriate degree for those planning a program leading to the Ph.D. degree, for community college or secondary teaching, and for general cultural enrichment.

For unconditional admittance to the M.A. degree, the applicant must have completed at the undergraduate level not less than 36 quarter hours of credit in English, exclusive of general education courses, and must meet the admission standards as required by the Graduate Studies Office.

A minimum of 15 credits must be earned in courses limited to graduate students.

Graduate students interested in future doctoral study should develop competence in an appropriate foreign language.

Plan A, 48 Cr. (Thesis)

I. Credits in English: Min., 38 Cr.

A. Prescribed:

ENGL 616 Research in English (or equivalent course), 4 Cr.

ENGL 699 Thesis, 6 Cr.

OR

ENGL 698 Creative Work, 6 Cr.

One 600-level course in English literature, 4 Cr.

One 600-level course in American literature, 4 Cr.

B. Electives: Min. of 20 Cr. must be elected in ENGL. No more than 4 Cr. can be taken in ENGL 655.

II. Cognate courses: Max. of 10 Cr. may be earned in approved cognate courses.

Plan B, 50 Cr. (Non-thesis)

I. Credits in English: Min., 40 Cr.

A. Prescribed:

ENGL 616 Research in English (or equivalent course), 4 Cr.

One 600-level course in English literature, 4 Cr.

One 600-level course in American literature, 4 Cr.

TWO starred papers written in conjunction with approved courses. One of these starred papers must be written in conjunction with

ENGL 616. Obtain department specifications for starred papers from the graduate director in English.

B. Electives: Min. of 28 graduate Cr. must be elected in ENGL. No more than 4 Cr. can be taken in ENGL 655.

II. Cognate Courses: Max. of 10 Cr. may be earned in approved cognate courses.

III. A student completing the Plan B program must pass a final oral examination on the starred papers submitted to the student's final evaluation committee.

MASTER OF SCIENCE

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution, must have completed at the undergraduate level a minimum of 36 quarter credits in English, exclusive of general education courses, and must meet the admission standards as required by the Graduate Studies Office.

At least one-half of the Master of Science degree program must be earned in courses in which enrollment is limited to graduate students.

Plan A, 46 Cr.; Plan B, 49 Cr.

I. Research: Plan A, 10 Cr.; Plan B, 4 Cr.

ENGL 616 Research in English (or equivalent course), 4 Cr.

ENGL 699 Thesis, 6 Cr. (Plan A only)

OR

ENGL 698 Creative Work, 6 Cr. (Plan A only)

II. Major: Min., Plan A, 20 Cr.; Plan B, 24 Cr.

One 600-level course in English literature, 4 Cr.

One 600-level course in American literature, 4 Cr.

Other credits to be selected with English department adviser. No more than 4 Cr. in ENGL 655.

III. Professional Education: Min., Plan A or B, 9 Cr.

IV. Electives: Plan A, 7 Cr.; Plan B, 12 Cr.

Credits to be selected with the English department adviser from related fields, Introduction to Graduate Statistics, Interpretation of Research, or additional courses in the major.

V. Prior to graduation, students in Plan B must pass a comprehensive examination given by the English Department.

Plan C, 54 Cr.

I. Research: Min., 4 Cr.

ENGL 616 Research in English (or equivalent course), 4 Cr.

II. Major: 24 Cr.

One 600-level course in English literature, 4 Cr.

One 600-level course in American literature, 4 Cr.

Selected course work in English to total 24 credits, and not to include more than one course by independent study. No more than 4 Cr. in ENGL 655.

III. Educational Foundations: 6 Cr.

Students will select from the list developed by the College of Education.

IV. Educational Applications and Implementations: 15 Cr.

Selected work, with the English adviser's approval, from methods workshops, practicums, internships, school curriculum development, special projects related to the teaching assignment, and from ENGL 650 and other major courses and courses in related fields, as offered and as appropriate to the student's situation.

V. General Electives: Min., 6 Cr.

Selected work from the major or related fields, with the approval of the English adviser.

VI. Candidates are required to complete successfully a final examination, oral or written, covering the materials included in a professional portfolio to be developed as sanctioned by the adviser. The examination will be conducted by two members of the English Department and one member from outside the department.**PERMANENT WORKSHOP DESCRIPTIONS**

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to page 21 to determine the maximum number of workshop credits which may be applied to graduate degrees.

538. Mississippi River Creative Writing Workshop in Poetry and Fiction. Discussion of techniques and ideas in writing poetry and fiction, including student writing exercises and visits from published professional poets and fiction writers from the upper Midwest. Cannot be used as substitute for 332 or 334. 3 Cr. SUM.

COURSE DESCRIPTIONS

500. Special Problems in English. A seminar or conference course for advanced students

521. Literary Theory and Criticism. The concepts which apply to such problems as the writer's creative process, the various purposes of literary art, form, and technique, and the responses that literature elicits. 3 Cr. F, S.

525. Rhetoric of Writing. Rhetorical analysis of written language for students of composition and literature. Differences between speech and writing. Modes of written discourse, stylistics, and history of written composition. Prereq.: 163. 4 Cr. W.

526. Specialized Writing. Advanced study and practice of writing in selected professional areas. Variable content. Sample topics include technical and scientific writing, writing for educators, government report writing, and administrative writing. Prereq.: 339 or consent of instructor. May be repeated to max. of 8 Cr. 4 Cr. DEMAND.

527. Advanced Creative Writing: Poetry. Writing of poetry at the advanced level. Prereq.: 334 or permission of the instructor. 4 Cr. S.

528. Advanced Creative Writing: Fiction. Writing of fiction at the advanced level. Prereq.: 332 or permission of the instructor. 4 Cr. W.

529. Advanced Creative Writing: Playwriting. Writing of plays at the advanced level. Prereq.: 333 or permission of the instructor. 4 Cr. F.

530. Seminar in Poetry and Fiction Writing. Writing of poetry and fiction beyond the advanced level courses. Emphasis on individual writing, including projects, revision and development of a portfolio. Prereq.: 428-528 or 427-527, or permission of the instructor. 3 Cr. W.

531. Teaching ESL: Theory and Methods. Linguistics and language acquisition theory applied to teaching English as a Second Language. Knowledge of foreign language recommended. Prereq.: 232 or permission of instructor. 4 Cr. DEMAND.

532. Topics in Teaching ESL. Variable topics in teaching English as a Second Language and second language acquisition, stressing the integration of theory, method, and practice. Sample topics: materials development, methods for specific skill areas, language assessment, and program development. Prereq.: 431-531 or permission of instructor. May be repeated with consent of instructor and adviser to max. of 8 Cr. 4 Cr. DEMAND.

533. Computers and Language. Introduction to computer applications in language data analysis and processing; presentation of the fundamentals of SNOBOL. Prereq.: 232 or MATH 169 or consent of instructor. 4 Cr. DEMAND.

534. English Grammars. The application of modern linguistics to the description of English grammar, including an introduction to the theories and methods of structural and generative-transformational grammars. Prereq.: 232 or equivalent. 4 Cr. DEMAND.

535. History of the English Language. The development of English sounds, grammatical structures, and vocabulary from Old English to Modern English; the reading and analysis of selected texts. Prereq.: 232 or equivalent. 4 Cr. DEMAND.

536. American English. Contemporary spoken American English, social and regional dialects, and their relationship to the written language. Prereq.: 232 or equivalent. 3 Cr. DEMAND.

539. Topics in Linguistics. One or more topics of current importance in linguistics. Prereq.: 232 or equivalent. May be repeated to max. of 8 Cr. with consent of instructor and adviser. 4 Cr. DEMAND.

541. Milton. "Comus," "Paradise Lost," "Paradise Regained," "Samson Agonistes," "Areopagitica," and the minor poetry. 4 Cr. S.

543. Shakespeare II. The texts, background and criticism of Shakespeare. 4 Cr. DEMAND.

545. The Nineteenth-Century English Novel. Austen, Scott, Mary Shelley, Dickens, Thackeray, Meredith, Butler, Eliot, Hardy, and others. 4 Cr. DEMAND.

546. The American Novel. The development of the American novel. 4 Cr. DEMAND.

547. Seminar in Literary Themes. Selected recurrent themes in literature, such as literature of the American Revolution, the hero from Finn to Frodo, images of success in fiction, and the gothic. Variable content. May be repeated to maximum of 8 Cr. 4 Cr. DEMAND.

548. Seminar in Literary Forms. The forms of literature, such as satire, autobiography, and new fic-

tion. Variable content. May be repeated to maximum of 8 Cr. 4 Cr. DEMAND.

550. Science Fiction. A study of science fiction as a literary genre: its history, development, relationship to other genres, criticism, concepts, and types. Emphasis on twentieth-century science fiction. 4 Cr. DEMAND.

551. Women in Literature. Images of women and their life experiences as revealed in literature. Emphasis on portrayals by women writers of conflicts between role definition by society and women's struggle for self-realization. 4 Cr. F.

553. Literature of Dying and Death. Literary treatments of the problems faced by the dying person and his/her associates. Biographies, poetry, and fiction which provide insight into the nature and meaning of death. 4 Cr. DEMAND.

555. Canadian Literature. The study of Canadian literature with emphasis on twentieth-century authors such as Margaret Atwood, Robertson Davies, Margaret Laurence, Farley Mowat, Alice Munro, Mordecai Richler, Sinclair Ross, and Gabrielle Roy. 4 Cr. DEMAND.

558. Topics in Teaching Composition. Topics of concern to teachers of English: new theories of composition, computer-assisted instruction, grammar review, sentence combining, and writing evaluation and diagnosis. May be repeated to max. of 6 Cr. 3 Cr. DEMAND.

559. Seminar in Teaching Language. Variable content stressing methods, theories, and problems in teaching language in both secondary school and college. Sample topics: problems in teaching traditional grammar; teaching linguistic concepts, linguistics and reading. May be repeated to a maximum of 8 Cr. 4 Cr. DEMAND.

560. Seminar in Teaching Literature. Variable content stressing theories, methods, and problems in teaching literature in junior and senior high schools. Sample topics: adolescent literature; problems in literary comprehension; teaching fiction, poetry or drama. May be repeated to a maximum of 8 Cr. 4 Cr. DEMAND.

564. Autobiography and Biography. Study of autobiography and/or biography as literary genres with attention to narrative techniques, form, style, and thematic interpretations of life experience. Topic focus may vary including women's autobiographies, American autobiographies, biography, or writing autobiography/biography. 4 Cr. DEMAND.

567. Recent Best Sellers. Reading and discussion of various types of contemporary books that are worthwhile and interesting. Variable content. May be repeated to a max. of 9 Cr. 4 Cr. DEMAND.

569. Literature and American Minorities. A study of contributions of American minorities: Black Americans, American Indians, Asian Americans, and Mexican Americans, to American Literature through themes, content, and forms. Content and focus to vary. 4 Cr. DEMAND.

585. The Eighteenth-Century English Novel. Defoe, Richardson, Fielding, Smollett, Sterne, and related authors. 4 Cr. DEMAND.

587. Topics in the Drama. A study of various forms, themes, or periods in dramatic literature, such as "Tragedy" or "Political Drama." May be

repeated once with different topics. 4 Cr. W.

590. European Writers of the Twentieth Century. 4 Cr. DEMAND.

591. Contemporary Poetry. Will focus upon major poets and poetry movements since World War II. Emphasis will be on poetry written in English, but may include influential poets in translation. 4 Cr. DEMAND.

594. American Writers of the Twentieth Century. 4 Cr. DEMAND.

597. British Writers of the Twentieth Century. Study of selected important writers of the period, chosen on the basis of theme or genre. Emphasis will vary. 4 Cr. S.

COURSES FOR GRADUATE STUDENTS ONLY

616. Research in English. Bibliography, methods, and tools for research in literature, language and writing. 4 Cr. F.

620. Academic and Professional Writing. Advanced study and practice of academic and professional discourse. The rhetoric appropriate to graduate level papers, theses, journal articles, and conference papers; revision, including audience adaptation; and the differences between written and spoken presentations. Prereq.: 616 or consent of instructor. May be repeated to max. of 8 Cr. 4 Cr. DEMAND.

622. History of Literary Theory and Criticism. Major texts from ancient times to the present. Designed to provide the student with a background of critical history. 4 Cr. DEMAND.

625. Classical Theories of Rhetoric. A study of the development of classical rhetoric and present applications of its theories. 4 Cr. DEMAND.

626. Eighteenth to Twentieth Century Theories of Rhetoric. A study of the development of Post-Renaissance rhetorical theory and present applications. 4 Cr. DEMAND.

629. Topics in Rhetoric. An in-depth exploration of a significant area of research in contemporary rhetoric. 4 Cr. DEMAND.

639. Seminar in TESL and Language Acquisition Research. Variable topics stressing critical review of research in TESL and language acquisition. Sample topics: first and second language acquisition; language assessment; error analysis; discourse analysis; TESL methods and materials. May be repeated with consent of instructor and graduate adviser. 4 Cr. DEMAND.

643. Shakespeare Studies. The text and sources, theories, and history of representative comedies, tragedies, and histories. 4 Cr. DEMAND.

650. Topics in Teaching English. A seminar in selected topics in teaching English. Sample topics would include teaching writing, studies in literacy, the English curriculum, current research in teaching English, teaching literature to adolescents. Variable content. May be repeated once for credit. 4 Cr. DEMAND.

655. Supervised Teaching. Ongoing training in teaching college composition. Limited to teaching assistants and required every quarter they teach, to a maximum of 6 Cr. S/U grading. 1 Cr. F, W, S.



656. The Teaching of College Composition. A survey of significant approaches to the teaching of writing in college; analysis of pedagogical materials and methods in composition. Required for all Teaching Assistants in English. 4 Cr. F.

657. Internship in the Teaching of College English (Literature). Individual instruction in the theory and techniques of effective college classroom teaching of literature, and practical experience in solving the problems of actual classroom instruction under the direct supervision of an experienced teacher. Research project on the teaching of college English required. Admission by consent of the chairperson. 2 Cr. DEMAND.

658. Writing Center Practicum. Practicum in the theory, pedagogy, and methods of a writing center. 4 Cr. W.

659. Professional Writing. Department-approved and directed field experience with an approved agency. Field experience will comprise work in a professional environment requiring the writing, editing, and analytical skills of an advanced English student. Final paper is required. By permission of director of graduate studies and chairperson. May be repeated to a max. of 8 Cr. 2-8 Cr. DEMAND.

664. Seminar in American Literature through the Civil War. Study of one or more important authors such as Franklin, Poe, Thoreau, Hawthorne, and Whitman. 4 Cr. DEMAND.

665. Seminar in American Literature of the Later Nineteenth Century. The writings of one or more major literary figures such as Twain, James, Dickinson, Howells, and Crane. 4 Cr. DEMAND.

666. Seminar in American Literature of the Twentieth Century through World War II. The

writings of one or more major literary figures such as Frost, Hemingway, Faulkner, Eliot, and Steinbeck. 4 Cr. DEMAND.

667. Seminar in American Literature of the Twentieth Century since World War II. A study of significant authors from World War II to the present with a selection from such writers as Bellow, Baldwin, Lowell, O'Connor, and Welty. 4 Cr. DEMAND.

670. Topics in Early English Literature. Selected major works in English Literature from Beowulf to Malory. Varied content. 4 Cr. DEMAND.

675. Seminar in English Renaissance Literature. The literary works, background and criticism of the poetry, prose and drama of selected principal writers of the English Renaissance. 4 Cr. DEMAND.

684. Seminar in Restoration and Eighteenth-Century British Literature. Selected genres, authors, or themes in English literature from 1660-1789. 4 Cr. DEMAND.

687. Seminar in Nineteenth-Century British Literature. A selected aspect of nineteenth-century British literature. The content will vary. 4 Cr. DEMAND.

689. Seminar in Twentieth-Century British Literature. Selected aspects of twentieth-century British literature. The content will vary. 4 Cr. DEMAND.

696. Seminar in World Literature. Selected readings from the works of one or more major world figures. 4 Cr. DEMAND.

697. Contemporary Thought in Literature. A study of the philosophical and cultural content of selected contemporary writings. 4 Cr. DEMAND.

698. Creative Work. 1-6 Cr. F, W, S, SUM.

699. Thesis. 1-6 Cr. F, W, S, SUM.

Foreign Languages and Literature

228 BROWN HALL/255-4142

Chairperson: Roland Specht-Jarvis

Graduate Faculty: Carlson, Carter, Jarvis, Langen, Levilain, Roman-Morales, Saltz, Specht-Jarvis

This department currently does not offer a major program. Service courses for other graduate programs may be offered in either the daytime or evening schedules.

COURSE DESCRIPTIONS

Soviet Studies 510. Contemporary Policy Issues in Soviet Studies. Policy-oriented analysis of key issues facing the Soviet Union today. Emphasis on Soviet understanding of issues, policy options, approaches to implementation. Topics vary from year to year. Topics might include defense and security strategies, economic reform, international trade, social welfare, cultural politics, environment. 4 Cr. S.

French 511. Advanced Studies in French Literature. Seminar for intensive study of a particular movement, author, or work as announced in advance. To be taught in French. Prereq.: 9 credits of literature or consent of instructor. 1-4 Cr. May be repeated to max. of 12 Cr. DEMAND.

German 511. Advanced Studies in German Literature. Seminar for intensive study of a particular movement, author, or work as announced in advance. To be taught in German. Prereq.: 9 credits of literature or consent of instructor. 1-4 Cr. May be repeated to max. of 12 Cr. DEMAND.

French 514. Advanced Studies in French Literature in Translation. Seminar for intensive study of a particular movement, author, or work as an-

nounced in advance. Prereq.: 9 credits of literature or consent of instructor. 1-4 Cr. May be repeated to max. of 12 Cr. DEMAND.

French 554. Advanced Methodology in Teaching of Foreign Languages. Russian 554. Advanced Methodology in Teaching of Foreign Languages. A seminar dealing with problems of teaching foreign languages at the elementary or secondary level and with an examination of recent trends in methodology. Discussion of the course content in English and in the foreign languages. Offered according to need. 1-4 Cr. DEMAND.

French 560. Study Abroad. Prereq.: FREN 211, 212, and approval of program director. 3-6 Cr. DEMAND.

German 560. Study Abroad. Prereq.: GERM 311-313, and approval of program director. 3-6 Cr. DEMAND.

Spanish 560. Study Abroad. On-site study of selected aspects of language and/or culture of the host country; final report presented in Spanish. Prereq.: 311, 312 or approval of department program director. 3-6 Cr. DEMAND.

Spanish 594. Readings in Commercial Spanish. Oral and written practice of the Spanish of the business community. Emphasis on legal and commercial term. Prereq.: a good knowledge of Spanish-equivalent to at least 6 quarters. 8/9 quarters advisable. 3 Cr. S.

German 571. German Business. Introduction to German Business: 1) legal system, 2) business administration, 3) job market, 4) banking industry, 5) production vs. service industries, 6) housing. 1-4 Cr. DEMAND.

Geography (GEOG)

359 STEWART HALL/255-3160

Chairperson: C. W. Harper

Graduate Faculty: Addicott, Bixby, Coppock, Richason, Wixon

MASTER OF SCIENCE

Admission to the graduate program requires completion of at least an undergraduate minor in geography. In some cases, the applicants may be required to complete additional undergraduate work even though they may have completed a minor or major. Applicants must have completed a baccalaureate degree from an accredited college or university. Teaching applicants will complete the program described below. Applicants who do not have a background in teacher education should confer with the department chairperson.

At least one-half of the Master of Science degree program must be earned in courses in which enrollment is limited to graduate students.

This program is designed for both full-time and

part-time students. Full-time students must expect to complete part of their course load in evening classes.

Plan A, 45 Cr.; Plan B, 48 Cr.; Plan C, 54 Cr.

I. Research: Min., Plan A, 9-15 Cr.; Plan B or C, 3 Cr.

ED 614 Interpretation of Research, 3 Cr.
(Plan C only)

OR

ED 615 Introduction to Research, 3 Cr.
GEOG 699 Thesis, 6-9 Cr. (Plan A only)

II. Major: Min., Plan A, 18 Cr.; Plan B or C, 24 Cr.
Advanced study in subject matter, methods, materials, and curriculum.

III. Professional Education: Min., Plans A or B, 9 Cr.
Credits to be chosen with the approval of the professional education adviser.

IV. Electives: Min., Plan A, 3-6 Cr.; Plan B, 9 Cr.;
Plan C, 6 Cr.

V. Educational Foundations: Min., 6 Cr.
(Plan C only)

Students will select from a list developed by the College of Education and approved by the Graduate Council.

VI. Educational Applications and Implementations:
Min., 15 Cr. (Plan C only)

Workshops, practicums, internships, school curriculum development, special projects related to the teaching assignment. (Approval of major adviser.)

COURSE DESCRIPTIONS

502. Techniques of Geographic Information Systems. Introduction to the specific techniques used by geographic information systems in the study of various environmental and planning issues. Topical. Prereq.: 382 or approval of instructor. 4 Cr. S.

506. Thematic Cartography. Application of cartographic techniques to the mapping of various geographic data. Topical. Prereq.: 305 and/or consent of instructor. 4 Cr. W.

507. Production Cartography. The course introduces the use of the vertical process camera and the techniques of cartographic scribing. Prereq.: 305. 4 Cr. W, ALT.

508. Remote Sensing: Application and Interpretation. The study of the characteristics and qualities of nonconventional remote sensing imagery as it applies to the inventory and assessment of various environmental phenomena. Topical. Prereq.: 350 or approval of instructor. 4 Cr. S.

554. Regional Planning. Comparative regional planning. Utilization of case studies from various countries, stressing economic distribution and ideological differences. Topical. 4 Cr. F ALT.

555. Urban Site Development. Emphasis on the art of planning the arrangement of buildings and other structures on the land so as to be in harmony with each other and the environment. 4 Cr. S ALT.

557. Preservation and Neighborhood Change. A systematic view of neighborhood change. Attention is given to district and neighborhood historic preservation, investment analysis and racial issues. 4 Cr. F.

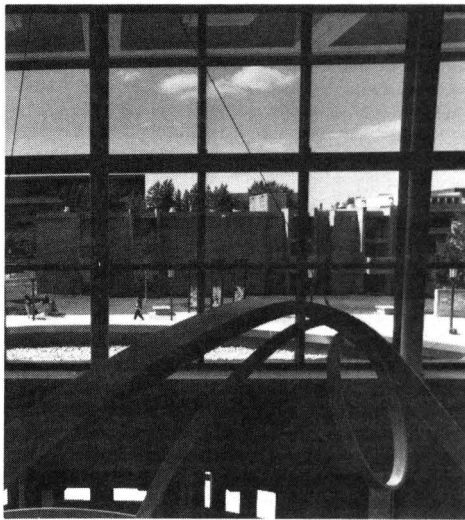
559. Outdoor Recreation Land Use. Case studies and field investigations of outdoor recreation land use and related activities. Topical. Prereq.: 279 or consent of instructor. 4 Cr. S.

562. Applications in Geographic Information Systems. Practical uses and applications of standard techniques employed in modern geographic information systems. Topical. Prereq.: 382, 402 or approval of instructor. 4 Cr. S.

572. Geomorphology. The configuration of the earth's surface and physical processes which have brought the surface to its present condition. Topical. 4 Cr. F.

575. Climatology and the World's Climates. Inspection and analysis of climatological data with respect to climatic types and their corresponding climatic controls. Emphasis is given to spatial distribution. Topical. 4 Cr. DEMAND.

580. Agricultural Geography. World area differences in crop, livestock, and technological patterns. Special emphasis on farming in the United States. Topical. 4 Cr. F ALT.



586. Political Geography. Geographic concepts applied to the analysis of political organization and behavior. Topical. 4 Cr. S, DEMAND.

590. Issues in Urban Geography. Selected contemporary issues in urban geography. Prereq.: 394 or permission of instructor. May be repeated to max. of 8 Cr. 4 Cr. DEMAND.

592. Water Resources. Development and management of water resources: problems of supply, distribution, quality, pollution, floods and variability; case-studies in selected regions, brief background in hydrological processes. Topical. 4 Cr. F ALT.

COURSES FOR GRADUATE STUDENTS ONLY

601. Research in Geography. A seminar or conference course for students wishing to investigate some phase of this subject. Credits and meetings by arrangement. 1-4 Cr. F.

602. Readings in Geography. A seminar or conference course for students wishing to investigate the geography of a particular region of the world. Credits and meetings by arrangements. 1-4 Cr. W.

630. Seminar. Research and seminar presentation on a selected geographic topic. Regional or topical. Prereq.: consent of instructor. Variable credit. 1-4 Cr. May be repeated to max. of 9 Cr. DEMAND.

644. Internship: Practical Geography. Requires consent of the department and is limited to graduate students only. 1-8 Cr. DEMAND.

650. Land Use Analysis: Examination of the Nature, Use, and Conservation of the Land. Stress is placed on land use planning techniques. Permission of instructor. Topical. 4 Cr. DEMAND.

654. Urban, Regional and Resource Planning. Urban and regional planning field; concepts, philosophies and theories of planning; review of case-studies selected to illustrate different frameworks of urban, regional and resource planning. Topical. 4 Cr. DEMAND.

699. Thesis. 3-9 Cr. F, W, S, SUM.

Gerontology (GERO)

365A STEWART HALL/255-3899 or 255-3013

Director: Linda Havir

Graduate Faculty: Bodelson, Havir, Litterst, McCue, J. Murphy, Preble, Ross, Sheehan, Stokes

MASTER OF SCIENCE— Gerontology

A Master of Science in gerontology prepares graduates to assume professional leadership roles in the delivery of services to older people and their support networks, in the planning of services, in administration of services, and in training and instruction of older people and service providers. Employment is available at local, state, and federal levels of government as well as with private and voluntary agencies and institutions.

Students take core courses in the biology, psychology and sociology of aging, as well as courses in social policy, services and research methods. Additional courses will be selected to assist the student in attaining specific professional skills and knowledge.

An internship assures that these skills can be utilized in agencies and institutional settings. All students are expected to complete an 8-credit internship as part of the master's program. Those students who have experience in service-delivery to the aging, must complete their internship in a different program or setting in order to diversify their educational backgrounds. Exceptions to this restriction may be approved by graduate adviser.

The Master of Science in gerontology requires 51 credits of course work. This includes 28 credits of required courses, 8 credits of internship and 15 credits of electives.

Prerequisites for Admission to the Master's Degree Program

Students applying for admission to the Master of Science in gerontology program must have a Bachelor's degree from an accredited college or university and an acceptable score on the Graduate Record Examination and/or acceptable undergraduate scholastic record. To be considered for acceptance, students are expected to have a minimum of 3 years of experience in service-delivery to the aged and earned Continuing Education Credits in the field from workshops and conferences, or to have completed 3 undergraduate gerontology courses. All students are expected to have completed at least a broad-based introductory course in gerontology. An approved statistics course is required of all students prior to enrolling in GERO 699, Thesis. Students are encouraged to enter graduate studies during the fall quarter.

At least one-half of the Master of Science degree program must be earned in courses in which enrollment is limited to graduate students.

Plan A Only, 51 Credits

I. Core Requirements, 16 Cr.

- GERO 620 Advanced Policy Issues in Gerontology, 4 Cr
- SOC 650 Sociology of Aging: Theory and Research, 4 Cr.
- PSY 647 Psychology of Aging: Theory and Research, 3 Cr.
- BIOL 512 Biology of Aging, 3 Cr.
- GERO 542 Professional Seminar, 2 Cr.

II. Research Requirements, 12 Cr.

- ED 615 Introduction to Research, 3 Cr. (or equivalent)
- APSY 678 Introduction to Graduate Statistics, 3 Cr. (or equivalent)
- GERO 699 Thesis, 6-9 Cr.

III. Internship Requirements, 8 Cr.

- GERO 644 Gerontology Internship, 8 Cr.

IV. Electives, 15 Cr.

- ANTH/GERO 520 Aging in Culture and Society, 3 Cr.
- APSY 523 Counseling Older Persons, 3 Cr.
- GERO 515 Women and Aging, 3 Cr.
- GERO 525 Dementia and Aging, 3 Cr.
- GERO 540 Seminar, 1-4 Cr.
- GERO 600 Special Problems, 1-4 Cr.
- HETS 512 Advanced Nutrition, 4 Cr.
- HURL 509 Ageism, 4 Cr.
- MGMF 579 Social Insurance, 4 Cr.
- PSY 543 Psychology of Adulthood, 3 Cr.
- SOC 573 Sociology of the Elderly Family, 3 Cr.
- SOC 575 Sociology of Health and Illness, 4 Cr.

Other suitable electives may be selected in conjunction with the adviser. For students with an undergraduate specialization in gerontology, appropriate substitutions may be made in consultation with the adviser.

COURSE DESCRIPTIONS

511. Aging Policy and Programs. An examination of the federal, state and local framework of services and programs for the aging. Prereq.: GERO core requirements or consent of instructor. 3 Cr. F.

515. Women and Aging. An exploration of the position of older women in society and the particular problems of and issues for women as they age. Prereq.: GERO core requirements or consent of instructor. 3 Cr. DEMAND.

520. Aging in Culture and Society. Focus on the aging process in cross-cultural perspective, including consideration of the effects of ethnicity on the aging experience in the U.S. Application of the methods and theory of anthropology to aging will be stressed. 3 Cr. DEMAND.

525. Dementia and Aging. Study of the nature, causes, and symptoms of dementia. Conditions resulting in dementia, including Alzheimer's Disease, will be stressed. 3 Cr. DEMAND.

540. Seminar. Analysis of issues or topics of concern in the field of aging. A specific topic will be selected each time the course is offered. Prereq.: completion of core requirements or consent of instructor. May be repeated to a max. of 9 Cr. 1-4 Cr. DEMAND.

542. Professional Seminar. Regular meetings to discuss internships and issues relevant to preparing for a career in the aging field. 2 Cr. DEMAND.

543. Field Experience in Gerontology. Introductory field placement including observation of and orientation to a field site. Taken concurrently with 542, Field Experience Seminar. 2 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

620. Advanced Policy Issues in Gerontology. An in-depth exploration of key concepts and major issues in the field of aging. Students will formulate their position on each major issue, based on lectures, readings, and discussions. 4 Cr. F.

644. Gerontology Internship. Supervised field experience in an agency, program or institution working with older adults. Arranged by contract between site supervisor, faculty supervisor and student. Taken concurrently with 542, Field Experience Seminar. 4-16 Cr. DEMAND.

Health Education and Traffic Safety (HETS)

259-2 HALENBECK HALL/255-2135

A124 EDUCATION BUILDING/255-4251

Chairperson: John Palmer

Graduate Faculty: Dobey, Hortis, Osendorf, Palmer, Risk

MASTER OF SCIENCE— Health Education

Admission to the graduate program in health education requires completion of an undergraduate minor or equivalent of at least 36 quarter hours in health. In some cases, the applicant may be required to complete additional undergraduate work even though a major or minor may have been completed. Applicants must have completed a baccalaureate degree from an accredited college or university. Teaching applicants will complete the program described below. Applicants who do not have a background in teacher education should confer with the department chairperson.

Under Plan B, candidates are required to write a starred paper in conjunction with a graduate health education course of their own choosing. The paper shall be a detailed study and shall follow the style manual available through the graduate studies office. Further, in addition to the final written comprehensive examination, the candidate will be required to take a final oral examination on this project.

At least one-half of the Master of Science degree program in health education must be earned in courses in which enrollment is limited to graduate students.

This program is designed for both full-time and part-time students. Full-time students must expect to complete part of their course load in evening classes. The part-time student can complete the program through regular evening instruction or through summer quarter attendance.

Some offerings provide in-service courses to practicing professionals and service courses for other graduate programs.

Plan A, 45 Cr.; Plan B, 48 Cr.

