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1976-1977

UNDERGRADUATE BULLETIN

ST. CLOUD STATE UNIVERSITY



ST. CLOUD STATE UNIVERSITY UNDERGRADUATE BULLETIN 1976-1977

- College of Business
- College of Education
- College of Fine Arts
- College of Industry
- College of Liberal Arts & Sciences

ST. CLOUD / MINNESOTA 56301

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UNIVERSITY INFORMATION PHONE NUMBERS

	Area Code 612
University Switchboard	255-0121
Academic Affairs	255-3143
Admissions and Records	255-2111
Business Office	255-3133
Career Planning/Placement	255-2151
Financial Aids	255-2047
Graduate Studies	255-2113
High School/Community College Relations	255-2243
Housing Office	255-2166
Information Services	255-3151

ABBREVIATIONS

Cr.	Credit
Undgr.	Undergraduate
Gr.	Graduate
Prereq.	Prerequisite
Lab.	Laboratory
ACCT	Accounting
AHLT	Allied Health Programs
AMST	American Studies
ANTH	Anthropology
ART	Art
BEOA	Business Education and Office Administration
BIOL	Biological Sciences
CHEM	Chemistry
CJS	Criminal Justice Studies
COMM	Mass Communications
CSCI	Computer Science
DAN	Danish
DTS	Driver and Traffic Safety
EAST	East Asian Studies
ECON	Economics
ED	Education
EDAD	Educational Administration
EDT	Student Teaching
ELED	Elementary Education
ENGL	English
ENV	Environmental Studies
ESCI	Earth Science
FREN	French
GEOG	Geography
GERM	German
HLTH	Health
HIST	History
HPER	Health, Physical Education and Recreation
HURL	Human Relations
IM	Information Media
IND	Industrial Education
LAST	Latin American Studies
MATH	Mathematics
MGMF	Management and Finance
MKGB	Marketing and General Business
MUS	Music
PE	Physical Education
PHIL	Philosophy
PHYS	Physics
POL	Political Science
PSY	Psychology
REC	Recreation
RUSS	Russian
SEED	Secondary Education
SOC	Sociology
SPAN	Spanish
SPC	Speech Communication
SPED	Special Education
SSCI	Social Science
SST	Social Studies
SSPA	Speech Science, Pathology and Audiology
SW	Social Work
TECH	Technology
TH	Theatre
URB	Urban Affairs
WS	Women's Studies



KEY TO SYMBOLS

† Indicates a general education course

QUARTER OFFERED

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

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.

ACADEMIC CALENDAR 1976-1977**1976 SUMMER QUARTER****First Summer Term**

Monday June 7	Registration, payment of fees, and deadline for First and Second Term graduation applications.
Tuesday June 8	Classes begin. Late fees apply.
Friday June 11	Deadline for class changes and payment of fees.
Monday July 5	Holiday (Independence Day)
Friday July 9	Deadline for dropping courses. First Summer Term ends at 4:00 p.m.

Second Summer Term

Monday July 12	Registration, payment of fees.
Tuesday July 13	Classes begin. Late fees apply.
Friday July 16	Deadline for class changes and payment of fees.
Thursday August 12	Summer Commencement.
Friday August 13	Deadline for dropping courses. Second Summer Term ends at 4:00 p.m.

1976 FALL QUARTER

Wednesday September 8	Faculty Meetings and New Student Days.
Thursday September 9	Registration and payment of fees.
Friday September 10	Classes begin. Late fees apply.
Wednesday September 15	Deadline for class changes.
Monday September 20	Deadline for graduation applications.
Thursday September 23	Last day to pay fees.
Monday October 11	Columbus Day (Holiday).
Thursday November 11	Veteran's Day (Holiday).
Friday November 12	Deadline for dropping courses.
Friday November 19	Fall Commencement.

1976-77 WINTER QUARTER

Monday November 29	Registration and payment of fees.
Tuesday November 30	Classes begin. Late fees apply.
Monday December 6	Deadline for class changes.
Monday December 13	Last day to pay fees. Deadline for graduation applications.
Friday December 17	Christmas vacation begins at end of regularly scheduled classes.
Monday January 3	Classes resume.
Friday February 18	Deadline for dropping courses.
Monday February 21	Presidents' Birthday (Holiday).
Friday February 25	Winter Commencement.

1977 SPRING QUARTER

Monday March 7	Registration and payment of fees.
Tuesday March 8	Classes begin. Late fees apply.
Monday March 14	Deadline for class changes.
Monday March 21	Deadline for graduation applications. Last day to pay fees.
Friday May 13	Deadline for dropping courses.
Friday May 20	Spring Commencement



1977 SUMMER QUARTER

First Summer Term

Monday June 13

Registration, payment of fees, and deadline for First and Second Term graduation applications.

Tuesday June 14

Classes begin. Late fees apply.

Friday June 17

Deadline for class changes and payment of fees.

Monday July 4

Independence Day (Holiday).

Friday July 15

Deadline for dropping courses. First Summer Term ends at 4:00 p.m.

Second Summer Term

Monday July 18

Registration and payment of fees.

Tuesday July 19

Classes begin. Late fees apply.

Friday July 22

Deadline for class changes and payment of fees.

Thursday August 18

Summer Commencement.

Friday August 19

Deadline for dropping courses. Second Summer Term ends at 4:00 p.m.

This calendar is subject to change in the event of a fuel emergency.

HISTORY

The institution which is now St. Cloud State University first opened its doors as the Third State Normal School in September, 1869. The original building was the Stearns House, a hotel purchased by the State Legislature for \$3,000 and remodeled for use as a school. Classrooms were on the first floor, the "model school" was on the second floor, and a women's dormitory was on the third floor. The faculty consisted of Principal Ira Moore and four assistants. The student body included 42 women and 11 men. In the years since this modest beginning, the school has developed into a university of established reputation with 29 buildings and a faculty in excess of 500 members.

This progression from normal school to university follows closely the pattern of development of similar state institutions of higher education throughout the nation. Until 1898, St. Cloud Normal School was essentially a secondary school with a few students of college rank. Beginning in 1898, the school began offering a full junior college curriculum. In 1914 the high school portion of the program was dropped. In 1921 the institution was authorized by the State Legislature to adopt the name of St. Cloud State Teachers College. The word "teachers" was deleted in 1957. The name change to St. Cloud State University became effective in 1975.

Granting of the first four-year degree, Bachelor of Education, was authorized in 1925. The name of the degree was changed to Bachelor of Science in 1940. The 1953 Legislature enabled the institution to grant the Master's degree and the 1967 Legislature authorized the Specialist degree.

Although the university has been a teacher preparation institution during most of its history, students are now enrolled in many other programs available to them. Authorization was obtained in 1946 to grant the Bachelor of Arts degree to students not majoring in education. A two-year associate degree was added in 1948. In recent years the university has added Bachelor of Music and Bachelor of Elective Studies degrees in addition to an External Studies Program.

Today the university is a multi-purpose and comprehensive institution offering a broad range of undergraduate and graduate programs of study in the College of Liberal Arts and Sciences, College of Business, College of Education, College of Fine Arts, College of Industry, and the Graduate School.

PHILOSOPHY

St. Cloud State University is committed to the pursuit of excellence in all aspects of higher education within its mission. The University strives to provide an environment which will challenge students to develop their talents, extend their intellectual abilities and interests, stimulate them to expand their creative abilities, and provide the impetus to a life-long respect and enthusiasm for learning. Students are provided the opportunity to develop the knowledge, skills, and attitudes required for entrance into a variety of careers.

The University assists students to develop an appreciation for both continuity and change and to recognize that knowledge serves to identify and preserve past human achievement as well as to provide the foundation for further progress. Students are encouraged and assisted to develop greater self-understanding; to develop respect and concern for individual worth and human dignity; to become more sensitive to the values held by other persons or groups; and to understand and assume their responsibilities to individuals, to society, and to their environment.

In this setting, it is anticipated that these experiences will prepare persons to continue to learn, to appraise their values and the values of society, and to accept their responsibility to participate in the decisions required of citizens in a rapidly changing world.

GOALS

The University will strive to achieve the following goals. Each of these goals is currently being achieved in varying degrees.

- A. The University will provide learning experiences to all persons who can benefit from such experiences in accordance with its firm commitment to equal educational opportunity.
- B. Through the curriculum and supportive educational experiences, the University will provide students with opportunities to develop an understanding of and appreciation for our rich heritage of human discovery and creativity in the arts, humanities, and sciences.
- C. The University will provide selected baccalaureate and graduate programs which will prepare students for a wide variety of careers, as well as provide programs and educational services for those not preparing for a career or not seeking a degree.

- D. Through academic programs and co-curricular activities, the University will provide students with opportunities to develop and improve their abilities to read and listen with understanding, think creatively, communicate effectively, and solve problems imaginatively.
- E. The University will provide a variety of opportunities for the continuing personal development of students in: (1) understanding and relating to others, (2) assessing their strengths and weaknesses, (3) determining their identity and values, and (4) maintaining their physical and mental well-being.
- F. The University will develop appropriate educational programs designed for persons seeking career change or advancement, reentry into a career field or personal enrichment.
- G. The University will include intercultural and international dimensions in its educational programs to enable students to gain a better understanding of other peoples.
- H. The University will reaffirm its commitment to excellence by: (1) seeking to employ and retain dedicated and professionally outstanding faculty; (2) encouraging faculty to improve and expand their qualifications; (3) maintaining and strengthening standards in teaching and academic achievement.
- I. The University will serve as a community college for the St. Cloud area and will serve as a regional institution by extending its services and programs throughout its service area in response to community needs.

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, National Council for Accreditation of Teacher Education and National Association of Schools of Music.

EQUAL OPPORTUNITY

St. Cloud State University is an equal opportunity employer. Through an active and continuing affirmative action program, the university provides equal opportunity and treatment in employment, admissions and all academic programs.

NON-DISCRIMINATION POLICY

St. Cloud State University does not discriminate on the basis of race, color, creed, religion, national origin, sex, marital status, status with regard to public assistance or disability in admissions, employment or the operation of its educational programs. Inquiries concerning compliance with Federal or State laws prohibiting such discrimination should be directed to the University's Affirmative Action Office or its Title IX Coordinator.

PROGRAMS OF STUDY

St. Cloud State University offers programs leading to the following degrees: (1) Bachelor of Arts, (2) Bachelor of Elective Studies, (3) Bachelor of Music, (4) Bachelor of Science, (5) Master of Arts, (6) Master of Business Administration, (7) Master of Science, (8) Specialist, (9) Associate in Arts, (10) Associate in Elective Studies (11) Associate in Science, and (12) Pre-Professional Programs which cover one and two-year curricula leading to further study in professional fields at other colleges and universities.

UNDERGRADUATE PROGRAMS

GENERAL EDUCATION REQUIREMENTS

ASSOCIATE LEVEL DEGREES. All students working toward an A.A. or A.S. degree must meet the following general education requirements.

- A. Communications (8 credit hours)
 - English 162
 - Speech Communication 161
- B. Distribution Requirements (24 credit hours)
 1. Humanities - Select 8 credits from designated general education courses in the following departments or programs: American Studies, Art, English, Foreign Language, Music, Philosophy, Theatre.
 2. Natural Science and Mathematics - Select 8 credit hours from designated general education courses in the following departments or programs: Biology, Chemistry, Earth Science, Mathematics, Physics.
 3. Social and Behavioral Sciences - Select 8 credits from designated general education courses in the following departments or programs: East Asian Studies, Economics, Geography, History, Industrial Education, Political Science, Psychology, Social Science, Sociology, Technology.
- C. Students are required to meet with their general education advisers at least once each quarter with additional meetings scheduled as necessary. They must obtain their adviser's signature on their registration forms before they will be permitted to register.

BACCALAUREATE LEVEL DEGREES (for students who entered St. Cloud State University after June 1, 1973).

All students working toward a B.A., B.Mus., or B.S. degree must meet the following general education requirements.

- A. Communications (12 credit hours)
 1. Writing Skills (8 credit hours) - All students are required to demonstrate or achieve competency in writing in their first three quarters in the University through one of the following:
 - a. Complete English 162 and English 163.
 - b. Demonstrate competency through an examination program provided by the English Department. Provision will be made for all students to attempt to earn advanced placement into English 163. Those who are successful will be given an opportunity through further testing to earn exemption from English 163.
 2. Speech Communication Skills (4 credit hours) - All students are required to demonstrate or achieve competency in speech skills in their first three quarters in the university through one of the following:
 - a. Complete Speech Communication 161.
 - b. Competency can be certified by the Speech Communication faculty's evaluation of any 36-week or longer speech course(s) completed in the 10th, 11th, or 12th grades of high school. If, upon faculty evaluation, a student's high school background does not provide for competency in all components of speech communication skill, then, with the consent of the student, the Speech Communication Department may recommend one of the following speech communication courses to fulfill the competency requirement: SPC 220, 226, 324, 325, or 331.

c. Competency can be achieved through out-of-class experience prior to college. This achievement will be verified through a competency examination administered by the Speech Communication Department.

3. No credit will be given for advanced placement or exemption in communication skills. Students demonstrating competency will have that part of the requirements waived and will have those credit hours added to their general education electives.

B. Philosophy Requirement (4 credit hours) - All students are required to take one of the following Philosophy courses: 110, 120, 122, 150, 151, 205, 280, 281, 282.

C. Interdisciplinary Studies Requirement (4 credit hours) - All students are required to take Social Science 104.

D. Physical Education Requirement (2 credit hours) - All students are required to take two credit hours, selecting from designated Physical Education courses. See list below.

E. Distribution Requirements (36cr.)¹ - The aim of this part of the requirement is to provide the student with some non-vocation oriented experiences in each of the broad areas of knowledge. Each student should achieve a minimum level of competence in each area.

This part of the requirement may be met through courses offered by the departments listed below which have been designated for general education. (Designated courses are listed below.) Courses which are prerequisite to courses in the student's major or minor program, or required by the student's major or minor program, or in the department of the student's major or minor program may not be used to meet this part of the requirement.

Students may be exempted from the distribution requirement in the area in which their major or minor is located by substituting other designated courses. For example, a student who has a major in Biology can substitute designated general education courses from the Humanities and/or from the Social and Behavioral Sciences for the 16 credits required in Area 2, Natural Science and Mathematics. In the same way, a student majoring in Sociology can substitute designated general education courses from the Humanities and/or from Natural Science and Mathematics for the 12 credits required in Area 3, Social and Behavioral Sciences. Students are encouraged to apply for exemptions and substitutions whenever they believe the general education objectives would be better achieved through an alternative selection of courses. Application forms are available from faculty advisers and from the Academic Affairs Office.

Area 1. Humanities. Choose 8 credits from the following: 8 cr.

American Studies	Foreign Languages
Art	Music
English	Theatre

Area 2. Natural Science and Mathematics. Choose from at least three: 16 cr.

Biological Sciences	Mathematics and Computer Science
Chemistry	Physics and Astronomy
Earth Science	

Area 3. Social and Behavioral Sciences. Choose from at least three: 12 cr.

East Asian Studies or Economics or Political Science or Social Science or Sociology
Geography
History
Industrial Education or Technology
Psychology

F. General Education Electives (10 cr.)¹ - Any courses which have been designated for general education may be used to meet this part of the requirement. Courses which are required for the student's major or minor program, and courses prerequisite to such courses, *may not* be used to satisfy this requirement. Professional education courses required for state certification *may not* be used by students seeking certification as teachers. Business majors must choose their general education electives outside the College of Business.

¹ No more than eight credits may be taken in any one department for purposes of Part E, Distribution Requirements, and Part F, General Education Electives, except that twelve credits are allowed in Foreign Language. No more than eight Foreign Language credits may be counted toward the fulfillment of Area 1, Humanities in Part E, Distribution requirement. The other four may be counted in Part F, General Education Electives.

- G. Students are required to meet with their general education advisers at least once each quarter with additional meetings scheduled as necessary. They must obtain their adviser's signature on their registration forms before they will be permitted to register.

BACCALAUREATE LEVEL DEGREES (for students who entered St. Cloud State University before June 1, 1973).

Students whose first enrollment was prior to June 1, 1973 will satisfy the credit and distribution requirements of the general education program in effect prior to June 1, 1973, except that they have the freedom to select from courses designated for general education listed below.

Group I - All required	30
Speech Communication 161 (4)	
English 162 or 172; 163, 262, 263, or 264 (8)	
Philosophy 110, 120, 122, 150, 151, 205, 215, 280, 281, or 282 (4)	
Social Science 104 (4)	
Physical Education. Select any designated courses. (4)	
Current Issues 432 (2)	
East Asian Studies, Economics, Political Science, or Social Science Select any designated courses. (4)	
Group II, Social Science - Select from three departments.	12
Any designated courses.	
Geography	
History	
Industrial Education or Technology	
Psychology	
Group III, Natural Science/Mathematics - Select from three departments.	16
Any designated courses.	
Biological Sciences	
Chemistry	
Earth Science	
Mathematics and Computer Science	
Physics and Astronomy	
Group IV, Humanities - Choose option A, B, or C	8 or 12
A. Select from two departments. Any designated courses (8)	
Art	
English	
Music	
Theatre	
B. A Foreign Language. Any designated courses. (12)	
C. American Studies. Any designated courses. (8)	
TOTAL	66 or 70

Courses which are prerequisite to courses in the student's major or minor program, or required by the student's major or minor program, or in the department of the student's major or minor program, may not be used to meet general education requirements.

Students may be exempted from the distribution requirement in the group in which their major or minor is located by substituting designated general education courses from departments in the other two groups. Thus, a student with a major in History (Group II, Social Science) may substitute designated general education courses from the departments listed under Group III and /or Group IV. In the same way, a student with a major in Physics (Group III, Natural Science/Mathematics) may substitute designated general education courses from the departments in Group II and/or Group IV. Students majoring in a department in Group IV (Humanities) may substitute courses from Group II and /or Group III. Substitutions should improve the balance among the three groups in the student's total program. Substitutions must be approved by the student's adviser and by the Office for Academic Affairs. Application forms are available from faculty advisers and from the Office for Academic Affairs.

GENERAL EDUCATION COURSES

The following courses are designated as appropriate for general education. Each is identified by a dagger (†) in the course description section of this Bulletin.

ALL UNIVERSITY COURSES

Current Issues - 432

COLLEGE OF BUSINESS

BEOA 101, 216, 308
 MGMF 167, 270, 361, 362, 363, 370, 375
 MKGB 235, 238, 320, 321, 322, 336, 437

COLLEGE OF EDUCATION

ELED 200, 290, 291, 310, 312
 HE 125
 IM 104, 204, 468
 PE 100, 120, 121, 122, 123, 124, 125, 126, 130, 131, 132, 133, 135, 136, 138, 139, 140, 144, 145, 150, 152, 153, 159, 160, 180, 200, 201, 202, 203, 205, 208, 210, 212, 213, 217, 218, 222, 230, 231, 232, 233, 234, 235, 236, 238, 240, 250, 266, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 290, 307, 308
 PSY 111, 121, 270, 370, 390
 ED 103, 436, 475
 SPED 401

COLLEGE OF FINE ARTS

ART 101, 102, 103, 110, 111, 121, 222, 240, 243, 250, 260, 270, 275, 280, 285, 296, 302, 303, 305, 306, 320, 392, 396, 430, 431, 432, 433, 434, 435, 436, 437
 MUS 100, 103, 104, 111, 112, 121, 122, 123, 124, 125, 141, 151, 152, 153, 154, 155, 161, 164, 165, 166, 168, 169, 171, 172, 173, 174, 176, 177, 198, 213, 221, 222, 223, 229, 230, 231, 238, 240, 305, 321, 322, 330, 421, 422, 463
 TH 140, 260, 261, 262

COLLEGE OF INDUSTRY

DTS 290, 390, 394
 IND 124, 130, 161, 169, 180, 181, 192, 210, 224, 301, 365, 492
 TECH 101, 102, 165, 166, 170, 175, 305, 306, 317, 325

COLLEGE OF LIBERAL ARTS AND SCIENCES

AMST 101, 102, 302, 490
 ANTH 250
 BIOL 101, 104, 107, 109, 201, 202, 303, 307, 332, 343, 344, 345, 349, 350, 411, 460, 475, 498
 CHEM 102, 201, 202, 203, 211, 212, 213, 214, 251, 252, 327
 COMM 201, 220, 346, 473
 CJS 101
 CSCI 169, 269
 DAN 131, 132, 133
 EAST 363, 364
 ECON 259, 260, 273, 274, 280, 281, 445, 451, 460, 461, 465, 471, 478, 480, 483
 ENGL 124, 162, 163, 221, 222, 232*, 250, 269, 290, 291, 292, 293, 294, 359, 391, 394, 455
 ENV 210
 ESCI 105, 109, 206
 FREN 131, 132, 133, 210, 211, 212, 243, 311, 312, 321, 322, 323, 341, 411, 414, 431, 432, 433, 434, 435, 436, 437, 441
 GEOG 101, 171, 270, 271, 273, 275, 276, 371, 372, 376, 379, 471
 GERM 131, 132, 133, 210, 211, 212, 243, 311, 312, 313, 321, 322, 323, 341, 411, 412, 413, 414, 421, 422, 423, 431, 432, 433, 435, 436, 441, 460
 HIST 101, 105, 111, 121, 131, 140, 141, 200, 201, 202, 203
 MATH 121, 251, 254, 440
 PHIL 110, 120, 122, 140*, 150, 151, 205, 270*, 280, 281, 282, 290*, 370*, 442*, 301
 PHYS 103, 106, 107, 201, 202, 207, 208, 230
 POL 201, 211, 251, 334, 335, 336, 361
 RUSS 131, 132, 133, 140, 210, 211, 212, 243, 311, 312, 322
 SCI 110
 SOC 260, 261, 264, 268, 281, 369

SPAN	131, 132, 133, 210, 211, 212, 243, 311, 312, 313, 341, 411, 414, 421, 422, 423, 431, 432, 433, 434, 435, 436, 437, 438, 439, 441, 460
SPC	161, 220*, 222*, 223*, 226*, 280*, 321*, 324*, 325*, 331*
SSCI	104, 204*, 301*, 401, 460, 470, 472, 476

* May be used only as electives in meeting general education requirements, Part F.

ASSOCIATE OF ARTS

The Associate of Arts degree is awarded to those students who satisfactorily complete 96 credits including the general education requirements. The Department of Business Education and Office Administration also offers an Associate of Arts program in secretarial education. See the department's section in this **Bulletin** for the requirements of that program.

ASSOCIATE IN ELECTIVE STUDIES

The Associate in Elective Studies degree provides students an opportunity to design their own two-year programs of study. The degree is awarded on the completion of 96 quarter credits of self-selected courses with a 2.00 (C) average. No more than 48 credits in one discipline may be applied toward the degree.

ASSOCIATE OF SCIENCE

The Associate of Science degree is awarded to those students who satisfactorily complete 96 credits including the general education requirements. Associate of Science programs are offered by the departments of Industrial Education and Technology. Program requirements are given under departmental headings in this **Bulletin**.

BACHELOR OF ARTS

The Bachelor of Arts degree programs are designed for those students who wish to pursue their studies in the liberal arts tradition. The degree is awarded upon the satisfactory completion of a minimum of 192 credits, which must include the general education requirements and the requirements of a field of concentration. The field of concentration requirements may be met by one of the following:

- A. 60 credit interdisciplinary major
- B. 48 credit major plus 12 credits in a foreign language
- C. 60 credit major/minor combination (36 or 48 credit major plus a 24 or 36 credit minor)

Courses intended specifically to meet teacher certification requirements may not be counted toward the degree unless approved by the dean of the college in which the student has selected his field of concentration.

BACHELOR OF ELECTIVE STUDIES

The Bachelor of Elective Studies (B.E.S.) degree is for those students who wish to develop their own programs of study. Requirements for the degree are:

1. Completion of a minimum of 192 credits with a 2.00 (C) average.
2. At least 48 credits in upper division (300-400) courses.
3. No more than 96 credits can be counted in any **one** discipline.
4. No major or minor program is required; however, students may complete majors and minors in those departments which indicate BES programs are available. See individual departmental listings.
5. Meet the residence requirement of St. Cloud State University as outlined in this **Bulletin**.

Students who meet the admission requirements for St. Cloud State University and students enrolled either previously or currently who have a 2.00 (C) average are eligible to apply for admission to the Bachelor of Elective Studies degree. Applications are accepted the first three weeks of each quarter. Application forms are available during that period from the BES Program Director, Performing Arts 209, or from the Office for Academic Affairs, Administrative Services Building.

BACHELOR OF MUSIC

The Bachelor of Music degree is for those students whose primary interest is musical performance. 124 credits in music are required. The student's major instrument or voice is studied each quarter and recitals are required at the end of the junior year and at the end of the senior year. Additional details of the program are listed in the Department of Music offerings.

BACHELOR OF SCIENCE

The Bachelor of Science degree is awarded to those students who successfully complete a professional four-year program of a minimum of 192 credits including general education requirements and the requirements of a field of concentration. Students seeking a teaching certificate must also complete the professional education requirements. Students in the College of Business must complete the Business Core. Requirements for specific programs can be found under department headings in this Bulletin.

EXTERNAL STUDIES

Acting Coordinator: Delaine Halberg **Committee:** Bergstrom, Downes, Elsen, Halberg, D. Lu, V. Mork, E. Perkins, Van Akin, Yoos

A new program offered as an alternate means to the undergraduate degree or as a way to gain additional knowledge without pursuing a degree, the External Studies Program is available to mature persons in the central Minnesota area. The program seeks to reduce the barriers to higher education and to allow the learner to gain credit for college-level competencies already held. A program of additional learning will be built around current knowledge. Stress is put on independent learning which allows students to move at their own pace.

During an extended orientation activity, the student learns about the university, its resources, and its offerings and plans the educational activities and goals to be pursued.

The Associate in Arts, Associate of Elective Studies, Associate in Science, Bachelor of Arts, Bachelor of Science (non-teaching) and the Bachelor of Elective Studies degrees are offered through the External Studies Program. Majors and/or minors are offered in most departments. Students who do not wish to pursue a degree but are interested in gaining additional knowledge in an area are encouraged to inquire.

Interested persons should contact the Coordinator of External Studies, St. Cloud State University, St. Cloud, MN 56301.

PRE-PROFESSIONAL PROGRAMS

These suggested pre-professional curricula have been reviewed by the appropriate professional school at the University of Minnesota. Students may enroll in any of these programs with the assurance that they will meet the course distribution recommendations of the University. These curricula are not inflexible, but may be adjusted to meet individual needs and the requirements of other professional schools. Students are responsible for knowing the admission requirements of the particular professional school they plan to attend. Advisers should be consulted for needed assistance.

PRE-AGRICULTURE

Adviser Max Partch

Schools of Agriculture have many and varied curricula. The following list should be followed until the student has selected a particular program within the field of agriculture.

ENGL 162, 163; SPC 161; BIOL 201, 202; CHEM 211, 212; MATH 131; PHYS; Two general education courses selected from: GEOG, HIST, POLS, PSY, SOC, SSCI; Two general education courses selected from ART, ENGL, MUS, TH.

PRE-DENTISTRY

Adviser David Mork

The following is a minimal list required by the University of Minnesota.

BIOL 201, 203, 303, 332; CHEM 211, 212, 214, 251, 252; ENGL 124, 162, 163; MATH 130 or 131, 134; PHYS 231, 232, 233; PSY 121, 262; SPC 161; ART 110, 260.

PRE-ENGINEERING

Adviser Bruce Ellis

CHEM 211, 212; CSC1 271, 371; ENGL 162, 163; MATH 241, 242, 243, 244, 334; PHYS 234, 235, 236, 251, 252, 332, 334, 335; Select 8 credits from designated general education courses in the following departments: AMST, ART, ENGL, FREN, GERM, MUS, SPAN, TH; Select 12 credits from designated general education courses in the following departments: ANTH, ECON, ESCI, ENV, GEOG, HIST, PHIL, POLS, SOC, SPC. An additional 8 credits may be taken in any area except CHEM, CSC1, ESCI, MATH or PHYS.

It is strongly recommended that the pre-engineering student meet periodically with the adviser.

PRE-FISHERIES MANAGEMENT

Adviser Alfred Grewe

Two years of coursework in pre-fisheries may be completed at St. Cloud. For the entire program see the adviser. The first quarter course should include: BIOL 201, CHEM 211; MATH 131, or 231 and any one of the following: ECON 259; ENGL 162; ESCI 284; POL 211. *Do Not Make Substitutions!*

PRE-FORESTRY

Adviser Max Partch

BIOL 201, 202; CHEM 211, 212; ENGL 162, 163; ESCI 284; ECON 273; MATH 131, 134 (or high school trigonometry); PHYS 231; SPC 161; TECH 110 (or high school mechanical drawing); Select 10 credits from: HIST, GEOG, POLS, PSY, SOC, SSCI; Select 10 credits from: ART, ENGL, MUS, TH; Suggested electives: BIOL 203, 343, 345, 350; CHEM 251; ECON 274; MATH 241; PHYS 232, 233. (The University of Minnesota forestry program requires a summer session between the sophomore and junior years.)

PRE-LAW

Adviser Robert Becker

The law schools do not require a student to take a prescribed list of courses or complete a particular major. To obtain further information on pre-legal studies contact the adviser.

PRE-MEDICAL RECORD ADMINISTRATION

Adviser Caroline Bourestom

BIOL 201, 303, 464, 465; CHEM 201, 202; ENGL 124, 162, 163; MATH 131, 169; PSY 121; SSCI 104; SOC 260; SPC 161; Select 4 credits in each of the following: PHIL, PE, SSCI; Electives: 25 cr. Total cr.: 96.