I. Research: Min., Plan A, 9 Cr.; Plan B, 3 Cr.

Prescribed:

HETS 601 Research Methods in Health Education, 3 Cr.

HETS 699 Thesis, 6-9 Cr. (Plan A only).

II. Major: Min., Plan A, 18 Cr.; Plan B, 24 Cr.

Selected course work in health education and related fields with consent of adviser.

III. Professional Education: Min., Plans A or B, 9 Cr. Consent of secondary education adviser.

IV. General Electives: Min., Plan A, 3-6 Cr.; Plan B, 9 Cr. Prescribed:

PSY 678 Introduction to Graduate Statistics, 3 Cr.

Electives from related fields or courses in the major. Consent of adviser.

Students who wish to qualify for licensure as a supervisor, consultant, director, or coordinator of school health programs under Minnesota EDU 325 will have to meet the following minimum requirements: A major in health education at the Master's degree level. A minimum of 15 quarter hours of graduate credit in administration and supervision from the following courses or comparable approved courses in administration and supervision:

HETS 625 Supervision of School Health Programs, 3 Cr.

EDAD 601 Research and Theory in School Administration, 3 Cr.

EDAD 674 Educational Administration, 3 Cr.

EDAD 677 Personnel Administration, 3 Cr.

EDAD 696 Elementary School Supervision, 3 Cr.

A minimum of 6 quarter hours of graduate credit from the following courses:

HETS 515 Health Education Curriculum Development, 4 Cr.

HETS 598 Elementary School Health Program, 3 Cr.

HETS 639 Practicum, 3 Cr.

The candidate must have the required teacher's license for health education and three years of successful professional experience in that discipline.

HEALTH EDUCATION AND TRAFFIC SAFETY (HETS) PERMANENT WORKSHOP DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to Academic Regulations, under the heading, "Workshop Limitation" to determine the maximum number of workshop credits which may be applied to graduate degrees.

551. Workshop: Emergency Driving Techniques for Inservice Driver Education Instructors. Designed to cover the organization and administration of program development. Classroom and laboratory instruction will be provided. Practical demonstrations and time for individual instruction will be provided. All phases of emergency driving instruction will be covered. 1 Cr. SUM.

554. Workshop: Instructor Preparation for AAA Driver Improvement Program. An introduction and analysis of risk perception and risk management, the decision making process, influencing factors on the decision making process, and how to conduct the AAA Driver Improvement Program effectively and efficiently. 3 Cr. F.

555. Workshop: Special Topics in Traffic Safety. Specific strategies for promoting quality driver education will be identified. Strengths and weaknesses of various strategies will be discussed. Participants will be given an opportunity to develop a specific action plan for promoting driver education in their geographic area of interest. May be repeated three times. 1-3 Cr. S, SUM.

560. Workshop: Program Sharing. A variety of programs providing educators and interested community members an opportunity to examine chemical abuse intervention and prevention programs. 1 Cr. F.

561. Workshop: Growing Healthy. A practical, participative experience in learning about growing healthy in the primary and intermediate grades. 2 Cr. SUM.

562. Primary Grades Health Curriculum Follow-up Workshop. On-site evaluation of Primary Grades Health Curriculum implementation. Also, a one-day reconvening session on campus. 1 Cr. SUM.

564. Implementing "Kids Teaching Kids" Program. An exploration of the role of an adviser in the "Kids Teaching Kids" elementary program. The influence of peers, development of healthy attitudes and the making of responsible decisions are included. Emphasis will be on the preparation of sixth grade peer leaders to teach. 1 Cr. W.

COURSE DESCRIPTIONS

504. Adult Children of Alcoholic and Other Dysfunctional Families. The issues and problems facing adults from dysfunctional family units will be studied with an emphasis on adult children of alcoholics. The adult children syndrome and unhealthy family of origin patterns are contrasted with healthy adult and family system functioning. Current trends in the assessment and treatment of adult children of alcoholics will be explored. Prereq.: HETS 125 or 215; PSY 115; or permission of instructor. 4 Cr. DEMAND

505. Mood Modifying Substances in Contempo-

rary Society. A study of mood modifiers including alcohol and nicotine. Suggested educational strategies K-12. Complies with requirements of MSA 126.05. Prereq.: 90 Cr. of prior course work 3 Cr. F, W, S, SUM.

511. Nutrition: Older Adult. Nutritional status and needs of the older adult. Common nutritional problems of the elderly. Overview of the programs designed to serve the health and nutrition needs of the older adult. Prereq.: 210 or permission of instructor. 4 Cr. W.

512. Advanced Nutrition. Current topics in nutrition; relationship of nutrition to physical performance; methods of nutritional assessment; and complex nutrient needs. Prereq.: 210 or permission of instructor. 4 Cr. S.

515. Health Education Curriculum Development. Organization and development of a school health curriculum, K-12; techniques for course of study construction. Lab. Prereq.: 210, 215, 301, 315, 481. 4 Cr. F, S, DEMAND.

523. Basic Electrocardiography. A study and measurement of the electrical activity associated with cardiac function. Prereq.: PE 349 or permission of instructor. 3 Cr. S.

530. Seminar: Topical. Selected health topics. May be repeated to max. of 16 Cr. 1-4 Cr. DEMAND.

556. Improving Driver Education Instruction. Designed to assist Driver Ed. instructors in their efforts to improve the driving performance of their students. Emphasis on Risk Management and instructional procedures that enable students to assess elements that indicate the probability that the level of risk could increase, adjust time, space, and visibility to manage the level of risk, reduce the consequences should a collision situation arise. 4 Cr. DEMAND.

580. Fleet Safety Supervision. A course designed to assist transportation fleet personnel with supervision, budgets, scheduling, accident investigation and regulations. 4 Cr. F, W.

581. Human Sexuality. Body growth and development, reproduction, and heredity. Role of the home, church, school and community in family life education, dating and courtship, marriage and family living. 4 Cr. F, W, SUM.

582. Environmental Health. Effects of environmental factors, processes, and activities on human health, comfort, welfare, and survival. Prereq.: 125 or 215 or instructor's consent. 3 Cr. DEMAND.

583. Highway Traffic Problems and Procedures. The identification of specific community and environment concerns related to traffic problems. Local problems will be identified and solutions attempted. 3 Cr. W, S.

590. Organization and Administration of Driver Education. Administrative and supervisory techniques related to scheduling, record keeping, research report writing, government regulation and budgeting. Prereq.: 390 or certification. 4 Cr. F, W, SUM.

598. Elementary School Health Program. Concepts of health, disease, safety, family life, nutrition, first aid, and consumer information for the elementary school. Complies with requirements of: MSA 126.02, Subd. 2 and 5, MCAR 3.050. Prereq.: 90 Cr. of prior course work 3 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

601. Research Methods in Health and Physical Education. Selection of research topics, methods, laboratory research, application of statistical procedures, formal writing, experimental design. 3 Cr. SUM.

620. Seminar in Physiology of Exercise. A discussion and evaluation of current research and conditioning trends in exercise physiology. Prereq.: PE 349 or 449. 3 Cr. SUM.

621. Laboratory Techniques in Exercise Physiology. The study of advanced exercise physiology laboratory techniques for students who plan to continue studies in the exercise physiology area. Prereq.: 449 or 620, Cardiopulmonary resuscitation certification. 4 Cr. DEMAND.

622. Exercise and Fitness Prescription. Application of the information obtained in Laboratory Techniques (621). Students will learn how to prescribe programs that will promote "wellness" and lead to healthier lifestyles. Prereq.: 449 and/or 620, and 621. 3 Cr. DEMAND.

624. Internship in Exercise Physiology and Cardiac Rehabilitation. Course is designed to give the student a Phase I and Phase II hospital or clinic car-

diac rehabilitation experience. Prereq.: PE 620, 621 and 622. 3-12 Cr. DEMAND.

625 Supervision of the School Health Program. History, legal requirements, budget, scheduling, coordination, public relations, and philosophy as each of these relates to the school health program. 3 Cr. DEMAND.

630. Seminar in School Health Education. Lectures, readings, research and discussion on selected topics. 1-4 Cr. May be repeated with different topics to max. of 9 Cr. DEMAND.

632. Survey of Recent Research in the Field of Health. Readings and discussion of recent studies and authentic reports in various areas of health interest. 3 Cr. DEMAND.

637. Practicum I. Supervised experience in an off-campus setting peculiar to the student's needs. Prereq.: consent of instructor. 1 Cr. DEMAND.

638. Practicum II. Supervised experience in an off-campus setting peculiar to the student's needs. Prereq.: consent of instructor. 1 Cr. DEMAND.

639. Practicum III. Supervised experience in an off-campus setting peculiar to the student's needs. Prereq.: consent of instructor. 3 Cr. DEMAND.

696. Internship. Supervised agency clinical experience. 1-16 Cr. DEMAND.

History (HIST)

283 STEWART HALL/255-3165

Chairperson: Edward Pluth
Graduate Faculty: Gambill, Hofsommer, Lewis, Massmann, Medler, Nayenga, Overy, D. Peterson, Pluth, Samarrai, Vaughter

Department policy statements on evaluation procedures, starred papers, and reading lists are available in the history office. Each student's progress is to be evaluated after the completion of 12 graduate credits. Students are to contact their adviser in the first enrollment period following completion of 12 graduate credits. Students are encouraged to obtain pertinent material no later than the first quarter of enrollment.

This program is designed for both full-time and part-time students. Full-time students must expect to complete part of their course load in evening classes.

MASTER OF ARTS— History Track

An applicant for admission to this program must have earned a minimum of 24 credits in history beyond general education requirements and the undergraduate grade point average should be 2.8 or above. Others may be admitted conditionally. In some cases, the applicant may be required to complete additional undergraduate work even though a major or minor may have been completed.

Reading knowledge of a foreign language is not required but it may be needed. Many graduate

schools offering doctorate programs in history prefer applicants who have completed a master's with a thesis.

Students pursuing a Master of Arts degree must earn a minimum of 15 GRADUATE ONLY credits in the program.

Plan A: Min., 45 Cr.

I. Courses in History: 36-39 Cr.

A. Prescribed:

HIST 699 Thesis, 9 Cr.

*HIST 578 Historical Criticism and Writing, 3 Cr.

*HIST 573 Historiography, 3 Cr.

B. Electives: 19-24 Cr. in History.

II. Cognate Courses: 6-9 Cr. in courses approved by adviser.

A student completing the Plan A program will be required to pass a final oral examination based on the thesis submitted to the Final Evaluation Committee.

Plan B: Min., 48 Cr.

I. Courses in History: 30-36 Cr.

A. Prescribed:

*HIST 578 Historical Criticism and Writing, 3 Cr.

*HIST 573 Historiography, 3 Cr.

Three starred papers written in conjunction with

*These courses may be waived if the student has fulfilled these requirements as part of an undergraduate program.

approved courses. B. Electives: 22-30 Cr. in History.

II. Cognate Courses: 12-18 Cr. in courses approved by adviser.

A student completing the Plan B program will be required to pass a final oral examination based on the starred papers submitted to the final evaluation committee.

At the option of the department, candidates may also be required to complete a final written examination.

MASTER OF ARTS— Public History Track

There are special entrance requirements for this track which are as follows:

Entrance Requirements for M.A. in History— Public History Track

It is expected that an applicant for admission to this program shall have completed a major in history (or its equivalency) at the undergraduate level of at least 48 credits with an honor point ratio of 3.0 or higher overall and 3.25 or higher in the major. Candidates should have completed a survey in United States history and should have taken at least 12 credits in advanced American history courses. Applicants also should have earned 12 credits or more in advanced non-United States history classes. Additional courses in such fields as American government, geography, American studies, and anthropology would strengthen the application, as would work experience in public history. Some students may be admitted conditionally depending upon their backgrounds.

Applicants should, as a part of the regular application process for graduate studies, submit a statement explaining why they are interested in entering this program and indicating what, if any, experience they have in public history. In addition, a prospective candidate in public history must submit a statement of purpose, not to exceed 500 words, outlining the person's public history interest and professional goals. This statement is an important part of the application process used by the Director of Public History to evaluate the writing skills as well as the interests of the prospective students. A faculty committee will review all applications, and finalists for the program will be interviewed by this committee.

The Graduate Record Examination (GRE) is required for a Master of Arts.

Students pursuing a Master of Arts degree must earn a minimum of 15 GRADUATE ONLY credits in this program.

Public History Track, Minimum, 45 Credits Plan A Only

- I. Research: Minimum, 9 Cr.
HIST 699 Thesis, 9 Cr.
- II. Major: Minimum, 20 Cr.
HIST 670 Introduction to Public History, 4 Cr.
HIST 671 Local History, 4 Cr.
HIST 696 Internship in Public History, 12 Cr.
- III. Cognate Courses: Minimum, 16 Cr.
AMST 570 Architecture and the American

Environment, 4 Cr.

ANTH 576 Advanced Museology, 4 Cr. OR a course in management,** 4 Cr.

ANTH 581 Cultural Resource Management, 4 Cr.

GEOG 557 Historic Prevention Planning, 4 Cr.

A student completing the track in public history, Plan A program will be required to pass a final oral examination based on the thesis submitted to the Final Evaluation committee.

MASTER OF SCIENCE

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution and must have completed at least an undergraduate minor in history in order to select it as a graduate major. In some cases, the applicant may be required to complete additional undergraduate work even though a major or minor may have been completed.

At least one-half of the Master of Science degree program must be earned in courses in which enrollment is limited to graduate students.

Plan A, 45 Cr.; Plan B, 48 Cr.

- I. Research: Min., Plan A, 9-15 Cr.; Plan B, 3-6 Cr.
HIST 578 Historical Criticism and Writing, 3 Cr.
HIST 699 Thesis, 6-9 Cr. (Plan A only)
- II. Major: Min., Plan A, 18 Cr.; Plan B, 24 Cr.
Credits to be selected with major adviser.
- III. Professional Education: Min., Plan A or B, 9 Cr.
Credits to be selected with approval of the professional education adviser.
- IV. Electives: Min., Plan A, 3-6 Cr.; Plan B, 9 Cr.

A student completing Plan A will be required to pass a final oral examination based on the thesis submitted to the final evaluation committee.

A student completing Plan B will be required to take a written comprehensive examination as a final evaluation. It is strongly advised that students take a historiography course (History 573) appropriate to their area(s) of concentration.

COURSE DESCRIPTIONS

512. History of Technology to 1750. Examine the impact of technology on the growth and demise of classical cultures with an emphasis on Western Civilization. The time/space relationship of human identity will be chronologically studied. 4 Cr. DEMAND.

514. History of American Technology. Examines from the historical perspective the changes technology has brought to American life. Topics considered will be the history of machine-made products, transportation, communication, munitions, urbanization, the concept of work, the roles of men and women, and the pursuit of leisure. 4 Cr. DEMAND.

518. History of Social Welfare in the U.S. Survey and analysis of the development of social welfare concerns in the U.S. as they have been shaped by a

*These courses may be waived if the student has fulfilled these requirements as part of an undergraduate program.

**Approval of the director of the public history track is required.



combination of social, political and economic factors. 4 Cr. DEMAND.

533. Russia, 1700-1917. A survey of politics, diplomacy, society, economics, and culture in Russia from Peter the Great to the Revolution. 4 Cr. W.

534. Soviet Russia, 1917 to the Present. A historical survey of politics, society, economics, and culture in the Soviet Union. 4 Cr. S.

545. United States Military History. Military problems and accomplishments from 1775 to the present. 4 Cr. DEMAND.

548. U.S. Social and Intellectual. Puritanism, revivalism, early American political thought, economic values, agrarianism, reform movements, literary traditions, individualism, are among topics discussed. 4 Cr. DEMAND.

556. U.S. Foreign Relations from World War I. The U.S. as a world power; diplomatic policies in two world wars and their aftermath. 4 Cr. ALT.

558. The American West. Topical and chronological consideration of western land policy, territorial government; Indian policy, economic development. 4 Cr. ALT.

563. U.S.-Latin American Relations. General trends with emphasis on specific relations with selected Latin American countries or regions. 4 Cr. DEMAND.

567. Modern Japan. Japanese history, 1800-present, emphasizing political developments, social and economic change, cultural and intellectual achievements. 4 Cr. S.

573. Historiography. Readings and discussion of historians and historical interpretation. 3 Cr. DEMAND.

578. Historical Criticism and Writing. Problems in and methods of historical accuracy and consistency; references, chronology, availability of knowledge, historical "myths," and preparation of research papers and thesis. 3 Cr. DEMAND.

580. Seminar in American History. Intensive reading and research in one area or topic of U.S. or Latin American history. Limited to senior or graduate students. May be repeated with different topic to max. of 9 Cr. 3 Cr. DEMAND.

583. Seminar in European History. Bibliographical study, research, and discussion of a selected topic in European history. Limited to senior or graduate students. May be repeated with different topic to max. of 9 Cr. 3 Cr. DEMAND.

586. Seminar in Africa, Asia, or Middle East. Reading and research on a selected topic. (Africa, Asia, or Middle East.) Limited to senior or graduate students. May be repeated with different topic to max. of 9 Cr. 3 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

605. Readings in History (Topical). Guided study of individual investigation of special historical topics and/or problems. Credits and meetings by arrangement. May be repeated with different topic to max. of 9 Cr. 1-4 Cr. DEMAND.

635. Readings in European History. Guided study through individual investigation of special periods and topics. May be repeated with different topic to max. of 9 Cr. 1-3 Cr. DEMAND.

640. Colonial America. Extensive study of themes in development of English colonies from Jamestown to U.S. Independence, e.g., the development of colonial society, culture, economics, politics, ideas, American Revolution. 3 Cr. DEMAND.

641. U.S. 1783-1848. Extensive study of topics such as Constitutional Convention, Federalists, Jeffersonians, Jacksonians, War of 1812, Manifest Destiny, and reform movements. 3 Cr. DEMAND.

642. U.S. 1848-1877. Extensive study of topics such as slavery, the Civil War, and Reconstruction. 3 Cr. DEMAND.

643. U.S. 1877-1920. Extensive study of such themes as agrarian protest, industrialization, growth of urban society, progressivism, and international involvement. 3 Cr. DEMAND.

644. U.S. 1920-1970s. Extensive study of the Jazz Age, the New Deal, World War II, and post-war U.S. 3 Cr. DEMAND.

651. Readings in American History. Guided study of American history through individual investigation of special periods and topics. May be repeated with different topic to max. of 9 Cr. 1-3 Cr. DEMAND.

662. Seminar in Ancient or Medieval History. Bibliographical study, intensive reading, discussion, research in selected areas or topics of European history to 1450. May be repeated with different topic to max. of 9 Cr. 3 Cr. DEMAND.

664. Seminar: European History. Bibliographical study, reading in documents and secondary works, analysis and discussion, research in selected topics or areas. May be repeated with different topic to max. of 9 Cr. 3 Cr. DEMAND.

670. Introduction to Public History. Discussion of "public history"; study of historical societies; training in research methods, traditional and "straight-line"; layout design work and photography for the public historian; mapping techniques. Prereq.: permission of instructor. 4 Cr. F.

671. Local History. Discussion of "local history"; consideration of oral history; genealogical study; archival work; records management. Prereq.: permission of instructor. 4 Cr. W.

681. Seminar in American History. Intensive reading and research in one area or topic of U.S. or Latin American history. May be repeated with different topic to max. of 9 Cr. 3 Cr. DEMAND.

696. Internship in Public History. Work for a full quarter in a historical society, a history firm, or an equivalent situation to gain experience and work skills directly in a setting of Public History. Prereq.: permission of instructor. 12 Cr. S.

699. Thesis. 6-9 Cr. F, W, S

Human Relations (HURL) and Multicultural Education

B118 EDUCATION BUILDING/255-3124

Director: Doug Risberg

Graduate Faculty: Andrzejewski, Hofmann, Risberg

The human relations program provides training in self-awareness and skills essential for living and teaching in a pluralistic society. The program addresses issues of human rights and social justice including the study of racism, sexism, ageism, and oppression based on class, disability, ethnicity, religion, sexual orientation or physical appearance. Courses are available for those planning to enter education and public service positions in government, health care, business, and industry. These courses are designed to enable participants to enhance their effectiveness in analyzing how power, resources, cultural standards, and institutional practices and procedures are used to perpetuate the oppression of various groups in society, and how people may be effective in creating social and institutional change.

Other objectives include (1) an understanding of the contributions and life styles of the various racial, cultural, and economic groups in society; (2) recognizing and dealing with dehumanizing biases, discrimination, and prejudices; (3) creating learning environments which contribute to the self-esteem of all persons and to positive interpersonal relations; (4) respecting human diversity and personal rights.

The center currently is in the process of developing a Master of Science degree in conjunction with the women's studies and minority studies programs. Service courses for other graduate programs are offered in both the daytime and evening schedules.

COURSE DESCRIPTIONS

502. Current Issues in Human Relations. Focus on a problem area or issue in Human Relations. May be repeated to a max. of 8 Cr. 1-4 Cr. DEMAND.

507. Indians and Contemporary Human Rights Issues. Analysis of the factors that lead to the current social, political, and economic status of American Indians. Prereq.: 201 or 495-497. 4 Cr. DEMAND.

509. Ageism. Analysis of how cultural standards and institutional practices lead to the oppression of people in this society based on age. Prereq.: 201 or 496-497 or SSCI 208. 4 Cr. DEMAND.

511. Heterosexism. Study of institutionalized heterosexism and homophobia and the impact on lesbian/gay and heterosexual people. Prereq.: 201 or 496/497. 4 Cr. DEMAND.

550. Nonverbal Communication and Education. The role of nonverbal communication in human interaction. Includes analysis of environmental factors, physical appearance, body language, touching behavior and paralanguage. 3 Cr. DEMAND.

591. Change Agent Skills. Study of the theories of social empowerment and the development of practical skills for producing institutional and personal change. Prereq.: 201. 4 Cr. DEMAND.

592. Practicum in Social Change. Experiential

practicum: Application of theory and research to constructive institutional and social change. Prereq.: 591. 4 Cr. S.

596. Human Relations and the Teacher Part I. Part I of program to meet teacher licensure rule 3.041. The focus is upon parts bb, cc and dd of the state requirement. Coreq.: 597. 3 Cr. F, W, S.

597. Human Relations and the Teacher Part II. Part II of the program to meet teacher licensure rule 3.041. The focus will be upon part aa of the state requirement. Coreq.: 596. 3 Cr. F, W, S.

COURSES FOR GRADUATE STUDENTS ONLY

608. Children's/Student's Rights. An analysis of problems related to the oppression of young people/students. 4 Cr. DEMAND.

614. Administration of Multicultural Education. Prepare administrators to provide leadership in helping their institutions and personnel to become more responsive to the human condition, individual cultural integrity, and cultural pluralism in society. 3 Cr. F or S.

620. Research Methods in Human Relations. This course exposes students to an overview of the research process and its place in the social environment. This overview includes a critical examination of the philosophical foundations of the scientific process, specifically from the perspective of oppressed social groups. Students will learn research designs and techniques appropriate to field settings and useful for social groups not represented in the research process. Research literature focusing on minorities, women, and other social groups will be critically examined for underlying assumptions. 3 Cr. F.

621. Quantitative Methods and Human Relations. This course is a continuation of HURL 620. It will focus on analysis and presentation of data collected on selected social issues, especially those pertaining to race, gender, sexual preference, and poverty. Prereq.: 620. 3 Cr. W.

622. Professional Writing and Reporting in Human Relations. This course provides students with information and experiences that will enable them to write proposals for grants and contracts, research and technical reports, academic research proposals, and other professional documents in the areas of human relations and social equity. Prereq.: 620, 621. 3 Cr. S.

625. The Law as an Instrument of Social Change. Investigates the dialectical nature of U.S. legal system: how the law functions to maintain class privilege and how the law can be used for social change. Develops practical legal skills for change agents. 4 Cr. F.

629. Introduction to the Human Relations Profession. An overview of the background and professional application of human relations. 2 Cr. F.

680. Internship in Human Relations. Supervised experiences with selected agency school, organiza-

tion, etc., that has a primary goal to facilitate the improvement of human relationships between individuals and groups. 3-9 Cr. DEMAND.

681. A Seminar in Practical Approaches for Providing Human Relations Instruction. This seminar will focus upon various techniques for facilitating human relations education. It will be sub-divided into two main components: (1) facilitating group leadership,

techniques in intergroup, interracial and non-sexist communications; and (2) instructional techniques in the study of human relations issues. 4 Cr. W.

682. Advanced Theory and Issues in Human Relations. Advanced study of current human relations theories and application of these theories in various settings and in regard to various human relations issues. 4 Cr. W.

Industrial Studies (IND)

216 HEADLEY HALL/255-3235

Chairperson: Anthony E. Schwaller

Graduate Faculty: Akubue, Bergstrom, Bjorklund, Carter, Gilberti, Horton, Lacroix, Nestel, Schwaller

MASTER OF SCIENCE

An applicant for admission to the Master of Science degree in Industrial Studies must meet the following requirements:

1. A baccalaureate degree from an accredited college or university.
2. An acceptable score on the Graduate Record Examination and/or acceptable undergraduate scholarship.

In some cases, it may be necessary for the applicant to complete some prerequisite undergraduate work even though the student may have an undergraduate major or minor. An entrance interview and writing sample must both be completed within the first 24 credits of course work.

At least one-half of the Master of Science degree program must be earned in courses in which enrollment is limited to graduate students.

This program is designed for both full-time and part-time students. Full-time students must expect to complete a majority of their course load in evening classes. This program in itself will not provide *licensure* for secondary industrial arts teaching.

Plan A, 45 Cr.; Plan B, 48 Cr.

I. Core: Plan A, 26 Cr.; Plan B, 20 Cr.

Technology: Select 13 Cr. from: IND 502, 505, 601, 604, 615

Select one course from IND 632, 640, 665, 683

Research:

Plan A, 13 Cr. selected from the following:

IND 668 Current Literature and Research, 4 Cr.

IND 699 Thesis, 6-9 Cr.

ED 615 Introduction to Research, 3 Cr.

APSY 678 Introduction to Graduate Statistics, 3 Cr.

APSY 679 Seminar: Research Planning, 3 Cr.

Plan B: 7 Cr. selected from the following:

IND 668 Current Literature and Research, 4 Cr.

ED 615 Introduction to Research, 3 Cr.

APSY 678 Introduction to Graduate Statistics, 3 Cr.

APSY 679 Seminar: Research Planning, 3 Cr.
Plus starred paper required.

II. Tracks:

1. Technology Education Track: Plan A, 16 Cr.; Plan B, 16 Cr.

Select 7 Cr. from:

IND 517 Organization and Administration of Technical Problems, 3 Cr.

IND 650 Contemporary Instructional Strategies in Technology Education, 4 Cr.

IND 673 Foundations of Technology Education, 4 Cr.

Professional Education: 9 Cr. (see professional education block below)

2. Vocational Track: Plan A, 16 Cr.; Plan B, 16 Cr.

Select 7 Cr. from:

IND 515 Vocational Guidance, 3 Cr.

IND 517 Organization and Administration of Technical Problems, 3 Cr.

IND 518 Conference Leading, 3 Cr.

IND 531 Evaluation in Industrial Subjects, 3 Cr.

IND 553 Individualized Instruction, 3 Cr.

IND 595 Workshop, Vr. Cr.

IND 650 Contemporary Instructional Strategies in Technology Education, 4 Cr.

IND 673 Foundations of Technology Education, 4 Cr.

IND 695 Workshop, Vr. Cr.

Professional Education: 9 Cr. (see professional education block below)

3. Technical Research Track, Plan A or B, 12 Cr.

Select 3 Cr. from IND 632, 640, 665, 683.

IND 670 Technical Research Design, 3 Cr.
IND 671 Technical Research Experimentation, 3 Cr.

IND 672 Technical Research Applications, 3 Cr.

III. Electives:

Track 1: Plan A, 3 Cr.; Plan B, 12 Cr.

Track 2: Plan A, 3 Cr.; Plan B, 12 Cr.

Track 3: Plan A, 7 Cr.; Plan B, 16 Cr.

Note: Any credits over the minimum level in any area can be counted in the electives area.

Professional Education Block:

1. Educational Foundations: Select 3 Cr. from ED 604, 605, 606, 607, 609, 610, 611, 612, 632
2. Curriculum: Select 3 Cr. from ED 625, 647, 648, 649
3. Instruction: Select 3 Cr. from ED 624, 628, 631, 654, 655

COURSE DESCRIPTIONS

502. Technology and the Environment. A study of the design and use of ecologically benign technologies related to food, energy, and shelter. 2 Cr. S.

505. Foundational Technical Developments. Study of the universal characteristics of technology, its foundational technical developments, and their effects upon culture. 3 Cr. W.

515. Vocational Guidance. Acquisition, development, and the dissemination of occupational and guidance information. 3 Cr. SUM ALT.

517. Organization and Administration of Technical Programs. Organization and administration of secondary, post-secondary, special needs and adult technical education programs. 3 Cr. F.

518. Conference Leading. Techniques and practices employed in leading and participating in conferences. 3 Cr. W ALT.

523. Electronic Prepress and Imaging. Electronic communication technologies and their application to the publishing industry. The development of a variety of technical skills and knowledge related to the areas of electronic prepress and imaging. Emphasis will be placed upon the creation of informative and effective publications using Color Electronic Prepress Systems/Desktop Publishing. 4 Cr. DEMAND.

530. Mass Production in Wood. Care and use of woodworking machines and special hand tools. Mass-production aspect of woodworking machines. Activity of class based upon a group project whenever possible. Lab. 4 Cr. S ALT.

531. Evaluation in Industrial Subjects. Processes of evaluation and problems of measuring achievement in industrial-technical areas. Selection, development and validation of evaluative instruments and techniques. 3 Cr. S ALT.

536. Construction Scheduling and Estimating. Introduction to preliminary, detail, and quantity estimating. Scheduling techniques. Emphasis on residential and small commercial projects. 4 Cr. F ALT.

553. Individualized Instruction. Utilizing individualized instruction for designing new courses or converting existing ones to an individualized learning approach. Emphasis will be placed upon techniques and the use of media. 3 Cr. F ALT.

591. Technology Education Activities. Selection of different approaches used to develop technology education activities for the secondary education technology educator. 2-4 Cr. DEMAND.

598. Internship. Offered only to students who hold internships with industrial organizations for which advanced approval has been given by the department. May be repeated; however, a max. of 8 Cr. will count toward a graduate degree. 1-8 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

601. Technology and Society. Effects of invention and technology development on society. 3 Cr. F.

604. Innovations and Contemporary Problems. Current technological innovations, issues and events and their interrelationship to contemporary problems that face today's society. 4 Cr. W ALT.

615. Seminar. Seminar presentation on a selected industrial education topic. Permission of department required. May be repeated to max. of 9 Cr. 1-4 Cr. F.

632. Technical Problems in Communications: (Topical). Technical study for specialists in communications. Recent developments, experimentation and technical reports. May be repeated to max. of 6 Cr. 3 Cr. SUM ALT.

640. Technical Problems in Manufacturing: (Topical). Technical study for specialists in manufacturing. Recent developments, experimentation and technical reports. May be repeated to max. of 6 Cr. 3 Cr. F ALT.

650. Contemporary Instructional Strategies in Technology Education. In-depth study and examination of innovative teaching strategies and their applications in technology education. Students will identify, discuss, and apply selected strategies. 4 Cr. W.

665. Technical Problems in Construction: (Topical). Technical study for specialists in construction. Recent developments, experimentation and technical reports. May be repeated to max. of 6 Cr. 3 Cr. F ALT.

668. Current Literature and Research. Analysis of literature of the industrial field, with special attention to individual readings and reports, implications of such literature for current problems in industrial education. 4 Cr. S ALT.