PRE-MEDICINE

Adviser Stanley Lewis

Pre-medicine is not a major as such, but the courses listed below, along with a bachelor's degree, fulfill the requirements for admission to any of the three Minnesota Medical Schools. These requirements should suffice for many out-of-state medical schools also. A pre-medical student does not need to major in a science; he or she should choose a major which would be desired if admission to medical school is not attained.

BIOL 201, 203, 303 and 332; CHEM 211 and 212 or 213, 214, 251, 252 and 325; ENGL 124, 162 and 163; SPC 161; MATH 131, 134 and 231; PHYS 231, 232 and 233; PSY 121 and 262; SSCI 104 and 401; Electives in Humanities and Social Science areas. Total number of credits needed for admission to medical school varies. (See adviser or medical school catalog).

PRE-WILDLIFE MANAGEMENT

Adviser Alfred Grewe

Three years of coursework in pre-wildlife may be completed at St. Cloud. For the entire program see the adviser. The first quarter courses should include: BIOL 201; CHEM 211; MATH 131 or 231; and any one of the following: ENGL 162; ECON 259; ESCI 284; POL 211. *Do Not Make Substitutions!*

GRADUATE PROGRAMS

General Purposes. Courses at the graduate level assume, for each student, a high level of maturity and great breadth and depth of intellectual interests. Consequently, much independence in reading and investigation is expected of students who enroll for graduate study.

Emphasis is placed on directed reading, techniques of primary investigation, independent and constructive thinking. High standards of performance in the ability to organize and evaluate evidence and defend conclusions are required.

The purposes of graduate study are:

- a. To develop to the optimum degree the ability of professional people to augment their professional and cultural understandings and skills.
- b. To develop appreciation, attitudes, and understandings characteristic of educated persons.
- c. To develop some preparation and experience in educational research to the end that sensitivity to change and an attitude of intelligent inquiry may be fostered.

Admission to Graduate Study. Students who hold baccalaureate degrees from accredited institutions and who present evidence of high level professional preparation at the undergraduate level will be considered for graduate study.

Application for admission should be made to the School of Graduate Studies. 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 "2.6" 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.

It is recommended that such application be made as far in advance of registration as possible. A student who holds the baccalaureate degree from another college should ask the registrar of that college to forward two official copies of his undergraduate transcript to the School of Graduate Studies at the time that application is made. All applicants should arrange to complete the entrance tests prior to registering for graduate credit.

Course Numbering System. Courses numbered from 500-699 may be used to satisfy the requirements of graduate degrees. Many courses carry double numbers, such as 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. Courses open only to graduate students are numbered 600-699.

SPECIALIST DEGREE

THE SPECIALIST DEGREE may be pursued by students who have completed a Master's degree or in some cases its equivalent and who are eligible for entrance into graduate study. Programs are offered in Information Media in the Department of Library & Audiovisual Education and School Administration in the Department of Educational Administration.

MASTER'S DEGREES

THE MASTER OF ARTS degree may be pursued by students who have completed either undergraduate liberal arts programs or teacher education degrees. Programs are presently offered in art, biology, English, history, and mathematics.

THE MASTER OF BUSINESS ADMINISTRATION is designed for students who desire a broad, integrated program to prepare them for leadership in business, industry, or government service.

THE MASTER OF SCIENCE. Programs in teacher education are available in elementary school teaching and in the following secondary teaching fields: art, biology, business education, English, geography, history, industrial education, mathematics, music, physical education, physical science, and social science. In addition, there are programs available in the following special fields: Curriculum and Instruction, elementary school administration, secondary school administration, reading specialist, speech and hearing therapy, special education, consultants-directors-supervisors of information media (library and audiovisual education), employment counseling, rehabilitation counseling, school counseling, and general counseling. Completion of these programs culminates in the Master of Science degree.

FIFTH YEAR PROGRAM IN TEACHER EDUCATION

The Fifth Year Program 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 primarily in the area taught. A person who has less than an undergraduate minor may not choose that field for his Fifth Year major. As nearly as possible, a student's Fifth Year Program will be planned to provide an integrated five-year program of preparation for teaching.

Additional information is contained in the **Graduate Bulletin**, available from the Dean, School of Graduate Studies.

ACADEMIC INFORMATION

ADMISSION AND REGISTRATION

ADMISSION OF HIGH SCHOOL STUDENTS. Graduates of accredited high schools must submit through their high school the Minnesota College Admission Form, an official transcript of high school credits, the American College Test (ACT), the Preliminary Scholastic Aptitude Test (PSAT) or Scholastic Aptitude Test (SAT) scores and the \$10 application fee (check or money order, not refundable.)

Students who are in the upper two-thirds of their high school graduating class or who have a composite score of 15 on the American College Test (ACT) examination, a combined score of 66 on the Preliminary Scholastic Aptitude Test (PSAT) or a combined score of 660 on the Scholastic Aptitude Test (SAT) shall be eligible for admission to St. Cloud State University.

To encourage early planning for college, St. Cloud State University will grant provisional admission to eligible seniors in accredited high schools. The application materials should be submitted by the student and high school during the student's senior year, containing all the available information on the student to date.

ADMISSION OF TRANSFER STUDENTS. Persons who have taken courses at other colleges and who are seeking admission to St. Cloud State University must submit an Application for Admission with Advanced Standing (obtained from the Office of Admissions and Records), a \$10 non-refundable fee (check or money order), and official transcripts from all institutions previously attended. Applicants with a "C" average in previous college-work are routinely eligible for admission; other applicants will be considered on an individual basis.

All credits averaging "C" or higher earned at college level institutions which are accredited by the North Central Association of Colleges, or other comparable regional accrediting associations, are accepted toward graduation so far as they fit into the curriculum which the student selects. (Credits earned in approved unaccredited institutions may be accepted when the student has completed 32 credits at St. Cloud State University with at least a "C" average.)

A transfer student who has earned an A.A. degree from an accredited college will have met the general education requirements at St. Cloud State University provided his A.A. degree program includes at least 60 credits of transferable general education courses. However, students preparing to teach should note that completion of the required communication sequence (writing and speech communication skills) is a prerequisite for Admission to Teacher Education.

A transfer student who has not earned an Associate degree must meet all requirements of the general education program.

A student who is denied admission may request that his application, together with his written appeal for reconsideration, be forwarded to the Admissions and Retention Committee.

A student who is admitted with less than a "C" average will be required to make up the honor point deficiency.

Students entering St. Cloud State University who have completed a hospital diploma program in nursing and who are registered nurses are granted 45 credits toward graduation.

DEADLINES FOR APPLICATIONS. Applications for admission should be submitted at least three weeks prior to the beginning of the quarter of enrollment. Earlier applications are encouraged.

REGISTRATION. The registration period for each quarter is indicated in the University Calendar. Students should consult the class schedule for specific registration instructions.

LATE REGISTRATION. Any registration which is completed after the beginning of classes is considered late, and thereby penalized by the addition of \$5 the first class day, accumulative at the rate of \$2 for each of the succeeding four class days of a regular quarter and three class days for summer sessions. Registration through the tenth class day of a regular quarter may be permitted in exceptional cases by clearing with the Office of Admissions and Records. These registrations would be subject to the late registration fee accumulative at the rate of \$2 a day.

EVENING AND EXTENSION REGISTRATION. Evening and Extension registration instructions are found in the class schedules available in the Office of Admissions and Records.

PRE-MORTUARY SCIENCE

Adviser Donald Peterson

ACCT 181, 182; ANTH 250; BIOL 201, 203; CHEM 211, 212; ENGL 162, 163; HE 215; PSY 121, 222; SOC 260; SPC 161; Electives 32–38.

PRE-NURSING

Adviser Dave Mork

The pre-nursing program varies depending upon where the student plans to transfer for completion of the degree. Most nursing schools will accept one year of pre-nursing. In the first quarter the student should take BIOL 201, ENGL 162, PSY 121, and CHEM 201 or 211. For further details, contact the pre-nursing adviser.

PRE-OCCUPATIONAL THERAPY

Adviser Caroline Bourestom

ART 270, 275, or 303; BIOL 201, 307, 464, 465; CHEM 201; ENGL 162, 163; IND 130, 161; MATH 121 or 132; PSY 121, 262, 433, 475; SPC 161; HE 215; Two general education courses selected from: ANTH, GEOG, SOC; Additional electives to bring total to 90 cr.

Acceptance into the professional program is competitive with the grade point average as the major factor. Applications should be submitted in January of the sophomore year. For further details please contact the adviser.

PRE-OPTOMETRY

Adviser Charles Eckroth

Two years of college is the minimum required for admission to optometry school. However, the growing trend is for most entering students to have a 4-year bachelors degree. It is suggested that the student plan for a BES degree (or other suitable major) to include the following courses.

BIOL 201, 202, 203, 342, 344, 435, 445; CHEM 211, 212, 214, 251, 252; PHYS 231, 232, 233, 283; ENGL 162, 163; PSY 121, 262; MATH 131, 134, 140, 231, 232; SSCI 104; SOC 260, 261, 278; SPC 161; Humanities electives 8–12 credits; Foreign Language electives 8–12 credits.

PRE-PHARMACY

Advisers John Carpenter and John Laakso

The courses listed below comprise a recommended two-year program. Students desiring to transfer after one year should consult with the advisers.

BIOL 201, 203; CHEM 211, 212 or 213, 214, 291, 292, 393; ECON 273, 274; ENGL 162, 163; MATH 130, 134, or 140; PHYS 231, 232, 233; Electives in social sciences and humanities (16–20 cr.)

Students with proficiency in mathematics or English may elect higher level courses in those areas or general electives.

The following courses are normally taken in pharmacy school but may be taken earlier: BIOL 344; MATH 241; HE 215; and PE 206. BIOL 202 is desirable but not required.

PRE-PHYSICAL THERAPY PROGRAM

Adviser Caroline Bourestom

BIOL 201, 203, 464, 465 (PE 248 & 349 may be substituted for BIOL 464 & 465); CHEM 211, 212, or 213, or 201, 202; ENGL 162, 163; HE 215; PE 449; PHYS 201, 202; PSY 121, 475; Electives from the following to bring program total to 90 cr.: ART, ENGL, MATH, MUS, PHIL, SPC, TH.

Acceptance into the professional program is competitive with the grade point average being a major factor. Applications should be submitted in January of the sophomore year. For further details please contact the adviser.

PRE-VETERINARY MEDICINE

Adviser John Peck

BIOL 201, 203, 303 or 342 or 202, 332 (not required); MATH 130, 131, 134 (Depends on high school background); CHEM 211, 212, 214, 251, 252, 325; PHYS 231, 232, 233; ECON 273; SPC 161; ENGL 162, 163; 8 credits from ANTH, GEOG, HIST, POL, PSY, SOC, SSCI; 8 credits from ART, MUS, LIT; Additional courses to bring total up to 90.

CLASS RANKING. For admission to sophomore standing a student must have completed a minimum of 48 or more quarter hours or their equivalent.

To achieve junior standing a student must have completed 96 or more quarter hours or their equivalent.

To achieve senior standing a student must have completed 144 or more quarter hours or their equivalent.

COURSE NUMBERING SYSTEM. Courses numbered 001 to 099 may not be used to meet graduation requirements.

Courses numbered 100 to 199 are generally considered for freshmen.

Courses numbered 200 to 299 are generally considered for freshmen and sophomores.

Courses numbered 300 to 399 are generally considered for sophomores and juniors.

Courses numbered 400 to 499 are generally considered for juniors and seniors. Some of these courses also carry numbers in the 500 series, which indicates they are open to graduate students.

Courses numbered 500 to 599 are double-numbered courses (with courses in the 400-499 series) and are open to graduate students.

Courses numbered 600 to 699 are exclusively for graduate students.

SCHOLARSHIP STANDARDS

GRADING SYSTEM. The academic achievement of students is recorded by the following system: A, excellent; B, very good; C, average; D, passing; and E, failing. The mark of X is given at the end of the early quarter or quarters of a course which must be taken in a series of more than one quarter before any credit is earned. S means satisfactory performance; U means unsatisfactory. W means withdrawn. V means the student audited the course without being evaluated. A student who registers to audit a course and then fails to meet the attendance requirement established by the instructor will be given a mark of U.

After the final drop date (as indicated in the University Calendar), any withdrawal will be recorded as an "E". If extenuating circumstances warrant other considerations, an appeal may be made through the Office of Admissions and Records. Students who register for a course but do not attend the class and/or do not withdraw officially will be given a mark of "E".

When a student who is otherwise doing satisfactory work in a course is unable, for reasons beyond his/her control, to complete all course requirements during the term, that student will be given an "I" for Incomplete. 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 "E" (Failure).

HONOR POINTS. The following system of honor points is used in all courses and curricula; a mark of **A**, 4 points per quarter hour of credit; **B**, 3 points; **C**, 2 points; **D**, 1 point; **E**, no honor points per quarter hour.

COMPUTING HONOR POINT RATIO. A student's honor point ratio is a numerical ratio of the total credits attempted and the total honor points received. The following are examples of the method of computing honor point ratios:

A. A student who completed 16 quarter hours credit with 16 hours of **C** has earned 32 points. The honor point ratio is $32 \div 16 = 2.0$.

B. A student who completes 16 quarter hours of credit with 8 hours of **C** and 8 hours of **D** has earned 24 honor points. The honor point ratio is $24 \div 16 = 1.5$.

Courses in which the mark of "S" or "U" is given are not included in the computation of honor point ratio.

Only courses taken at St. Cloud State University are used in computing honor point ratio. When a course is repeated, only the last mark is used in the calculation of the honor point ratio.

Marks of "I" (Incomplete), "X" (In Progress), "V" (Auditor), "W" (Withdrawn) do not represent credit earned and are not included in the computation of honor point ratio. When a mark of "E" is earned, the credit hours attempted are included in the computation of honor point ratio.

ACADEMIC TRIAL QUARTER REQUIREMENTS. When students fail to maintain a "C" average for any given quarter, their academic work for that quarter is unsatisfactory.

Whenever students' cumulative honor point ratios fall below the minimum level, they will automatically be placed "on trial" the following quarter of enrollment.

Quarters in attendance	Minimum HPR
After 1 quarter	—
2	1.40
3	1.70
4	1.90
5 or more	2.00

Students “on trial” must earn at least a “C” average during the trial quarter. A mark of incomplete does not meet this requirement; any incompletes must be removed before the student is allowed to enroll for another quarter. If students fail to obtain a “C” average during the trial quarter they will be dismissed for the period of one calendar year. If there are extenuating circumstances a student may appeal this dismissal to the Admissions and Retention Committee through the Office of Admissions and Records.

DISMISSAL. The University reserves the right to dismiss a student whose personal qualities, general health, scholastic achievement, conduct, or other standards are such that continued enrollment would not be in the best interests of the University and the student.