670. Technical Research Design. Phase I of the technical research project. An examination of the elements and conventions used in writing a technical research report. Students will select a research area of interest within the thematic areas of communication, construction, manufacturing, transportation/energy, and develop a technical research design. 3 Cr. W.

671. Technical Research Experimentation. Phase II of the technical research project. An exploration of the methods of experimentation in a technical environment. Graduate researchers will engage in technical experiments related to an aspect of communication, construction, manufacturing, transportation/energy. Prereq.: 670. 3 Cr. S.

672. Technical Research Application. Phase III of the technical research project. Involves field application, evaluation and reporting of research projects in the thematic areas of communication, construction, manufacturing, transportation/energy. Prereq.: 670, 671. 3 Cr. SUM.

673. Foundations of Technology Education. Contributors to development of technology education with special attention to economic, social and philosophical factors motivating this development. 4 Cr. S.

683. Technical Problems in Transportation/Energy: (Topical). Technical study for specialists in transportation/energy. Recent developments, experimentation and technical reports. May be repeated to max. of 6 Cr. 3 Cr. S ALT.

699. Thesis. 6-9 Cr. DEMAND.

Information Media (IM)

214 CENTENNIAL HALL/255-2062

Director: John Berling

Graduate Faculty: Berling, Fields, Hauptman, Hill, Hites, Keable, P. Lacroix, J. M. Nelson, Rydberg, M. Thompson

The Center for Information Media has developed Master of Science and Specialist degree programs in educational communications, information technologies, and human resources development/training. Encompassed in the programs are competency development in the theory and practice of librarianship, education and information technology, instructional systems design, and message design and delivery. The underlying philosophy of these programs is the development of leadership skills that make it possible to work with people to provide appropriate services to meet their needs. An essential characteristic of the graduate programs is the incorporation of the theory and application of current and developing technologies into leadership functions and message design and delivery. It is recommended that IM 603 and IM 505 or IM 606 or IM 607 be taken within the first enrollment. Please contact CIM office prior to first enrollment.

SPECIALIST DEGREE— Information Media

The Specialist degree program is available to: (1) those who have completed a master's degree with a major in some area of educational media and information technologies (library or audiovisual education), (2) those who have completed a minimum of 45 graduate credits in some area of media but who have not completed a master's degree yet are eligible for entrance into a master's degree program under present entrance requirements or (3) those who have a master's degree in another area. Each student's program will be designed to meet the individual's interests and needs.

The specific goals of the Specialist degree program are to develop competencies necessary for media supervisor licensure; to develop a background and depth in one or more areas in addition to a more general background which a master's degree may offer; to prepare a student for administrative positions in public, academic or school district media programs; to help students meet requirements for advancements in position or salary schedules which may require an advanced degree and to offer an opportunity for in-depth study of a problem through the field study.

With the exception of those students who have completed a master's degree in information media at St. Cloud State University, all students will be required to take the Graduate Record Examination. A minimum grade point average on all graduate work is 3.0. References are required.

Specialist Degree Program: Min., 45 Cr.

I. Major: Min., 33 Cr. (The student must have a minimum of 60 graduate credits of media.)

IM 683 Seminar in Information Media, 2 Cr.

IM 684 Field Study, 3-9 Cr. Credits selected with the consent of the adviser.

II. Electives: Min., 12 Cr. Selected with the consent of the adviser.

MASTER OF SCIENCE— Information Media

Programs are available for students who desire advanced degrees in educational communications, information technologies, or human development /training. Encompassed in the programs are competency development in the theory and practice of librarianship, education and information technology, instructional systems design, and message design and delivery. The underlying philosophy of these programs is the development of leadership skills which make it possible to work with people to provide appropriate services to meet their needs. An essential characteristic of the graduate program is the incorporation of the theory and application of current and developing technologies into leadership functions and message design and delivery.

Candidates are required to successfully complete a comprehensive written examination based on the major material covered in their individual programs and to participate in an exit interview.

Program One: Information Technologies:

Plan A, 48 Cr.; Plan B, 51 Cr.; Plan C, 54 Cr.

Program One is designed for persons interested in gaining competencies leading to a career in information technologies (e.g., information specialist, library or educational technologist, school technology coordinator) in various business, government, and educational settings.

This program is designed for both full-time and part-time students and can be completed through regular evening instruction. It also can be completed through summer quarter attendance.

I. Research: Min., Plan A, 9 Cr.; Plan B or C, 3 Cr.

IM 608 Research Methods

IM 699 Thesis (Plan A only), 6 Cr.

II. Major: Min., Plan A, 24-33 Cr.; Plan B, 30-36 Cr.; Plan C, 18-24 Cr.

Required core to include IM 571, 603, 644, and 682 plus other credits to be selected with an adviser.

III. Applications and Implementations: Plan C only, 15 Cr.

IV. Electives: Min., Plan A, 3-6 Cr.; Plan B or C, 6-12 Cr.

Credits to be selected from related fields, general study courses, Introduction to Graduate Statistics, Interpretation of Research, or the major.

Program Two: Educational Media:

Plan A, 51 Cr.; Plan B, 54 Cr.; Plan C, 57 Cr.

Program Two incorporates all of the competency requirements leading to licensure as a media generalist and is specifically structured for persons desir-

ing a career in the public schools. To be eligible, students must hold a baccalaureate degree with a current teaching license.

This program is designed for both full-time and part-time students and can be completed through regular evening instruction. It also can be completed through summer quarter attendance.

- I. Research: Min., Plan A, 9 Cr.; Plan B, 6 Cr.; Plan C, 3 Cr.
IM 608 Research Methods, 3 Cr.
IM 682 Research in Media (Plan B only), 3 Cr.
IM 699 Thesis (Plan A only), 6 Cr.
- II. Major: Min., Plan A or B, 33 Cr.; Plan C, 36 Cr.
Required core to include IM 512, or 573, or 583, 558, 571, 576, 577, 578, 581, 603, 606, 609, 644.
- III. Applications and Implementations: Plan C only, 15 Cr.
- IV. Professional Education: Min., 6 Cr.
Courses to be selected with adviser.
- V. Electives: Min., Plan A, 3 Cr.; Plan B, 6-9 Cr.; Plan C, 9-12 Cr.
Credits to be selected with adviser from related fields, general studies courses, Introduction to Graduate Statistics, Interpretation of Research or courses in the major.
- VI. Course Sequencing for Program Two:
Preliminary course work: these courses must be taken at the beginning of the program: IM 558, 571, 577, 603, and 606.
Additional required courses: these courses must follow the preliminary course work and precede the culminating course work: IM 512 or 573 or 583, 576, 578, 581, 644, curriculum, professional education courses, and electives.
Culminating course work: these courses must be taken at the end of the program: IM 608, 609, 679, and 682 or 699.

Program Three: Human Resources Development/Training: Plan A, 51 Cr.; Plan B, 54 Cr.; Plan C, 57 Cr.

Program Three, an information media master's degree in training and development, is for those interested in organizational media management in business, industrial, governmental, and health fields. The degree is designed to prepare an individual with such competencies as problem analysis, program development, resource management, and personnel/performance evaluation. Program Three gives students a basic framework for undertaking a training position, while at the same time developing the specific skills necessary for the field.

This program is designed for both full-time and part-time students. Completion requires attendance in some daytime classes, although most courses will be offered through regular evening instruction. This program can NOT be completed through summer quarter attendance alone.

- I. Research: Min., Plan A, 9 Cr.; Plan B, 6 Cr.; Plan C, 3 Cr.
IM 608 Research Methods, 3 Cr.
IM 682 (Plan B only), 3 Cr.
IM 699 Thesis (Plan A only), 6 Cr.
- II. Major: Min., Plan A, 30 Cr.; Plan B, 33 Cr.; Plan C, 36 Cr.

Required core to include IM 512 or 583, 536, 558, 571, 603, 607, 647, 658, 675, 680

- III. Applications and Implementations: Plan C only, 18 Cr.
- IV. Related Fields: Min., Plans A, B, or C, 9-12 Cr.
Required courses include: MGMT 361 (501) and PSY 678. Other courses may include MGMT 362 (501), 370 (501), 567, MKGB 320 (501), PSY 574, 667, SPCH 511, 520, 540.
- V. Electives: Plan A or B, 3 Cr.; Plan C, 6 Cr.
Credits to be selected with adviser.
- VI. Courses Sequencing from Program Three:
Preliminary course work: these courses must be taken at the beginning of the program: IM 558, 571, 603, 607, and MGMT 501.
Additional required courses: these courses must follow the preliminary course work and precede the culminating course work: IM 512, 536, 583, 647, 658, PSY 678, SPCH 511 or 520 or 540, and electives.
Culminating course work: these courses must be taken at the end of the program: IM 608, 675, 680, and 682 or 699.

Students Seeking License Endorsement

Students with baccalaureate degrees who have teacher licensure or are eligible for teacher licensure may apply for admission to pursue license endorsement as media generalists. Students with teacher licensure and a master's degree may apply for admission to pursue license endorsement as media supervisors. Minnesota licensure endorsements require the following experience in addition to the course requirements:

- Media Generalist – 200 hour practicum
- Media Supervisor – three years in the area of media while holding licensure valid for the position in which the media experience was obtained.

The Media Generalist Licensure program is a minimum of 36 credits plus a practicum. Prereq. include courses in computer usage and an introduction to information media. Recommended courses to include IM 512 or 573 or 583, 558, 571, 576, 577, 578, 581, 603, 606, 609, 644, 679, and one of the following: ED 646, 647, 648, or 649.

The Media Supervisor Licensure program requires a minimum of 18 credits beyond the master's degree and the Media Generalist level. Recommended courses include IM 606, 651, 658, EDAD 674, however, the program will be individually tailored when necessary.

Applicants planning to work toward any license endorsement should meet with a graduate adviser in the Center for Information Media to plan the sequence of courses required. Additional information may be obtained from the Director of the Center for Information Media, St. Cloud State University, 720 South 4th Avenue, St. Cloud, MN 56301-4498. Phone: 612-255-2062.

PERMANENT WORKSHOP DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to page 21 to determine the maximum number of workshop credits which may be applied to graduate degrees.

531. Introductory Workshop to Online Literature Searching. Techniques of user-computer interaction for retrieval of bibliographic information using the Bibliographic Retrieval Services databases. Offered one quarter per year. Fees assessed per database(s) searched. 2 Cr. DEMAND.

532. Administrative Uses of a Microcomputer in Schools, Media Centers, and Libraries. How to apply a microcomputer and related software for data management purposes. Will explore both generic and dedicated software packages. Prereq.: knowledge of microcomputer operations. 1 Cr. DEMAND.

COURSE DESCRIPTIONS

505. Role of Public Libraries in Society. Explores the history and evolution, principles, and practice of public librarianship, including the library's role in providing services into the information age and beyond. 3 Cr. DEMAND.

512. Television in Media. Developing, designing, utilizing, evaluating, and administering television in instructional and related programs. Lab. 3 Cr. F, W, S, SUM.

516. Television in Media II. Planning, preparation, editing and evaluation of television programming including administering programs and facilities, writing, lighting, staging, and graphics. Prereq.: 412 or 512. 3 Cr. W.

536. Business Information Resources. Explores sources of business information available in published formats issued by the business and financial community and various government agencies, as well as business information accessible through the computer and related media. Directed primarily to business students and others associated with the business community in an information capacity. 3 Cr. F, S.

545. Microcomputers in Classrooms and Media Centers. Instructional applications, utilization, and management of microcomputers in educational settings. Survey of available hardware, software, and related instructional materials. 3 Cr. F, W, S, SUM.

558. Principles and Procedures of Instructional Development I. Introduction to instructional development, including theoretical background, needs assessment, learner analysis, and instructional strategies. 3 Cr. W, SUM.

562. Children's Services/Materials in Public Libraries. Explores programs and materials (print and non-print) appropriate for children ages 0-14. Emphasis will be on developing familiarity with children's authors, illustrators, and creators of non-print material. 3 Cr. DEMAND.

568. Media Materials and Methods of Instruction. Theory and techniques of selection, evaluation, and use of print and non-print materials, such as library materials, display materials, slides, filmstrips, motion pictures, videotape, sound recordings, microcomput-

er programs, and communications (including two-way television). 3 Cr. F, W, S, SUM.

571. Design and Preparation of Information Media. Design and production of graphic instructional support materials. Lab. 3 Cr. F, W, S, SUM.

573. Photography in Media. Basic photographic processes in media, including still photography, black and white darkroom processes, and the operation of equipment. Lab. 3 Cr. F, S, SUM.

574. Slide Photography in Media. A course on the fundamentals of slide photography for audiovisual presentations. Topics include: materials and equipment, compositional guidelines, scripts and shot lists, studio and on-location techniques, close-up photography, slide duplication, title and graphic slide production, legalities and ethics. Lab. processing of color film not included. Prereq.: 473 or 573 or permission of instructor. 3 Cr. DEMAND.

576. Selection and Evaluation of Media. The selection of media materials, including theory, principles, techniques, and basic tools. 3 Cr. F, SUM.

577. Reference and Bibliography in Media. Reference and bibliographic works, including theory, practice, tools and bibliographies. 3 Cr. W, SUM.

578. Cataloging and Classification of Materials. Study of information materials organization including basic processes for cataloging and classifying materials using Sears Subject Headings and the Dewey Decimal Classification System. MARC format, automation, and basic filing rules will also be covered. Lab. 3 Cr. F, SUM.

581. Reading, Listening and Viewing Guidance. Materials of varying formats (book and non-book) used by children and youth in the learning process, with an emphasis on application. 3 Cr. W, SUM.

582. Audio Systems. Lecture and demonstration of the theory and application of sound reproduction techniques to support system planning, component selection, system expansion, and component purchasing for monophonic and polyphonic systems. Lab. 3 Cr. DEMAND.

583. Color Slide Presentations. Systematic approach to the production of color slide presentations for informational and instructional presentations. Includes need assessment, format selection, presentation design, equipment selection and operation, and media production. Does not include laboratory processing of photographic materials. Prereq.: 471-571. 3 Cr. S.

584. Seminar. Conferences, reports, readings, discussions, problems, and research in a special facet of media. May be repeated. 1-4 Cr. F, W, S, SUM.

593. Black and White Photographic Techniques. A continuation of the black and white portion of 473-573 with emphasis on controls for composition, lighting, contrast, and sharpness in both the negative and the print. Attention will also be given to selection and organization of equipment and facilities. Prereq.: 473-573 or permission of instructor. 3 Cr. S.

COURSES FOR GRADUATE STUDENTS ONLY

603. Information Media: Theory, Research, and Practice. Overview of the nature, forms, and uses of information media. Survey of emphasis areas within

the Information Media field examined from the perspective of recent research and influential theories. Introduction to professional literature, organizations, and opportunities. 3 Cr. F, SUM.

604. Information Media in Society. The role of media, personnel, and organization in society; a study of materials of library and audiovisual service. (A general course for graduate students; not open to information media majors.) 3 Cr. DEMAND.

606. The School Library Media Program. Philosophy and mission of school library media programs. Includes rules and responsibilities of library media specialists, integration of library media skills into curriculum, issues in leadership and public relations, and examination of current issues and trends. 3 Cr. W, SUM.

607. Training/Human Resource Development. Study of training/human resource development: divisions, organizations, professionals, and literature. Examination of the theories of learning, motivation, and communication as they relate to training and development. Study of the associated practitioner roles: systems design, message design and development, training and problem needs, analysis, and strategies. 3 Cr. F.

608. Research Methods in Media. Methods of evaluating research procedures and interpreting findings. Defining and limiting a problem, gathering, documenting, organizing, and presenting findings. 3 Cr. W, SUM.

609. Administration of Media. Basic theory and techniques of administering media programs and service. It is recommended that this course be taken during the latter part of the IM core. 3 Cr. S, SUM.

615. Preparation of Media II. Planning and preparing materials for instructional use; graphics, lettering, and overhead transparencies. Lab. Prereq.: 471-571 and 473-573 or permission of instructor. 3 Cr. DEMAND.

631. Selection and Evaluation of Media II. Theory, principles, and techniques of evaluating and selecting materials and equipment used for formats of media. Prereq.: 476-576. 3 Cr. DEMAND.

636. Reference and Bibliography in Media II. Theory of patron information needs, study of specialized bibliographic and reference media materials in subject areas. Prereq.: 477-577. 3 Cr. DEMAND.

638. Technical Processes in Information Media II. Continuation of the study of information media materials organization with emphasis on the use of Library of Congress classification schedules and subject headings, administrative considerations in larger operations, and computer-stored bibliographic data. Lab. Prereq.: 478-578. 3 Cr. DEMAND.

644. Technologies in Library/Media Center. Principles of automation in the media center with emphasis on the use of new technologies to handle the problems of information acquisition, processing, storage, and retrieval. Analysis and application of automated systems to current media center practices. Lab. 3 Cr. S, SUM.

646. Microcomputer Software. Selection, evaluation, and processing of microcomputer programs and documentation; sources, techniques, and media center management of software. Prereq.: 545 or

equivalent. 3 Cr. W, SUM.

647. Instructional Development and Design for Microcomputers. The theoretical background of instructional programs including microcomputer programs and software; the selection, utilization, and evaluation of existing programs; and individual experience in planning, designing and producing programs. Prereq.: 545, 558, or permission of instructor. 3 Cr. W.

651. Administration of Media II. Application of the principles of administrative patterns, personnel management, public relations, budgeting and facilities to a media program. Prereq.: 609 or permission of instructor. 3 Cr. DEMAND.

658. Principles and Procedures of Instructional Development II. Implementation of instructional development principles and procedures, construction of an instructional system through application of an ID model to meet an instructional need, course design, and evaluation of instructional delivery systems. Prereq.: 458 or 558 or equivalent. 3 Cr. S, SUM.

660. History of Libraries and Information Media. A survey of the development of libraries and information media from ancient times to the present. 3 Cr. W.

662. Recent Trends in Media. Consideration of the latest trends of thinking in the various areas of media handling and use. 3 Cr. DEMAND.

675. Organizational Training and Media Management. Study of the theories, philosophy, and praxiology of training/human resource development organizations, operations, research, and public/personnel relations. Investigation of advanced readings and theories of data management and long-range planning as it relates to training/human resource development practitioners in their development of media management, training management, and operations management. 3 Cr. S.

679. Media Generalist Practicum. A field experience individualized to take into account license requirements for the media generalist, the candidate's previous experience, special needs, and other special circumstances. Students should contact the department at least one quarter before practicum is to begin. Prereq.: media generalist course work requirements. 1-6 Cr. F, W, S, SUM.

680. Internship in Media. Intern experiences relating to media in all its practical facets. Lab. 2-12 Cr. F, W, S, SUM.

681. Readings in Media. Selected readings of literature of the field and related areas. 1-3 Cr. F, W, S, SUM.

682. Research in Media. Current experiments in media and closely related fields. 2-12 Cr. F, W, S, SUM.

683. Seminar in Media. Conferences, reports, readings, discussions, problems, and research in a special facet of media. May be repeated to max. of 9 Cr. 1-4 Cr. F, W, S, SUM.

684. Field Study in Media. (For Specialist degree only.) Research problem(s) developed by the student with permission of the adviser and the department chairperson. 3-9 Cr. F, W, S, SUM.

699. Thesis. 6Cr. F, W, S, SUM.

Interdisciplinary Studies

365 STEWART HALL/255-2248

Chairperson: Allen Stensland

Graduate Faculty: Downes, Haniff, Hellwig, Mehrhoff, Mittlefehldt, Morgan, O'Toole, Robertson, E. Simpson, Stokes, Tripp, Wolfer

The Department of Interdisciplinary Studies has general responsibility for the administration of the following broad interdisciplinary programs: African Studies, American Studies, East Asian Studies,

Gerontology, International Relations, Latin American Studies, Local and Urban Affairs and the Social Science/Social Studies program. In addition, each of the programs has a director and a program advisory committee.

For information on graduate offerings, see American Studies, Gerontology, Social Science, and Social Studies.

Latin American Studies (LAST)

255 STEWART HALL/255-3034

A program of the Department of Interdisciplinary Studies.

Director: Robert Lavenda

Graduate Faculty: Addicott, Carter, Diaz, G. B. Erickson, Hellwig, Lane, Larkin, Lavenda, O'Neill, Peterson, Ringer, Saltz, Sorensen, Stokes

The Latin American Studies program attempts to enhance student awareness about Latin America as a significant cultural area, as well as to provide an integrative framework within which students may

encompass the specific knowledge they learn about Latin America from the various disciplines.

COURSE DESCRIPTION

550. Minorities in Latin America. An investigation of the position of minorities in contemporary Latin America, principally Afro-Americans and Amerindians, utilizing a comparative and interdisciplinary approach. 4 Cr. DEMAND.

Management and Finance (MGMF)

104 BUSINESS BUILDING/255-3225

Chairperson: Dwaine Tallent

Graduate Faculty: Christopherson, Farrell, Karvel, King, Legg, S. Mooney, Pesch, Polley, Rhee, Roth, Saraph, Sebastian, Skalbeck, Tallent, Thomas, J. Vora, Ward, Yook, Young

Also see M.B.A. requirements in the College of Business section.

COURSE DESCRIPTIONS

538. International Business Seminar. The course is designed to serve as an integrated capstone for international business. It includes understanding of the problems faced by international business, policy and decision-making processes as well as control and evaluation of international business. Prereq.: 470, 473; MKGB 427. 4 Cr. S.

560. Organizational Staffing. Analysis of selected issues related to organizational staffing: labor force allocation, mobility and productivity; validity and utility of recruitment and selection/reduction strategies; evaluation of human resources. Prereq.: 362. 4 Cr. F.

561. Labor Relations. Evolution of labor unions and law; analysis of private and public sector bargaining processes; systems of dispute-resolution; analysis of union impact. Prereq.: 362. 4 Cr. W.

563. Operations Planning Systems. Planning and analysis of materials requirements, workforce, facilities, work orders and logistics in manufacturing and service organizations using techniques such as MRP, JIT and DRP. Prereq.: 363. 4 Cr. F, S.

564. Purchasing and Materials Management. Strategies of supplying materials and services in manufacturing and service organizations through planning and analysis of vendors, operations, distribution and logistics within a broad framework of materials management. Prereq.: 363. 4 Cr. W.

566. Compensation Theory and Practice. An analysis of compensation theories and practices; their effect on employee motivation, productivity, and morale. Prereq.: 362. 4 Cr. S.

567. Organization Theory. To survey and increase understanding of the structures, processes, and outcomes of organizations. 4 Cr. F, W, S, SUM.

570. International Business Management. Survey of the environmental, economic, political and social constraints on doing business abroad; effects of overseas business investments on domestic and foreign economics; and management and operational strategies of firms engaged in international business. Prereq.: min. of 144 Cr. or permission of instructor. 4 Cr. W.

571. Corporate Financial Policies. Examination and analysis of financial concepts relative to: corpo-

rate financial decision making; adjustments to changing conditions; market structure and corporate capital instruments; capital market movements and financial decisions. Prereq.: 371, MATH 231 (or equivalent). 4 Cr. F, W, S, SUM.

572. Financial Institutions. Examination and analysis of various financial institutions; their role in the economy; current issues/controversies in banking and intermediation; international aspects of financial intermediation. Various financial institutions examined. 4 Cr. F, W, S, SUM.

573. International Finance. Examination and analysis of international financial concepts, principles, and practices. Analysis of international balance of payments, foreign exchange markets and risk factors, financing of international trade and multinational enterprises. Innovations in international finance are discussed. Prereq.: 371, 471; ECON 205, 206. 4 Cr. DEMAND.

574. Security Analysis. Classification and analysis of securities, markets, industries; investment policies; management of portfolios of institutional investors, international portfolio diversification, and recent innovations in finance/investment securities and markets. Prereq.: 371, 373. 4 Cr. F, W, S.

575. Life and Health Insurance. Examination and analysis of: individual life and health insurance and employee benefits (group insurance); estate and financial planning; insurance company management and operations; regulation; public policy issues. Prereq.: 375. 4 Cr. F.

576. Property and Liability Insurance. Analysis of

property and liability risks; contract analysis; insurance law; insurance company management and operations; regulation; public policy issues. Prereq.: 375. 4 Cr. W.

577. Strategy and Organization of Public Administration. This course treats problems in bureaucratic organizations which arise from the political system and a non-profit orientation. The focus of the course is on strategy formulation and decision-making in the non-business sector. Prereq.: Min. of 144 Cr. or permission of instructor. 4 Cr. DEMAND.

579. Social Insurance. Analysis of economic security and insecurity; public programs designed to alleviate the perils of premature death, poor health, retirement, unemployment, and poverty. Focus is upon the role of business in economic security, program structure and financing, and public policy issues. Prereq.: 375. 4 Cr. S.

COURSES FOR GRADUATE STUDENTS ONLY

605. Business Seminar. Selected topics related to (1) management; (2) finance; or (3) insurance and real estate. 4 Cr. DEMAND.

665. Readings in Management. Special readings in the subject area. 4 Cr. DEMAND.

672. Readings in Finance. Special readings in the subject area. 4 Cr. DEMAND.

675. Readings in Insurance and Real Estate. Special readings in the subject area. 4 Cr. DEMAND.

Marketing and General Business (MKGB)

304 BUSINESS BUILDING/255-2057

Chairperson: William Rodgers

Graduate Faculty: Benson, Calhoun, Dubinsky, Hanafy, J. Johnson, J. Kurtz, J. Larson, Rodgers, Schneider, Walter, Wells

Also see M.B.A. requirements in the College of Business section.

COURSE DESCRIPTIONS

520. Retailing Management. Organization for retailing and functional activities involved; problems of inventory methods, credit and collections, personnel, location, layout, receiving, and delivery. 4 Cr. F.

521. Product Planning and Development. The role of product planning and development in marketing decision-making; product planning concepts and models; product planning process; practical experience through case analysis. Prereq.: 320. 4 Cr. S.

522. International Trade for Small Business. The course covers basic international trade management planning and the functions and responsibilities of export and import managers. The course is directed to small business and examines major aspects of imports and exports. Prereq.: 320. 4 Cr. W.

523. Advertising Management. Analysis of advertising policies and practices in campaign planning, media selection, client-agency relationships,

research and testing. Consent of department chairperson. 4 Cr. W.

524. Sales Management. Managerial aspects of sales promotion, problems involved in investigations of markets, planning sales effort, management of sales personnel, and control of sales operations. Consent of department chairperson. 4 Cr. W.

525. Marketing Research. Research process as an aid to decision-making in marketing management; research methodology, presentation of marketing research results, evaluation of the effectiveness of marketing research. Prereq.: BCIS 141. 4 Cr. F, W, S, SUM.

526. Marketing Systems. An introduction to the system concept in the analysis of marketing activities; system theory and its application to marketing with emphasis on the explanation of varying approaches to marketing systems, such as ecological, institutional, and social physics; development of marketing systems. 4 Cr. W ALT.

527. International Marketing. Stresses the importance of international marketing to the American economy and analyzes the United States international marketing with emphasis on the problems and practices of managing international marketing activities; analysis of characteristics, structure, and competitive factors of international markets. 4 Cr. F, W, S.

531. Transportation Management. A survey course dealing with the role of transportation in the marketing system; economic characteristics of the transport modes; theory of rates and rate structure; regulation; and national transportation policy. Prereq.: 320. 4 Cr. S.

532. Marketing Channels. An examination of alternative marketing channels connecting producer and consumer. The characteristics of different marketing institutions are examined and recent trends in channels and institutions are considered. Prereq.: 320. 4 Cr. W, SUM.

533. Marketing Logistics. Provides an overview of physical distribution and logistics management. Topics include: transportation, storage, inventory control, order processing and location decision making. Prereq.: 320. 4 Cr. F.

534. Social Marketing. The course deals with marketing decisions and strategies in relation to contemporary social changes in the society. The course entails dimensions of social changes, ecological and environmental changes, social values and ethics, shortages of energies, role of women in society, food marketing and health questions, and social and ethical responsibilities. Prereq.: 320. 4 Cr. W ALT.

535. Marketing for Non-Profit Organizations. Application of marketing philosophy, concepts and techniques to non-business organizations related to the public. The course contains the analysis of non-business organizations in respect to market structure and market behavior. Marketing strategies and planning for health care, public sector, political

ideas and persons, religious institutions, education and service marketing. Prereq.: 320. 4 Cr. F ALT.

537. Business Law. Policy and rationale of the law of property, trusts and estates, insurance, agency, partnerships, corporations, securities regulation and anti-trust. 4 Cr. F, W, S, SUM.

538. International Business Seminar. Designed to serve as an integrated capstone for international business. Includes understanding of the problems faced by international business, policy and decision-making processes as well as control and evaluation of international business. Prereq.: 427; MGMT 470, 473. 4 Cr. S.

545. International Business Law. Introduction to the legal aspects of international private trade transactions from inception to completion including documentation, performance, rights, duties, and U.S. and foreign governmental restrictions. Prereq.: 235 and 436. 4 Cr. S.

COURSES FOR GRADUATE STUDENTS ONLY

605. Business Seminar—Marketing. Selected topics related to marketing theory and practice. Consent of instructor required. 4 Cr. DEMAND.

626. Readings in Marketing. Special readings in the subject area. Consent of department chairperson. 1-4 Cr. DEMAND.

633. Business Case Analysis. Independent research culminating in written and/or oral presentation. 1-4 Cr. DEMAND.

Mass Communications (COMM)

125 STEWART HALL/255-3293

Chairperson: Amde—Michael Habte

Graduate Faculty: DeSanto, Fish, Habte, Vadnie

The curriculum of the graduate program in communication management consists of the following four major components of instruction, research and practical lab work totaling 48–51 quarter credit hours leading to the degree of Master of Science in communication management:

- A core program of courses plus the final graduate research, 15–18 Cr.
- A choice of specialization within two related tracks: News Media Management and Information Media each consisting of 12 Cr.
- A minor in a selected graduate program or a strong supporting field within the department, 12–15 Cr.
- Department electives including independent /internship studies, 6–9 Cr.

Plan A: 48 Cr.; Plan B, 51 Cr.

A. Core Program: Plan A, 18 Cr.; Plan B, 15 Cr.

COMM 601, Communication Theories and Research Methods, 4 Cr.

COMM 612, Communication Media Economics and Institutions, 4 Cr.

COMM 660, Seminar: Communication Law and Ethics, 4 Cr.

COMM 689, Applied Research (Plan B only), 3 Cr.
COMM 699, Thesis (Plan A only), 6 Cr.

B. Track I: News Media Management, Plan A or B, 12 Cr.

COMM 525, Press—Government Relations, 4 Cr.
COMM 542, Public Affairs Reporting, 4 Cr.

COMM 611, Seminar: News Media Management Theories and Practices, 4 Cr.

C. Track II: Information Management, Plan A or B, 12 Cr.

COMM 524, Seminar: Public Opinion and Communication Research, 4 Cr.

COMM 686, Advanced Advertising Theories, 4 Cr.
COMM 696, Advanced Public Relations Theories and Practices, 4 Cr.

D. Minor/Supporting Field: Plan A, 12 Cr.; Plan B, 15 Cr.

In selected graduate programs.

E. Department Electives: Minimum: Plan A, 6 Cr.; Plan B, 9 Cr.

Internship, independent studies, other graduate communications courses, excluding preparatory courses required for full admission into the program.

PERMANENT WORKSHOP DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to Academic Regulations under the "Workshop Limitation" heading to determine the maximum number of workshop credits which may be applied to graduate degrees.

536. Workshop: Public Relations Writing and Publications. Preparation of materials for use in public relations work including brochures, news, releases and newsletters. Emphasis is on writing and production at a professional level using the four-step PR process. Prereq.: 220, 240; or 272; 320, 350, 434 or consent of instructor. 4 Cr. S, SUM.

COURSE DESCRIPTIONS

520. Mass Media and Social Institutions. A critical analysis of mass media as social institutions. Particular attention will be given to their effects on knowledge about the media and social norms, public opinion and government, and popular tastes. Media credibility, professionalism, media effects and press ethics will be reviewed. Prereq.: 220, 320. 4 Cr. F, W, S.

524. Seminar in Public Opinion and Communication Research. Seminar in which participants are engaged in a critical examination of the basic theories and research findings on opinion formation and public persuasion and make their own research proposals in appropriate selected areas. 4 Cr. DEMAND.

525. The Press and Government. An examination of the interaction between the news media and the government, with particular emphasis on the press playing a watchdog function and adversary to government. Prereq.: Permission of instructor. 4 Cr. DEMAND.

530. International Communications. Brief survey of global telecommunications channels and systems, with special emphasis on issues in the free flow of information debate, and foreign news in the American press. 4 Cr. DEMAND.

532. Communication Research. Strategies, methods and resources used in mass media research. Special emphasis on research as a tool in advertising, broadcasting, news editorial and public relations. Prereq.: 320 or consent of instructor. 4 Cr. F, W, S.

534. Public Relations Principles and Methods. Interpreting the school, business, and other organizations for their publics; responsibilities of the public relations representative to the community served; the overall public relations programs. Prereq.: 220, 240 or 272, 320. 4 Cr. F, W.

538. Public Relations Case Studies and Campaigns. Study and development of public relations campaigns. Special attention is given to case studies dealing with various public relations issues and problems. Prereq.: 434 or permission of instructor. 4 Cr. W, S.

541. Magazine Article Writing. Varied special types of writing for magazines, newspapers, journals, company publications, other printed media. Market study: adapting style, content to specific publications. 3 Cr. DEMAND.

542. Public Affairs Reporting. Urban affairs reporting mechanisms with in-depth examinations of current urban problems, such as inner-city crime, redevelopment, transportation, ecology, etc. which face a metropolitan government. 4 Cr. DEMAND.

545. Advanced Photojournalism. Lecture and lab in photojournalistic production for newspapers, magazines, company publications, television, etc. Photojournalism history, theory, trends, legal aspects, ethics, composition, special techniques, development and execution of picture stories and essays. Prereq.: 346 or consent. Departmental approval. Majors/minors only. 3 Cr. DEMAND.

550. Advanced Editing and Makeup. Advanced instruction in format, makeup and typography of print publications with emphasis on current trends, editing techniques and publication problem solving. Prereq.: 350. 4 Cr. S.

560. Mass Communications Law. Study and research of media-related laws such as censorship, libel, privacy, access, sources, copyright, obscenity, government regulations plus development of First Amendment rights and interplay of ethics. Prereq.: 220; 240 or 272 (320 for news-ed sequence). 4 Cr. F, W, S.

564. Management of the Broadcast/Cable Station. Advanced study of the organization, operation and key problems of the radio, television and cable station from the standpoint of management. Research in design and implementation of case studies. 4 Cr. S.

570. Modern Communication Technology: Uses and Influences. Examination of the communications industry and its constituents in the light of recent developments in telecommunications technology. 4 Cr. DEMAND.

575. Telecommunications Management Policies. An examination of management policies with regard to the U.S. and international regulatory structures for the telecommunications industries, with special emphasis on the impact of regulation on media institutions, personnel and consumers. 4 Cr. DEMAND.

580. Advising School Publications. Role of the faculty adviser; trends, philosophies, problems; theoretical and practical considerations; content of journalism-mass communications curriculum. 4 Cr. DEMAND.

581. Teaching Mass Communications. Theories, methods, materials and curriculum developments for teaching mass communications in the secondary schools. 3 Cr. DEMAND.

586. Principles of Mass Media Advertising. Overview of various types of advertising. Basic knowledge of selling and preparing ads for various mass media. History, economic and legal backgrounds. Prereq.: 220; 240 or 272. 4 Cr. F, W.

592. Direct Response Advertising. Focus is on principles and methods of direct response advertising. Course includes how direct mail and telemarketing are used in this advertising area. Includes mailing costs, database, catalogs, law and ethics. Prereq.: juniors and seniors in advertising, graphic design or marketing or permission of instructor. 4 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

601. Communication Theories and Research Methods. An examination of the dominant theories and research approaches utilized in the contemporary study of mass media messages and their impact on audiences. Prereq.: 501, applied statistics. 4 Cr. F, S.

611. Seminar in News Media Management Theories and Practices. Seminar integrates media management concepts with practical and specific concerns of regional news media organizations. A case study approach will be used extensively to characterize problems while unifying concepts and solutions. Prereq.: 501, 601, 660 or 525. 4 Cr. DEMAND.

612. Communication Media Economics and Institutions. Examines the interrelatedness of media institutions and economic trends. Explores the impact of change in technology, audience, the media structure, etc., as factors that contribute to economic injury or stability in the media industries. 4 Cr. F, W.

660. Seminar: Mass Communications Law and Ethics. Study of legal and ethical issues facing the working reporter and editor. Special issues will also be studied which are of current interest to practitioners of mass communications. 4 Cr. W.

686. Advanced Advertising Theories. An analysis of the major theories in advertising and the application of such theories and methods to case studies. Prereq.: 498 or equivalent. 4 Cr. DEMAND.

689. Applied Research (Plan B Starred Papers). Independent research course designed for graduate candidates completing their requirements of the Plan B starred papers. Prereq.: completion of course requirements. 3 Cr. F, W, S, SUM.

696. Advanced Public Relations—Theories and Practices. Study and strategy for dealing with public relations problems of profit and not for profit organizations in contemporary society. Emphasis is on methods and principles for dealing with problem solving. 4 Cr. DEMAND.

699. Thesis. 6 Cr. F, W, S, SUM.

Mathematics (MATH) and Statistics (STAT)

139 ENGINEERING AND COMPUTING CENTER/255-3001

Chairperson: Howard Bird

Graduate Faculty: Bahauddin, Bird, Brink, Buls, Carlson, Carr, Daunis, R. Earles, C. Ernst, Franzosa, Garity, J. Johnson, Kalia, Keith, Kepner, Lahren, Leitch, Leung, D. Miller, Naraine, Robinson, Scully, Stavros, Sundheim, Van Akin, Wilmesmeier

These programs are designed primarily for part-time students. Most graduate courses are offered only in evenings or summer sessions.

MASTER OF ARTS— Mathematics

The applicant for admittance to the M.A. program must have a bachelor's degree from an accredited college or university, with a major in mathematics and an overall grade point average of at least 2.8 with an average of 3.0 in the major. Students may be admitted provisionally. Final decision on admission will be made by the mathematics graduate faculty after consideration of entrance examination scores, undergraduate record, and letters of recommendation. At least 15 credits in the program must be earned in courses in which enrollment is limited to graduate students.

Plan A, 45 Cr.; Plan B, 48 Cr.

I. Credits in Mathematics:

Plan A. A minimum of 36 quarter hours including a thesis must be earned in mathematics. Two graduate-only year-long sequence courses in mathematics must be included in the 36-hour requirement.

Plan B. A minimum of 39 quarter hours must be earned in mathematics. Two graduate-only year-long sequence courses in mathematics must be included in the 39-hour requirement.

II. Cognate Areas:

A maximum of 9 quarter hours may be taken in a related area acceptable to the student's adviser.

A final written examination must be successfully completed by all Plan B candidates. In addition, an oral examination may be required at the option of the mathematics graduate faculty. Both a final written and a final oral examination must be successfully completed by all Plan A candidates. The oral examination will include a defense of thesis.

MASTER OF SCIENCE— Mathematics

An applicant for the M.S. degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution, and must have completed at least an undergraduate minor in mathematics. In some cases, the applicant may be required to complete additional undergraduate work.

At least one-half of the Master of Science degree program must be earned in courses in which enrollment is limited to graduate students.

Plan A, 45 Cr.; Plan B, 48 Cr.

I. Research: Min., Plan A, 9-12 Cr.; Plan B, 3 Cr.

ED 615 Introduction to Research, 3 Cr.

MATH 699 Thesis, 6-9 Cr. (Plan A only)

II. Major: Min., Plan A, 21 Cr.; Plan B, 27 Cr.

MATH 610, Recent Trends in Junior High School Mathematics, 3 Cr.

MATH 616, Teaching Geometry in the Secondary School, 3 Cr.

MATH 619, Teaching Algebra in the Secondary School, 3 Cr.

The remaining 12-18 credits in the major are

planned by the student and the mathematics adviser. Credits may be earned in mathematics, mathematics education, and computer science. The number of credits in each area is to be determined by the needs of the student.

- III. Professional Education: Min., Plan A or B, 9 Cr. Credits to be selected with approval of the professional education adviser.
- IV. Electives: Min., Plan A, 3-6 Cr.; Plan B, 9 Cr. Credits to be selected with the approval of the mathematics adviser.

MASTER OF SCIENCE: Mathematics — Junior High School Program

Plan A, 45 Cr.; Plan B, 48 Cr.

- I. Research: Min., Plan A, 9-15 Cr.; Plan B, 3-6 Cr.
ED 615 Introduction to Research, 3 Cr.
MATH 699 Thesis, 6-9 Cr. (Plan A only)
- II. Major: Min., Plan A, 18 Cr.; Plan B, 24 Cr.
Select course work in the mathematics major. The program is planned by the student and the mathematics adviser. Credits may be earned in mathematics, mathematics education, and computer science. The number of credits in each area is to be determined by the needs of the student.
- III. Professional Education: Min, Plan A or B, 9 Cr. Credits to be selected with approval of the professional education adviser.
- IV. Electives: Min., Plan A, 3-6 Cr.; Plan B, 9-12 Cr.

MATHEMATICS (MATH) COURSE DESCRIPTIONS

503. Computer-Integrated Mathematics Instruction. The use of the computer as a tool in the mathematics classroom as well as for teacher utilities. Topics include evaluation and selection of math education software, use of computers as educational tool, writing programs for classroom use, curriculum applications. Prereq.: MCS 267 or equivalent. (For Math Ed majors and minors only.) 3 Cr. W, S, SUM ALT.

515. Number Theory. Prime and composite integers. Diophantine analysis, number congruences, quadratic residues. Prereq.: 356 or consent of instructor. 3 Cr. W.

525. Contemporary Geometry. Vectors and transformations on the Euclidean plane, and their application to problem solving. Prereq.: high school geometry and 257. 3 Cr. W.

526. Advanced Geometry. Projective geometry from both a synthetic and an analytic point of view. Primitive forms, projectivities, and conics. Prereq.: 424 or 525. 3 Cr. W.

536. Complex Variables. The complex field, the theory of analytic functions, power series. Fundamental Theorem of Algebra. Prereq.: 245 or 265. 3 Cr. S ALT.

540. History of Mathematics. Historical survey of the development of mathematics. Prereq.: 241. 3 Cr. S, SUM ALT.

545. Introduction to Real Analysis I. Properties of the real number system, sequences and limits, con-

tinuity and differentiation. Topics include upper and lower bounds, the completeness axiom for real numbers, Cauchy sequences, the Bolzano Weierstrass property, the extreme value theorem, the intermediate value theorem, the mean value theorem, L'Hospital's rule and Taylor's theorem. Prereq.: 243, 257, 254. 3 Cr. F, W, S.

546. Introduction to Real Analysis II. Series, power series, uniform and pointwise convergence, Riemann integration and applications. Prereq.: 445-545, 4 Cr. W ALT, S.

547. Introduction to Real Analysis III. Riemann integral, derivatives, theorems of calculus, sequences and series of functions. Lebesgue integral. Prereq.: 546. 3 Cr. S ALT.

550. Teaching Problem Solving in Mathematics. Problem solving strategies, teaching for problem solving, the Math Lab, estimation, cooperative learning. For mathematics education majors/minors only. Prereq.: permission of instructor. 3 Cr. W, S, SUM ALT.

552. Topics in Mathematics for Secondary School Teachers. Number systems, sets, deduction, algebras, geometries, functions, probability, computers. The changing mathematics curriculum. 4 Cr. DEMAND.

555. Foundations of Mathematics. Operations on sets, relations, and functions, cardinal number, ordinal arithmetic, the axiom of choice, axiomatic theories. 3 Cr. SUM ALT.

557. Linear Algebra. Euclidean n -space, vector spaces, linear transformations. Prereq.: 356. 3 Cr. S ALT.

559. Recent Trends in Elementary School Mathematics. Modern approach to teaching arithmetic, teaching aids and devices, experimental work, recent research. 4 Cr. DEMAND.

560. Topology. Metric spaces, topological spaces, separation axioms, connectedness, compactness. Prereq.: 356 or 445. 3 Cr. S ALT.

570. Numerical Analysis I. Round-off error and computer arithmetic. Solutions of equations in one variable. Interpolation and polynomial approximation. Numerical integration and differentiation. Error analysis. Prereq.: 243 and either CSCI 270, 274 or permission of instructor. 3 Cr. F.

571. Numerical Analysis II. Continuation of 470-570. Direct and interactive solutions in linear algebra. Orthogonal polynomials, splines and least squares approximations. Error analysis. Prereq.: 470-570. 3 Cr. W ALT.

572. Numerical Analysis III. Continuation of 471-571. Solutions of nonlinear equations, initial value problems, boundary value problems, and partial differential equations. Prereq.: 471-571. 3 Cr. S ALT.

580. Topics in Mathematics. Study of topics in theoretical or applied mathematics. Prereq.: consent of instructor. (May be repeated to maximum of 6 Cr.) 3 Cr. S.

MATHEMATICS (MATH) COURSES FOR GRADUATE STUDENTS ONLY

610. Recent Trends in Junior High School Mathematics. Selected topics in junior high school mathematics: materials, approaches, diagnosis and remediation, research, and experimental programs. 3 Cr. SUM.

611. Teaching Mathematics in the Secondary School. Survey of mathematics curricular development, objectives and content of proposals for change in the mathematics curriculum, learning theory, issues and trends. 3 Cr. F ALT, SUM ALT.

616. Teaching Geometry in the Secondary School. Historical development, current issues and trends, curricular reform movements, experimental programs, research findings. 3 Cr. W ALT, SUM ALT.

619. Teaching Algebra in the Secondary School. Topics related to the teaching of algebra and related areas. Historical aspects, methodology, curricular developments; evaluation and research findings in algebra. 3 Cr. S ALT, SUM ALT.

624. Modern Geometry I. An overview of Euclidean and non-Euclidean geometries, and the fundamentals of synthetic projective geometry. Prereq.: one course in college level geometry. 3 Cr. F ALT, SUM ALT.

625. Modern Geometry II. Oriented toward transformational geometry. Topics for study include: Klein's Erlanger program and an analytic model of the real projective plane. Prereq.: 624 and a background in vector spaces, matrices. 3 Cr. W ALT, SUM ALT.

630. Modeling and Simulation I. A study of the construction of models which simulate real-time systems. Prereq.: STAT 543 or 537. 3 Cr. DEMAND.

631. Modeling and Simulation II. Advanced study of models which simulate real-time systems. Prereq.: 630. 3 Cr. DEMAND.

636. Complex Analysis I. The complex field, topology of the complex plane, analytic functions. 3 Cr. DEMAND.

637. Complex Analysis II. Complex integration theory. Prereq.: 636. 3 Cr. DEMAND.

638. Complex Analysis III. Complex series expansions, conformal mappings, Dirichlet's problem. Prereq.: 637. 3 Cr. DEMAND.

640. Numerical Solutions to Differential Equations. Numerical solutions to ordinary and partial differential equations. Stability, convergence and error analysis. Prereq.: 334, 570. 3 Cr. DEMAND.

641. Numerical Linear Algebra. Numerical methods involved in the solution of linear systems, generalized matrix inversion, the eigenvalue and eigenvector problems. Prereq.: 557, 570. 3 Cr. DEMAND.

643. Calculus for Secondary Teachers. Review of calculus involving limits, integration, differentiation of elementary functions. Cannot be used in the M.A. program or part of the 24 quarter hours of mathematics in the M.S. program. 4 Cr. DEMAND.

645. Metric Spaces for Analysis. Properties of metric spaces, normed Linear spaces, open and closed sets, limits, continuity, sequences, completeness, compactness, function spaces. Prereq.: 546. 3 Cr. DEMAND.

646. Introduction to Measure and Integration. Lebesgue measure, Lebesgue integral, bounded variation, LP spaces, product measures, Fubini Theorem. Prereq.: 645. 3 Cr. DEMAND.

647. Real Analysis. Generalized measure and integration, abstract measure spaces. Prereq.: 646. 3 Cr. DEMAND.

656. Modern Algebraic Theory I. Groups, normal subgroups, solvable groups, Sylow theorems, direct

sums and finitely generated abelian groups, introduction to rings. Prereq.: 557. 3 Cr. DEMAND.

657. Modern Space Algebraic Theory II. Rings, ideals, localization, principal rings, polynomials, irreducibility, Noetherian rings, modules, fields, field extensions. Prereq.: 656. 3 Cr. DEMAND.

658. Modern Algebraic Theory III. Roots of polynomials, splitting fields, algebraic closure, Galois theory, solvability by radicals, finite fields, transcendence bases, selected topics from homological algebra. Prereq.: 657. 3 Cr. DEMAND.

660. Topology I. Topological spaces, product spaces, net and filters, compactness. Prereq.: 356. 3 Cr. DEMAND.

661. Topology II. Connectedness, separation axioms, metric spaces, completeness, comparison of topologies, function spaces. Prereq.: 660. 3 Cr. DEMAND.

662. Topology III. Topics from uniform spaces, topological groups and algebras. Prereq.: 661. 3 Cr. DEMAND.

680. Graduate Seminar. Reading, research and discussion of selected topics. Prereq.: consent of instructor. 1-3 Cr. DEMAND.

699. Thesis. 3-9 Cr. F, W, S, SUM.

STATISTICS (STAT) COURSE DESCRIPTIONS

521. Regression Analysis. Linear and multiple regression, model building with selection procedures, nonlinear estimation, analysis of covariance. Prereq.: 229. 3 Cr. F.

522. Design and Analysis of Experiments. Single and multiple analysis of variance and multiple comparisons procedures for fixed, mixed, and random effects designs, including completely randomized design, randomized complete block design, nest designs, and Latin square designs. Prereq.: 229. 3 Cr. W.

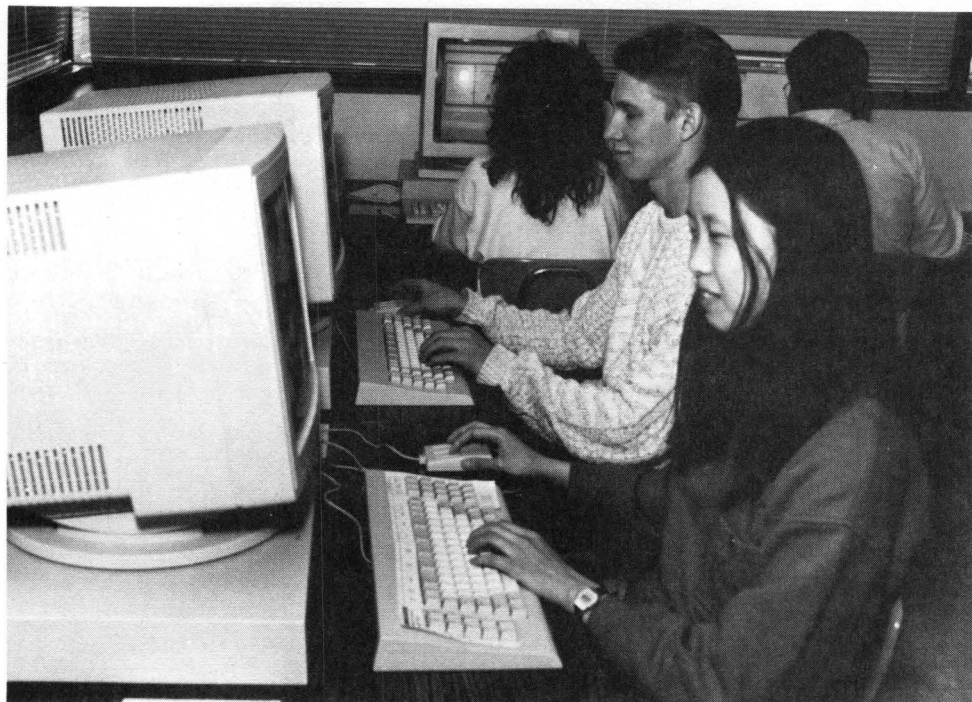
523. Applied Multivariate Statistical Methods. Topics include Hotelling's T^2 , MANOVA, principal components analysis, factor analysis, discriminant analysis, and cluster analysis. Prereq.: 431. 3 Cr. F.

529. Statistics and Probability for Teachers. Exploratory data analysis, probability, random variables, measures of centrality and variability, sampling distributions, confidence interval estimation, hypothesis testing using parametric and nonparametric methods. Prereq.: MATH 243. 3 Cr. F, S, SUM.

532. Sample Survey Design. An introduction to sample survey design with an emphasis on practical applications. Topics include questionnaire construction, determining the sample size, simple, stratified, cluster, ratio, regression, and systematic sampling techniques. Prereq.: 229. 3 Cr. W.

535. Introduction to Nonparametric Statistics. One and two sample location problems, the two dispersion problem, the one and two way layouts, the independence problem, and selected problems in regression. Prereq.: 229. 3 Cr. S.

537. Probability and Statistics I. Axiomatic development of probability, continuous and discrete sample spaces, random variables, probability density functions, Bayes' Theorem. Prereq.: 243, 254. 3 Cr. F, SUM ALT.



538. Probability and Statistics II. Distributions of functions of random variables, multi-dimensional random variables, t and f distributions, moment generating functions. Prereq.: 437, MATH 265 or MATH 245. 3 Cr. W.

539. Probability and Statistics III. Point estimation and sufficient statistics, maximum likelihood estimation of parameters, statistical hypotheses, statistical tests. Prereq.: 538. 3 Cr. S.

543. Introduction to Probability Models. Probability theory, random variables, Markov Chains, Poisson Process, queuing theory. Prereq.: 243. 3 Cr. DEMAND.

590. Topics in Statistics. Study of modern topics in theoretical or applied statistics. Prereq.: consent of instructor. 4 Cr. S.

STATISTICS (STAT) COURSES FOR GRADUATE STUDENTS ONLY

637. Mathematical Statistics I. Distributions of discrete and continuous random variables, conditional probability and independence, special probability distributions, methods for obtaining distributions of functions of random variables. Prereq.: MATH 265. 3 Cr. F ALT.

638. Mathematical Statistics II. Limiting distributions, interval and point estimation, sufficient statistics, hypothesis testing. Prereq.: 637. 3 Cr. W ALT.

639. Mathematical Statistics III. Further topics in estimation and hypothesis testing, nonparametric methods, categorical data analysis, linear models, topics from multivariate statistics. Prereq.: 638. 3 Cr. S ALT.

Minority Studies (MINS)

B-120A EDUCATION BUILDING/255-3036 or 255-4928

Director: Robert C. Johnson

The Minority Studies program is designed for students who desire to complement their course of study with an understanding and examination of American racial and ethnic groups, namely, Black Americans, Hispanics, Asian Americans, and Native Americans. It provides insight into the history, contributions, social/cultural development, intellectual expression, and present circumstances of these various groups in American society.

The department does not currently offer a graduate major.

COURSE DESCRIPTION

550. Minorities in Latin America. An investigation of the position of minorities in contemporary Latin America, principally Afro-Americans and Amerindians, utilizing a comparative and interdisciplinary approach. 4 Cr. DEMAND.

Music (MUS, MUSM, MUSP, MUSE)**238 PERFORMING ARTS CENTER/255-3223****Chairperson:** Kenton Frohrip**Graduate Faculty:** Allen, Bertrand, Echols, Ernest, Flom, Frohrip, Fuller, Givens, Gyllstrom, J. Johnson, Layne, Moore, Schrader, Smale, Wilhite

St. Cloud State University is accredited by the National Association of Schools of Music.

MASTER OF MUSIC**Music Education Emphasis**

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution, must have completed at least an undergraduate minor in music, and must meet the admission requirements of the Office of Graduate Studies. When an applicant holds a minor in music, undergraduate course work will be required to bring the student to a major program level. Acceptance into a graduate program is determined by musical knowledge, experience and performance.

At least one-half of the Master of Music degree program must be earned in courses in which enrollment is limited to graduate students.

This program is designed for both full-time and part-time students. Full-time students must expect to complete part of their course load in evening classes.

Plan A, 45 Cr.; Plan B, 48 Cr.

I. Research: Min., Plan A, 9-12 Cr.; Plan B, 3-6 Cr.

MUS 602 Introduction to Research in Music,
3 Cr. and/or

MUS 697 Starred Papers, 3 Cr. (Plan B only)

MUS 698 Creative Work, 6-9 Cr. (Plan A only)

OR

MUS 699 Thesis, 6-9 Cr. (Plan A only)

3 Cr. electives in research optional (Plan B only)

II. Major: Min., Plan A, 18 Cr.; Plan B, 24 Cr.

Prescribed:

MUS 604 Analytical Techniques, 3 Cr.

Applied Music (consent of adviser), 3 Cr.

Music Literature (to be selected from MUS

611, 612, 613, 614, 615, 616), 6 Cr.

MUS 608 Curriculum Development, 3 Cr.

Electives: Min., Plan A, 3 Cr.; Plan B, 9 Cr.

III. Professional Education: Min., 9 Cr.

Credits to be selected with approval of the professional education adviser.

IV. Electives: Min., Plan A, 3-9 Cr.; Plan B, 9-12 Cr.

Piano Pedagogy Emphasis**Plan A Only, 46 Cr.**

I. Research: Min., 9 Cr.

*MUS 602 Introduction to Research in Music,
3 Cr.

*MUS 698 Creative Work, 6-9 Cr.

OR

*MUS 699 Thesis, 6-9 Cr.

II. Major: Min., 34 Cr.

*MUS 604 Analytical Techniques, 3 Cr.

*Music Literature (to be selected from MUS 611,

612, 613, 614, 615, 616), 6 Cr.

MUS 632 Private Lessons: Piano (3 quarters),
9 Cr.

MUS 652 Chamber Music Performance, 1 Cr.

MUS 680 Graduate Seminar: Research in Piano
Pedagogy, 3 Cr.

MUSM 530 Piano Pedagogy, Elementary Level,
3 Cr.

MUSM 531 Piano Pedagogy, Intermediate Level,
3 Cr.

MUSM 532 Piano Pedagogy, Advanced Level,
3 Cr.

MUSM 536 Piano Literature, 3 Cr.

(Students who have completed MUSM 430,
MUSM 431,

MUSM 432, MUSM 436, or the equivalent
should substitute music elective.) Music History,
4-6 Cr. Music Theory, 4-6 Cr. A total of 10 Cr. of
music history and music theory.

III. Electives, Min. 3 Cr.

**Conducting and
Literature Emphasis**

An applicant for this degree must have completed an undergraduate degree in music or have passed an equivalency examination and must meet the admission requirements of the Office of Graduate and Continuing Studies. When an applicant holds a minor in music, undergraduate course work will be required to bring the student to a major program level. Acceptance into a graduate program is determined by musical knowledge, experience and performance.

At least one-half of the Master of Music degree program must be earned in courses in which enrollment is limited to graduate students.

This program is designed for both full-time and part-time students. Full-time students must expect to complete part of their course load in evening classes.

Plan A Only, 48 Cr.

I. Research: Min., 9 Cr.

*MUS 602, Introduction to Research in Music,
3 Cr.

MUS 698, Creative Project, 6-9 Cr.

OR

MUS 699, Thesis, 6-9 Cr.

II. Major: Min., 23 Cr.

MUSM 508, Score Preparation, 3 Cr.

MUSM 511, History of Wind Band Literature,
3 Cr.

OR

MUSM 512, Choral Literature, 3 Cr.

OR

MUSM 513, Orchestra Literature, 3 Cr.

*MUS 604, Analytical Techniques, 3 Cr.

MUS 610, Conducting, 4 Cr. (2 quarters, 2 Cr.
each)

Applied or Pedagogy study, 4 Cr.

*Music Literature (to be selected from MUS 611, 612, 613, 614, 615, 616), 6 Cr.

III. Supporting Program: Min. 8 Cr.

Graduate level music courses in History/Literature, Theory/Composition, Music Education or Applied/Pedagogy areas.

IV. Electives: Min. 8 Cr.

Any advisor-approved discipline offering graduate level courses at SCSU or by transfer from other accredited institutions.

MUSIC MUSICIANSHIP (MUSM) PERMANENT WORKSHOP DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to page 26 to determine the maximum number of workshop credits which may be applied to graduate degrees.

527. Workshop: Creative Movement for Musicians. Movement, improvisation, stage deportment, character development and study, and audition techniques for musicians. This course is designed for current and prospective BA, BS, BM and graduate music students, as well as school music educators. 3 Cr. DEMAND.

570. Workshop: Music Instrument Repair. Consideration of instrument care, upkeep, and minor repair. 2 Cr. DEMAND.

574. Workshop: Woodwind Instrument Literature. Explore pedagogical, solo and chamber literature for woodwinds in progressive order of difficulty. Prereq.: MUSM 475 or 575. 2 Cr. DEMAND.

576. Workshop: Choral Development. A workshop designed for choral directors. Emphasis will be placed on development and maintenance of an effective choral program at the senior high level. 2 Cr. DEMAND.

577. International Voice Skills in Choral Conducting and General Music Workshop. This workshop is practical, hands-on, and oriented to solving real problems of choral conducting and classroom teaching. Yet it offers understanding which undergirds the practical. 3 Cr. SUM.

579. Workshop: Teaching Total Percussion. A course designed to explore recent trends in percussion education through a comprehensive integration of all the standard percussion instruments. Snare drum, mallets, tympani, drum set and trap instruments are included since students (elementary through senior high) are called upon to perform on those instruments in bands and orchestra. Ensemble, literature and curriculum are also included. 2 Cr. DEMAND.

580. Workshop: Flute Pedagogy. Intended primarily for public school music teachers whose major performing instrument is not flute. Deals with principles of tone production, the systematic expansion of technique to the complete practical range of the flute, and methods and literature. 2 Cr. DEMAND.

581. Workshop: Oboe and English Horn Pedagogy. Examination of pedagogical and reed adjustment principles and materials for the oboe and English horn which determine performance. Designed for prospective or practicing teachers of music in schools or private studios. 2 Cr. DEMAND.

582. Workshop: Clarinet Pedagogy. Students will participate in "hands on" playing of the clarinet. Students should be able to play the chromatic scale from Low E to G4 and sight read common combinations of rhythms using whole notes through sixteenths. Emphasis will be upon tone production, tonguing styles and refinement and extension of technique. Students will provide their own instrument. 2 Cr. DEMAND.

583. Workshop: Saxophone Pedagogy. Students will participate in "hands on" playing of the saxophone and should be able to play the chromatic scale throughout the practical range and sight read common combinations of rhythms using whole notes through sixteenths, tone production, vibrato, technical refinement and extension and articulation styles will be emphasized together with appropriate literature and materials. 2 Cr. DEMAND.

584. Workshop: Bassoon Pedagogy. Students will participate in "hands on" playing of the bassoon. Students should be able to play the chromatic scale throughout practical range and sight read common rhythmic combinations using whole notes through sixteenths, reed adjustment, tone production, tonguing styles and appropriate literature will be emphasized. 2 Cr. DEMAND.

585. Workshop: Trumpet Pedagogy. Methods and materials for teaching trumpet. 2 Cr. DEMAND.

586. Workshop: French Horn Pedagogy. Methods and materials for teaching French Horn. 2 Cr. DEMAND.

587. Workshop: Trombone/Baritone Pedagogy. A study of the history, technique, teaching principles, teaching and performance literature and equipment considerations for trombone and baritone horn or euphonium. 2 Cr. DEMAND.