ACADEMIC POLICIES

PREREQUISITES. A student who fails in the first course of a sequence cannot take the following courses in that sequence until the failure has been made up. Prerequisites for a course, as stated in this bulletin, must be met before the course is taken unless permission to omit the prerequisite is obtained from the department chairperson concerned.

STUDENT LOAD. An undergraduate student enrolled for 9 credits or more (5 credits in a Summer term) is considered a full-time student. The recommended normal load is 16 credits (8 credits in a Summer term). The maximum allowable load without special permission is 20 credits (10 credits in a Summer term). Students who wish to enroll for more than the established maximum must secure permission from their adviser and college dean if they have been admitted to a major program of study. Students who have not been admitted to a major program of study must secure permission from their general education adviser and from the Assistant Vice President for Academic Affairs. A student’s load includes the total of all courses carried, including correspondence, extension, and any other college courses taken concurrently with those at St. Cloud State University.

CLASS ATTENDANCE. The university regards class attendance as the personal responsibility of each student. Upon enrollment in a course the student becomes accountable for all the requirements of the course. It is the practice for the student to give the instructor, in advance, if possible, the reason for the absence. Members of the faculty are asked to report to the Student Life and Development Office the name of any student whose repeated absence is impairing his/her work.

AUDITING OF CLASSES. A student who wishes to attend the class sessions of a course but who does not wish to receive credit for it must register as an auditor. The same registration procedure is followed and the same fees charged as for credit courses. Auditors must attend class but the taking of quizzes and examinations is optional. Auditors who fail to meet the attendance requirements will receive a mark of U (Unsatisfactory) rather than a mark of V (Auditor). Courses audited cannot be counted toward graduation requirements. Courses audited are counted as part of the student load.

REPEATING COURSES FOR IMPROVEMENT OF GRADE. Students may repeat courses at their own discretion in an effort to improve grades. In such cases, no additional credit will be allowed. The last grade earned will be the student’s official grade for the course.

REPEATING COURSES FOR ADDITIONAL CREDIT. Students may enroll in some courses more than once. Courses in this category are specified in the course description section in this bulletin. The maximum number of credits allowable is stated in the course description. For each enrollment the student receives credit hours and a grade.

CHANGE OF CLASS. A student is not permitted to change subjects or to add subjects to his class schedule after the fifth day of a quarter during the school year or after the fourth day of classes during a summer term. A failing mark will be given for courses dropped after the deadline shown in the University Calendar, except as noted in the “Marking System” section. All class changes require the completion of a “Drop and Add” form, which is secured in the Office of Admissions and Records.

RESIDENCE REQUIREMENT. Residence credit is earned on the campus of St. Cloud State University. To be eligible for graduation under a four-year curriculum a student must have been in residence at least three quarters and must have earned at least 45 quarter hours of

credit in residence during his last two years. Eight of these credits must be earned in residence during the quarter immediately preceding graduation. The Director of Admissions and Records is authorized to permit a student who lacks four or fewer credits for graduation, and who has a good scholastic record, to complete his degree requirements in a manner to be prescribed by the Vice-President for Academic Affairs.

Transfer students are required to take at least 12 quarter hours in their major field and 8 hours in their minor fields in residence unless waived by the department. A student transferring from a community college must take a minimum of 96 quarter hours in addition to credits earned at the community college.

Any student must be enrolled for credit in the university during the quarter in which the requirements for graduation are completed.

CORRESPONDENCE, EXTENSION, WORKSHOP OR FIELD TRIP CREDIT. A maximum of 15 quarter hours of correspondence credit may be used toward a bachelor's degree.

Extension credit may be transferred toward graduation only from those institutions accredited to give extension courses.

No more than 8 quarter hours credit in either workshop or field trips (tours) may be applied to a major and no more than 4 quarter hours of such credit may be applied to a minor. No more than a total of 16 quarter hours of workshop and field trip credits may be applied on any curriculum. These 16 hours cannot be earned exclusively in either workshop or field trips.

MAJOR PROGRAM OF STUDY. Students who expect to become candidates for the bachelor's degree may, when their completed credits equal or exceed 32 quarter hours earned at all colleges and at least 12 in residence at St. Cloud State University, make application for admission to a major program of study. The minimum scholarship requirement for admission to a major program is an honor point ratio of 2.0 in work taken at St. Cloud State University. Applications for admission to a major program must be initiated as follows:

For majors and minors offered in:

- Accounting
- Business Education & Office Administration
- Insurance & Real Estate
- Management & Finance
- Marketing & General Business
- Quantitative Methods & Information Systems

Contact the Office of:

Dean, College of Business

- Elementary Education
- Health, Physical Education & Recreation
- Library & Audiovisual Education
- Psychology
- Reading Instruction
- Special Education

Department Chairperson

- Art
- Music
- Theatre

Dean, College of Fine Arts

- Driver & Traffic Safety Education
- Engineering Technology
- Industrial Education
- Industrial Engineering
- Photographic Engineering Technology

Dean, College of Industry

- American Studies
- Anthropology
- Biological Science
- Bio-Medical Science
- Chemistry
- Comprehensive General Science
- Comprehensive Physical Science
- Computer Science
- Criminal Justice

Dean, College of Liberal Arts and Sciences

Earth Science
 East Asian Studies
 Economics
 English
 Environmental Studies
 French
 Geography
 German
 Health Care Science
 History
 Latin American Studies
 Mass Communications
 Mathematics and Computer Science
 Medical Technology
 Minority Studies
 Philosophy
 Physical Therapy
 Physics and Astronomy
 Political Science
 Public Administration
 Social Science
 Social Studies
 Social Work
 Sociology
 Spanish
 Speech Communication
 Speech Science, Pathology & Audiology
 Urban Affairs
 Women's Studies

Dean, College of Liberal Arts
 and Sciences

Elective Studies

Director, Bachelor of
 Elective Studies

Students interested in the Associate of Arts program in Secretarial Science must contact the Dean of the College of Business; those interested in the general Associate of Arts Program and the Associate of Elective Studies Program should contact the Director of Admissions and Records; those interested in the Associate of Science in Health Care Science must contact the Dean of the College of Liberal Arts and Sciences; those interested in the Technology or Industrial Education two-year programs should contact the Dean, College of Industry.

WITHDRAWAL FROM THE UNIVERSITY. Students withdrawing officially from the University should report to the Office for Student Life and Development for instructions on procedure. Withdrawal without proper application during a quarter will result in failing grades.

GRADUATION. Under the authority of the State University Board, St. Cloud State University awards the Specialist Degree, the degree of Master of Science, Master of Arts, Master of Business Administration, Bachelor of Science, Bachelor of Arts, Bachelor of Elective Studies, Bachelor of Music, Associate of Arts, and Associate of Elective Studies, and Associate of Science. A minimum total of 192 quarter hours of credit is required for any four-year degree.

Candidates for a Bachelor of Science degree in an education program must meet the following academic standards in order to qualify for graduation:

1. General Scholarship — 2.00.
2. Major field — 2.25.
3. Minor field — 2.00.
4. Professional Education Core — 2.25
5. Admission to Teacher Education.

Candidates for non-teaching degrees must meet the following academic standards to qualify for graduation:

1. General Scholarship — 2.00.
2. Major field — 2.00.
3. Minor field — 2.00.

Application for graduation forms are obtained in the Office of Admissions and Records. Check the University Calendar for the due date in any specific quarter.

Any student completing a major in two different degree designations (e.g., B.A., B.S., B.Mus., B.E.S.) the same quarter may elect the degree designation of his or her choice. No student will be awarded more than one degree at the end of any given quarter.

Students returning for additional undergraduate work after completing a bachelors degree at St. Cloud State University will be required to complete a minimum of 45 credits at St. Cloud State University to earn an additional (different) degree.

Thirty-six credits must be earned in residence. If less than 45 credits are earned, the major will be recorded but no new diploma will be issued or degree designated.

Students returning for additional undergraduate credit may not receive two diplomas for the same degree. The additional major will be listed on the Permanent Record.

The Permanent Record will list the student's major(s), minor(s), and area(s) of emphasis within the major, if any.

The graduation for a particular quarter will be "final" seven working days after the end of the quarter.

GRADUATION WITH HONORS. Students who complete any associate or baccalaureate degree program prior to September 1, 1978 will be graduated with honors in accord with the following:

Scholastic Honors	Awarded to graduates who have achieved an honor point ratio of at least 3.00 but less than 3.50.
High Scholastic Honors	Awarded to graduates who have achieved an honor point ratio of at least 3.50.

Students who complete any associate or baccalaureate degree program after September 1, 1978 will be graduated with honors in accord with the following:

Cum Laude	Awarded to graduates who have achieved an honor point ratio of at least 3.25 but less than 3.50.
Magna Cum Laude	Awarded to graduates who have achieved an honor point ratio of at least 3.50 but less than 3.75.
Summa Cum Laude	Awarded to graduates who have achieved an honor point ratio of at least 3.75.

Only course work completed at St. Cloud State University will be used to determine academic honors. To be eligible for consideration, graduates of associate degree programs must have been in residence for at least three quarters and have completed a minimum of 45 quarter hours of credit at St. Cloud State University; graduates of baccalaureate degree programs must have been in residence at least six quarters and have completed a minimum of 90 quarter hours of credit at St. Cloud State University. Associate degree graduates must have earned at least 30 quarter hours of credit in courses graded on the A-E marking system; baccalaureate degree graduates must have earned at least 75 quarter hours on the A-E marking system.

CREDIT-BY-EXAMINATION. A student may earn a maximum of 48 quarter hours of credit by examination. Entering freshmen are eligible to take examinations for credit if they have a "B" average in high school in the area to be examined and for all high school work. Requests for exceptions will be considered when test scores or other evidence suggests greater ability than the high school record indicates.

All other students who meet the qualifications listed below may apply to take credit examinations:

1. The student must have a "B" (3.0) average for all university work taken in the subject area of the exam.
2. A student should have a "C" average for all university work taken at St. Cloud State University. If a transfer student has taken less than two full quarters at St. Cloud, he/she must have a "B" average for all university work taken.
3. Students may not take examinations at a level below that of courses already taken in an area. For example, a student who has completed a 200-level course in a specific subject area cannot take an examination for credit in a 100-level course in the same area. Exceptions may be made in the case of transfer students who, in the judgment of the Assistant Director of Admissions and Records in the Office of Admissions and Records, and the chairperson of the department involved, have not had previous opportunity to cover the material in the 100-level course.
4. Students having completed 112 or more quarter hours may not receive credit by examination in courses at the 100 or 200 level.

5. A student may not take an examination in a course more than once.

Credit received by examination counts toward residence, general education, major and minor requirements. Examinations are graded on a Satisfactory/Unsatisfactory basis. Only "Satisfactory" grades are entered on the student's permanent record.

Examinations for credit may be requested in any course. The final authority for determining whether a student may take a course by examination rests with the department chairperson involved.

Students are not required to take the examination in the same quarter in which they apply. For example, students are encouraged to apply in the spring quarter for examinations to be taken in the fall, thus permitting the use of summer for reading and preparation.

Application forms are available in the Office of Admissions and Records, 117 Administrative Services Building.

COLLEGE LEVEL EXAMINATION PROGRAM. The university grants four credits for scores at the fiftieth percentile or higher on each of the following General Examinations: Mathematics, Humanities, Natural Science, and Social Science-History. Four credits are granted for scores at the fiftieth percentile or higher on each of the following Subject Examinations: American Government, General Psychology, Introduction to Business Management, Introductory Business Law, Introductory Marketing, Introductory Sociology, Statistics, and Tests and Measurements. Eight credits are granted for scores at the fiftieth percentile or higher on the Subject Examination in American History.

The Vice President for Student Life and Development will announce periodic dates for administration of tests under the College Level Examination Program (CLEP).

ADVANCED PLACEMENT. St. Cloud State University is a formal participant in the Advanced Placement Program administered by the College Entrance Examination Board. Students achieving a score of "3," "4," or "5" routinely receive credit. Students achieving a score of "2" are possibly qualified and may receive credit upon the recommendation of the department in which the test was taken. Additional information may be secured from the Assistant Vice President for Academic Affairs.

INDEPENDENT STUDY. Recognizing the diversity of interest, preparation and talent among its students, St. Cloud State University desires to individualize education as much as possible. This program permits a student to earn from one to four hours of credit for individual study in an area or topic not offered in a regular course.

In working out the arrangements for this special study, the student should consult with and receive the approval of his adviser, the instructor with whom the work will be done, and the chairperson of the department. Application forms are available in the Office of Admissions and Records, 117 Administrative Services Building.

COMMON MARKET PROGRAM-STUDENT EXCHANGE. The Common Market Student Exchange is designed to encourage students to seek enrichment in their education by considering the offerings of the other state universities. The program provides for mobility that allows students to take advantage of curriculum and program specialties and the different intellectual and social climates at other state universities.

A student is eligible to participate in the Common Market Student Exchange if he/she has a minimum grade-point average of 2.0 and has completed at least 45 quarter hour credits at the home state university. All credits earned under the program are considered "residence credits" at the home university and will be entered as such on the student's record. Students may enroll in any other state university for one to three quarters.

Interested students should contact the Common Market Director in the office of Admissions and Records. The director will assist with course evaluations, housing, financial aid, as well as have available catalogs, class schedules and applications to other universities.

INTERNSHIPS. An internship is a one-quarter, full, or part-time work experience for university credit. The program offers students a supplement to classroom learning through a variety of internship positions in local, state, and federal government agencies, public service organizations and private business. Information about internship opportunities and policies is available from the offices of the College Deans.

EXPERIMENTAL COURSES. The university offers a number of new courses on an experimental basis each quarter which are not listed in this **Undergraduate Bulletin**. These courses are listed in quarterly class schedules. Course descriptions are available in the Office for Academic Affairs and in the appropriate department office.

TRI-COLLEGE REGISTRATION PROGRAM. St. Cloud State University, the College of St. Benedict and St. John's University have entered into a cooperative agreement to encourage registration for courses on any of the three campuses by regular full-time undergraduate

students. The purpose of this agreement is to encourage students from one institution to take courses at the other institutions and thereby broaden their educational opportunities. The program is restricted to undergraduate students and excludes summer school and extension courses. Students will register and pay fees at their home institution while attending classes at the host institution. Additional information including special registration forms, class schedules and bulletins may be obtained in the Office of Admissions and Records.

MILITARY SCIENCE. The Army Reserve Officers Training Corps Program prepares college students for careers in the active army, army reserve, and national guard. ROTC courses are offered to Saint Cloud State University students on the SCSU campus by the Saint John's University Military Science Department under the provisions of the Tri-College Registration Program. ROTC is open to both men and women, and students do not incur a military obligation until their third year in the program.

The military science on-campus program is divided into two phases: freshman and sophomore year (MS I and MS II) which make up the Basic Course; and the junior and senior year (MS III and MS IV) which comprise the Advanced Course. This program also involves one six-week, off-campus summer training program between the student's junior and senior academic year.