589. Workshop: Music Education in Minnesota. Participation in clinic and workshop sessions at Minnesota Music Educator's Association Mid-Winter Clinic. May be repeated. Max. of 3 Cr. can be used toward a degree program. 1 Cr. W.

MUSIC MUSICIANSHIP (MUSM) COURSE DESCRIPTIONS

503. Survey of Music History. A survey of music history from the Medieval period to the present. 3 Cr. F.

504. Electronic Music. The study and utilization of electronic sounds, techniques and procedures in contemporary music. 3 Cr. DEMAND.

508. Score Preparation. Score preparation for secondary music education performance. 3 Cr. DEMAND.

511. History of Wind Band Literature. Study of the historical, social and stylistic trends unique to the wind band and its music. Emphasis on educational resources and programming ideas for school bands. Prereq.: 223. 3 Cr. DEMAND.

512. Choral Literature. A study of representative choral literature of different styles and eras, and a survey of choral literature practically designed for usage by secondary school and church choir directors. 3 Cr. DEMAND.

513. Orchestra Literature. Major orchestral works ranging from Early Baroque to 20th century, with emphasis on formal structure (orchestration), style and background. 3 Cr. DEMAND.

518. Hymnology. A study of the function of hymns, the historical development of the hymn, and the evaluation of texts and tunes. Prereq.: MUSM 221, 222. 3 Cr. F ALT.

519. Sacred Music Seminar. Current trends in church music and administration of church music programs. 3 Cr. W ALT.

522. Multicultural Music for Educators. Comparative study of world music systems, including art and folk music of non-Western cultures, and folk music of selected western cultures. Includes direct application to classroom teaching. 3 Cr. F.

523. Jazz Harmony. A comprehensive study of jazz harmony and its application in 20th century practices. Prereq.: MUSM 205, 215, or permission of instructor. 2 Cr. F.

530. Piano Pedagogy: Elementary Level. Basic problems and techniques in teaching piano to the beginner. Survey of materials and procedures. 3 Cr. F ALT.

531. Piano Pedagogy: Intermediate Level. Basic problems and techniques in teaching piano to the intermediate student. Survey of materials and procedures. 3 Cr. W ALT.

532. Piano Pedagogy: Advanced Level. Basic problems and techniques in teaching piano to the advanced student. Survey of materials and procedures. 3 Cr. S ALT.

536. Piano Literature. A historical and stylistic presentation of piano literature suitable for the concert hall, from the Baroque to the present. 3 Cr. S ALT.

537. Organ Literature. Historical survey of music composed for the organ. Prereq.: MUSM 221, 222. 3 Cr. W ALT.

538. Keyboard Accompanying. Insight into the art of piano accompaniment through discussion and actual performance of representative works. Permission of instructor. 2 Cr. S ALT.

542. Voice Pedagogy. Basic problems and techniques in the teaching of voice and chorus. Survey of procedures and materials. 3 Cr. W ALT.

550. Double Reed Construction. The construction of reeds for oboe, bassoon, and English horn, with attention to varying shapes and facings, intonation problems, tone procurement and adjustment of reeds to fit the individual and instrument. 3 Cr. DEMAND.

556. Choral Arranging. Principles and devices in arranging for choral groups of all types, sizes and degrees of development. 3 Cr. DEMAND.

558. Instrumental Arranging. Principles and devices in arranging for instrumental groups of all types, sizes, and degrees of development. 3 Cr. DEMAND.

562. Brass Pedagogy. Basic pedagogical problems and techniques of each brass instrument. Methods and materials for teaching brass instruments. 3 Cr. DEMAND.

564. Stringed Instrument Pedagogy. Special projects; special techniques of bowing, position work, and artistic skills; survey of solo materials. 3 Cr. DEMAND.

567. Church Music History. Study of church music throughout history with special emphasis on liturgical music. 3 Cr. F ALT.

568. Jazz Improvisation. A multi-level experience in improvisation in the jazz style for all instruments. Prereq.: Permission of the instructor. May be repeated to max. of 8 Cr. 2 Cr. DEMAND.

569. Jazz Arranging. Application of practical and theoretical harmony to jazz style and scoring for jazz ensembles. Prereq.: MUSM 205. 4 Cr. DEMAND.

571. Seminar: (topical). Selected musicianship topics. May be repeated to a max. of 9 Cr. 1-4 Cr. DEMAND.

MUSIC PERFORMANCE (MUSP)

COURSE DESCRIPTIONS

(Private lessons at graduate level are 1 hour.)

554. Private Lessons: Secondary Instrument. Prereq.: consent of instructor. May be repeated to max. of 4 Cr. 1 Cr. F, W, S.

MUSIC EDUCATION (MUSE)

COURSE DESCRIPTIONS

522. Psychology of Music. Function of musical aspects relative to the development of skills, maturity, and testing. 3 Cr. DEMAND.

524. Music Education Seminar. Research and discussion of latest developments and innovations as well as analysis and suggestions for resolution of individual teaching programs. 3 Cr. DEMAND.

526. School Music Administration. The practical and philosophical principles relative to the administrations of a music program (K-12). 3 Cr. DEMAND.

MUSIC COURSES (MUS) FOR GRADUATE STUDENTS ONLY

602. Introduction to Research in Music. Materials, techniques, and procedures for research in music. 3 Cr. W.

603. Opera Theatre. Performance of scenes, one-acts and full-scale operas. Prereq.: consent of instructor. 1-3 Cr. F, W, S, SUM.

604. Analytical Techniques. Harmonic, melodic, and structural analysis of music in various periods with emphasis on those aspects specifically needed by students. 3 Cr. ALT.

608. Curriculum Development. A philosophical and historical study of the problems of music curricula development with emphasis on current practices. 3 Cr. ALT.

610. Conducting. Analysis, preparation, rehearsal and performance of selected compositions with the band, orchestra or choir. Prereq.: consent of instructor. May be repeated. 2 Cr. DEMAND.

611. Music of the Medieval and Renaissance Periods. Studies in Medieval and Renaissance music. 3 Cr. ALT.

- 612. Music of the Baroque Period.** Studies in music from 1600 to 1750. 3 Cr. ALT.
- 613. Music of the Classical Period.** Studies in music from 1750 to 1830. 3 Cr. ALT.
- 614. Music of the Nineteenth Century.** Studies in nineteenth-century music. 3 Cr. DEMAND.
- 615. Music of the Twentieth Century.** Studies in twentieth-century music. 3 Cr. DEMAND.
- 616. Music of the United States.** Studies in the music of the United States. 3 Cr. ALT.
- 631. Private Lessons: Piano.** Prereq.: approval of instructor. May be repeated to max. of 9 Cr. 1 Cr. F, W, S.
- 632. Private Lessons: Piano.** One 1-hour lesson per week and studio class. Study of literature, techniques, and interpretation. Prereq.: permission of instructor. May be repeated for additional credits to a max. of 27 Cr. Only 9 Cr. applicable to degree program. 3 Cr. F, W, S.
- 633. Private Lessons: Organ.** Prereq.: approval of instructor. May be repeated to max. of 9 Cr. 1 Cr. F, W, S.
- 635. Private Lessons: Voice.** Prereq.: approval of instructor. May be repeated to max. of 9 Cr. 1 Cr. F, W, S.
- 636. Private Lessons: Voice.** Prereq.: approval of instructor. 3 Cr. F, W, S, SUM.
- 641. Private Lessons: Brass Instruments.** Prereq.: approval of instructor. May be repeated to max. of 9

Cr. 1 Cr. F, W, S.

- 643. Private Lessons: Stringed Instruments.** Prereq.: approval of instructor. May be repeated to max. of 9 Cr. 1 Cr. F, W, S.
- 645. Private Lessons: Woodwind Instruments.** Prereq.: approval of instructor. May be repeated to max. of 9 Cr. 1 Cr. F, W, S.
- 647. Private Lessons: Percussion Instruments.** Prereq.: approval of instructor. May be repeated to max. of 9 Cr. 1 Cr. F, W, S.
- 652. Chamber Music Performance.** Study and performance of chamber music. Prereq.: consent of adviser. May be repeated to max. of 2 Cr. 1 Cr. F, W, S.
- 654. Major Performing Organization.** Participation in an assigned sectional rehearsal of the band, choir, or orchestra. Prereq.: consent of instructor. May be repeated to max. of 2 Cr. 1 Cr. F, W, S.
- 680. Graduate Seminar: Research in Piano Pedagogy.** Student research projects at all levels of piano pedagogy. Lectures on tests, periodicals, and other research sources will be included. Prereq.: MUSM 530, 531. 3 Cr. ALT.
- 697. Starred Papers.** Starred papers, research projects in music. Permission of adviser and instructor. 3 Cr. F, W, S, SUM.
- 698. Creative Work.** 6-9 Cr. F, W, S, SUM.
- 699. Thesis.** 6-9 Cr. F, W, S, SUM.

Philosophy (PHIL)

123 BROWN HALL/255-2234

Interim Chairperson: David Boyer

Graduate Faculty: M. Anderson, Bahde, Boyer, Corliss, Dienhart, Gill, Hartz, C. A. Johnson, A. Phillips, Steup, Vania, White, Yoos

The Department of Philosophy has three main functions: (1) to provide all students with an introduction to the ideas, problems, and methods of philosophers; (2) to give courses serving the particular needs of students who are majoring or minoring in other fields; (3) to offer major and minor programs for those with special interests in one or more areas of philosophy, such as philosophy of science, social philosophy, ethics, philosophy of religion, and logic.

The department does not currently offer a graduate major. Service courses for other graduate programs are offered primarily in the daytime schedule, PHIL. 555 and 560 are evening courses.

COURSE DESCRIPTIONS

510-529. Special Studies. Seminar for intensive study of a particular philosopher (as announced in the class schedule), or of the philosophical problems in a special discipline, such as history or biology or behavioral sciences. 2-4 Cr. DEMAND.

531. Philosophy of Art. A general introduction of philosophical questions relating to the fine arts. 4 Cr. S ALT.

532. Film Aesthetics. An introduction to motion

pictures as an art form and a critical examination of various theories of film. Special attention to: Russian Theories of montage, the Auteur theory, and the realist thesis. 4 Cr. DEMAND.

533. Philosophy of History. The nature of historical explanation, historicism, objectivity, and meaning of history. Prereq.: 260 or consent of instructor. 4 Cr. DEMAND.

542. History of American Philosophical Thought. The development of American philosophy from its beginnings: puritanism, transcendentalism, idealism, pragmatism, realism, and contemporary analysis. 4 Cr. F ALT.

555. Professional Ethics. Examines the ethical foundations of professions and discusses negotiation strategies that will enable students to cope more effectively with ethical issues in their professional life. 4 Cr. S.

560. Philosophy for Children. The nature of philosophy as practiced by children and adults. Discussion-based pedagogy in philosophy using children's literature and films. Practice sessions leading discussions. S/U only. 3 Cr. W ALT.

584. Philosophy of Law and Punishment. Examines fundamental presuppositions of the legal system, e.g., why should we obey the laws? Why are we justified in punishing people who break laws? Also examines such controversial issues as civil disobedience, the right to privacy, the nature of justice, etc. 4 Cr. F, W, S.



Physical Education (PE), Recreation (REC), and Sport Science (SS)

227 HALENBECK HALL/255-2155

Chairperson: Robert Waxlax

Graduate Faculty: Bacharach, Brink, Buckley, Collins, Kelly, Kurtz, Morohoshi, Nearing, Sheehan, Street, Waxlax, Whitlock

MASTER OF SCIENCE— Physical Education

Admission to the graduate program in physical education requires completion of an undergraduate minor or equivalent of at least 36 quarter hours in physical education. In some cases, the applicant may be required to complete additional undergraduate work even though a major or minor may have been completed.

A minimum of 24 credits in physical education must be taken. Some credits in fields related to physical education also will be accepted with consent of adviser. At least one-half of the minimum requirements for the Master of Science degree program in physical education are required to be earned in courses in which enrollment is limited to graduate students.

Under Plan B, candidates are required to write a starred paper in conjunction with a graduate physical education course and shall take a final oral examination over the starred paper. The paper shall be a detailed study and shall follow the style manual of the Graduate School available in the graduate studies office. In addition, a final written comprehensive examination is required.

This program is designed for both full-time and part-time students. Full-time students can be expected to complete part of their course load in evening classes. The part-time student may complete the program through regular evening instruction and/or through summer quarter attendance.

Plan A, 45 Cr.; Plan B, 48 Cr.

I. Research: Min., Plan A, 9 Cr.; Plan B, 3 Cr.

PESS 601 Research Methods in Physical Education, 3 Cr.

PESS 699 Thesis, 6-9 Cr. (Plan A only)

II. Major: Min., Plan A, 18 Cr.; Plan B, 24 Cr.

Selected course work in physical education.

Consent of adviser.

III. Professional Education: Min., Plan A or B, 9 Cr.

Consent of secondary education adviser.

IV. General Electives: Min., Plan A, 3-6 Cr.; Plan B, 12 Cr.

Prescribed: APSY 678, Introduction to Graduate Statistics, 3 Cr. Electives from related fields, general studies core or courses in the major. Consent of adviser.

PERMANENT WORKSHOP DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to Academic Regulations under the "Workshop Limitation" section to determine the maximum number of workshop credits which may be applied to graduate degrees.

PHYSICAL EDUCATION (PE) PERMANENT WORKSHOP DESCRIPTIONS

522. Workshop: Appropriate Games and Activities for Teaching Basic Skills. Workshop for elementary/physical education teachers. The theme is "Games with a purpose." 1 Cr. W.

SPORT SCIENCE (SS) PERMANENT WORKSHOP DESCRIPTIONS

525. Workshop in Track and Field. A workshop using a learn-by-doing approach to track and field activities. Special emphasis will be placed on biomechanical analysis of events as well as coaching and officials certification. 2 Cr. SUM.

PHYSICAL EDUCATION COURSE DESCRIPTIONS

511. Organization and Development of Physical Education in the Elementary School. Principles, problems, and procedures. Open to 4-year elementary graduates. 3 Cr. F, W.

512. History and Principles of Physical Education. Concepts and philosophy underlying physical education. Role of physical education in life of ancient societies to present. 3 Cr. F, W.

530. Seminar: Topical. Selected topics in physical education. May be repeated to max. of 9 Cr. 1-4 Cr. DEMAND.

535. Theory of Dance. History, theory, and philosophy underlying dance from primitive times to the present. Prereq.: permission of instructor. 3 Cr. DEMAND.

539. Social Skills and Initiative Activities. Adventure games, initiative problems, and trust activities which foster cooperative social skills and attitudes in children and youth. Students will participate directly in the learning and development of these group activities. 2 Cr. S, SUM.

545. Computer Applications in Physical Education and Recreation. Applications of computer technology as it relates to the disciplines of physical education and recreation. 3 Cr. F, S, SUM.

551. Perspectives for Exceptional Populations. Overview of the concepts of developmental/adapted physical education in the school settings. Emphasis will be placed upon PL 94-142 and Section 504 of the Rehabilitation Act, least restrictive environment, mainstreaming techniques, and those disabling conditions most prevalent in regular physical education classes. 3 Cr. F, W.

553. Organization and Administration of Secondary Level Physical Education. Methods of presentation and adaptation of materials on secondary level for instructional intramural, and special events programs. 3 Cr. F, S.

560. Motor Development. A study of normal and abnormal motor development and its principles emphasizing mature and immature locomotor and nonlocomotor patterns. 3 Cr. ALT.

561. Appraisal and Assessment of Motor Performance. Techniques and procedures for appraising and assessing motor performances. Emphasis will be placed upon the most valid and reliable evaluative tools utilized in assessing exceptional populations and on the Individualized Educational Program (IEP) preparation. 3 Cr. ALT.

562. Movement Opportunities and Teaching Techniques for Exceptional Populations I. Curricula programming, teaching techniques, and adaptations and/or modifications designed specifically to meet the unique physical needs of mentally handicapped individuals and emotionally disturbed individuals. 3 Cr. ALT.

563. Movement Opportunities and Teaching Techniques for Exceptional Populations II. Curricula programming, teaching techniques, and adaptations and/or modifications designed specifically to meet the unique needs of physically handicapped individuals and other health impaired individuals. 3 Cr. ALT.

564. Developmental/Adapted Physical Education Practicum I. Application of theoretical knowledges through hands-on experiences with exceptional students—mentally retarded, emotionally disturbed, learning disabled, physically handicapped, visually handicapped, hearing impaired, and/or other special needs students—both in regular and self-contained physical education settings. 2 Cr. F, W, S, SUM.

565. Developmental/Adapted Physical Education Practicum II. Application of theoretical knowledges through hands-on experiences with exceptional students—mentally retarded, emotionally disturbed, learning disabled, physically handicapped, visually handicapped, hearing impaired, and/or other special needs students—both in regular and self-contained physical education settings. 2 Cr. F, W, S, SUM.

566. Developmental/Adapted Physical Education Practicum III. Advanced coverage of the information and techniques from 565. 2 Cr. F, W, S, SUM.

568. Sport Opportunities for Exceptional Populations. Sport opportunities available for exceptional populations including recreational sports and established sport organizations and/or associations and their classification of participants and rules and regulations governing their activities. 3 Cr. S.

PHYSICAL EDUCATION AND SPORT SCIENCE (PESS) COURSE DESCRIPTIONS

523. Basic Electrocardiography. A study and measurement of the electrical activity associated with cardiac function. Prereq.: PESS 349 or permission of instructor. 3 Cr. S.

RECREATION COURSE DESCRIPTIONS

515. Recreation Administration I. This course includes subjects necessary to the daily management of departmental operations. Topics to be covered are departmental philosophies, policies and procedures, personnel, activity registration and scheduling, management styles, risk management and liability. Prereq.: 233. 3 Cr. DEMAND.

516. Recreation Administration II. This course includes subjects necessary to the daily management of departmental operations. Topics to be covered are executive and financial accountability, bonds and taxes, budgeting, marketing, promotion, public relations and program life cycle. Prereq.: 233. 3 Cr. DEMAND.

520. Recreation/Sports Law and Risk Management. An understanding of the structures and processes of the U.S. judicial system as it affects the delivery of recreation and leisure services. Emphasis is on practical application of principles. Prereq.: 415 and 416. 3 Cr. DEMAND.

541. Outdoor Education. Development in outdoor education; instructional principles of outing activities and outdoor education program materials and methods. 3 Cr. DEMAND.

545. Computer Applications in Physical Education and Recreation. Applications of computer technology as it relates to the disciplines of physical education and recreation. 3 Cr. F, S, SUM.

SPORT SCIENCE

COURSE DESCRIPTIONS

508. Philosophy of Sport. Objectives/values of sport in a contemporary society. Personal philosophy of sport. 3 Cr. F, S, SUM.

556. Administration of Interscholastic Athletics. History and objectives, national, state and local control, and contemporary challenges in interscholastic athletic programs. 3 Cr. F, W, S, SUM.

591. Psychology of Sport. Examining sport in terms of motivation, performance, and the relationship between sport and human development. 3 Cr. W.

PHYSICAL EDUCATION (PE)

COURSES FOR GRADUATE

STUDENTS ONLY

631. Seminar in Physical Education. Problems of teachers engaged in teaching or supervising physical education in the public schools. 3 Cr. DEMAND.

652. Test and Measurements in Physical Education. Critical study of tests and measurements available in physical education; methods of constructing and evaluating new tests and measurements. 3 Cr. SUM.

660. Administration of Physical Education. Facilities, equipment, space, time, costs, etc. involved in promotion of a physical education program. 3 Cr. DEMAND.

PHYSICAL EDUCATION AND SPORT SCIENCE (PESS) COURSES FOR GRADUATE STUDENTS ONLY

601. Research Methods in Physical Education and Sport Science. Selection of research topics, searching literature, test construction, descriptive methods, laboratory research, application of statistical procedures, formal writing, experimental design. 3 Cr. DEMAND.

607. Principles of Movement. Scientific principles that form the basis for developing a complete concept and understanding of human movements. 3 Cr. DEMAND.

610. Comparative Physical Education and Sport. Physical education and sport in other parts of the world with emphasis on methods of instruction and coaching, objectives and types of activities and sports. Selected countries are studied in depth. 3 Cr. DEMAND.

615. Human Movement: A Neurological Approach. The neurological foundations of movement and abnormal movement patterns as a result of trauma

and disease upon the nervous system. 3 Cr. SUM.

620. Seminar in Physiology of Exercise. A discussion and evaluation of current research and conditioning trends in exercise physiology. Prereq.: 349 or 449. 3 Cr. DEMAND.

622. Exercise and Fitness Prescription. Application of the information obtained in Laboratory Techniques (PE 625). Students will learn how to prescribe programs that will promote "wellness" and lead to healthier lifestyles. Prereq.: 449 and/or 620 and 621. 3 Cr. DEMAND.

624. Internship in Exercise Physiology and Cardiac Rehabilitation. Course is designed to give the student a Phase I and Phase II Hospital or Clinic Cardiac Rehabilitation experience. Prereq.: PE 620, 621 and 622. 3-12 Cr. DEMAND.

625. Laboratory Techniques in Exercise and Sport Sciences I. The study of laboratory techniques in exercise physiology and biomechanics for the advanced exercise and sport sciences student. Prereq.: 349 or 607 and 449 or 620, cardiopulmonary resuscitation certification. 4 Cr. F.

626. Laboratory Techniques in Exercise and Sport Sciences II. The study of laboratory techniques in exercise physiology and biomechanics for the advanced exercise and sport sciences student. Prereq.: 349 or 607 and 449 or 620, cardiopulmonary resuscitation certification. 4 Cr. W.

633. Readings and Research in Physical Education and Sport Science. 1-4 Cr. DEMAND.

661. Planning Physical Education and Sport Facilities. Principles, terminology, and standards for planning construction, use, and maintenance of facilities. 3 Cr. DEMAND.

699. Thesis. 6-9 Cr. F, W, S, SUM.

SPORT SCIENCE (SS) COURSES

FOR GRADUATE STUDENTS ONLY

609. Sport and Society. The inter-relationship of sports and athletics with other aspects of culture. Emphasis on the twentieth century. Prereq.: 412-512 or consent of instructor. 3 Cr. DEMAND.

640. Law and Sport. Provide insight into the development and implementation of sound policies, procedures, and safety regulations as the law pertains to athletics and recreational sports. 3 Cr. DEMAND.

654. Advanced Theory of Competitive Athletics. Practical problems associated with coaching and training a competitive athlete through high school and college years. No one sport will be stressed. 3 Cr. SUM.

660. Administration of Intercollegiate Athletics. Facilities, equipment, space, time, costs, etc. involved in promotion of an intercollegiate athletic program. 3 Cr. DEMAND.

680. Internship in Athletic Administration. On site administrative internship in an athletic and/or recreational sports setting under the cooperative supervision of an administrator and university supervisor. Prereq.: 640 and 660, or equivalent. 6-9 Cr. DEMAND.



Physics (PHYS), Astronomy (ASTR), and Engineering Science (ENGR)

324 MATHEMATICS AND SCIENCE CENTER/255-2011

Chairperson: David Jerde

Graduate Faculty: Dalton, Eckroth, Garrity, Harlander, Kalia, Lesikar, McWilliams, Nook, W. Pou, Schoenberger, Trummel

The department does not currently offer a graduate program. Service courses for other graduate programs are offered primarily in the daytime schedule, although some classes may be offered in summer quarter.

PHYSICS (PHYS)

COURSE DESCRIPTIONS

520. Seminar. Lectures, readings, discussion on selected topics. May be repeated. 1-4 Cr. DEMAND.

535. Laser Optics. Study of laser resonance cavities and beam properties. Laser beam delivery systems in applications. Lab. Prereq.: 333 or consent of instructor. 4 Cr. S.

536. Advanced and Fourier Optics. Multilayer dielectric films, Fresnel equations, Fourier optics applications. Lab. Prereq.: ENGR 338, PHYS 333, and MATH 334. 4 Cr. DEMAND.

542. Topics in Biomedical Engineering. Instrumentation, data analysis and phenomenological principles of clinical interest. Prereq.: EE 312; ENGR 334; MATH 334 or permission of instructor. 4 Cr. DEMAND.

546. Methods of Theoretical Physics. Lagrangian and Hamiltonian mechanics, tensor, and vector calculus methods applied to classical mechanics and electrodynamics. Prereq.: 236, MATH 334. 4 Cr. DEMAND.

556. Methods and Materials for Teaching Physical Science. Modern techniques and curricula for teaching secondary school physical science. 4 Cr. F, W.

ASTRONOMY (ASTR) PERMANENT WORKSHOP DESCRIPTION

This course is not intended to support a graduate degree program but is intended to respond to identified needs of post-baccalaureate students. Please refer to Academic Regulations under the "Workshop Limitation" section to determine the maximum number of workshop credits which may be applied to graduate degrees.

585. Observational Astronomy Workshop. Stars, constellations, planets and their motions, meteors, comets, galaxies will be observed using the Mathematics and Science Center Planetarium and Observatory. 1 Cr. SUM.

ASTRONOMY (ASTR)

COURSE DESCRIPTIONS

505. Introduction to Planetarium Operation. Use of the planetarium projector to illustrate important sky motions, appearance of the sky from different places on the Earth, seasonal passage, and bright constellations. Student will normally demonstrate competence by giving a show. Prereq.: 311 or equivalent or consent. 1 Cr. DEMAND.

506. Intermediate Planetarium Operation. Use of the planetarium projector to illustrate precession and most constellations. Important special effects projects. Constellation stories from around the world. Prereq.: 505. 2 Cr. DEMAND.

515. Small Telescope Observing Techniques. Optical and mechanical characteristics of small telescopes, charts and almanacs, telescope building, using telescopes to observe several kinds of astronomical objects. Night observing sessions required. Prereq.: 311 or 312, or PHYS 232 or 236. 4 Cr. DEMAND.

521. Seminar. Lectures, readings and/or discussions on selected topics in astronomy, astrophysics or planetary science. May be repeated. 1-4 Cr. DEMAND.

Political Science (POL)

315 BROWN HALL/255-2162

Chairperson: Janna Merrick

Graduate Faculty: R. Becker, Bodelson, Curtis, Frank, E. Jones, Kilkelly, Merrick, O. Schmidt, Williamson

Students interested in the area of Political Science must refer to the requirements of Social Science.

The graduate courses offered by the department provide one component of the Social Science major and provide service courses to other programs. Courses may be offered in either the daytime or evening schedule.

COURSE DESCRIPTIONS

511. The Presidency. Analysis of the American Presidency, with emphasis on Presidential selection, the leadership role of the Presidency, legislative involvement, relations with the media and the American public, the President as party leader, and internal relationships between members of the executive branch. Prereq.: 111. 4 Cr. DEMAND.

512. Legislative Process. Legislative functions, elections, process, influence on decision-making and problems. Prereq.: 111 or permission of instructor. 4 Cr. DEMAND.

513. Judicial Process. An examination of the structure, process and personnel of American courts with particular emphasis on the role of the United States Supreme Court in the American political system. Prereq.: 111. 4 Cr. F, S.

529. Seminar. Discussion, readings, and research under faculty guidance and supervision. Specific topic selected each time offered. Prereq.: permission of instructor. May be repeated. 4 Cr. F, W.

551. International Law. Survey of development and contemporary application of rules and principles of international law: maritime laws, ocean resources, space, and peaceful settlement of disputes between states. Prereq.: 251. 4 Cr. DEMAND.

552. United Nations and Regional Organization. Organization, authority, achievements and problems of the United Nations and of its auxiliary components. Prereq.: 251. 4 Cr. DEMAND.

563. American Political Thought. Study of the philosophy and theories which underlie the American system of democratic government and which have contributed to the formation of this system of government. Prereq.: 111. 4 Cr. DEMAND.

565. Modern Ideologies. A study of the ideologies of Facism, Communism, and ideas which have contributed to democratic thought. 4 Cr. S.

581. Administering Public Policy. Studies of initiation, content, administration, and impact of selected contemporary domestic government policies: transportation, consumerism, environment, poverty. Prereq.: 111. 4 Cr. ALT.

582. Public Personnel Administration. Personnel methods in the public sector including recruitment, employee performance, employee rights, collective bargaining, affirmative action and employee conduct. Prereq.: 111. 4 Cr. ALT.



583. Managing Local Governments. Practical problems of local administration including grant applications, personnel, budgeting, public works, and local renewal. Prereq.: 212 or 313 or consent of instructor. 4 Cr. ALT.

584. Public Budgeting. Studies budgeting in public agencies and emphasis on budget preparation and the politics of budget decisions. Stresses practical applications of budget making. Prereq.: 380; ECON 460 or 461. 4 Cr. ALT.

585. Administrative Law. Legal problems arising out of use of administrative agencies; administrative procedure; judicial relief against administrative action. Prereq.: 111. 4 Cr. W.

591. Constitutional Law. A study of Supreme Court decisions which interpret the federal system; powers of the legislative, executive, and judicial branches; the commerce clause; federal taxation powers. Prereq.: 111. 4 Cr. F. DEMAND.

592. The Courts and Civil Rights. Supreme Court decisions concerning discrimination, speech, religion, search and seizure, counsel and other individual rights. Prereq.: 111. 4 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

619. American Government Seminar. Research under faculty guidance and supervision. A specific topic selected each time offered. Prereq.: consent of instructor. May be repeated to max. of 9 Cr. 1-4 Cr. DEMAND.

639. Comparative Government Seminar. Research under faculty guidance and supervision. A specific topic selected each time offered. Prereq.: consent of instructor. May be repeated to max. of 9 Cr. 1-4 Cr. DEMAND.

659. International Relations and Organization Seminar. Research under faculty guidance and supervision. A specific topic selected each time offered. Prereq.: consent of instructor. May be repeated to max. of 9 Cr. 1-4 Cr. DEMAND.

Psychology (PSY)

102 WHITNEY HOUSE/255-4157

Chairperson: Christina McGlasson
Graduate Faculty: D. Anderson, Buhl, Hemmer, Jazwinski, Kukuk, McGlasson, Prochnow

COURSE DESCRIPTIONS

530. Seminar. Selected topic in special areas in psychology. May be repeated. 1-4 Cr. DEMAND.

533. Laboratory Instrumentation. Use of psychological laboratory equipment in various experimental psychology paradigms.

541. Child Psychology. The study of childhood emphasizing current research, theory, and development of children in various cultures. Prereq.: 241. 3 Cr. F.

542. Psychology of Adolescence. The study of adolescence emphasizing current research, theory, and development of adolescents in various cultures. Prereq.: 241. 3 Cr. W.

543. Psychology of Adulthood. The study of adulthood emphasizing current research, theory, and development of adults in various cultures. Prereq.: 241. 3 Cr. S.

546. Psychological Issues of Family Violence. Psychological implications of violence in the family, including child abuse and neglect, incest/sexual abuse and spouse abuse. 2 Cr. F.

545. Play in Childhood. Spontaneous developmental play during childhood years. Relation of play and playfulness to personality development. Historical and current theories and concepts. Review of research and data collection procedures. Prereq.: 241 or permission of instructor. 3 Cr. DEMAND>

556. Psycholinguistics. The effect of language on cognitive processes will be examined with a focus on sentence comprehension, speech perception, memory for prose, bilingualism, and linguistic relativism. Prereq.: 252 or permission of instructor. 3 Cr. DEMAND.

569. Personnel Psychology. Psychological methods, procedures, and principles in personnel work; technical aids, psychological testing, vocational guidance, worker efficiency and morale. Prereq.: 264 or instructor's consent. 3 Cr. W.

570. Social Cognition and Decision Making.

Study of social cognition: decision making, layperson's explanations of behavior, person memory, attitudes, and stereotypes. Analysis of biases in the social inference process. Practical applications to personnel decisions and advertising. Prereq.: 273 or 252, or permission of instructor. 3 Cr. S ALT.

573. Aggression, Anger, and Violence. Survey of psychological theories and research regarding the origins and determinants of human and animal aggression. Application to specific interest areas. 3 Cr. S ALT.

577. Research on Psychology of Women. Selected topics in current psychological research dealing with women and women's issues. Emphasis on reducing sex bias in psychological research. Prereq.: 275, or consent of instructor. 3 Cr. S.

589. Psychology of Learning. Psychological theories of learning will be presented with a focus upon current research and contemporary theories and models of learning. Both human and animal research in the areas of learning and constraints upon learning will be examined. Prereq.: 115, 215, 216, 317 or consent of instructor. 3 Cr. F ALT.

592. Psychological Disorders. Classification, description, etiology and treatment of the disorders of personality organization and behavioral integration. 3 Cr. F, S, SUM.

COURSES FOR GRADUATE STUDENTS ONLY

640. Advanced Developmental Psychology. Advanced study of human growth and development. Emphasis on trends, problems, theory, and contemporary research. 3 Cr. S ALT.

647. Psychology of Aging: Theory and Research. Review of theory and research on the psychology of aging. Physical, social, and cognitive aspects of aging. 3 Cr. W.

660. Organizational Psychology. Psychology of individual and group behavior in the organizational complex; contemporary research and implications for administration and management; motivation, influence, communication, group processes, leadership, supervision. 3 Cr. DEMAND.

Sciences (SCI)

41 MATHEMATICS AND SCIENCE CENTER/255-3260

Coordinator: Patricia Simpson

SCIENCE COURSE DESCRIPTIONS

560. Selected Topics in Science Education. Intensive study of a special topic in science education. May be repeated. 1-4 Cr. DEMAND.

Social Science Program (SSCI)

Director: Kathleen Maloney

Also see the interdisciplinary studies department.

MASTER OF SCIENCE

Both teaching and non-teaching degrees are available. Admission to the graduate program requires completion of at least an undergraduate minor in a social science discipline, social studies or an interdisciplinary program with a strong social science component. In some cases, the applicant may be required to complete additional undergraduate course work even though a major or minor may have been completed in one of these fields. Applicants must have completed a baccalaureate degree from an accredited college or university. The student may elect to concentrate in a single social science discipline with some course work in the other fields, or may elect to emphasize the social sciences more equally.

At least one-half of the Master of Science degree program must be earned in courses in which enrollment is limited to graduate students.

This program is designed for full-time and part-time students. Graduate courses in the participating departments may be scheduled in either the daytime or evening schedules. Applicants should confer with program director.

Plan A, 45 Cr.; Plan B, 48 Cr.

I. Research: Min., Plan A, 9-12 Cr.; Plan B, 3 Cr.

ED 615 Introduction to Research, 3 Cr.

SSCI 699 Thesis, 6-9 Cr. (Plan A only)

II. Major: Min., Plan A, 18 Cr.; Plan B, 24 Cr.

Advanced study in subject matter, methods, materials and curriculum.

III. Professional Education: Min., Plan A or B, 9 Cr.
Approval of the professional education adviser.

IV. Electives: Min., Plan A, 3-6 Cr.; Plan B, 9 Cr.

COURSE DESCRIPTIONS

560. Social Science Seminar. Analysis of issues or problems of an interdisciplinary social science nature. A specific topic will be selected each time the course is offered. May be repeated to max. of 9 Cr. 1-4 Cr. F, W, S.

565. Ideology and Control. Controlling myths as a barrier to human change; elements of modern mythology and practical exercises for reducing mythic content, including professional and policy applications. 4 Cr. S.

570. Area Studies Seminar. Analysis of contemporary social, political, and economic conditions of an area. A specific country or region will be selected each time the course is offered. May be repeated to max. of 9 Cr. 1-4 Cr. F, W, S.

576. Black and American: Issues in Afro-American Studies. An interdisciplinary exploration of what it means to be both Black and American. A specific topic will be listed in the class schedule. 4 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

630. Problems in the Social Sciences. An examination of the methods used and the problems faced in the various social science disciplines. Not open to students with a major or minor in social science. 3 Cr. SUM.

699. Thesis. 3-9 Cr. F, W, S, SUM.

Social Studies (SST)

Also see the Interdisciplinary Studies department.

COURSE DESCRIPTION FOR GRADUATE STUDENTS ONLY

640. Recent Trends in Teaching Social Studies in Secondary School (Topical). The secondary school social studies program viewed in light of new methods, curriculum trends, materials, and philosophies. 3 Cr. May be repeated with different topic to max. of 9 Cr. SUM.

Social Work (SW)

236 STEWART HALL/255-3139

Chairperson: Marge Twiname-Dungan

Graduate Faculty: Brennan, Huang, Present, Stadium

SOCIAL WORK (SW) COURSE DESCRIPTIONS

514. Social Work and the Law. An examination of issues common to law and social work; including the legal system and its impact on the social work profession. Examines administrative and court procedures, law-making, legislation, child protection issues, social work licensure issues and legal problems of clients. Pre-req.: 211, 360 or consent of instructor. 4 Cr. DEMAND.

Sociology (SOC) and Anthropology (ANTH)

262 STEWART HALL/255-2294

Chairperson: John Murphy

Graduate Faculty: Alessio, Baer, Breci, Broyles, Harper, Havir, Lavenda, Mehdi, J. Murphy, Schwedtfeger, Sherozman

The graduate courses offered by the department provide one component of the Social Science major and provide service courses to other programs. Courses may be offered in either the daytime or evening schedule.

COURSE DESCRIPTIONS

ANTHROPOLOGY (ANTH)

520. Aging in Culture and Society. Focus on the aging process in cross-cultural perspective, including consideration of the effects of ethnicity on the aging experience in the U.S. Application of the methods and theory of anthropology to aging will be stressed. 3 Cr. DEMAND.

563. Seminar Discussion and Readings in Advanced Anthropology. A specific topic selected each time offered. Prereq.: ANTH 150 or permission of department chairperson. May be repeated to max. of 9 Cr. 4 Cr. DEMAND.

576. Advanced Museology. Institutional roles and relationships of museums; emphases on development, policy making, management, and administration; on-campus practica in Hatcher Museum, off-campus practica as available. Prereq.: 275, or permission of instructor. 4 Cr. DEMAND.

581. Cultural Resource Management. Applied approaches to management of ethnic, historic, and prehistoric cultural resources, emphases on site location and identification, determination of level(s) of significance, impact assessment, and mitigation procedures. Prereq.: ANTH 267, or permission of instructor. 4 Cr. DEMAND.

590. Field Methods in Anthropology. Anthropological field methods in one of the major subdisciplines of anthropology, archaeology, ethnography, or linguistics. Prereq.: 150 or 267 or SOC 160 or consent of instructor. 1-8 Cr. DEMAND.

SOCIOLOGY (SOC)

530. Analysis and Uses of U.S. Census of Population Data. Major focus is on content, quality, and application of U.S. Census of Population Data in the social, economic, geographic, and political spheres. Prereq.: 160. 4 Cr. DEMAND.

542. Social Movements. Analysis of social movements; origin in discontent; role of ideas, personal relationships, organizational factors in their development. Some contemporary and social movements. Prereq.: 160. 4 Cr. DEMAND.

555. Sociology of Work and Occupation. Changing nature, social meaning and organization of work and the impact of these on workers. Who works, why work, and consequences of unemployment. Prereq.: 160 or permission. 4 Cr. DEMAND.

556. Complex Organizations. Analysis of formal and informal organizational structure, processes, and behavior. Power, conflict, roles, values and culture in corporations and bureaucracies. Emphasis on current

issues, and applications. Prereq.: 160 or permission. 4 Cr. DEMAND.

557. Principles of Population. Population size, composition, distribution, and demographic processes, relationship of population to family, education, economy, and other institutions. Prereq.: 160. 4 Cr. DEMAND.

558. The Sociology of Labor Market. Sociological investigation of current theories and research of the different types of labor market structure. Prereq.: 160. 4 Cr. DEMAND.

562. Seminar. Discussion, readings, evaluation of sociological theory, social issues, or contemporary events. A specific topic selected each time offered. Prereq.: 160. May be repeated. 1-4 Cr. DEMAND.

570. Minority Group Cultures and Contributions. Minority Group cultures and contributions and the position of minority groups in American society. Focus on different minority groups. 4 Cr. DEMAND.

572. Sociology of the Family. The family as a dynamic institution; relations to other institutions; research based variations and trends in family life. Prereq.: 160. 4 Cr. DEMAND.

573. Sociology of the Elderly Family. The elderly family's structure, function, change as social system are analyzed sociologically. Current research and theory are used in discussing variations in the elderly family's structure, interaction patterns and life styles in the United States at the present time. Prereq.: 160. 4 Cr. DEMAND.

575. Sociology of Health and Illness. Study of the sociocultural aspects of illness, health, treatment, health care delivery and the social organization of health care. Current issues and specific topics will be discussed. Prereq.: 160 or consent of instructor. 4 Cr. W.

578. Advanced Statistics I. Application of basic aspects of statistical inference to sociological problems/issues. Special attention to hypotheses testing, confidence intervals, analysis of variance. Prereq.: 278 or equivalent. 4 Cr. DEMAND.

579. Using SPSSX in the Social Sciences. Experience in using a powerful statistical package of organizing and analyzing data as is typically done in the social sciences. Prereq.: 278 or equivalent statistic class. 4 Cr. DEMAND.

581. Social Stratification. Class, status, and power in America: their origin, legitimation, and consequences. Theories and research on stratification, and stratification internationally. Prereq.: 160. 4 Cr. DEMAND.

585. Intermediate Social Theory. Systematic organization of concepts and principles for the explanation of social phenomena and as a guide to contemporary sociological research. Prereq.: 160. 4 Cr. W.

SOCIOLOGY (SOC) COURSE FOR GRADUATE STUDENTS ONLY

650. Sociology of Aging: Theories and Research. Focus on the current developments in sociological theory and research techniques and findings in the study of age, aging, and death and dying. 4 Cr. DEMAND.

Special Education (SPED)

A211 EDUCATION BUILDING/255-2041

Chairperson: Sandra Reese

Graduate Faculty: Ayers, Bigler, Gadberry, R. Johnson, J. Lewis, M. Markell, F. Reese, S. Reese, Wellik

MASTER OF SCIENCE— Special Education

The Department of Special Education offers program plans leading to a Master of Science degree. The student's program of study may be designed to emphasize education of the mild/moderately mentally handicapped, the moderate to severely mentally handicapped, the specific learning disabled, the emotionally/behaviorally disordered, the mildly handicapped (master consulting teacher), or the gifted and talented. An early childhood/special needs licensure is also available in a joint program with the Center for Child and Family Studies. An introductory course on the education of exceptional is required for admission to this program.

Plan A: Thesis

Students pursuing the Plan A are required to complete a minimum of 15 credits in research, 15 graduate only credits in the major field and a minimum of 45 credits. The final product prepared by the student is a research based thesis. Preliminary and final oral examinations over the thesis are required.

Plan B: Starred Papers

Students pursuing the Plan B option are required to complete a minimum of 6 credits in research, 15 graduate only course work in their major field, and a minimum total of 48 credits. The final product prepared by the student is two starred topical papers. Preliminary and final oral examinations over the starred paper topics are required.

Plan C: Professional Portfolio

This plan is designed for the professional practitioner whose primary goal is to improve her/his qualifications and performance as a classroom teacher within the structure of a master's degree program. Students pursuing the Plan C option are required to complete 6 credits of research, 15 credits of graduate only course work in their major field, and a minimum total of 57 credits. The final product prepared by the student is a professional portfolio. Preliminary and final oral examinations over the professional portfolio are required.

The Master's degree program is designed for either full-time or part-time students. Full-time students may expect to complete part of their course work in evening classes. Part-time students can complete much of their course work in evening classes, but can be expected to attend some summer session courses.

Plan A, 45 Cr.; Plan B (Starred Papers), 48 Cr.; Plan C (Professional Portfolio), 57 Cr.

I. Research: Min., Plan A, 15 Cr.; Plans B and C, 6 Cr.

SPED 602 Research in Special Education, 3 Cr. (Required for Plans A, B, and C)

SPED 699 Thesis, 9 Cr. (Plan A only)

APSY 678 Introduction to Graduate Statistics, 3 Cr. (Required for Plans A, B, and C)

II. Major: Min., Plan A, 18 Cr.; Plan B, 24 Cr.; Plan C, 24 Cr.

SPED 601 Current Trends in Special Education, 3 Cr.

SPED 603 Problems in Special Education, 3 Cr.

SPED 690-694 Topical Seminars, 6 Cr.

III. Professional Education: 6 Cr.

Courses from education, applied psychology and psychology selected with adviser.

IV. Electives: Min., Plan A, 3-12 Cr.; Plan B, 12 Cr.; Plan C, 6 Cr.

V. Educational Applications and Implementation: Min., Plan C only, 15 Cr.

FIFTH YEAR PROGRAM— Special Education

A Fifth Year program is also available primarily for those who are interested in obtaining a special education license. Admission to this program is through the School of Graduate and Continuing Studies (see page 22). An undergraduate grade point average of 2.25 is required for admission to this program.

SPECIALIST DEGREE— Special Education Administration

This degree is designed to prepare individuals for leadership positions in special education, particularly as administrators of special education programs in the public schools. Satisfactory completion of the degree may result in a recommendation for licensure as a director of special education in Minnesota.

The applicant for the Specialist degree must complete an approved program which consists of a minimum of 45 quarter hours of graduate credit including a field study of nine credits.

An approved program will be developed jointly with the student and the adviser at the time of admission and will be based on the licensure requirements, the background of the student, and the role the candidate expects to assume.

This degree must be completed within seven years of the date of the first course which applies to this program with a minimum of 30 credits in the program being completed at St. Cloud State University.

Candidates who expect to be recommended for licensure as a supervisor of special education in Minnesota must have full licensure in a program area of special education and have three years of experience in that area.

Requirements for admission to the program are as follows:

(1) completion of a master's degree program in spe-

cial education or completion of 45 credits in a graduate program with an emphasis in special education, (2) a grade point average of 3.25 on credits earned for the master's degree. For students who have not completed a master's degree, a grade point average of 3.25 is required on all completed graduate credits and the candidate must meet the requirements for admission to a master's degree, (3) licensure in any program area of special education (including school psychology or school social work), (4) graduate courses in research, graduate statistics, and current trends in special education, (5) completion of the Graduate Record Examination aptitude test. The Approved Program consists of the following:

I. Research

Required: SPED 698 Field Study Research, 9 Cr. or SPED 699 Thesis, 9 Cr.

(Candidates must have completed graduate courses in statistics and research before registering for the field study or thesis)

II. Major: Special Education Administration, 24 Cr.

Required: SPED 610 Supervision and Administration of Special Education I, 3 Cr.

SPED 613 Supervision and Administration of Special Education II, 3 Cr.

SPED 654 Practicum in Special Education Administration, 3 Cr.

EDAD 650 School Law, 3 Cr.

EDAD 604 School Finance, 3 Cr.

EDAD 677 Personnel Administration of Education, 3 Cr.

EDAD 608 Community Relations for School Administrators, 3 Cr.

Electives: 3 Cr.

III. Special Education: A minimum of 12 credits selected in consultation with adviser.

COURSE DESCRIPTIONS

502. Introduction to Education of the Hearing Impaired. Background and history, etiology, and achievement, relationship to intelligence, socio-emotional development. Parent consultation. Integration into school program. Adult adjustment. 3 Cr. S.

503. Foundations in Special Education I. Historical and philosophical background, handicapping conditions and their implications, legal bases, resources, and advocacy. 3 Cr. F, W, S, SUM.

504. Cultural Diversity and Education. Problems of cognitive, linguistic, social, and emotional development. Preschool, elementary and secondary school programs. Role of supportive agencies. 3 Cr. F, W, S, SUM.

505. Behavior Problems in the School. Introduction to the assessment and management of behavior problems in the classroom. Prereq.: APSY 262, 362, or CDIS major. 3 Cr. F, W, S, SUM.

506. Management of Individuals with Multiple Handicaps. Characteristics, etiology and teaching strategies of individuals with multiple handicaps including: orthopedic conditions, chronic illness, sensory impairments, and other health impairments. 3 Cr. W, S, SUM.

507. Education of Mildly Handicapped Children. Introduction to mildly handicapped children. Survey of approaches to instruction. Laws and regula-

tions governing programs for the mildly handicapped. 3 Cr. DEMAND.

508. Developmental Screening and Assessment of Young Children. To familiarize participants with the philosophy, procedures and methodologies used to conduct developmental screening. 3 Cr. DEMAND.

509. Foundations in Special Education II. Curriculum design and adaptation, interface of special education and regular education, individual and group management, delivery systems. Prereq.: 403/503. 3 Cr. W, S, SUM.

511. Applied Special Education Foundations. Curriculum based evaluation and instruction, informal and formal observation systems, task analysis, and IEP's. Prereq.: 403/503. 3 Cr. F, W.

512. Psycholinguistics. Introduction to psycholinguistics. Symbolic processes involved in communication. Interpretation of data. 3 Cr. F, W, S, SUM.

513. Math Methods for Special Needs Students. Activities and procedures for diagnosis and teaching of mathematics with handicapped students. 3 Cr. F, W, S.

514. Mainstream Science and Social Studies for the Special Educator. Overview of planning, selecting resources, scope and sequence of curriculum, responding to individual learner needs, and evaluating student learning in the teaching of science and social studies. 3 Cr. F, W, S.

515. Medical Perspectives for the Classroom. Classroom Implications of medical conditions and their medical management. 3 Cr. F, W, S.

516. Assessment for Special Education. The role of measurement in determining eligibility for special education programs and/or for educational program planning and evaluation purposes. Prereq.: 403/503, APSY 362. 3 Cr. F, W.

517. Emotionally/Behaviorally Disordered Students. Issues in the definition, assessment, etiology, and treatment of emotional and behavioral disorders in children and youth. 3 Cr. F, W, S.

518. Mainstream Reading and Language Arts for the Special Educator. Basic techniques for reading and language arts diagnosis and teaching in the regular classroom. Prereq.: 403/503. 3 Cr. F, W.

519. Reading and Language Arts for Special Needs Students. Specialized remedial and supplemental teaching techniques and materials for teaching reading and language arts to handicapped students. Prereq.: 403/503, 418/518. 3 Cr. W, S.

520. Basic Skills for Education of Severely Handicapped I: Methods and Strategies. Methods and strategies used in educational programming for individuals with moderately, severely or profoundly handicapping conditions. Prereq.: 403/503. 3 Cr. F, W, SUM.

521. Education of the Severely Handicapped II: Curriculum Content. Curriculum content areas for educational programs for individuals with moderately, severely, or profoundly handicapping conditions. Prereq.: 420/520. 3 Cr. W, S, SUM.

522. Education of the Gifted and Talented. Issues in education of the gifted and talented, discussion of definitions, characteristics, development, screening, identification, curriculum, teaching strategies, and program development. 3 Cr. DEMAND.

523. Methods and Materials in Special Education

I. Selection of children and organization of school programs for mentally retarded and orthopedically handicapped. Curriculum adjustment, teaching methodologies. Prereq.: 403/503. 3 Cr. DEMAND.

524. Methods and Materials in Special Education

II. Analysis of curricular materials for mentally retarded and orthopedically handicapped. Observation and participation. Prereq.: 423/523. 3 Cr. DEMAND.

525. Special Learning Disabilities I. Techniques of identification and evaluation of children with learning difficulties associated with language, emotional, and perceptual problems. Prereq.: 403/503, 427/527. 3 Cr. W, SUM.

526. Special Learning Disabilities II. Instructional methodology and treatment for children with learning disabilities. Prereq.: 425/525. 3 Cr. S, SUM.

527. Teaching Basic Skills to Handicapped Learners. Principles of teaching basic skills and their application to the development of skills in handicapped learners diagnostic procedures. Prereq.: 403/503 and background in developmental reading and developmental mathematics. 3 Cr. F, W, S, SUM.

528. Learning Problems in the Classroom I. Characteristics and needs of special education students in the regular classroom. Survey of special programs. 3 Cr. DEMAND.

531. Career and Transitional Programming for the Special Needs Learner. Instructional planning, development and modifications for special needs students in career and transitional programs. 3 Cr. F, W.

533. Special Education Secondary Methods. Instructional methodology and treatment for secondary special education students. 3 Cr. F, W.

534. Directed Independent Study of Occupations. Visitation and observation of work sites, job analysis, survey of human resources, and community analysis. 3 Cr. DEMAND.

536. Communication and Consultation in Special Education. Analysis, study, and application of various communication and consultation methods for working with school staff, parents and other agencies. 3 Cr. S.

537. Applied Elementary Special Education Methods. Understanding of standard and specialized approaches in the special education curriculum at the elementary level. 3 Cr. F, W.

538. Social Skills and Initiative Activities. Adventure games, initiative problems, and trust activities which foster cooperative social skills and attitudes in children and youth. Students will participate directly in the learning and development of these group activities. 2 Cr. S, SUM.

540. Instruction and Management of Children with Emotional Disorders, Levels I-III. Identification, assessment and programming for E/BD child in Service Levels I, II, III. 3 Cr. F, W.

541. Educational Instruction and Management of Children with Emotional Disorders, Levels IV-VI. Analysis of and functioning within comprehensive systems of educational programming within specialized settings. 3 Cr. F, S.

543. Community Resources. Provide working knowledge of various local, regional and state ser-

vices to handicapped students. 3 Cr. DEMAND.

545. Issues and Concepts in Learning Disabilities I. Introduction to learning disabilities, issues in diagnosis and service delivery, attentional characteristics. 3 Cr. F, W.

546. Issues and Concepts in Learning Disabilities II. Examination of cognitive and linguistic variants in learning disabilities, procedures and strategies for intervention. 3 Cr. F, S.

553. Elementary Mainstream Practicum for the Special Educator. Field experience in an elementary regular education classroom. Prereq.: 403/503. 2 Cr. F, W.

554. Secondary Mainstream Practicum for the Special Educator. Consists of a series of formal observations of teaching direct instructional experiences in secondary school classrooms. 2 Cr. F, W.

COURSES FOR GRADUATE STUDENTS ONLY

601. Current Trends in Special Education. Current trends including methods and materials, assessment procedures, and innovations in service systems. An introductory course for graduate students. 3 Cr. F, W, SUM.

602. Research in Special Education. Techniques and interpretations of research in special education. Problem definition, research design, reporting results. 3 Cr. F, W, SUM.

603. Problems in Special Education. Seminar in problems and issues relating to programming for exceptional children in the schools. Content determined according to background and interests of the students. 3 Cr. F, S, SUM.

605. Behavioral Analysis for Handicapped Children. Analysis of symptom development and educational problems in handicapped children according to the principles of learning. Prereq.: 405-505. 3 Cr. F, S, SUM.

610. Supervision of Special Education. Methods, staff development, curriculum development, administrative relationship. 3 Cr. W, SUM.

611. Learning Strategies for Mildly Handicapped. Strategies for upper elementary, junior/senior high, post secondary mildly handicapped/slow learning students to aid them in learning to learn, to solve problems, and to complete tasks independently in regular education classes and other natural environments. 1-9 Cr. DEMAND.

613. Administration of Special Education. Role of special education administration in school management system. Planning, programming, and evaluating service delivery systems. Local, state and federal resources. 3 Cr. S, SUM.

616. Special Education Program Development for Administrators. Special education program development models and approaches are reviewed and analyzed. Specific program components required for quality special education programs are studied, and the process of developing quality indicators for application to program development and evaluation is analyzed and discussed. Instructor approval for non-special education graduates. 3 Cr. W.

619. Legal and Financial Aspects of Special Education for Administrators. This course reviews

and analyzes historical trends and current approaches to finance, budgeting, legal standards, case law, and legal interpretation and enforcement structures in the field of special education. 3 Cr. S.

621. Seminar: Intervention Approaches with Behavior Problem Children. Analysis of various intervention approaches for the management and education of disturbed children. Attention will be directed toward programs/models which utilize differing psycho-educational dynamics in the education of emotionally disturbed children. Prereq.: PSY 596 or permission of department. 3 Cr. F, SUM.

622. Seminar: Education of Emotionally Disturbed Children in the Regular Classroom. Analysis of educational programming needs and models for the disturbed child/adolescent who is in the regular classroom. Attention will be focused on developing competencies necessary for the special educator to serve as an effective resource consultant as well as supplying direct services to the disturbed child within a mainstream setting. Prereq.: 527, 621. 3 Cr. W.

623. Seminar: Education of Emotionally Disturbed Children in Specialized Settings. Analysis of educational programming models and psycho-educational techniques for the more seriously disturbed child/adolescent in specialized settings. Included would be psychiatric settings, residential and day schools for disturbed children and correctional programs. Prereq.: 621, 622. 3 Cr. S.

624. Seminar: Differentiated Instruction for Gifted/Talented. Strategies for developing, adapting, and evaluating curriculum for gifted and talented children. Emphasis on individualization and applications of strategies. 3 Cr. W.

625. Seminar: Enhancing Creativity. A study of the nature of creativity, examination of obstacles, and approaches that enhance creative development. 3 Cr. S.

633. Educational Strategies with Young Handicapped Children. This course is designed to review knowledge of basic concepts of individualized education for handicapped children and provide an understanding of curriculum, materials, and methodology necessary for providing educational services to young handicapped children. 3 Cr. DEMAND.

645. Seminar: Mildly Handicapped Consultation. Seminar focusing on problems and issues relative to concurrent field experiences in consultation strategies for mainstreamed mildly handicapped students in the elementary and secondary school. Coreq.: 675. 3 Cr. F.

649. Practicum: Mild/Moderate K-12 Special Education Settings. Field internship with mild/moderately handicapped students in elementary and secondary settings. 3-6 Cr. S, SUM.

650. Practicum in Moderately, Severely, and Profoundly Handicapped. Supervised practicum in teaching moderately, severely, and profoundly handicapped children. Prereq.: 520 and 521, permission of department. 3-8 Cr. F, W, S, SUM.

651. Practicum in Special Education. Supervised experiences in a special education program, vocational program or college programs. Prereq.: permission of department. 3-8 Cr. F, W, S, SUM.

652. Practicum in Special Learning Disabilities. Supervised practicum in teaching children with learning disabilities taken concurrently with 525 and 526. Prereq.: permission of department. May be repeated to max. of 6 Cr. 3-6 Cr. W, S, SUM.

653. Practicum with Gifted and Talented. Supervised experience in teaching gifted and talented students. Prereq.: 623 and 624 or concurrent registration and permission of the department. 1-6 Cr. DEMAND.

654. Practicum in Special Education Administration. Supervised experience in the schools with directors of special education. Prereq.: 610, 613, or permission of department. 3 Cr. F, W, S.

655. Practicum in Emotionally Disturbed. Supervised experience in a public school program for children who are emotionally disturbed. Prereq.: 621, 622, 623 and permission of department. 3-6 Cr. DEMAND.

660. Practicum: Moderately Mentally Handicapped. Field internship in elementary/secondary school programs for moderately mentally handicapped. 4 Cr. F, W.

661. Practicum: Severely (Multiply) Mentally Handicapped. Field internship in elementary/secondary school programs for severely (multiply) mentally handicapped. 3 Cr. F, S.

670. Practicum: Emotionally/Behaviorally Disturbed Students, Levels I-III. Field experience in elementary E/BD for Level II and III programs. Emphasis on evaluation and programming for children with emotional and/or behavioral problems. 3 Cr. W.

671. Practicum: Emotionally/Behaviorally Disturbed Students, Levels IV-VI. Practicum in the education of E/BD children and youth in Level IV and other specialized settings. 3 Cr. F, S.

675. Practicum: Mildly Handicapped Consultation. Supervised practicum for advanced graduate students seeking mildly handicapped licensure. The student will be involved in learning and demonstrating competence in early intervention strategies with mildly handicapped individuals in the elementary and secondary settings utilizing a consultative, indirect service model. Coreq.: 645. 3 Cr. F.

680. Practicum: Learning Disabled Students I. Field internship with learning disabled students. 3 Cr. F, W.

681. Practicum: Learning Disabled Students II. Field internship with learning disabled students in more restrictive settings. 3 Cr. F, S.

683. Practicum in Special Education/Early Childhood. Supervised practicum in teaching young (ages birth to 6) handicapped children. Prereq.: permission of department. 1-4 Cr. DEMAND.

698. Field Study. 3-9 Cr. F, W, S, SUM.

699 Thesis. 6-9 Cr. F, W, S, SUM.

Speech Communication (SPC)

129 MATHEMATICS AND SCIENCE CENTER/255-2216

Chairperson: Judith Litterst

Graduate Faculty: Bineham, Eyo, A. Grachek, Hyde, Kendall, Kendig, Litterst, Porter, Pribble, Pryately, Ringer, Ross, Stocker, C.F. Vick, E. Vora, Wildeson

Graduate courses are offered primarily in the daytime schedule and in the evening on a four-year rotation.

COURSE DESCRIPTIONS

511. Speechwriting. Intensive study of rhetorical principles of speech composition through model speeches and speechwriting practice. Prereq.: 220 or permission of instructor. 4 Cr. W.

515. Critical Approaches to Public Communication. Concepts, terminology, methods and literature of rhetorical criticism. Prereq.: 220 or consent of instructor. 4 Cr. F, W, S.

520. Theories of Persuasion. The elements of persuasion, including psychological and sociological theories, communication concepts and models, and analysis of communication situations and systems. Speaking and criticism. Prereq.: 220 or instructor consent. 4 Cr. F, W, S.

526. Intimate and Family Communication. Study of communication patterns between persons involved in an affectionate relationship. Experiential exercises and selected readings. Prereq.: 226 or consent of instructor. 4 Cr. S.

530. Modern Theories of Communication. Introduction to theories of human communication including theories of the neurophysiological, perceptual and semantic foundations of communication and theories and models of human interaction. 4 Cr. F, W, S.

531. Contemporary Approaches to Oral Interpretation. Performance, analysis and discussion of selected literary genres, selected performance styles, or performance criticism. Specific topics will be announced. Prereq.: 331. 4 Cr. ALT.

540. Advanced Public Speaking. Exploration in depth of speech principles through speech making and selected readings. 4 Cr. S.

552. Teaching of Speech Communication. Materials and methods for curricular and co-curricular teaching of speech communication in secondary schools. Must precede student teaching. Prereq.: 15 Cr. in SPC. 4 Cr. F.

570. Communication and Culture: Asia and the United States. Communication patterns in various Asian countries are described, analyzed and explained, and compared with those in the U.S. toward improving intercultural communication effectiveness. The countries studied include China, Taiwan, Japan, India, Malaysia, and other Asian countries. Prereq.: 161. 4 Cr. S.

575. Seminar: Problems in Intercultural Communication. This seminar in intercultural communication utilizes communication theory in order to analyze major conflicts and problems that are most likely to occur when individuals of different cultures communicate. Various issues will be examined. 4 Cr. DEMAND.

576. International Communication for Organizations and Professions. Theories and principles of intercultural communication are examined toward managing cultural diversity in the work place effectively. Major communication opportunities and difficulties for service abroad are explored. Prereq.: 161, 326 or 327. 4 Cr. W.

579. Communication and Modern Leadership. Awareness of modern leadership by utilizing rhetorical and communication theory to analyze and interpret the meaning of leadership in groups and modern organizations—business, industry, and government. Prereq.: 325, 326, 425, or consent of instructor. 4 Cr. S.