A Two-year ROTC Program is also offered which is designed for students having two years of undergraduate studies remaining or seniors planning to attend graduate school. This course entails a six-week basic summer training program, completion of MS III and MS IV, and completion of the six-week advanced summer training program.

All ROTC courses, textbooks, and uniforms are provided free of charge. Cadets selected for the Advanced Course (MS III and MS IV) receive a monthly, non-taxable subsistence allowance during their junior and senior years.

Full one, two, and three-year scholarships are available to students enrolled in Military Science. Competition is based on academic and military scholarship, leadership and military aptitude.

Upon graduation from college and the successful completion of Army ROTC, cadets are commissioned Second Lieutenants in the U.S. Army Reserve. Cadets selected as Distinguished Military Graduates may apply for Regular Army Commissions. Reserve Lieutenants serve on active duty for two years or less while Regular Lieutenants have an active duty obligation of three years.

Registration for Military Science courses is conducted through the SJU Military Science Department only. Students desiring to enroll should contact the Saint John's Military Science Department at 363-2614 for enrollment and course information.

CENTRAL MINNESOTA PUBLIC SERVICE CONSORTIUM. St. Cloud State University is a member of the Central Minnesota Public Service Consortium. The Consortium, which includes Public School District #742, The Diocesan Bureau of Education, the City of St. Cloud, the College of St. Benedict, St. John's University, and St. Cloud State University promotes continuing education, community service projects, and inter-institutional cooperation.

FINANCIAL INFORMATION

TUITION

Following is the schedule of tuition charges for the Minnesota State Universities:*

ON CAMPUS

Undergraduate:

Residents	\$ 9.25 per credit hour
Non-Residents	\$18.50 per credit hour

Graduate:

Residents	\$12.00 per credit hour
Non-Residents	\$23.25 per credit hour

OFF-CAMPUS COURSES

There is no distinction between on-campus and off-campus courses for tuition purposes.

RECIPROCITY AGREEMENTS. Reciprocal agreements regarding in-state tuition fees has been reached with North Dakota and Wisconsin. North Dakota and Wisconsin residents will be charged in-state tuition fees at St. Cloud State University. The in-state fee assessment for North Dakota and Wisconsin students applies to all of the other State Universities in the State University System.

All students nominated for a graduate assistantship at St. Cloud University pay *in-state* graduate tuition fees.

LATE REGISTRATION. Any registration which is completed after the beginning of classes is considered late, and thereby penalized by the addition of \$5 the first day accumulative at the rate of \$2 for each of the succeeding four class days of a regular quarter, or three class days of a summer session. Registration through the tenth class day of a quarter may be permitted in exceptional cases by clearing with the Registrar. Such registration would be subject to the late registration fee accumulating at the rate of \$2 per day.

FEES

The Student Activity Fee is \$15 per quarter. This fee sponsors lectures, concerts, plays, and athletic contests. The fee is also used to pay for the university newspaper and all university social and recreational activities.

The Student Union Fee is a quarterly fee of \$10.00.

The Student Union/Program Fee is a quarterly fee of \$5.00.

The Health Service Fee is a quarterly fee of \$8.00. A hospital and medical insurance premium of \$16.00 per quarter for single coverage and \$79.50 for family coverage is suggested for all full-time students.

Fees for the Summer Quarter will be assessed at a rate of \$2.50 per credit.

* All tuition and fee charges are subject to change by the State University Board.

Undergraduate and graduate students enrolled on campus on a part-time basis are required to pay an amount equal to one half of each of the above fees.

Students enrolled exclusively in off-campus courses are not charged Student Activity, Student Union or Health Service fees.

SUMMARY OF EXPENSES

Board and room per quarter, Residence Halls	\$400.00*
Tuition per quarter (16 credit hours, resident)	148.00
Student Activity Fee, per quarter	15.00
Student Union Fee, per quarter	10.00
Student Union/Program Fee, per quarter	5.00
Campus Health Service Fee, per quarter	8.00
Insurance Premium (optional)	16.00
Total (average student)	\$602.00

* Double occupancy - 21 meal plan

Special Fees

Towel service for Physical Education courses	1.00
All tuition and fee charges are subject to change by the State University Board.	

REFUND ON TUITION AND FEES

On-Campus Classes: No partial refunds will be made for courses dropped by a student unless that person withdraws officially from all course work. If complete withdrawal and check-out is carried out with the knowledge and consent of the Student Affairs Office during the first week of classes of the fall, winter, or spring quarter, 80 per cent of the fees will be returned. During the second week of classes, 60 per cent; third week, 40 per cent; fourth week, 20 per cent; thereafter, no refund will be made. In the summer sessions, a 60 per cent refund will be made upon withdrawal in good order during the first five days of classes; 20 per cent during the second five days of classes; thereafter no refund of fees will be made.

Evening and Extension Classes: State University Board regulations state that prior to the first class meeting a full refund will be given; prior to the second class meeting, 80 %; prior to the third class meeting, 60%; prior to the fourth class meeting, 40%; prior to the fifth class meeting, 20%; thereafter, no refund will be given. If necessary to withdraw, immediately contact the Office of Admissions and Records, St. Cloud State University, St. Cloud, Minnesota 56301.

No refunds will be made for short courses (duration of less than five weeks of a quarter or less than two and one-half of a summer session).

IDENTIFICATION CARD AND FEE STATEMENT. After payment of fees, each student must carry at all times a validated ID card and receipted fee statement. These are needed for identification, library use, proof of completed registration, admission to university events and locker and towel services.

STUDENT AFFAIRS

The Vice-President for Student Life and Development, two Associate Deans of Students, Director of Student Activities, Director and Assistant Director of Student Housing, Director of Financial Aids, Financial Aids Assistant, Director of Atwood Memorial Center, Health Services, and Counseling and Related Services administer a number of programs in the interest of student welfare. The following are the co-curricular activities: loans, scholarships, and part-time employment; supervision and training of upperclass student counselors; selective service and veterans affairs; orientation of new students; concerts and lectures; and counseling with students concerning many kinds of problems.

UNIVERSITY STUDENT ACTIVITIES. The Program of University Student Activities at St. Cloud State University offers a variety of cultural, educational, social, and recreational activities to all students of the University. The purpose of these activities is to provide for expression of diverse interests and talents, development of potential abilities, and the promotion of skills in leadership and committee endeavors. In short, the University Student Activities Program is initiated and implemented to provide the student with development opportunities at St. Cloud State University.

Currently there are over 100 student organizations functioning on campus. (A complete roster of organizations and their offices is available in the University Student Activities Office.) Students are encouraged to acquaint themselves with these organizations and to become involved with these groups by way of lending their support, ideas, and talents. Some of the larger organizations include: the Major Events Council, Atwood Board of Governors, the *Chronicle*, KVSC, and the Student Component Assembly. If students are interested in helping to determine budget allocations of the student activity fee, participation in the Student Activities Committee (SAC) is welcomed and encouraged. (A brochure explaining SAC allocation policies is also available for students.)

Other programs that are organized by the University Student Activities Office include: New Student Orientation, the Campus Travel Service, Eastman Hall Open Recreation, and the Master Activities Calendar.

New Student Orientation offers two pre-orientation programs for all new first quarter and transfer students. Both programs consist of academic advising from student counselors and faculty advisers. Packets of information about St. Cloud State University are distributed to new students at each orientation program. MAINSTREET SCSU is the introduction of campus organizations to new students at SCSU. MAINSTREET is held during the beginning of each quarter in Atwood Center. Materials from the participating organizations are distributed at this time.

The Campus Travel Service provides information on various trips, tours, and flights to all students. This information is on file in the Student Activities Office. International Student I.D. Cards can also be obtained through this office. Students need validation of full-time status, a photograph, and \$2.50 to obtain an International Student I.D. Card. Information on special trips and tours can be found posted in Room 222 at Atwood Center.

The Eastman Hall Open Recreation Program is structured to meet the needs of the majority of the student body by providing an opportunity to recreate at their leisure. The schedule at Eastman is concentrated toward providing an informal, spontaneous recreational outlet for those students who need and can best utilize this type of activity. Facilities in Eastman Hall include three gyms, a pool, saunas, and locker rooms. Volleyballs, basketballs, badminton and table tennis equipment is available for student use. Equipment may be borrowed with the use of a validated student I.D.

The Master Activities Calendar serves two purposes: to provide departments and organizations with a reliable source of information as they plan their activities, and to supply this information monthly to their students. The deadline to be included on the printed calendar is the twentieth day of the preceding month. This calendar is then distributed campus-wide at designated areas.

Additional information about any of these areas, or concerning any student organization, activities budget, or extracurricular program may be obtained by contacting the University Student Activities Office, Atwood Memorial Center, Room 222 (255-2205).

COUNSELING CENTER. The Counseling Center assists students in making personal, educational, vocational and social adjustments through individual and group counseling. A complete psychological test library is maintained and tests in the areas of mental ability, inter-

ests, personality, special aptitudes, and achievements are frequently used to assist students. An educational, vocational, and personal information library is also provided. In addition, the Center provides technical support to institutional staffs and student organizations. This support encompasses a broad range of counseling-related activities, which seek to promote the overall development of the student. Staff training in residence halls and organizational training are illustrative of this outreach orientation.

ATWOOD MEMORIAL CENTER. Atwood Center provides facilities, services and programs to accommodate the university community in the development of individual and group resources.

Facilities include a large multi-purpose area suitable for concerts, banquets, etc.; a small theater; a variety of conference rooms; bakery and delicatessen; snack bar; unique dining settings; a music listening room; recital, reading and gallery lounges; display areas; ticket sales; Pot Pourri Shop; Coffehouse Apocalypse; and student organization offices.

Services include a program advisory staff, Atwood reservations secretary and special events food service staff. Recreation and Games services include bowling, billiards, table tennis and table games. There is also a professional hair stylist shop and a print shop.

Programs are primarily due to the creative efforts of the Atwood Board of Governors, a student program board who provides an innovative experimental university series and a program of concerts, lectures, exhibits and tournaments. Also located in Atwood Center is the office of the Coordinator of Student Activities and headquarters for the Major Events Council.

HEALTH SERVICES. All students are encouraged to have a health history in the form of a Datamation Report on file in the Health Center prior to starting their academic career.

Health Services is a completely equipped medical clinic that is staffed by qualified medical personnel. The clinic provides on-campus medical care to all students who pay the quarterly health service fee and who have a validated I.D. card in their possession. For a more detailed description of services available, consult the *Student Handbook*.

The State University Board and Health Services encourage every student attending a state university to have health insurance coverage. If not covered by an individual or parents' policy, the student may purchase the Guarantee Trust Insurance Health Plan contracted for by the State University System.

FINANCIAL AID PROGRAM. A variety of sources are available from which a student may draw to finance an education at St. Cloud State University. Interested students should refer to the Financial Aid and Scholarship brochures or see the Financial Aid Officer in the Administrative Services Building. The primary sources are:

1. **Family Resources.** The student's family will be expected to give financial aid to the full extent of their ability.
2. **Student Savings.** The student will be expected to have savings from gifts or earnings which can be used to defray school expenses.
3. **Emergency Loans** are granted to students who are financially needy, have at least a C average, have a record of personal and financial responsibility, and have been in residence at this university for at least one quarter.
4. **Federally Insured Loans** are made to students by local lending institutions or the Minnesota Higher Education Coordinating Board through the university.
5. **National Direct Student Loans** are made to needy students on a long-term basis at 3% interest with possible cancellation for teaching service.
6. **Supplemental Educational Opportunity Grants** give the exceptionally needy student, including transfers, no more than half the amount of need.
7. **Scholarships** in limited number are available to qualified students.
8. **Veterans Benefits** are available for training of students under the following: Public Law 894—Rehabilitation of Veterans, Public Law 634—War Orphans Bill, Public Law 358—G.I. Bill. To become eligible for either of the first two, the student should see the nearest veterans' office to initiate action. The veteran may obtain an application form for the G.I. Bill from the Student Life and Development Office (142 Atwood Center) or from any veterans' office.
9. **Work-Study** permits students from low income families to help defray costs by working no more than fifteen hours a week while enrolled in school or forty hours a week during vacations and summers.

10. **Part-Time Employment.** Applications should be made to the Financial Aid Office or the Student Employment Service.
11. **State Scholarship and Grant Program.** This program under the Higher Education Coordinating Board has increased tremendously in its scope recently. High school counselors have the information and application blanks for these grants and scholarships. An ACT Family Statement is required.
12. **Basic Educational Opportunity Grants.** This is a new program which became effective in 1973-74. The program provides for grants of \$1400 less the expected family contribution to assist students in meeting educational costs. A separate application is required and is available at colleges, high schools, libraries, post offices, and other federal buildings.
13. **Law Enforcement Education Program** provides grants and loans for law enforcement personnel. Information is available at the Financial Aids Office.
14. **Bremer Incentive Scholarships** are for students over 25 years of age. Information and applications are available at the Financial Aids Office.

A student may apply for all forms of financial assistance if eligible. The student should apply for the full academic year if anticipating that aid will be needed for any part of the year. A student applying for any financial aid *must* apply for a Basic Educational Opportunity Grant.

How to Apply. The steps necessary to apply for financial aid are:

1. Incoming students should complete the FFS (ACT form) as an application for aid.
2. Those students using a PCS or SFS form must also submit an additional application for financial aid.
3. Preference will be given to students who have applied prior to March 1.

HOUSING

How to Apply for University Housing. (1) Students enrolling at St. Cloud State University for the first time will receive housing application material soon after they have received notice of acceptance to the University. For students who have previously been enrolled at St. Cloud State, applications are available at the Housing Office, Carol Hall. Summer school students are requested to write to the Housing Office, Carol Hall for reservations. Please complete and submit this material to the University Housing Office. A \$25.00 room reservation deposit should accompany your housing application. (2) Students are assigned to residence halls during the latter part of July and notices are mailed shortly thereafter. Should a student wish to cancel the housing assignment, notice must be given to the University 60 days prior to the opening of the fall quarter and 45 days prior to the opening of all other terms. Residents of University housing pay in advance quarterly for room and board and sign a contract for the entire academic year. Residents who re-register after withdrawal during the academic year must contact the Housing Office. (Exception — Shoemaker Hall is a room only quarterly contract residence hall.)

Residence Hall Facilities. The University has approximately 2,800 beds in the residence halls. Holes and Stearns Halls are freshmen co-ed halls with men and women living on alternate floors. Mitchell is the only all women's hall. Hill-Case houses both men and women in separate wings and has common recreational facilities and lounges. Sherburne Hall is the high-rise building (the tallest building in St. Cloud) which houses upperclass men and women on alternate floors. Shoemaker Hall is also an upperclass hall housing men and women on alternate floors. The Benton-Carol facilities are designed to afford mature, responsible junior and senior men and women an opportunity for independent living with minimum supervision in an apartment-like setting. Carol Hall provides an area for recreational facilities for Benton Hall residents. 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, pillow, drapes for each room, wastebasket, study desk, adequate study lighting, room chairs and closet space. Residents provide their own linen, blankets and bedspread for twin sized bed. Linen service may be purchased from a private launderer.

Residence Halls. The residence halls are designed to provide experience in group living, self-discipline, and interaction with fellow students. The major goal of the residence hall program is to provide an atmosphere in which the work required of students to succeed in the University can be accomplished.

Each residence hall has a full-time director who is responsible for the administration and supervision of the hall. Each floor or house is guided by an undergraduate Resident Adviser who is selected for outstanding leadership qualities and ability to work effectively with students. Each hall has a general council which aids in the government of the hall. The hall programs include the following: Scholastic Program, Athletic Program, Activities Program, Social Program and Hall Council. Special programs provided by the Housing Office include: Tutoring programs, Movies, Educational programs (i.e. sexuality, rape awareness, alcoholism), Recreational/Athletic competition, Small group interest sessions, Skiing, Roller skating parties, Dances, and many more!

Rates and agreements. Room and board fees in residence halls are approximately \$1,154.25 per academic year for a double room. Charges for room and board are payable in advance by the quarter, unless the student chooses to follow payment schedule as published in our information bulletin (rate letter). Information about payment dates is included with each hall assignment. Late payment incurs a \$1.00 per day fee until payment is made.

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 this bulletin. 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. The \$25 deposit will be forfeited unless the student notifies the Housing Office 45 days before the beginning of the following quarter his/her intent to leave the university.

Room and board charges are subject to change by the action of the State University Board. No discount is made for absences. A student withdrawing from the university during the quarter receives a refund of board charges but is not refunded room rent. Such a student must pay for board through the Friday following the date of departure. The unused room rent for the quarter may be refunded only if the student leaves for medical reasons. Room without board is available for summer school students at \$65 per term when two share a room and \$85 for a single room. Meals may be obtained a la carte at one of the food service centers and at Atwood Center.

ALL-UNIVERSITY COURSES

CURRENT ISSUES

†432. Current Issues. Significant problems and important issues that face humans. An interdisciplinary, interdivisional course designed to provide the senior student an opportunity for integrating learning experiences. 2 Cr.

EDUCATIONAL TOURS

410-510. Educational Tours. (Name of Department or Program). Tours taken under supervision of the University. Exact nature of course will be defined by the department involved and approved by the Vice President for Academic Affairs. Considered residence credit. 1 to 8 Cr.

EXTERNAL STUDIES

150. Individual Education Planning. An introduction to the external studies concept, including information about and skills in the areas of (1) individual education planning, (2) independent study, and (3) utilization of learning resources. No prerequisites. Permission of instructor is required. 2 Cr.

INDEPENDENT STUDY

199-499. Independent Study. (Name of Department or Program). Offered at the discretion of departments, this program is intended for the very able, motivated student whose intellectual needs are partially served by serious independent study. Permission of instructor required. May be repeated. 1-4 Cr.

ORIENTATION

Orientation 101. (4 credits, Fall), **102** (3 credits, Winter), **103** (2 credits, Spring). This course is designed to help prepare minority students to relate to a total educational environment which rests on a cultural base not necessarily shared by members of a minority subculture. No prerequisite.

INTERNSHIPS

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 1-16 Cr.

READING

019. Reading and Study Skills. Emphasis on study skills which includes developing an effective study approach, listening and notetaking skills, preparing for examinations, and vocabulary development. 2 Cr. (not applicable on degree).

120. Reading Rate Improvement. Emphasis on improving speed and flexibility in rate of reading. 2 Cr. (applicable on degree).

SPECIAL PROBLEMS

400. Special Problems. (Name of Department or Program). A seminar or conference course for advanced students wishing to work out a special problem in the academic area. 1-4 Cr.

TELEVISION

488-588. (Name of the Department or Program). Exact nature of the course to be offered on television will be defined by the department involved and approved by the Vice President for Academic Affairs.

WORKSHOPS

495-595. Workshop. (Name of the Department or Program). Specific subjects selected to meet special educational needs. Exact nature of the course will be defined by the department involved and approved by the Director of Continuing Education.

ALL-UNIVERSITY PROGRAMS

HONORS PROGRAM

Paul Gilbert, Director

Honors Council: *Faculty:* L. Bjorklund, H. Coppock, M. Craik, D. Lu, J. Melton, J. Miller, D. Peterson. *Students:* J. Bouley, G. Broich, L. Burggraff, D. Griebel, D. Guggenberger, D. Janson, P. Koplin, B. Ries, B. Tempte, B. Wakefield.

The Honors Program at St. Cloud State University strives to provide a climate within which serious intellectual endeavor can flourish. The primary purpose of the program is to provide the best possible situation within which the student may develop into a liberally educated scholar, capable of intellectual independence, critical thought, and self-enlightenment. The university attempts to confront the superior student with all kinds of ideas; it desires to deepen the intellectual experience, awaken sensitivities, and stimulate a love for learning. In the process, the student is encouraged to carry on dialogue of the intellectual discovery with colleagues and professors both in and out of the classroom. Consequently the close relationships created in small classes and in seminars are nurtured by discussions, forums, and cultural activities.

There are three possible degrees with Honors — Honors in Liberal Studies, Honors in Major, and University Honors. The first is granted to those who satisfactorily complete only the requirements in the Liberal Studies Honors curriculum; the second to those who complete honors requirements only in a major field, and the third to those who complete honors requirements in both.

For information concerning admission to Honors contact the Director.

Liberal Studies Curriculum. Students admitted into the Honors Program enroll in the Liberal Studies Curriculum rather than in the university general education courses. This curriculum includes the following course of study. The content of the various seminars may vary from year to year. Information concerning seminar content in a specific quarter is available in the office of the Assistant Vice-President for Academic Affairs.

FRESHMAN YEAR

100. Honors English. Emphasis upon advanced composition, creative writing, reading of selected literature and critical analysis. 4 Cr.

102. Honors English. Study of various literary forms with additional emphasis on analytical and interpretative thinking and writing. 4 Cr.

110. Honors Mathematics. Designed to help the student acquire greater insight into the nature of mathematical thinking — methods of proof, language of symbols, logical discourse, and deductive systems. 4 Cr.

120. Honors Physical Science. The purpose of all science requirements is to acquaint the student with major problems of a general area and the different ways a human being has attempted and does attempt solutions. There is no attempt to survey one area. Rather, the student is expected to develop skills and tools helpful in comprehending and evaluating scientific thought. 4 Cr.

121. Honors Biological Science. See description under Physical Science. 4 Cr.

SOPHOMORE YEAR

200. Honors Philosophy. Content will vary from year to year but is concerned with helping the student sharpen conceptual tools and critical techniques, encouraging development of a questioning intellectual attitude, and promoting the habit of original thought. 4 Cr.

210. Honors Social Science I. Seminars are designed to provide insight into the methods of the area, to demonstrate the interrelatedness of disciplines within the area, and to encourage the habit of critical thought. 4 Cr.

220. Honors Humanities I. Seminars are designed to provide insights into the area, to help the student discover relationships among disciplines within the area, and to allow opportunity for the student to develop powers of critical thought. 4 Cr.

JUNIOR YEAR

310. Honors Social Science II. A second seminar in social and behavioral science. 4 Cr.

320. Honors Humanities II. A second seminar in Humanities; see description above. 4 Cr.

SENIOR YEAR

401. Honors Interdisciplinary Colloquium: Humanities. 4 Cr.

402. Honors Interdisciplinary Colloquium: Natural Science. 4 Cr.

403. Honors Interdisciplinary Colloquium: Social Science. 4 Cr.

Senior Honors students must take two of the above interdisciplinary colloquia. One must be in the area of the student's major department and the other must be outside the area of the major.

LANGUAGE REQUIREMENT

Each student must complete one of the following options:

- a) a minimum of one year of satisfactory classwork in one foreign language at the university;
- b) present evidence of two years of satisfactory work in one foreign language at the high school level;
- c) demonstrate proficiency (as determined by the Foreign Language Department) in one modern language;
- d) three courses in linguistics and/or in foreign literature in translation.

ADVENTURE IN MEANING. All honors students are involved in this extra-curricular academic activity every quarter they are in the honors program. All students read the same materials, attend occasional lectures by scholars and artists, and meet together in small groups with selected professors. The objectives of the program are to provide a common source of conversation for all honors students; to further develop an appreciation for the liberal arts idea; and to help provide a sense of intellectual community.

DEPARTMENT HONORS. With the exception of three common features each departmental program has its own individual characteristics. All have, however, opportunity for students to do independent work for credit. The course entitled Independent Honors Study is offered in every department and may carry from two to twelve hours credit. The departments have complete control over this opportunity and are free to use it as the number of honor students and the availability of faculty permit. The purpose is to give students ample opportunity to pursue various readings or research topics not available to them through the regular departmental curriculum.

Secondly, each department requires a senior project for graduation with honors. This is normally begun during the spring quarter of the junior year or the fall quarter of the senior year. The nature of the project is determined by the student and the department; it must be a work that reveals scholarly or artistic competence in one's field. It should also reveal the student's ability to think critically, to handle the bibliographic and research tools of the field, and to use expression in a scholarly manner.

Finally, senior honor students must stand a comprehensive examination in their major field. The details of the examination are governed by the department.

Departments are free to develop further aspects of an honors curriculum. For information concerning various departments, students should contact the chairperson.

REQUIREMENTS FOR GRADUATION WITH HONORS

In Liberal Studies Program:

1. Completion of the Liberal Studies curriculum unless waivers are granted by the Honors Council.
2. 3.0 average in Liberal Studies and 3.3 for all work taken.
3. Participation in Adventures in Meaning every quarter of a student's membership in the Honors Program.
4. Approval of Honors Council in consultation with Liberal Studies faculty. Students should note that a minimum grade point average alone is not sufficient for honors. The university is more concerned with the other attributes of the honors outlook. It is possible, therefore, that a student might have a high grade point average but would not receive approval for honors.

In Departmental Honors:

1. Completion of program established by the department at the time the student was accepted into honors.

2. Acceptance by the department of a student's senior project and comprehensive examination.
3. 3.3 for all work taken and 3.5 in major.
4. Recommendation of major department.
5. Participation in Adventures in Meaning every quarter of a student's membership in the Honors Program.

In University Honors:

1. Completion of requirements for honors in Liberal Studies.
2. Completion of the requirements for honors in a major department.
3. Approval of both the department and the Honors Council.

Continuation in Honors Program. Any time honor students fall below a 3.0 average for all work taken they are permitted to continue for one quarter. If they are still below 3.0 at the end of the next quarter, they will be asked to discuss their situation with the Honors Council and may be asked to withdraw from the program. Regardless of a student's average, the Honors Council may review a student's status at any time should it receive evidence from a faculty member that a student's performance or attitude is inconsistent with the honors outlook.

In the case of departmental honors, a department should notify the Honors Council when a student has been dropped from the program for low grades or other reasons.

Pass-Fail Courses. Honors students may take one course other than an Honors course each year without being graded. At the end of the quarter they will be given a grade of "Satisfactory" or "Unsatisfactory". Credits earned in this way will not be included in computing grade point average. The purpose of this opportunity is to allow the superior students to learn more about an area where they have some interest but inadequate background to compete with advanced majors in the field.

INTERNATIONAL STUDIES AND PROGRAM DEVELOPMENT

C. Robert Frost, Director

Students at SCSU have the opportunity to study at a number of centers in Europe for six or nine months. The six months studies cover language and culture and require elementary knowledge of either German or Spanish. The German Center is located in Ingolstadt, a city of about 90,000 inhabitants, and the Spanish Center is located in Castellon, which is situated a short distance from Valencia.

The nine months program in Aalborg, Denmark, has the purpose of broadening the experiences of its participants by providing them with the opportunity to live with people of different values and culture and to give them the opportunity to travel widely in Europe. A student may qualify by maintaining a 2.0 grade point average from the time of application through departure for Denmark.

An additional nine months program is situated in Alnwick, England. Alnwick College is housed in a 13th century castle in one half of which still resides the Duke of Northumberland. The purpose of this program is to give the enrollees an understanding of life and society in Britain in particular and Europe in general. A student must maintain a 2.5 grade point average to the time of departure to qualify.

Every effort has been made to keep the costs of each program as low as possible. In each case they are only slightly higher than studying at the local campus.

COLLEGE OF BUSINESS

James G. Marmas, Dean

Wayne G. Little, Associate Dean

DEPARTMENTS

Accounting

Business Education and Office Administration

Management and Finance

Marketing and General Business

BUREAU

Bureau of Business Research & Service

OBJECTIVES

The primary purpose of the College of Business is to prepare the student for a professional career in business, education, or government and for competent and responsible participation and leadership in society. In pursuing this objective, the College is firmly committed to the principle that education for business requires both a broad preparation in business and substantial exposure to the sciences and arts of life.

Attainment of this major purpose within the institutional capabilities of the College of Business requires each business student to:

- 1) Acquire the broad conceptual knowledge essential to an understanding of the environmental processes which exercise a controlling influence upon the operating business organization.
- 2) Comprehend the relevant systematic bodies of knowledge and skills characterizing effective business administration (business functions and operations, economic-social-legal environment, quantitative methods and information systems, organization theory and interpersonal behavior, and administrative processes and policy) and have the ability to use this knowledge to solve the problems of business and society.
- 3) Secure a substantial exposure to the arts, sciences, and humanities which will enable the knowledges and understandings gained to enhance personal, civic, and professional life.
- 4) Develop an appropriate specialization for a lifelong career based upon the student's ability and interest.
- 5) Develop and be able to use the organizational, analytical, and creative capabilities requisite to incisive reasoning, rational judgment, problem solving, and continued personal growth.
- 6) Appreciate and put into practice the standards for responsible and ethical conduct necessary for business to meet its social responsibilities.
- 7) Have the ability and capacity to cope with rapid change and to discover solutions to human and decision-making problems within the internal and external environment of business.
- 8) Develop a concern and sensitivity for people in academic, social, and ultimately the student's professional life.
- 9) Have an inquisitive attitude about the problems of business and society and actively seek creative solutions to these problems.

The College of Business offers programs leading to the Bachelor of Science degree with majors in Business Teacher Education, Finance, General Business, Insurance and Real Estate, Management, Marketing, Private/Industrial Accounting, Public Accounting, Quantitative Methods and Information Systems, and Secretarial Administration. An Associate in Arts program in secretarial science and minor programs are also available.

The College of Business offers graduate programs leading to the Master of Business Administration and Master of Science in Business Education degrees. Detailed information concerning these programs may be found in the *Graduate Bulletin*.