580. Seminar in Speech Communication. Discussions and readings in advanced speech topics. A specific topic will be listed each time offered. Prereq.: senior/graduate standing or permission of instructor. 4 Cr. May be repeated. DEMAND.

Teacher Development

A132 EDUCATION BUILDING/255-3007

Chairperson: Leslie Crawford

Graduate Faculty: Bacharach, Bavery, Bjorklun, Davis, Hagen, D. Heine, P. Heine, Hintz, Hornstein, Kelsey, Louisell, Mortrude, Purdom, Putbrese, Romanish, Rouch, Schmidt, Scott, Sentz, Tabakin, Ullrich

The following programs are designed for both full-time and part-time students. Most courses are offered evenings during the academic year and during the daytime in the summer.

MASTER OF SCIENCE— Curriculum and Instruction

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution. Candidates must meet all the standard entrance requirements for graduate studies at this university. Candidates may select one of four tracks appropriate to their needs and interests.

Track I: Elementary School Education

Track II: Middle School/Junior High School Education

Track III: Senior High School Education

Track IV: Reading Teacher Education

Track I: Elementary School Education

To gain admission to Track I, a student must have a bachelor's degree with a major in elementary education from an accredited institution. Two years of teaching experience at the elementary school level is regarded as desirable background.

Before a student is admitted to Track I, he/she must satisfactorily complete ED 620, Seminar: Introduction to Graduate Studies in Elementary Education. ED 620 should be taken during the first or second quarter of graduate study. After completion of ED 620 and admission to Track I, each student files a planned program of studies. The program, planned with and approved by the adviser, must include a minimum of one-half of the credits to be earned in 600 level courses.

Plan A, 48 Cr.; Plan B, 51 Cr.; Plan C, 54 Cr.

I. Research: Min., Plan A, 12 Cr.; Plan B, 6 Cr.; Plan C, 3 Cr.

Select from the following as needed:

APSY 678 Introduction to Graduate Statistics, 3 Cr. (Required Plan B)

ED 614 Interpretation of Research, 3 Cr.

ED 615 Introduction to Research, 3 Cr. (Required Plan A)

ED 653 Current Instructional Research, 3 Cr.

ED 673 Reading: Investigation of Research and Interpretation of Design, 3 Cr.

ED 699 Thesis, 9 Cr. (Required Plan A)

II. Major: Min., Plan A, 33 Cr.; Plan B, 36 Cr.; Plan C, 45 Cr.

A. Prescribed:

ED 620 Seminar: Introduction to Graduate Studies in Elementary Education, 3 Cr.

ED 623 Elementary Education: Contemporary and Future, 3 Cr.

ED 646 Elementary School Curriculum, 3 Cr.

B. Professional Education: Min., Plans A and B, 9 Cr.; Plan C, 6 Cr.

Elect, with adviser's approval, appropriate courses from the professional education core.

C. Teaching Field: Min., Plans A and C, 15 Cr.; Plan B, 18 Cr.

Elect, with adviser's approval, appropriate courses in elementary education.

D. Educational Applications and Implementations: Min., Plan C only, 15 Cr.

III. Electives: Min., Plan A, 3 Cr.; Plan B, 9 Cr.; Plan C, 6 Cr.

Track II: Middle School

Junior High School Education

This track is designed for current or prospective middle school teachers possessing elementary or secondary teaching licensure who desire a Master of Science degree in Curriculum and Instruction and licensure as a middle school teacher. It also is designed for the career junior high school teacher who desires a Master of Science degree in Curriculum and Instruction.

Applicants for Track II must have an entrance conference with the adviser. The adviser may rec-

ommend a qualifying examination or prerequisite course work depending upon the background of the applicant. The program, planned with and approved by the adviser, must have a minimum of one-half of the credits to be earned in 600 level courses. In Plan A or B, ED 614 or ED 615 must be taken within the first 15 Cr. of graduate study.

Plan A, 48 Cr.; Plan B, 51 Cr.; Plan C, 54 Cr.

I. Research: Min., Plan A, 12 Cr.; Plan B, 6 Cr.; Plan C, 3 Cr.

Select from the following as needed:

APSY 678 Introduction to Graduate Statistics, 3 Cr. (Required Plan B)

ED 614 Interpretation of Research, 3 Cr.

ED 615 Introduction to Research, 3 Cr. (Required Plan A)

ED 653 Current Instructional Research, 3 Cr.

ED 673 Reading: Investigation of Research and Interpretation of Design, 3 Cr.

ED 699 Thesis, 9 Cr. (Required Plan A)

II. Major: Min., Plan A, 33 Cr.; Plan B, 36 Cr.; Plan C, 45 Cr.

A. Prescribed:

ED 624 Schools for the Early Adolescent, 3 Cr.

ED 627 Education of the Emerging Adolescent, 3 Cr.

ED 625 Seminar in Early Adolescent Education, 3 Cr.

B. Professional Education: Min., Plans A and B, 9 Cr.; Plan C, 6 Cr.

Elect, with adviser's approval, appropriate courses from the professional education core.

C. Teaching Field: Min., Plans A and C, 15 Cr.; Plan B, 18 Cr.

Elect, with adviser's approval, appropriate courses in candidate's teaching field(s).

D. Educational Applications and Implementations: Min., Plan C only, 15 Cr.

III. Electives: Min., Plan A, 3 Cr.; Plan B, 9 Cr.; Plan C, 6 Cr.

Track III: Senior High School Education

Applicants for Track III must have an entrance conference with the adviser. The adviser may recommend a qualifying examination or prerequisite course work depending upon the background of the applicant. The program, planned with and approved by the adviser, must have a minimum of one-half of the credits to be earned in 600 level courses. In Plans A or B, ED 614 or ED 615 must be taken within the first 15 Cr. of graduate study.

Plan A, 48 Cr.; Plan B, 51 Cr.; Plan C, 54 Cr.

I. Research: Min., Plan A, 12 Cr.; Plan B, 6 Cr.; Plan C, 3 Cr.

Select from the following as needed:

APSY 678 Introduction to Graduate Statistics, 3 Cr. (Required Plan B)

ED 614 Interpretation of Research, 3 Cr.

ED 615 Introduction to Research, 3 Cr. (Required Plan A)

ED 653 Current Instructional Research, 3 Cr.

ED 673 Reading: Investigation of Research and Interpretation of Design, 3 Cr.

ED 699 Thesis, 9 Cr. (Required Plan A)

II. Major: Min., Plan A, 33 Cr.; Plan B, 36 Cr.; Plan C, 45 Cr.

A. Prescribed:

ED 631 Senior High School Theories and Practices, 3 Cr.

ED 605 The Adolescent and the School, 3 Cr.

ED 632 Senior High School Seminar, 3 Cr.

B. Professional Education: Min., Plans A and B, 9 Cr.; Plan C, 6 Cr.

Elect, with adviser's approval, appropriate courses from the Professional Education Core.

C. Teaching Field: Min., Plans A and C, 15 Cr.; Plan B, 18 Cr.

Elect, with adviser's approval, appropriate courses in candidate's teaching field. Approved teaching fields include art education, biological sciences, business education, English, health education, industrial education, language arts, mathematics, music, physical sciences, physical education, social studies, speech communication.

D. Educational Applications and Implementations: Min., Plan C only, 15 Cr.

III. Electives: Min., Plan A, 3 Cr.; Plan B, 9 Cr.; Plan C, 6 Cr.

Track IV: Reading Teacher Education

This track is designed for teachers who desire a Master of Science degree in curriculum and instruction and also have reading teacher endorsements added to their teaching license. (Teachers desiring licensure as a reading consultant should refer to the Master of Science reading consultant program.) To be recommended as an elementary or secondary remedial reading teacher or as a secondary developmental reading teacher, the candidate must: (a) have an elementary or secondary teaching license based upon a bachelor's degree (elementary teachers may apply for either elementary or secondary reading teacher licensure; secondary teachers may apply only for secondary reading teacher licensure); (b) prove two years of successful teaching experience; and (c) complete at least one course in each of the following areas, some of which may have been a part of a bachelor's degree program.

1. Adolescent Literature (for secondary developmental reading teacher licensure)
2. Elementary Developmental Reading
3. Secondary Developmental Reading (for secondary developmental and remedial reading teacher licensure)
4. Individual Mental Testing or The Use and Interpretation of Mental Tests
5. Diagnosis and Correction of Reading Difficulties
6. Practicum in Analysis of Reading Difficulties
7. Practicum in Correction of Reading Difficulties

Plan A, 48 Cr.; Plan B, 51 Cr.; Plan C, 54 Cr.

I. Research: Min., Plan A, 12 Cr.; Plan B, 6 Cr.; Plan C, 3 Cr.

Select from the following as needed:

APSY 678 Introduction to Graduate Statistics, 3 Cr. (Required Plan B)

ED 614 Interpretation of Research, 3 Cr.

ED 615 Introduction to Research, 3 Cr.

(Required Plan A)

ED 653 Current Instructional Research, 3 Cr.

ED 699 Thesis, 9 Cr. (Required Plan A)

II. Major: Min., Plan A, 33 Cr.; Plan B, 36 Cr.; Plan C, 45 Cr.

A. Prescribed:

ED 620 Seminar: Introduction to Graduate Studies in Elementary Education, 3 Cr.

OR

ED 624 Schools for the Early Adolescent, 3 Cr.

OR

ED 626 Philosophy and Organization of Middle School, 3 Cr.

OR

ED 631 Senior High School Theories and Practices, 3 Cr.

ED 671 Reading: Clinical Diagnosis of Disabilities, 3 Cr.

ED 672 Reading: Clinical Remediation of Disabilities, 3 Cr.

B. Professional Education: Min., Plans A and B, 9 Cr.; Plan C, 6 Cr.

Elect, with adviser's approval, appropriate courses from the Professional Education Core.

C. Teaching Field: Min., Plans A and C, 15 Cr.; Plan B, 18 Cr. Elect, with adviser's approval,

appropriate courses in reading.

D. Educational Applications and Implementations: Min., Plan C only, 15 Cr.

III. Electives: Min., Plan A, 3 Cr.; Plan B, 9 Cr.; Plan C, 6 Cr.

MASTER OF SCIENCE— Reading Consultant

A graduate student who wishes to become licensed as a reading coordinator, consultant, or supervisor must have completed a master's degree and three years of successful teaching experience, including one year as a reading teacher.

Three starred papers or a thesis will be written during the Master's degree program. An oral comprehensive examination will be given during the last quarter of the student's work.

Both Plan A (thesis) and Plan B (three starred papers) are available to students who enroll in this program. A total of 48 credits is required on both Plan A and Plan B.

Students pursuing a master's degree must earn at least one-half of the program in courses in which enrollment is limited to graduate students.

An applicant for admission to this program must have met the following requirements:

1. The student must hold or be eligible for a Minnesota Elementary or Secondary School Teacher's License (Certificate).
2. The student must have taken a course in developmental reading at the elementary school level (ED 371, 372, or equivalent).
3. The student must have taken a course in children's or adolescent literature (ENGL 353, ED 340, or equivalent).

Program completion requires attendance during both the summer and the evening program of the regular academic year.

Plan A or B, 48 Cr.

I. Research: Min., Plan A, 9 Cr.; Plan B, 6 Cr.

Prescribed:

ED 615 Introduction to Research, 3 Cr. (Plan B only)

APSY 678 Introduction to Graduate Statistics, 3 Cr.

ED 699 Thesis, 6 Cr. (Plan A only)

II. Major: Min., Plan A, 21 Cr.; Plan B, 24 Cr.

Prescribed:

ED 571 Reading: Analysis and Correction of Disabilities in the Classroom, 3 Cr.

ED 572 Reading in the Secondary School: Developmental Programs, 3 Cr.

SPED 601 Current Trends in Special Education, 3 Cr.

ED 671 Reading: Clinical Diagnosis of Disabilities, 3 Cr.

ED 672 Reading: Clinical Remediation of Disabilities, 3 Cr.

ED 673 Reading: Investigation of Research and Interpretation of Design, 3 Cr. (Plan B only)

ED 674 Reading: Administration and Supervision, 3 Cr.

APSY 593 Individual Appraisal, 3 Cr.

III. Professional Education: Min., 18 Cr.

ED 642 Elementary School Language Arts, 3 Cr. or alternative with consent of adviser.

Electives: 15 Cr., consent of adviser.

(a) maximum of 4 credits independent study.

(b) minimum of 11 credits in 600 level courses.

___ 96 to ___ 98 Open-Permanent workshops or department development.

___ 99 to ___ 99 Independent study or thesis.

ODD = Odd numbered years

EVEN = Even numbered years

EDUCATION (ED) PERMANENT WORKSHOP COURSE DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to Academic Regulations under "Workshop Limitation" to determine the maximum number of workshop credits which may be applied to graduate degrees.

552. Workshop: Education of the Gifted and Talented. Definition of giftedness, identification of the gifted, characteristics of the gifted, development and organization of the curriculum for high potential students. 3 Cr. DEMAND.

556. Classroom Authoring. An advanced workshop for students with background in process writing. Includes direct experience with students working on authoring and publishing. 3 Cr. DEMAND.

593. Workshop: Experiential Science Curriculum for Elementary Teachers. Elementary science curriculum analysis and construction to involve hands-on materials and Piagetian Learning Cycle strategies. Students will design, construct, and share portions of units and activities through cooperative group structures. 3 Cr. DEMAND.

594. Workshop: Aerospace Curriculum and Materials, K-12. Designed to prepare teachers to identify, select, develop, implement and evaluate curriculum materials regarding aerospace topics. Primary emphasis will be on access to and use of NASA or NASA-related materials available at or through the Teacher Resource Room at LRC. 1 Cr. DEMAND.

596. Workshop: Middle Level Educator's Institute. An awareness workshop designed to acquaint participants with the philosophy, organizational procedures and other essential components of effective middle schools. Credits will vary depending upon the background and needs of the participants. May be repeated to a max. of 9 Cr. 1-3 Cr. DEMAND.

597. Workshop: Aerospace Activities for the Elementary School. For elementary teachers emphasizing hands-on activity approaches to teaching aerospace concepts. Offered in conjunction with NASA, the MN Department of Transportation, and the U.S. Air Force/Civil Air Patrol. Topics will include rocketry, the shuttle, airplane flight principles, telemetry, human space flight, planetary exploration, energy, and development of curriculum units for teaching the topics. 3 Cr. SUM.

598. Workshop: Defining Basics and Competencies. A critical look at the Back-to-the-Basics and Competency-Based movements. Essential skills, minimum standards, competency-based education and national and state assessment will be reviewed. Identification and evaluation of fundamentals for all students. 1 Cr. SUM.

EDUCATION COURSES (ED)

Courses taught by the Teacher Development Department have an ED prefix. The following numbering system describes the grouping of courses:

___ 02 to ___ 39 *Foundations of Education* – Includes study of: appropriate aspects of those behavioral sciences which support the educational process; needs of students; roles of professional educators; and roles of the schools.

___ 40 to ___ 59 *Curriculum and Instruction* – Development of scope and sequence of learning activities including process and procedures of teaching.

___ 60 to ___ 69 *Teaching*–Supervised practice in field settings and supervision courses.

___ 70 to ___ 89 *Reading(LIGH)*–Materials and methods of reading instruction.

___ 01 and

___ 90 to ___ 94 *Selected Topics*–New course development.

___ 95 to ___ 95 *Workshops*–Selected topics.

693. Workshop: Peer Coaching and Mentoring. Staff development based on teachers helping peers through classroom observation and feedback. Includes peer coaching, classroom observation and data collection, pre- and post-observation conferences and guided practice. 1-3 Cr. DEMAND.

COURSE DESCRIPTIONS

549. Multicultural Teaching: Viewpoints, Rationale, Strategies. Examines viewpoints on multicultural teaching from historical, national, and current global perspectives. Presents models for curricular change to meet accreditation standards in public schools. Focuses on implementation strategies. 3 Cr. F ODD.

551. Managing a Classroom for Optimal Learning. Behavior in the classroom environment. Development of environments that promote effective teaching and learning. 3 Cr. DEMAND.

553. Microcomputers in Programs for Young Children. Participants with educational background would be able to benefit most. A course specially designed for prekindergarten through grade one, educators who wish to use the microcomputer effectively as a learning tool with children. The focus will be on developing and using instructional strategies for: 1) using the microcomputer with the young children to develop/reinforce cognitive skills and individual learning styles; 2) selecting and integrating software: for classroom use (curriculum) and for administrative uses (recordkeeping, grading and parent communication). 3 Cr. S.

571. Reading: Analysis and Correction of Disabilities in the Classroom. Causes of reading difficulties, procedures to diagnose and correct them. Prereq.: a course in developmental reading. 3 Cr. S EVEN

572. Content Area Reading for Middle and Secondary Schools. Nature of high school and middle school reading programs, development of reading techniques and skills, development of vocabulary, reading interests, and reading ability in content fields, appraisal of reading abilities, diagnosis and remediation. 3 Cr. W.

573. Reading and Children's Literature: Current Issues. Examine children's books in terms of the development of cognitive and affective dimensions in reading comprehension. Relates the literature program in the curriculum to the aims of reading instruction, particularly in collaterally strengthening functional and recreational reading habits, not an alternative to IM 481 or 639. 4 Cr. S.

575. Reading: Materials for Classroom Use. An intensive study of materials used in teaching reading. All age groups are considered. Prereq.: ED 371 or 372. 3 Cr. DEMAND.

576. Reading for Middle School Teachers. Nature of middle school reading program, development of instructional techniques and skills, knowledge of reading interests and reading in the content fields; causes of reading difficulties and procedures to diagnosis and correct them. Required for secondary education majors seeking middle school teacher licensure. 3 Cr. F.

COURSES FOR GRADUATE STUDENTS ONLY

601. Selected Topics in Education: _____. Course designed for intensive study of a special topic in education. Topic will be announced in the class schedule. May be repeated to max. of 9 Cr. 1-4 Cr. DEMAND.

602. Evaluation in Education. A study of evaluation models utilized in education and the application of those models. Topics such as accreditation and the evaluation of staff, learners, textbooks, materials, programs, facilities, instruction, curricula, etc. are considered. A review of guidelines and standards for evaluators is presented. 3 Cr. DEMAND.

603. Legal Aspects of Church/State Separation in Education. Consideration of public education issues arising out of the concept of separation of church and state. Primary emphasis on court decisions that provide legal guideline about religiously sensitive issues in public education. 3 Cr. F ODD.

604. School/Community Organizations and the Teacher. Introductory guide to planned actions for facilitating human responsiveness and adaptability in school organizations. 3 Cr. DEMAND.

605. The Adolescent and the School. Importance of the school cultural milieu on the development of students. Emphasis on role of school personnel in developing, implementing constructive learning environments. 3 Cr. W.

606. Problems in American Education. Issues arising in our American educational situation; organizing principles of education in a democracy; the school and the state; education and social reconstruction; public schools and religious education; academic freedom; teaching controversial issues. 3 Cr. DEMAND.

607. The Student, The Teacher, and The Law. Statutes and legal decisions affecting teachers and students in the public schools of the United States. Licensure, contracts, tenure, teacher authority and liability with respect to students, curriculum, school property, and other related topics will be studied. 3 Cr. S ODD.

608. Children's/Students' Rights. An analysis of the changing status of children/students—their rights, roles, and responsibilities. 3 Cr. F EVEN.

609. Comparative Education. Foundations, practices, and problems of European, Asiatic, and American school systems. 3 Cr. DEMAND.

610. The School and the Social Order. Importance of education in the social structure, effects of a culture on education, the interrelationships of education and the economic, social and political systems; comparative education. 3 Cr. F EVEN.

611. History of American Education. The development of education in the United States from the Colonial period to the present. 3 Cr. W ODD.

612. Philosophy of Education. Historical aspects of education theory; beliefs, arguments, and assumptions underlying current educational thought and practice. 3 Cr. DEMAND.

613. Influential Ideas in American Education. Investigation of the people, organizations and events that have influenced and shaped the development of

the American educational system. 3 Cr. S ODD.

614. Interpretation of Research. Documentation and bibliography; kinds of research and research methods; use and interpretation of basic statistical tools and procedures. 3 Cr. F SUM.

615. Introduction to Research. Evaluating research procedures and interpreting findings. Defining and delimiting a problem, efficient gathering and proper documentation of data, organization and presentation of findings in acceptable form. 3 Cr. W, S, SUM.

620. Seminar: Introduction to Graduate Studies in Elementary Education. A student/staff seminar designed to orient the student to the graduate program in elementary education. 3 Cr. F, SUM

622. Seminar in Elementary Education. 1-4 Cr. DEMAND.

623. Elementary Education: Contemporary and Future. Problems, conditions, and issues relating to elementary education. Analysis and study of organization, instructional practices, curriculum, and materials. 3 Cr. S, SUM.

624. Schools for the Early Adolescent. Specific information and skills relative to the field of early adolescent education, including appropriate functions and components; philosophy and development; study of the current theories and practices in the education of early adolescents. 3 Cr. S.

625. Seminar in Early Adolescent Education. Problems and issues related to teaching and learning in the modern middle or junior high school; areas of emphasis determined by the needs and interests of the members of the seminar. Prereq.: 624. 3 Cr. S ODD.

627. Education of the Emerging Adolescent. This course focuses on the needs, the nature and the characteristics of the transescent learner. Emphasis will be on the organizational and instructional procedures for the school necessary to accommodate the needs and characteristics of students in the middle grades (ages 10-14). 3 Cr. F.

628. Modern Trends in Secondary Education. Various kinds of new educational materials, programs and equipment; speakers, visitations, and observation. 3 Cr. DEMAND.

631. Senior High School Theories and Practices. Historical overview of the field of senior high school education, including a survey of functions, philosophy, and development; study of current theories and practices in secondary education. 3 Cr. F.

632. Senior High School Seminar. Problems and issues related to effective teaching and learning in the modern senior high school; areas of emphasis determined by needs and interests of the members of the seminar. Prereq.: 631. 3 Cr. S EVEN.

633. Empowering Teachers. Empowering teachers for their emerging role in efforts to restructure American education. Focus is on theoretical constructs, current models, change agency and ideological issues. 3 Cr. S ODD.

635. Teaching Listening Skills in the Elementary/Secondary School. An examination/exploration of methods and materials for teaching listening skills in the elementary and secondary school classroom. 3 Cr. DEMAND.

636. Classroom Questioning Techniques. Study

of purposes, models, techniques, and research on classroom questioning. Self-review and development of techniques using audio/visual recordings. Coding and analysis of classroom discourse. 3 Cr. F EVEN.

637. Cooperative Learning. Introduction to the "What, Why, and How" of cooperative learning; research base and practical strategies based upon the "5 Essential Elements" of the Johnson and Johnson model. 3 Cr. F ODD.

638. Advanced Cooperative Learning. Course will focus on the collaborative skills K-12 teachers need to teach their students for effective group process. Special concerns regarding grading issues, lesson planning, controversy, high achieving students, and other teacher-generated topics will be addressed. Prereq.: An introductory course/inservice on cooperative learning and preferably classroom implementation experience. 3 Cr. S EVEN.

639. Global Education. Integration of global issues into elementary and secondary school curricula. Primary emphasis on use of teaching activities and materials of instruction relevant to global issues. 3 Cr. W ODD.

640. The Classroom Teacher and Mainstreaming. Surveys mainstreaming from the perspective of the classroom teacher. Emphasizes developing and implementing IEP/IIP and an overview of handicapping conditions. 3 Cr. W EVEN.

641. Elementary School Science. Activities and procedures for improving instruction in science. Analysis and evaluation of literature, research findings, and curriculum materials in the science curriculum. 3 Cr. W ODD.

642. Elementary School Language Arts. Activities and procedures for improving instruction in the language arts. Analysis and evaluation of literature, research findings, and curriculum materials in the language arts. 3 Cr. S EVEN.

643. Elementary School Social Studies. Activities and procedures for improving instruction in the social studies. Analysis and evaluation of literature, research findings, and curriculum materials in the social studies curriculum. 3 Cr. F ODD.

644. Elementary School Mathematics. Activities and procedures for improving instruction in mathematics. Analysis and evaluation of literature, research findings, and curriculum materials in the mathematics curriculum. 3 Cr. W EVEN.

645. School Discipline. Exploring behavior in the classroom environment. Helping teachers to develop school environments which promote effective functioning. 3 Cr. W ODD.

646. Elementary School Curriculum and Instruction. Theory and practice of elementary school curriculum and instruction. 3 Cr. W, SUM.

647. Secondary School Curriculum. Historical development; current issues and trends; sociological and psychological foundations, theories of secondary school education; organization; programs and procedures of curriculum improvement stressing role of teacher. 3 Cr. W.

648. Curriculum Construction. The basic study of alternative techniques and approaches to curriculum construction and implementation at all instructional levels. 3 Cr. F.



649. Practicum in Curriculum Construction and Development. Actual work with a school system to (1) survey the needs of the community, (2) study the present curriculum in the school, and (3) suggest changes. 3 Cr. S.

650. Law-Related Education: Materials and Instructional Strategies. Integration of law and legal concepts in elementary and secondary school curricula. Primary emphasis on rationale, materials of instruction, and teaching strategies as well as substantive education in law. 3 Cr. DEMAND.

651. Kindergarten Education. Activities and procedures for teaching and the use of materials in kindergarten programs. 3 Cr. S.

652. Learning Centers in the Elementary Classroom. Learning centers, design and management. Explores the learning environment, requires building five learning centers, and designing a management system for their use. 3 Cr. DEMAND.

653. Current Instructional Research. A review and appraisal of research study findings in all instructional areas. Educational implications of the research. 3 Cr. DEMAND.

654. Strategies, Development and Evaluation of Instruction. Investigation, application, analysis and evaluation of recent developments in instruction. Includes effective instruction, differentiated supervision, peer evaluation, and student participation. 3 Cr. W EVEN.

655. Teaching Strategies for Practitioners. Study and development of materials and teaching techniques in meeting the needs of classroom teachers at the post-baccalaureate level. 3 Cr. DEMAND.

656. Process Writing in the Elementary School. Writing as a basic skill—explores the process of teaching writing in the elementary school through writing experiences. 3 Cr. DEMAND.

657. Classroom-Computer Curriculum and Methods. An overview for teachers of instructional computer systems in the classroom; methods for use; the selection, design, or construction of computer-based curriculum; computer-based evaluation; and related research findings. 3 Cr. DEMAND.

658. Implementing Curriculum/Instructional Models by Computer. This course utilizes curricular/instructional models as a base. The student develops computer courseware that implements a model. Prereq.: 657 or competence in BASIC computer language. 3 Cr. DEMAND.

659. Critical Thinking: Theory Into Practice. An

analysis of critical thinking and current brain theory. The theoretical framework provides the basis for the creation of learning experiences designed to cultivate critical thinking by learners. 3 Cr. DEMAND.

661. Supervision of Student Teachers. Student teaching in professional curriculum; procedures for guiding students in planning, teaching, and evaluating learning activities. Prereq.: two years successful teaching experience. 3 Cr. DEMAND.

662. Nonverbal Communication and Education. An exploration of the components of nonverbal communication in educational institutions. 3 Cr. DEMAND.

668. Introduction to Techniques for Differentiated Supervision. Hunt's theory of conceptual levels, use of effective skills with student teachers, cooperative planning to apply supervision strategies (observing, conferencing) based on the student teacher's conceptual level. Two years teaching experience required. 3 Cr. DEMAND.

669. Advanced Techniques for Differentiated Supervision. Participants will: review theory of Hunt's conceptual levels; practice differentiated supervisory conferences and strategies; use strategies to improve the conceptual level of their student teachers; review and make a presentation on a module of effective teaching. Prereq.: 668. 3 Cr. DEMAND.

671. Reading: Clinical Diagnosis of Disabilities. Clinical experience in administration and interpretation of techniques in diagnosing reading disabilities. Prereq.: 471-571 and departmental approval. 3 Cr. SUM.

672. Reading: Clinical Remediation of Disabilities. Clinical experience in correction of reading disabilities. Prereq.: 671 and department approval. 3 Cr. SUM.

673. Reading: Investigation of Research and Interpretation of Design. A study of research methods and current research regarding the reading process and reading related areas. 3 Cr. DEMAND.

674. Reading: Administration and Supervision. Implementation and improvement of reading programs from pre-reading through corrective procedures in high school. 3 Cr. DEMAND.

675. Reading: Research in Children's Literature. Survey of research in children's literature for students working on starred papers or theses only. Consent of instructor. 3 Cr. DEMAND.

699. Thesis. 6-9 Cr. F, W, S, SUM.

Technology

216 HEADLEY HALL/255-2107

Chairperson: Kenneth Yager

Graduate Faculty: Diaz, Rashidi, Sadrai, Thornberg

PERMANENT WORKSHOP COURSE DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to page 26 to determine the maximum number of workshop credits which may be applied to graduate degrees.

529. Workshop: Robotics. Microbot-Teachmover, minimover, and T.S.I. Robot mechanism controls, application, and impact on labor force and society. Interface to Apple computer and Lab-Volt microprocessor. Control systems and applications. 2 Cr. SUM.

565. Photo Educators Workshop. Current aspects of exposure, processing, and printing of B/W and color photography. Familiarization with the field of photography, its uses in business and industry, and career opportunities. Field trips and industrial guest lecturers. 4 Cr. SUM.

575. Workshop: Microprocessing Training System—Lab Volt—AA348. A study, analysis and application of the Lab Volt AA348 microcomputer

laboratory system as applied to high school industrial arts electronics classes and vocational electronics programs. Illustrating the input/out operations, special programming methods of the system, trouble shooting, and applications. 4 Cr. SUM.

578. Digital Electronics. A solid foundation in digital electronic fundamentals will be presented. Topics taught via readings and hands-on lab activities. 4 Cr. SUM.

COURSE DESCRIPTIONS

530. Quality Assurance Theories. Theories and techniques of the current national and international Quality Assurance leaders and a comparative analysis of the various theories. 3 Cr. W.

571. Consumer Electronics. A study of the circuits and systems employed in popular home entertainment devices such as radio, T.V., and hi-fi. Emphasis will be placed on the set-up, maintenance and troubleshooting of these devices. 4 Cr. DEMAND.

572. Advanced Semiconductor Devices and Applications. In-depth study of digital and linear integrated circuits, compound semiconductors, photo-diodes, LED's, semiconductor laser, liquid crystal, and other state of the art topics. 4 Cr. DEMAND.

Theatre (TH) and Film Studies

210 PERFORMING ARTS CENTER/255-3229

Chairperson: Lin Holder

Graduate Faculty: Cermele, Holder, Perrier

The Department of Theatre does not offer a graduate degree, but the courses listed below are available for graduate credit as supplements to other degree programs or for students with a special interest in theatre but who are not pursuing a degree.

Graduate courses in the Department of Theatre are offered in the daytime schedule and provide a service component to other programs.

COURSE DESCRIPTIONS

542. Stage Lighting. Basic requirements of lighting for the stage. Lab. 4 Cr. F.

544. Internship in Theatre. In-residence training with a cooperating professional theatre. Permission of department required. 4-16 Cr. F, W, S.

546. Advanced Theatre Practicum. Lab. course for advanced theatre majors allowing implementation of creative problems in acting, directing, design and other theatre areas. Prereq.: permission of staff. 1 Cr. F, W, S.

548. Acting II. Analyzing and creating a stage character. Prereq.: 253. 4 Cr. W.

549. Directing II. Advanced directing techniques. Prereq.: 349. 4 Cr. W.

558. Acting III. Concentration on period styles. 4 Cr. S.

559. Directing III. Continuation of Directing II. 4 Cr. S.

560. Theatre Promotion and Business Management. Principles and methods of management in educational, community and professional theatres. Emphasis on promotion, ticket office procedure and theatre administration. 4 Cr. DEMAND.

581. Theatre History I. A chronological survey of the various arts and crafts of the theatre from the earliest origins to the mid-nineteenth century. 4 Cr. W.

582. Theatre History II. A chronological survey of the various arts and crafts of the theatre from the mid-nineteenth century to the present day. Prereq.: 581. 4 Cr. S.

591. Drama I. World drama; its origins to early English Renaissance. 4 Cr. F.

592. Drama II. World drama; from English Renaissance to early twentieth century. Prereq.: 591. 4 Cr. W.

593. Drama III. World drama; twentieth century. Prereq.: 591. 4 Cr. S.

596. Summer Theatre. Theatre production for advanced students. Experience in acting, directing, costuming, construction, promotion, lighting and other disciplines during the summer season. Registration by application only. 1-8 Cr. SUM.

Women's Studies (WS)

B-120 EDUCATION BUILDING/255-4928

Director: Pat Samuel
Graduate Faculty: Parrott, Samuel

The Center for Women's Studies does not offer a graduate degree, but the courses listed below are available for graduate credit as supplements to other degree programs or for students with a special interest in women's studies but who are not pursuing a degree.

COURSE DESCRIPTIONS

515. Feminist Theory. Exploration of major feminist theories and their application to the problems women face. Readings from selected major works of modern feminism. Introduction to feminist research methodologies. Prereq.: 12 credits of women's studies or equivalent. 4 Cr. S.

591. Feminist Advocacy and Organizing. Development of advocacy and organizing skills on behalf of women's rights. Introduction to alternative methods of effecting change and analysis of case studies. Students design and implement an action campaign. Prereq.: 201. 4 Cr. DEMAND.



Additional graduate courses offered by other departments include: AMST 590, ART 539, ENG 551, 564, GERO 515, PSY 577.

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Bahauddin, Mohammed (1970)

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Banaian, King (1984)

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- Bjorklund, Lorimer R. (1969)**
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logical University; Ph.D. 1976 Michigan State
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Gutteter, Lee J. (1967)

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Assistant Professor of Physics, Astronomy and Engineering Science
B.A. 1980, Southwest State University; M.S. 1983, Iowa State University; Ph.D. 1990, University of Wisconsin-Madison
- Nunes, Dennis L. (1975)**
Dean, Graduate and Continuing Studies
B.A. 1968, Linfield College; M.R.E. 1970, North American Baptist Seminary; Ph.D. 1976, Utah State University
- Osendorf, Frank P. (1967)**
Professor of Health Education and Traffic Safety
B.S. 1963, M.S. 1966, St. Cloud State University; H.S.D. 1973, Indiana University
- O'Toole, Thomas (1985)**
Associate Professor of Interdisciplinary Studies
B.A. 1963, St. Mary's College; M.A. 1967, University of Minnesota; D.A. 1976, Carnegie-Mellon University
- Overy, David H. (1970)**
Professor of History
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- Pagel, Larry G. (1986)**
Associate Professor
B.A. 1970, M.A. 1975, University of Northern Iowa; Ph.D. 1986, University of North Dakota
- Palma, Glen F. (1983)**
Associate Professor; Director, Center for Child and Family Studies
B.S. 1971, Loyola University; M.A. 1975, University of Connecticut; Ph.D. 1981, University of Minnesota
- Palmer, John W. (1976)**
Professor of Health Education and Traffic Safety; Chairperson
B.S. 1970, Illinois State University; M.S. 1974, College of Racine; S.P.E.C. 1978, St. Cloud State University; Ph.D. 1981, University of Minnesota
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Associate Professor of English
B.A. 1968, Lynchburg College; M.A. 1969, University of Virginia; Ph.D. 1983, University of Denver
- Parham, Sidney F. (1979)**
Interim Associate Dean, Graduate and Continuing Studies; Director of Summer Sessions
B.A. 1966, Washington-Lee University; M.A. 1969, University of Virginia; Ph.D. 1975, Tufts University
- Parrott, June M. (1989)**
Associate Professor of Minority Studies; Director
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- Paulson, Richard A. (1989)**
Associate Professor of Business Computer, Information Systems
B.A. 1973, University of Washington; M.B.A. 1984, University of Nevada-Las Vegas; Ph.D. 1989, University of Oregon
- Peck, John H. (1968)**
Professor of Biological Sciences
B.A. 1964, Clark University; Ph.D. 1968, University of California-Berkeley
- Perrier, Ronald G. (1975)**
Professor of Theatre and Film
B.S. 1962, University of Wisconsin-River Falls; M.A. 1968, Ph.D. 1972, University of Minnesota
- Perry, Constance M. (1985)**
Associate Professor of English
B.A. 1977, College of St. Catherine; M.A. 1980, Ph.D. 1982, Indiana University
- Pesch, Michael J. (1987)**
Associate Professor of Management and Finance
B.A. 1978, Ph.D., 1990, University of Minnesota; M.S. 1981, M.B.A. 1982, Ohio State University
- Peterson, Dale W. (1966)**
Associate Professor of History
B.A. 1953, Macalester College; M.A. 1961, Ph.D. 1969, University of Minnesota
- Peterson, Donald G. (1965)**
Professor of Biological Sciences
B.S. 1946, M.A. 1949, Ph.D. 1968, University of Minnesota
- Peterson, Terrance (1976)**
Professor of Applied Psychology
B.S. 1965, University of Wisconsin-Eau Claire; M.S. 1968, Ph.D. 1970, University of Wisconsin-Madison
- Petrangelo, George J. (1976)**
Professor of Applied Psychology
B.S. 1969, University of Wisconsin-River Falls; M.S. 1973, M.S. 1974, University of Wisconsin-Stout; Ed.D. 1976, University of Northern Colorado
- Pfleger, Lawrence R. (1979)**
Professor of Counseling and Related Services
B.S. 1967, M.A. 1969, Ph.D. 1977, University of Wisconsin; B.S. 1986, St. Cloud State University
- Phan, Dien (1991)**
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B.S. 1978, St. Cloud State University; M.B.A. 1980, University of Minnesota; Ph.D. 1990, University of Arizona
- Phillips, Alan M. (1966)**
Professor of Philosophy
A.B. 1956, Knox College; M.A. 1961, Ph.D. 1969, Michigan State University

Pluth, Edward J. (1966)

Associate Professor of History; Chairperson
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Polley, Douglas (1991)

Associate Professor of Management and Finance
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Minnesota

Porter, Laurinda W. (1984)

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Pou, Carol (1969)

Professor of Biological Sciences
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Pou, Wendell M. (1966)

Professor of Physics, Astronomy and Engineering
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Prible, Jana M. (1986)

Associate Professor of Applied Psychology
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Present, Richard D. (1976)

Associate Professor of Social Work
B.A. 1967, Macmurray College; M.S.W. 1969,
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nesota

Pribble, Paula T. (1984)

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Prochnow, Robert R. (1972)

Professor of Psychology
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University of Wisconsin; Ph.D. 1972, University
of Texas

Prout, Robert S. (1972)

Professor of Criminal Justice; Chairperson
B.A. 1969, Muskingum College; L.L.B. 1967,
M.Ed. 1970, Ohio University; Ph.D. 1972, Ohio
State University

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Purdum, Boyd A. (1968)

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Rankin, James M. (1989)

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Reese, Frederick D. (1976)

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- Roser, Sherman R. (1979)**
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Butler University; Ed.D. 1967, Ball State University
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nesota
- Sadrai, Mahin (1988)**
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- Saeed, Mohammad (1985)**
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- Samarrai, Alauddin I. (1968)**
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Wisconsin-Madison
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Professor of Management and Finance
B. Tech. 1969, Indian Institute of Technology;
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- Schmidt, Orville H. (1967)**
Professor of Political Science
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George Washington University; Ph.D. 1967,
West Virginia University
- Schmidt, Russell H. (1969)**
Professor of Teacher Development
B.S. 1955, Winona State University; M.S.E.E.
1965, University of Minnesota; Ed.D. 1968, Uni-
versity of Florida
- Schneider, Kenneth C. (1974)**
Professor of Marketing and General Business
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- Schoenberger, Annette (1987)**
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nois State University; Ph.D. 1987, Iowa State
University
- Schoenberger, Richard J. (1986)**
Associate Professor of Physics, Astronomy and
Engineering Science
B.S. 1964, St. Procopius College; Ph.D. 1971,
Iowa State University
- Schrader, Shirley L. (1967)**
Professor of Music
B.A. 1952, B.M. 1952, University of Northern
Colorado; M.A. 1956, University of Denver;
Ph.D. 1968, University of Michigan
- Schrank, Gordon D. (1981)**
Professor of Biological Sciences
B.S. 1970, Angelo State University; Ph.D. 1974,
University of Texas
- Schreiber, F. Barry (1979)**
Professor of Criminal Justice
B.A. 1971, Hope College; M.A. 1974, Ph.D.
1977, University of Colorado

Schulze, Kimberly A. (1988)

Assistant Professor of Applied Psychology
B.S. 1979, Morningside College; M.S. 1984, St. Cloud State University; Ph.D. 1990, Utah State University

Schwaller, Anthony E. (1978)

Professor of Industrial Studies; Chairperson
B.S. 1967, M.S. 1968, University of Wisconsin-Stout; Ph.D. 1976, Indiana State University

Schwerdtfeger, Dale W. (1971)

Associate Professor of Sociology and Anthropology
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Schwieger, Bradley J. (1976)

Professor of Accounting
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Scott, Linda E.U. (1988)

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B.A. 1972, Wichita State University; M.A. 1975, Ph.D. 1982, University of Minnesota

Scully, Daniel J. (1988)

Assistant Professor of Mathematics and Statistics
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Sebastian, Richard J. (1983)

Professor of Management and Finance
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Sebberson, David R. (1989)

Assistant Professor of English
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Sentz, Erma I. (1964-1966, 1968)

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Sheehan, Therese (1986)

Assistant Professor of Physical Education, Recreation and Sport Science
B.S. 1978, Illinois State University; M.S. 1986, University of Missouri; Ph.D. 1989, University of Missouri-Columbia

Sherarts, Theodore R. (1966)

Professor of Art
B.P.H. 1964, University of North Dakota; M.F.A. 1966, California College of Arts and Crafts

Sherohman, James L. (1978)

Associate Professor of Sociology and Anthropology
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Shurr, George W. (1967)

Professor of Earth Sciences
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Simpson, Eleanor E. (1969)

Professor of Interdisciplinary Studies
B.A. 1960, Park College; M.A. 1964, San Francisco State College; Ph.D. 1974, University of Minnesota

Simpson, Patricia (1989)

Assistant Professor of Biological Sciences
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Skalbeck, Bruce A. (1967-1971, 1977)

Associate Professor of Management and Finance
B.A. 1965, Mankato State University; M.B.A. 1967, University of Denver; Ph.D. 1975, University of Northern Colorado

Smale, Marcelyn J. (1990)

Associate Professor of Music
B.M. 1968, St. Olaf College; M.M. 1970, University of Illinois; Ph.D. 1987, University of Minnesota

Smith, Kevin (1991)

Assistant Professor of Computer Science
B.S. 1984, Georgetown College; M.S. 1986, Ph.D. 1988, Georgia Tech

Song, Jae H. (1978)

Professor of Business Computer Information Systems
B.S. 1964, Seoul National University; M.S. 1970, Imperial College London University; M.B.A. 1974, Ph.D. 1978, University of Minnesota

Soroka, Leonard G. (1975)

Professor of Earth Sciences; Chairperson
B.S. 1971, Temple University; M.Ed. 1972, West Chester State College; D.Ed. 1977, Pennsylvania State University

Specht-Jarvis, Roland H. (1983)

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Sprague, David S. (1969)

Vice President for Student Life and Development
B.S. 1960, Dakota State University; M.Ed. 1963, South Dakota State University; D.Ed. 1969, University of South Dakota

Stadum, Beverly A. (1987)

Assistant Professor of Social Work
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Stavros, Shirley R. (1987)

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Steup, Matthias (1989)

Assistant Professor of Philosophy
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Stinson, L. Marilyn (1975)

Professor
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Stocker, Glenn M. (1978)

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Street, Glenn M. (1987)

Associate Professor of Physical Education, Recreation and Sport Science
B.A. 1979, M.S. 1983, St. Cloud State University; Ph.D. 1988, Pennsylvania State University

- Summers, Marcia A. (1969)**
Professor of English
B.A. 1961, Geneva College; M.A. 1962, Ph.D. 1969, University of Illinois
- Sundby, Lawrence C. (1966-1971, 1975)**
Professor of Accounting
B.A. 1963, M.B.A. 1967, St. Cloud State University; Ph.D. 1975, University of Nebraska-Lincoln
- Sundheim, Richard A. (1988)**
Associate Professor of Mathematics and Statistics
B.S. 1971, M.S. 1974, Kansas State University; Ph.D. 1979, Purdue University
- Tabakin, Geoffrey (1989)**
Assistant Professor of Teacher Development
B.A. 1968, Africa University of Cape Town; M.A. 1976, Ph.D. 1983, University of Wisconsin-Madison
- Tallent, Dwaine R. (1979)**
Professor of Management and Finance; Chairperson
B.A. 1957, College of Emporia; M.S. 1964, Kansas State University of Agriculture and Applied Science; Ph.D. 1970, University of Nebraska- Lincoln
- Thomas, David J. (1980)**
Professor of Management and Finance
B.S. 1949, J.D. 1952, M.A. 1958, Ph.D. 1979, University of Nebraska-Lincoln
- Thompson, Merton E. (1989)**
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- Thoms, Karen Jarrett (1987)**
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- Thornberg, Hope B. (1990)**
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- Torrence, Judith L. (1976)**
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- Tripp, Luke S. (1989)**
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- Trummel, Donald R. (1960-1967, 1969)**
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- Tsai, Ray J. (1988)**
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- Ullrich, Walter J. (1989)**
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- Vadnie, Michael (1981)**
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- Van Akin, Everett F. (1968)**
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- Vania, Natalie (1991)**
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- Vaughter, Paul H. (1962)**
Associate Professor of History
B.A. 1959, M.A. 1960, University of Tulsa; Ph.D. 1970, University of Kentucky
- Vick, Charles F. (1971)**
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- Vora, Erika (1978)**
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- Vora, Jay A. (1978)**
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- Walter, Robert J. (1986)**
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- Ward, Edward (1990)**
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- Wellik, Jerry J. (1972)**
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UNIVERSITY SERVICES

ACADEMIC AFFAIRS

ACADEMIC COMPUTER SERVICES. Academic Computer Services provides access to various computer systems and services. Computing requirements are served by use of six local minicomputers. Over 300 workstations are connected to this computing network. Software includes several languages, databases, statistical analysis programs and other application packages. Several Apple II, Macintosh, and IBM microcomputers, dispersed throughout the campus, also are available. Other educational computing requirements are supported by using remote computers: (1) Univac 2200 (State University System's academic batch computer), (2) VAX 8650 (located at the University of Minnesota). The staff of Academic Computer Services provides con-

sulting for students in computer-related courses, assistance for students and faculty requiring statistical programming, and support for faculty interested in developing computer applications to be used in various courses. User numbers and account numbers are available upon request and approval. The Academic Computer Center, located in the Engineering and Computing Center, is open every day except major holidays, and provides an area for students to work on projects. Several microcomputer labs, under the supervision of other departments and colleges, are available for students required to perform classroom activities. A special microcomputer lab, called GISMO, is available for students wishing to use the micro technology for wordprocessing or other computing functions. Access to this lab requires a small fee for unlimited use.

OFFICE OF RECORDS AND REGISTRATION.

This office is responsible for admission of undergraduate and special (non-degree) students, registration for courses, reporting grades at the end of each quarter, undergraduate graduation evaluations, issuing of diplomas, teacher licensure and maintaining the permanent academic records. A copy of the academic record (transcript) may be obtained by writing the Office of Records and Registration. The complete name, social security number, last year of attendance and signature should be provided when requesting a transcript. There is a \$2 charge for each transcript.

CENTER FOR ECONOMIC EDUCATION.

The Center for Economic Education provides an inter-school program that has as a general objective the improvement of undergraduate and graduate economic education programs at the elementary, secondary and college levels of instruction. The center initiates research projects, participates in the planning of new academic programs and provides resource assistance to elementary and secondary schools in central Minnesota. This office conducts special adult education courses and offers symposiums and in-service workshops in economic education for teachers and curriculum supervisors. The center emphasizes the development and distribution of economics curricular materials for classroom use and provides assistance to outside professional groups and institutions concerned with economic education.

In cooperation with the Departments of Economics and Interdisciplinary Studies, the center offers a Master of Science degree in social science (economic education). This office conducts National Science Foundation, U.S. Office of Education and private foundation supported curriculum and research programs in economic education. The center administers the National Depository of Children's Stories in Economics.

CONTINUING STUDIES

As part of the Center for Graduate and Continuing Studies, this office is responsible for the development, coordination and implementation of the following programs: professional education and extension, evening programming, educational conferences, non-credit offerings and a B.E.S. degree program.

The major functions of Continuing Studies are to:

1. Provide leadership and coordinate programs of continuing studies with other academic and administrative units.
2. Cooperate with business, industry and other professions, groups and individuals in providing credit and non-credit courses.
3. Provide leadership for the development and coordination of programs of study focusing upon the needs of non-traditional students.
4. Develop and sponsor educational lectures and conferences.
5. Coordinate the policy for non-credit programs.

INSTITUTIONAL STUDIES. This office conducts studies on a variety of institutional aspects in order

to support administrative decisions. It gathers and reports institutional data in response to questionnaires and individual requests, and advises others conducting institutional analyses.

CENTRAL MINNESOTA HISTORICAL CENTER.

The purpose of the center is to collect primary and secondary sources of history of central Minnesota in order to preserve these materials and to make them available for the use of students, scholars and interested citizens.

LEARNING RESOURCES

Learning Resources Services, located in Centennial Hall, serves all disciplines of the university. It is located as a focal point in the approximate geographic center of the campus.

The Learning Resources Center includes all print and non-print materials (and attendant hardware) for the academic community. This collection includes approximately two million items. Seating in the reading areas and study carrels accommodates one thousand, one hundred. It contains 704,922 volumes, 204,552 paper copies of federal documents, 1,384,121 units of microform—including ERIC materials, 57,765 maps, 29,363 audio items (records and tapes), realia, slide sets, transparency sets, computer software, video tapes and over 2,000 periodical titles. In addition to the resources in this collection, online data base searching and CD-ROM indexes are available to serve patrons. St. Cloud State University has access to the MINITEX network systems of Minnesota which provide access to all major collections of Minnesota as well as those in North Dakota, South Dakota, and Wisconsin.

MINNESOTA ECONOMIC DEVELOPMENT

CENTER. The Minnesota Economic Development Center, 328 Stewart Hall, provides technical assistance and program/policy analysis to economic development groups. The center is funded by a grant from the U.S. Economic Development Administration and matching funding from St. Cloud State and the College of Social Sciences.

SOCIAL SCIENCE RESEARCH INSTITUTE.

The Social Science Research Institute, 328 Stewart Hall, provides assistance to faculty in applied research and funded research efforts. The Institute serves as liaison with the Office of Sponsored Programs, and maintains information regarding research opportunities in Minnesota and regionally.

ADMINISTRATIVE AFFAIRS

ADMINISTRATIVE COMPUTER SERVICES. The Computer Center, located in the basement of Centennial Hall (Room 37B), serves as Administrative Computer Services for St. Cloud State University and, additionally, serves as the Administrative Computer Center for the State University System.

The administrative computer is a UNISYS 110/91SV with large mass storage capacity. A Data General MV20000 Computer System supports an office automation system on the campus.

BUILDINGS AND GROUNDS. Buildings and Grounds assumes responsibility for the care, maintenance and operation of university-owned equipment and facilities. Also under the jurisdiction of Buildings and Grounds are the custodial and maintenance operations, and the motor pool.

PRINTING SERVICES. Printing Services serves as the central duplicating, photocopying and printing facility for the university.

SECURITY AND PARKING OPERATIONS. Responsible for enforcing campus security and parking operations to promote a safe environment.

UNIVERSITY RELATIONS

ADMISSIONS OFFICE. St. Cloud State University is represented at College Day/Night programs and individual high school and community college visits by members of this office. It provides specific admission, financial aid, and program information to college-bound students and high school counselors. Tours, information sessions and consulting appointments are provided for prospective students who visit campus.

ALUMNI AND FOUNDATION. Located in the former Alumni House, now the Alumni and Foundation Center, this office houses both the Alumni Association and the Foundation. The Alumni Association promotes the best interests of St. Cloud State University and continues to involve graduates in the university by sponsoring a wide range of activities—academic, cultural, social, and recreational in nature. It's the "friend raising" arm of the university. Alumni records including home address and employer information are maintained here.

The Foundation is the "fund raising" arm of the university. Through private contributions, the Foundation is able to provide that "margin of excellence" for students and faculty through scholarship and faculty grant programs respectively. Through the annual alumni fund, community campaign, phonathon, gift club program, Parents Association plus corporate and planned gift programs, the leadership provided by the Foundation helps support the ongoing mission of the university and new initiatives.

CAREER PLANNING AND PLACEMENT. This office provides services for all members of the university community, as well as for employers. Career counseling is available for both undergraduate and graduate students. Individuals approaching graduation are assisted in preparing a set of credentials and in developing effective skills and techniques for use in their search for employment. On-campus interviewing opportunities are made available for students.

In addition to interviewing arrangements, employers are assisted in making employment opportunities known to qualified students and alumni by means of a biweekly job vacancy bulletin distributed to all individuals actively seeking employment who have an active placement file. A referral service also is provided whereby employers receive information regarding qualified students and alumni upon request.

Resource information about numerous industrial, business, governmental, and institutional organizations is available in the center's career information library. The library also provides information concerning salaries, interviewing, resume preparation, correspondence, and other job-seeking skills and techniques. The career library also has a collection of video cassettes that include the major seminar presentations and basic information about several of the major employers of SCSU's graduates.

PUBLIC RELATIONS AND PUBLICATIONS. This is the official news and public information center for the university, disseminating information of general interest about the university to various publics served by the institution. The mass media are provided with university news, photographs and public service announcements through this office. The office also is responsible for publicizing and promoting men's and women's intercollegiate athletics. In addition, all official university publications are edited, designed and coordinated here. The office arranges press conferences and mass media interviews and appearances. It also helps plan and publicize university-sponsored public events and contributes to the enhancement of campus-community relations.

BUILDINGS AND PROPERTIES

The date after each building indicates the year the building was completed and occupied.

CLASSROOM BUILDINGS

Brown Hall (1959). Classrooms and faculty offices. Named for Joseph C. Brown, president, 1916-1927.

Business Building (1968). College of Business classrooms and offices, together with the Center for Economic Education and Office of Research, Development and Community Service.

Eastman Hall (1929). Facilities for physical education and recreation, including a swimming pool and

gymnasium. Named for Alvah Eastman, former member of the State University Board.

Education Building (1971). Facilities for secondary, elementary and special education together with psychology, communication disorders, guidance and counseling and student teaching are located in this building.

Engineering and Computing Center (1958, 1962, 1986). Classrooms, laboratories, and faculty offices for engineering program and facilities for academic computing. (Formerly the Gray Campus Laboratory School, named for Thomas J. Gray, president, 1881-1890).

Halenbeck Hall (1965, 1980). Health, physical education and recreation building with a main gym seating 7,500, a swimming pool, diving pool, two small gyms, 200 meter track, racquetball courts, wrestling room, weight room and dance studio. Named for Dr. Philip L. Halenbeck, a St. Cloud physician.

Headley Hall (1962). College of Science and Technology building with shops, laboratories, classrooms and offices plus a lecture auditorium seating 150. Named for John W. Headley, president, 1947-1951.

Kiehle Visual Arts Center (1952-1974). Former library, remodeled for use by the art department. Named for David L. Kiehle, president, 1875-1881.

Mathematics and Science Center (1973). This four-story structure includes, in addition to classrooms and laboratories, a planetarium, museum, green house, observatory, aquarium, computer-calculator room and high energy linear accelerator for nuclear research. It is connected to Brown Hall by an enclosed elevated walkway.

Performing Arts Center (1968). Music and theatre classrooms and offices, with a main theatre seating 450, a studio theatre/recital hall seating 300, rehearsal hall, private practice studios and television studio.

Riverview Building (1911). English department classrooms and offices and foreign language laboratories.

Stewart Hall (1948, 1988-1990). Classrooms, offices, student media, and auditorium seating 1,200. Named for Warren H. Stewart, State University Board member, 1938-1948.

SERVICE BUILDINGS

Administrative Services Building (1975). Offices for the President, Administrative Affairs, Academic Affairs, University Relations and part of Student Life and Development are housed in this building, located at the west entrance to the campus.

Alumni and Foundation Center (1973). Formerly a private residence acquired by the university in 1973, these facilities are used to provide services to alumni and as offices for Alumni and Foundation.

Atwood Memorial Center (1966, 1972). This building houses dining and recreation facilities and meeting rooms for students and faculty and was named for the Clarence L. Atwood family.

Carol Hall (1946). Originally a private home, then a women's residence hall, this building now contains the student housing office. It was named for Carol Selke, wife of President George A. Selke.

Centennial Hall (1971). The Learning Resources Center, which includes all materials and services usually found in the library and audiovisual services, is located in this building. It also contains a remote access information system, classrooms and laboratories for the Center for Library and Audiovisual Education, and Administrative Computer Services. Ground was broken during the university's centennial year, 1969.

Garvey Commons (1962, 1965, 1987). This building consists of four dining rooms with cafeteria service seating 1300 at one time. It was named for Beth Porter Garvey, first dean of women.

Lawrence Hall (1905). This faculty office building is the oldest structure on campus; named for Isabel Lawrence, president, 1915-1916.

Maintenance Building I (1964), attached to the heating plant and **Maintenance Building II** (1980), which contains the maintenance office. These buildings provide shops, warehouse and vehicle storage for the campus.

Whitney House (1956). A former residence now used for offices, this building was a gift to the university from the heirs of A. G. Whitney.

RESIDENCE HALLS

Benton Hall (1967, 1968). Apartment-type residence for 288 men and women. Named for Benton County.

Case Hall (1964). Residence hall for 190 men. Named for Marie E. Case, former faculty member.

Hill Hall (1962). Residence hall for 150 women and Health Services facility. Named for Helen Hill, former faculty member.

Holes Hall (1965). First high-rise with nine stories, housing 399 men and women. Named for W. W. Holes, former member of the State University Board.

Mitchell Hall (1957, 1959). Residence hall for 418 women. Named for W. B. Mitchell, former resident director.

Sherburne Hall (1969). Tallest building on campus, housing 504 men and women. Named for Sherburne County.

Shoemaker Hall (1915, 1960). Residence hall for 505 students. Named for Waite A. Shoemaker, president, 1902-1916.

Stearns Hall (1966). Companion building to Holes Hall housing 399 men and women. Named for Stearns County.

OTHER PROPERTIES

Beaver Islands. A group of islands in the Mississippi River one-half mile south of the campus used for the study of plant and animal life. Named by Zebulon Pike, who explored the area in 1805.

George W. Friedrich Park. This 50-acre tract one mile east of the campus contains granite quarry ponds and extensive pine plantings used for nature study. Named for George W. Friedrich, former faculty member.

Minnesota Highway Safety Center. Designed by the Minnesota Department of Highways, this facility is used to teach emergency driving techniques and for vehicle testing and research. It is located on a portion of 655 acres of unimproved state land placed in the custody of the university in 1970. The remainder of the property, adjoining Highway 10 east of the Minnesota correctional facility, is used by the university for environmental studies.

Selke Field. Varsity athletic field containing a baseball diamond, cinder track and football field, enclosed by a granite wall. Named for George A. Selke, president, 1927-1943.

Talahi Woods. This upper river terrace area is being preserved as an oak savannah and is to be retained in its natural condition for biological study.

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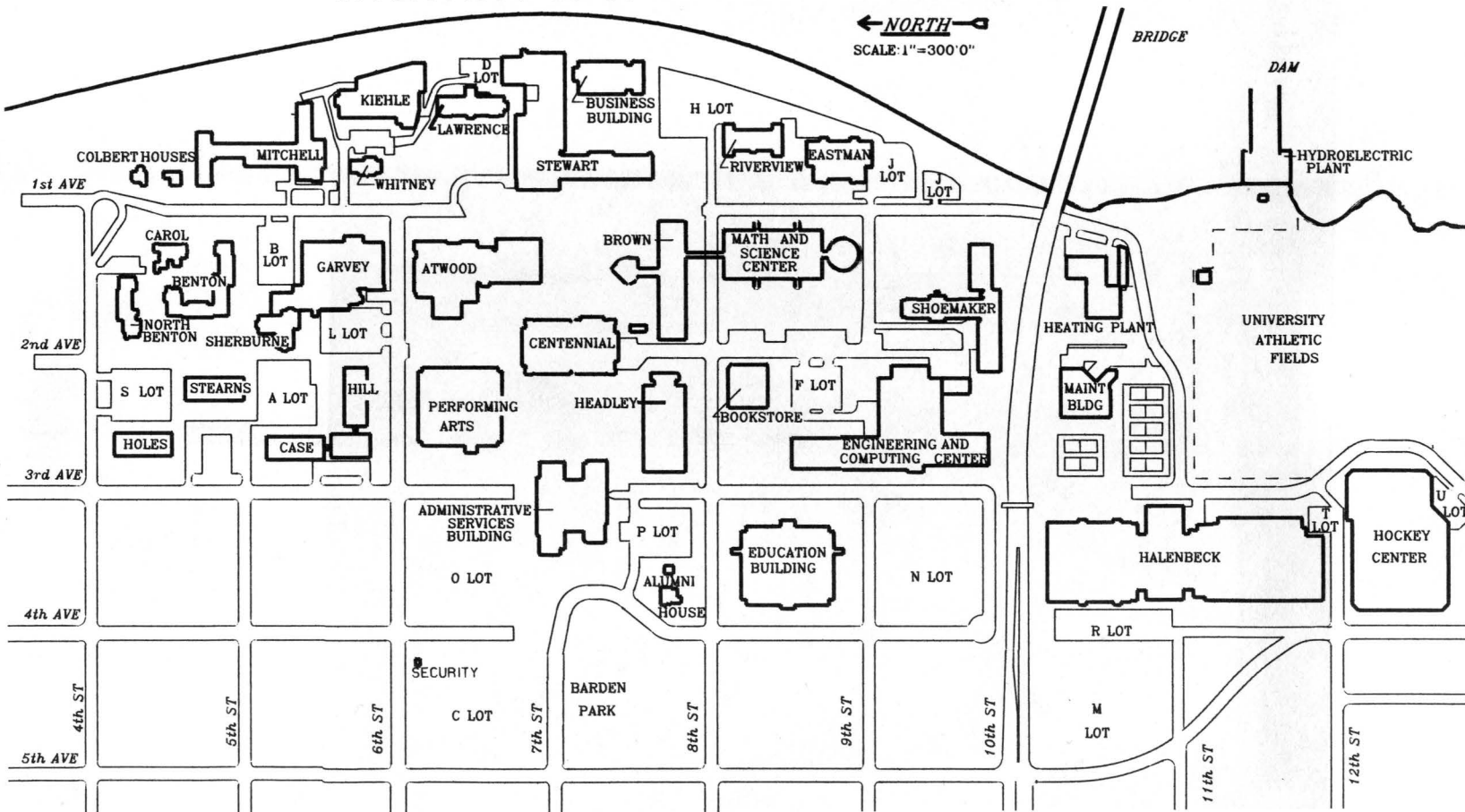
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ST. CLOUD STATE UNIVERSITY

MISSISSIPPI RIVER



SCALE: 1" = 300' 0"



OFFICE of GRADUATE STUDIES



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