BUREAU OF BUSINESS RESEARCH AND SERVICE

Ronald E. Carlson, Director

The Bureau of Business Research and Service is the research and service division of the College of Business. The main objective of the Bureau is to provide faculty and students with facilities and opportunities for research in business and related areas and to be of service to the community by furnishing information and knowledge for solving problems. Some of the functions of the Bureau are:

- 1) originate and administer industry and area research projects
- 2) channel research proposals to faculty members
- 3) seek cooperative arrangements with outside individuals and organizations for conducting specific research and service projects
- 4) operate or permit facilities to be used as a laboratory for study of select problems which involve research
- 5) provide a readily identifiable point of contact for business, industry, and government, through which they can be informed of or discuss the kinds of research and service in which they are interested.

INTERNSHIP PROGRAM IN BUSINESS

Howard Bohnen, Director

Business majors are encouraged to participate in the Internship Program in Business available in each department. The program provides:

- 1) an opportunity to work under a carefully planned and approved program for a quarter of the academic year with a participating firm or organization.
- 2) students an opportunity to identify with the business world while yet undergraduate students in the university.
- 3) the business community an opportunity to cooperate with the College of Business in preparing students for opportunities after graduation.
- 4) all majors in the College of Business a unique experience during their senior year.

The programs are available for any quarter during the academic year and also during the summer period. Majors in the College of Business are urged to arrange an interview with advisers at their earliest convenience so that total program includes provision for participation in the internship program during the first or second quarter of their senior year of study.

ACADEMIC POLICIES

Admission to Pre-Business Status

As soon as a student decides to major in business, the following should be accomplished:

- 1) Contact the Office of the Associate Dean, Room 123, in the College of Business.
- 2) Bring a transcript of credits earned at St. Cloud State University, or, if a transfer student, a transcript of credits earned at the previous college along with the bulletin of the former college (if available).

During the interview, the student will be properly registered as a pre-business student and a personal file will be established. The student will be advised at that time of the courses required to be completed before admission to a major program in the College of Business. As a pre-business student, it is necessary to obtain a "Permit to Register" form from the Office of the Associate Dean prior to the pre-registration dates for any quarter and the summer terms.

Admission to Major in Business

A pre-business student may be admitted to a designated major in the College of Business after:

- 1) Completing the courses recommended by the appropriate department for the freshman and sophomore years (this information is available in the Office of the Associate Dean).
- 2) Achieving the minimum of an overall 2.0 grade point average.
- 3) Completing Accounting 291 and 292; English 162; Marketing & General Business 140*; and Math 131 with the grade of "C" or better in each.

- 4) Obtaining an Admission to Major Program Form from the Office of the Associate Dean and is referred to the respective department chairperson for assignment of a major adviser.
- 5) Completing the Major-Minor Form with the assistance of his/her adviser. Admission to a major program is not complete until the Major-Minor Program Form is on record in the Office of Admissions and Records and the Office of the Dean.

*Majors in Business Teacher Education substitute PSY 362.

Transfer Policies

In addition to the general requirements of the university, the following special requirements apply to transfer students seeking degrees in the College of Business:

- 1) Transfer of credit for business and related courses to be applied to the business core and to the major program shall be limited to those courses completed with grades of "C" or higher (C-6 in the General College of the University of Minnesota).
- 2) Transfer of business and related courses from two-year institutions to be applied to the business core and to the major program shall be limited to such courses as the College of Business offers at the lower division level (freshman and sophomore years).
- 3) Transfer of business and related courses from baccalaureate degree granting institutions to be applied to the business core and to the major program shall be limited to those courses offered at levels no lower than the levels of comparable courses offered in the College of Business.
- 4) Students may request pre-business status for the first quarter at St. Cloud State University if the following courses (or their equivalents) have been completed with grades of "C" or higher in each: (a) MATH 131; (b) ENGL 162; (c) MKGB 140, (Except BEOA majors); (d) ACCT 291.
- 5) Students may register for the first quarter for the following courses: MGMF 361, MGMF 371, MKGB 320, BEOA 309 providing the following courses (or their equivalents) have been completed: Math 131; MKGB 140; ACCT 291, 292, 293; ECON 273, 274; MKGB 141, (Except BEOA majors), 235, 250. If a transfer student has not completed the general education requirements, that student must see the Associate Dean of the College of Business before enrolling for business courses at the 300 level.
- 6) Obtain a "Permit to Register" Form from the Office of the Associate Dean each quarter until officially admitted to the major program.

A comprehensive examination may be requested to establish competence in a subject. A transfer student who has completed an Associate of Arts degree from an accredited college in a college transfer program may enroll in 300-400 level courses for *one quarter*.

300-400 Level Courses. A student majoring in business (Bachelor of Science) must present a minimum of 96 quarter hours of lower division credit and be admitted to a major program in the College of Business in order to enroll in 300-400 level courses.

Admission to Minor Program in Business

The student with a major in business *may not* elect a business minor except in the area of quantitative methods and information systems. A student with a major program in a college other than the College of Business who desires a minor program in business may declare the minor at the time of application for admission to a major program if at that time the student has an accumulated grade point average (HPR) of 2.00 as a minimum in all course work completed. The student desiring to pursue a minor program in business should then initiate an application and have the minor program approved in the Office of the Associate Dean in the College of Business. Majors in the College of Business are *not* required to complete a minor in order to fulfill the requirements for the degrees.

Probation Policy. Students officially admitted to a major program in the College of Business who do not maintain an accumulative grade point average (GPA) of 2.0 shall be placed on probation effective immediately at the close of the quarter (or summer term) in which the accumulative grade point average (GPA) falls below 2.0. If the students who are on probation fail to achieve an accumulative grade point average (GPA) of 2.0 in the next quarter of University work (full summer term), they will be suspended from their major program in the College of Business. Students who are in suspended status from their major program in the College of Business may petition for permission to reapply for a major program.

Residence Requirement. Students majoring in business (Bachelor of Science Degree) must

complete their last year (48 credits) in residence at St. Cloud State University. Under unusual circumstances, the Dean of the College of Business may grant a modification of this requirement.

Core Requirements for Business Programs

All students majoring in business programs must complete the following core requirements:

Mathematics 131 College Algebra (or equivalent)	4
*Marketing 140 Business Statistics I	4
ACCT 291 Accounting I	4
ACCT 292 Accounting II	4
ACCT 293 Accounting III	4
MKGB 250 Data Processing for Business	4
MKGB 320 Introduction to Marketing	4
MKGB 235 Business Law I	4
MGMF 361 Management Theory and Practice	4
ECON 273 Principles of Economics I	4
ECON 274 Principles of Economics II	4
BEOA 309 Business Communications	4
MGMF 371 Managerial Finance	4
MGMF 468 Business Policies I	4

*Majors in Business Teacher Education substitute Psychology 362. 56

ALL-UNIVERSITY OF BUSINESS COURSES

444. Internship in Business (Name of Department). Participation in a full-time position as an intern-in-business with a cooperating business, governmental, or civic organization whose program has been approved in advance by the department with which the student has an approved major. Sixteen credits are provided upon completion of all requirements of which 4 credits apply to the required electives under the major program and 12 credits apply to general electives for graduation. 16 credits.

498. Small Business Institute Program. The SBI case analysis course is designed to give business majors an opportunity to apply relevant theories to actual practice in business. Interdisciplinary teams of students work with area businesspeople to help solve actual business problems in finance, marketing, management and accounting.

*Approval of the 498 course pending.

ACCOUNTING (ACCT)

Chairperson Mohamed S. Heikal. **Faculty** Azzeh, R. Carlson, Gerber, Hein, D. Lu, McLean, Minars, Ochu, Olsberg, Oswald, Sundby.

The Department of Accounting offers programs to students interested in professional careers in public accounting, industry, non-profit organizations, governmental bodies, and teaching. Courses offered emphasize the development of students' analytical capabilities and understanding of the usefulness and limitations of accounting. Depending upon areas of interest, the accounting major may select a concentration in private/industrial or public accounting.

In Minnesota, the CPA certificate is issued by the Minnesota State Board of Accountancy to those who have satisfied the experience requirements and have passed an examination in accounting practice, theory of accounts, auditing and commercial law. Effective July 1, 1971 applicants may sit for the CPA examination on the following basis:

Education	Experience in Years
1. Bachelor's or Master's degree candidates in last term of program if accounting major	None
2. Bachelor's or Master's degree holder without accounting major	1

- | | |
|--|---|
| 3. Two or more years of college study with C or higher grade average | 3 |
| 4. High school graduate | 5 |

The CPA examination may be taken in the last term of the Bachelor degree candidate's undergraduate registration.

Effective July 1, 1971, the CPA certificate may be granted to applicants on the following basis:

Required Education	Required Experience in Years
1. Master's degree, with accounting major	1
2. Bachelor's degree, accounting major	2
3. Bachelor's degree, any major	3
4. Two or more years of college study with C or higher grade average	5
5. High school graduate	6

BACHELOR OF SCIENCE

MAJORS (120-124)

A major in Accounting includes the Business Core (56 cr.) plus one of the following programs:

Public Accounting (64)

MATH 231 (or equivalent course).
MKGB 141, 336, 351, 437.
4 credits from: MKGB 440, 441, 451.
4 credits from: ECON 471, 475, 476.
ACCT 380, 381, 382, 383, 385, 481, 485, 486.
4 credits from: ACCT 444, 487, 488, 490.

Private/Industrial Accounting (68)

MATH 231, 232, 257 (or equivalent courses).
MKGB 141, 351.
8 credits from: MKGB 440, 441, 442, 451.
8 credits from: ECON 471, 475, 476.
ACCT 380, 381, 382, 383, 490, 492.
8 credits from: ACCT 444, 481, 486, 488.

Accounting Minor (36)

MKGB 235.
MGMF 371.
ACCT 291, 292, 293, 380, 381, 382, 385.

COURSE DESCRIPTIONS

284. Cost Accounting for Engineers. Cost concepts, cost flow; methods of cost accumulation and allocation. Prereq. 291. 4 Cr. S.

291. Accounting I. Accounting as a process of measurement and communication of economic data is explored; techniques of recording, classifying, measuring, and reporting economic data are studied with emphasis on the preparation of the balance sheet and income statement. 4 Cr. F, W, S, SUM.

292. Accounting II. Continuation of Accounting I, preparation of the funds statement and refinements in the balance sheet accounts; present value analysis and income taxation. Prereq.: 291. 4 Cr. F, W, S, SUM.

293. Accounting III. Accounting as a planning, analysis and control tool facilitating the decision-making processes of management. Prereq.: 292. 4 Cr. F, W, S, SUM.

Business majors may enroll in 300 and 400 level courses only if they have completed 96 credits (junior standing).

380. Cost Accounting I. Cost accounting systems which provide information used in inventory valuation and in making decisions regarding routine as well as non-routine operations. Prereq. 293. 4 Cr. F, W, S, SUM.

381. Intermediate Accounting I. Theories of accounting, accounting practice related to current asset measurement and reporting, evaluation of generally accepted accounting theory and practice *vis-a-vis* alternative theories. Prereq. 293. 4 Cr. F, W, SUM.

382. Intermediate Accounting II. Analysis and evaluation of current and alternative accounting theories relating to measurement and reporting problems of non-current assets and liabilities. Prereq. 381. 4 Cr. F, W, S.

383. Intermediate Accounting. III. Analysis and evaluation of current and alternative accounting theories relating to owners' equity, special income determination problems, and other topics of significant current interest. Prereq.: 382. 4 Cr. W, S, SUM.

385. Income Tax. Federal income taxation of individuals. 4 Cr. F, W, S, SUM.

483. C.P.A. Problems. Selected problems for C.P.A. examinations as preparation for the accounting practice part of the C.P.A. examination (Cannot be taken as a business elective.) 4 Cr. DEMAND.

490. Cost Accounting II. A study of the essential issues of cost analysis emphasizing the development and use of cost data appropriate for implementation of long and short run decision making, control and evaluation models. Prereq. 380, MATH 231, MKGB 240. 4 Cr. F, W, S, SUM.

491. Senior Research. A research seminar for senior accounting students. 1-4 Cr. F, W, S, SUM.

492. Management and Income Taxation. Federal income taxation of the continuing business enterprise with emphasis on areas critical to the industrial/private accountant from both a tax planning and determination view point. (Open to students in the private/industrial accounting major.) 4 Cr. DEMAND.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

481-581. Advanced Accounting. Theory and practice of accounting for business combinations; parents and subsidiary accounting for consolidated financial statements. Prereq. 383. 4 Cr. F, S, SUM.

485-585. Advanced Income Tax. Federal income taxation of partnerships, corporations, trusts and estates; Federal estate and gift taxation with emphasis placed on tax planning and tax research. Prereq. 385. 4 Cr. F, W, S, SUM.

486-586. Auditing Theory. Nature of the audit function, nature of the audit evidence, audit standards and procedures, professional ethics, and audit reports. Prereq. 383. 4 Cr. F, W, SUM.

487-587. Auditing Problems and Cases. Application of the audit standards and procedures in the verification of financial statements and preparation of audit reports. Prereq. 383. 4 Cr. SUM.

488-588. Accounting Systems. System planning, design, and applications; emphasis is placed on the interaction of computers and accounting in the development of management information systems. Prereq. MKGB 250. 4 Cr. W.

BUSINESS EDUCATION AND OFFICE ADMINISTRATION (BEOA)

Chairperson Harry Olson. **Faculty** Hall, Little, Madsen, Reha, Stinson.

The Department of Business Education and Office Administration prepares students for teaching business subjects in the secondary and post-secondary schools and for major office occupations in business, industry, government, and the professions.

The Bachelor of Science program in business education is designed to provide students with a broad understanding of the scope, development, and philosophy of business education; to stimulate interest in the teaching profession; and to prepare them to teach business subjects successfully.

The Bachelor of Science program in secretarial administration is designed to develop secretarial techniques to a high professional level.

The Associate in Arts program in secretarial science is a two-year program which provides students the opportunity of developing marketable skills leading to responsible positions in industry.

Students intending to major and minor in Business Education and Office Administration are strongly urged to consult with the chairperson of the department during their first quarter on campus.

Students who desire university credit through competency examinations must consult with the chairperson of the department. Students may take a major in any of the following programs.

ASSOCIATE OF ARTS

An Associate of Arts degree in secretarial science includes the general education requirement (32 crs.) plus:

BEOA 103, 108, 207, 208, 307, 308, 309; ACCT 291, 292; MGMF 167; MKGB 320. Students without high school shorthand must show competence in BEOA 201, 202, 203, and 204.

Electives: 11 to 13.

BACHELOR OF SCIENCE

MAJORS (84-124)

A major in Business Education and Office Administration includes the Business Core (56 cr) plus one of the following programs:

Accounting Teacher Education (36)

BEOA 207, 311, 401, 103 & 312 or 216 & 314;
ACCT 381, 382, 385; MKGB 336.

Business Electives: 4 or 5 credits.

Basic Business Teacher Education (36)

BEOA 216, 314, 401, 103 & 312 or 311.

ECON 460 or 471; MKGB 336.

Business Electives: 9 or 12 credits.

Marketing Management (D.E.) Teacher Education (36)

BEOA 315, 401, 405, 406, 407, 408, 409;
MKGB 322, 323, 420, 425. (Note: Internship may be required to meet certification requirements.)

Secretarial Teacher Education (36)

BEOA 103, 108, 207, 208, 307, 312, 313, 401.

Students must show competence in BEOA 203 & 204.

Business Electives: 7 or 9 credits selected from BEOA 101, 102, 201, 202, 211, 212, 216, 311, 314.

Secretarial Administration (72)

BEOA 103, 108, 207, 208, 211, 212, 213, 307, 413, 414; PSY 222.

Business and Related Electives: 33 credits selected to include one of the following areas of concentration:

Foreign Service Secretary: 2 years foreign language or equivalent; courses in history, economics, and/or geography of the country whose language is selected.

General Secretary:

Legal Secretary: MKGB 336, 437.

Medical Secretary: BIOL 201, 203, 309;
CHEM 211, MGMF 475.

Technical Secretary: CHEM 211; IND 260;
PHYS 201.

MINORS (36)

Accounting (36)

BEOA 207, 311; ACCT 291, 292, 293; MKGB 250; MGMF 167 or 361.

Business Electives: 9 credits (must include 4 cr. in ACCT).

Basic Business (36)

BEOA 216, 308, 314; ECON 273, 274; MKGB 320, 336; MGMF 167 or 361.

Business Electives: 5 credits.

Marketing Management (D.E.) (36)

BEOA 315, 405, 406; MKGB 322, 323, 420, 425.

Business Electives: 11 credits. (Note: Internship may be required to meet certification requirements.)

Secretarial (36)

BEOA 103, 108, 207, 208, 312, 313. Students must show competence in BEOA 203 & 204.

Business Electives: 13 to 15 credits selected from BEOA: 101, 102, 201, 202, 211, 212, 216, 307, 311, 314.

COURSE DESCRIPTIONS

101. Typewriting. Basic typing, simple letter writing, tabulation. May not be taken for credit if student has had high school typewriting or equivalent. Laboratory. 3 Cr. F, W, S, SUM.

102. Typewriting II. Continuation of 101; letter forms and styles, speed development. Individualized instruction on spirit and stencil duplication. Lab. 4 Cr. F, W.

103. Typewriting III. Continuation of 102; letters, stencils, drafts, legal documents, speed and production development. Skill instruction and experience on the IBM Executive Typewriter and the voice transcribing-dictating machines. Lab. 4 Cr. F, W, S.

108. Records Management. Common systems, organization and control. 2 Cr. W.

- 201. Shorthand.** Principles; reading and writing basic characters. Not open to students with high school shorthand. Prereq.: 103. 4 Cr. F.
- 202. Shorthand.** Continuation of BEOA 201; completion of basic principles; fluency in reading and simple dictation. Prereq.: 103. 4 Cr. F, W.
- 203. Shorthand.** Continuation of BEOA 202; dictation and transcription speed and accuracy. Must be taken concurrently with BEOA 204. Prereq.: 103. 4 Cr. W, S.
- 204. Transcription.** Must be taken concurrently with BEOA 203; development of vocational competency. Laboratory. 2 Cr. W, S.
- 207. Machine Calculation.** Rotary and ten-key printing calculators, introduction to machine accounting, vocational application. Laboratory. 4 Cr. W, S.
- 210. Key punch.** I.B.M. Selectric simulated keyboard and I.B.M. Key punch machine skill development. Laboratory. 1 Cr. F, W, S.
- 211. Secretarial Science.** For students with high school shorthand. Prereq.: 80 words per minute writing skill, accurate transcription. 4 Cr. F.
- 212. Secretarial Science.** Continuation of BEOA 211; rapid dictation and transcription, office correspondence. Prereq.: 90 words per minute writing skill, accurate transcription. 4 Cr. W.
- 213. Secretarial Science.** Continuation of BEOA 212; dictation and transcription power-building. Prereq.: 100 words per minute writing skill, accurate transcription. 4 Cr. S.
- †216. Consumer Education.** General education open to all students, problems of personal buying, consumption, credit, financing, investing, insuring, home-owning, household records. 4 Cr. F, W, S.

Business majors may enroll in 300 and 400 level courses only if they have completed 96 credits (junior standing).

- 304. Medical Shorthand.** Medical terminology, case histories, abstracts, scientific articles, medical forms and office procedure. Prereq.: 100 words per minute writing skill, accurate transcription. 4 Cr. S.
- 305. Legal Shorthand.** Legal terminology, office procedures, legal forms. Prereq.: 100 words per minute writing skill, accurate transcription. 4 Cr. S.
- 307. Administrative Secretarial Procedure.** Secretarial techniques, careers, duties and responsibilities, office administration. Prereq.: typewriting and shorthand skill. 4 Cr. S.
- †308. Survey of Business Law.** Contracts, sales, property, torts and other consumer-related topics. Not available to students who have had MKGB 235. 4 Cr. F, W.
- 309. Business Communications.** Business report writing, letters and memos; analysis and interpretation of business communications; critical thinking and logical organization of thought. 4 Cr. F, W, S, SUM.
- 311. Methods in Teaching Bookkeeping and Accounting.** Subject matter, materials, methods, evaluation procedures. Required before student teaching. Prereq.: Accounting 181, 182. 3 Cr. S.
- 312. Methods in Teaching Typewriting and Related Subjects.** Subject matter materials, methods, evaluation procedures. Required before student teaching. Prereq.: 103. 3 Cr. S.
- 313. Methods in Teaching Shorthand and Transcription.** Subject matter, materials, methods, evaluation procedures. Required before student teaching. Prereq.: 203 or 213. 3 Cr. S.
- 314. Methods in Teaching Basic Business Subjects.** Subject matter, materials, methods, evaluation procedures. Required before student teaching. Prereq.: consent of department. 3 Cr. S.
- 315. Methods in Teaching Distributive Education.** Subject matter, materials, methods, evaluation procedures. Required before student teaching. Prereq.: MKGB 322, 323. 3 Cr. S.
- 401. Seminar.** Readings, research, teaching problems in business education. Prereq.: student teaching. 2 Cr. W, S.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 405-505. Vocational Education.** History, purpose, organization, philosophy of vocational education. 3 Cr. F, W, S, SUM.
- 406-506. Methods for Cooperative Programs.** Instructional methods, materials. 3 Cr. W.

407-507. Adult Education Programs. Planning, administering, supervising, evaluating adult programs. Selecting, training adult education instructors. 3 Cr. SUM.

408-508. Coordination Techniques. Guidance, selection, placing students in training stations; job adjustments; developing training programs. 3 Cr. S, SUM.

409-509. Organization and Administration of Cooperative Programs. Principles, practices; local, state, federal regulations; reporting and evaluation; club programs; curriculum; affiliations. 3 Cr. F.

413-513. Office Management. Problems in planning and directing functions of business or professional offices; executive duties and responsibilities of office manager and private secretary; supervision of employees. 4 Cr. F.

414-514. Office Automation. Selection, acquisition, application, operation of electronic data processing systems. 4 Cr. S.

MANAGEMENT AND FINANCE (MGMF)

Chairperson LaVerne Cox. **Faculty** Batdorf, Bunn, Burnes, Pabst, Rajender, Riley, Swenson, Wentworth, Williams.

The students' interests are focused on the technical and conceptual aspects of management, finance, insurance and real estate with emphasis placed on the behavioral aspects as well as the basic orientations and their applications to the business world.

BACHELOR OF SCIENCE

MAJORS (96-100)

A major in Management and Finance includes the Business Core (56 Cr.) plus one of the following programs:

Management (40)

MGMF 362, 363, 375, 467; MKGB 141, 336.
Electives (16) from: MGMF 444, 460, 461, 462, 463, 464, 465, 471, 473, 474; MKGB 351, 451; PSY 422, 474; SOC 456, 465; IND 325, 326; ECON 475, 476.

Insurance and Real Estate (44)

MGMF 362, 375, 378, 467, 473; MKGB 141, 336.
Electives (16) from: MGMF 444, 462, 471, 474, 475, 476, 478; MKGB 323, 351, 424, 451; ECON 475, 476.

Finance (44)

MGMF 362, 375, 467, 471, 473; MKGB 141, 336; ECON 471.
Electives (12) from: MGMF 378, 444, 472, 474; MKGB 351, 451; ECON 460, 470, 475, 476.

Management, Finance, Insurance and Real Estate Minor (36)

ACCT 291, 292; MKGB 235, 320; MGMF 361.
300-400 level departmental courses elected from area of management, finance, and /or insurance and real estate (16).

COURSE DESCRIPTIONS

†**167. Introduction to Business.** Provides framework within which to develop an appreciation and understanding of the nature of business and the relationships of the functions of business to the environment of the American economy. (Not available to pre-business students or business major students except Business Education and Office Administration majors as indicated.) 4 Cr. F, W, S, SUM.

Business majors may enroll in the following courses only if they have completed 96 credits (junior standing).

†**361. Management Theory and Practice.** Historical development; functions of management in the decision making process; current organizational concepts and practices. (Should be taken before 362 or 363.) 4 Cr. F, W, S, SUM.

†**362. Personnel Administration.** Personnel function in business; acquisition and utilization of human resources; desirable working relationships; effective integration of the worker with company goals. 4 Cr. F, W, S, SUM.

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

368. Business and Society. To introduce students to broad perspectives of the role of business and its inter-action with the forces which exist in its surroundings. To develop an awareness of the major contemporary issues between business and society. 4 Cr. F, S.

†370. Organizational Behavior. To provide exposure and increase sensitivity to behavioral phenomena that exist in organizational relationships. To develop an understanding of the behavior aspects related to management and administration. Prereq.: MGMF 361 or permission. 4 Cr. F.

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

†375. Risk Management and Insurance. Management of risk in the business firm; property, liability, life and health insurance; economic and social significance; pricing, regulation, management, and investments. 4 Cr. F, W, S, SUM.

378. Real Estate Principles. Instruments, financing, marketing, planning, and valuation of real property. 4 Cr. F, S.

462. Small Business Management. Management problems and responsibilities in organizing, financing, and operating a small business. Prereq.: 371 or permission of instructor. 4 Cr. F.

Business majors may enroll in the following course only in the last quarter of their program and who have completed all other School of Business core requirements, or by special permission of the chairperson of the department.

468. Business Policies. Capstone problems of: administration; policy and decision making; techniques for sound and consistent policies; appraisal of business situations; evaluating decisions for possible corrective action. 4 Cr. F, W, S, SUM.

470. International Business Management. This course surveys 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.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

460-560. Problems in Personnel Administration. Analysis of selected personnel problems; wage and salary surveys and administration; job evaluation; merit rating profit sharing; incentives; selected issues and problems of man-power utilization. 4 Cr. F.

461-561. Collective Bargaining. Analysis of bargaining processes; legislative and administrative requirements applicable to unions, managements and employees; development and evaluation of collective bargaining agreements. 4 Cr. W.

463-563. Production and Inventory Control. Management control practices including production planning relative to engineering; production control including routing, scheduling and dispatching; manpower requirements; the interaction of decision-making processes. Recommended prior completion of 363 or permission of instructor. 4 Cr. F.

464-564. Purchasing and Materials Management. Principles, procedures, and methods for providing materials and services within the broad concept of complete management of the flows of materials. 4 Cr. W, S.

465-565. Motion and Time Study. Techniques of methods design and analysis (process charts, operations analysis, and micromotion and memotion studies); work measurement (stop watch time study, predetermined time study methods); work sampling. 363 recommended. 4 Cr. W, S, SUM.

467-567. Organization Theory. Analysis of relationships fostered by the industrialized productive setting leading to an integration of individual, group, and organization conclusions and data. 4 Cr. F, W, S, SUM.

471-571. Corporate Financial Policies. Examination and analysis of financial concepts relative to; corporate financial decision making; adjustments to changing conditions; market structure and corporate capital instruments; capital market movements and financial decisions. 4 Cr. F.

472-572. Financial Institutions. Examination and analysis of various financial institutions and their role in the field of finance: commercial banks; savings and investment institutions; personal finance companies; investment intermediaries. 4 Cr. W.

473-573. Investment Principles. Types of investment securities; security market operations; investment policies; principles for analyzing securities; investment institutional media; institutional aids; personal investment programs. 4 Cr. F, W, SUM.

474-574. Security Analysis. Classification and analysis of securities, markets, industries; investment policies; management of portfolios of institutional investors. 4 Cr. S.

475-575. Life and Health Insurance. Examination and analysis of: individual life and health contracts; group life; pension plans; estate planning; annuities and equity funding. 4 Cr. F.

476-576. Property and Liability Insurance. Examination and analysis of: insurable property and liability risk; contract analysis; insurance law; rates and reserves; types of property and liability insurances; optimum insurance programs. 4 Cr. S.

477-577. Public Administration: Strategy and Organization. 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. S.

478-578. Advanced Real Estate. Various ownership aspects of real estate and occupancy with emphasis on: deeds; contract for purchase; trust (intestate and testate); succession laws; taxation; homestead and special problems. Prereq.: 378 or permission by instructor. 4 Cr. S.

MARKETING AND GENERAL BUSINESS (MKGB)

Chairperson Robin T. Peterson. **Faculty** Benson, Calhoun, Chang, Davidson, Guimaraes, Hanafy, Heath, Highsmith, D. Krueger, M. Lu, Schneider, Stahlecker.

Career preparation in marketing seeks to provide basic understandings, knowledge, and skills requisite to job success in the several areas of employment in the field. Preparation in general business allows each student to choose a study emphasis through election of business courses within a career interest area. The Quantitative Methods and Information Systems Program emphasizes quantitative analytical approach to decision-making processes in an organization. The program is designed for students who would like to pursue careers in management science and data processing areas.

BACHELOR OF SCIENCE

MAJORS (100-124)

A major in Marketing-General Business includes the Business Core (56 cr.) plus one of the following programs:

Marketing (44)

MKGB 141, 321, 336, 351, 425, 429; ECON 377.

Marketing Electives: 16 credits.

General Business (56)

MKGB 141, 336, 351; ECON 377.

Business & Related Electives: 40 credits (No more than 16 credits may be taken from any one School of Business Department.)

MINORS (36)

Marketing & General Business (36)

ACCT 291, 292; MGMT 361; MKGB 235, 320.

MKGB electives: 16 credits selected from 300-400 level courses.

Quantitative Methods and Information Systems Major (48)

ACCT 380, MATH 231*, 232*, 257; MKGB 240, 351, 440, 441, 451.

At least 12 credits from the following:

CSCI 271, 371, MKGB 251, 442, 444, 445, 446, 450, 452, 454, 455

*May substitute MATH 241 and 242, or equivalent.

Quantitative Methods and Information Systems (36)

Select 20 credits from: CSCI 271, 371; MKGB 351, 440, 441, 442, 445, 446, 450, 451, 452, 454, 455.

Select one course from: ACCT 488; MGMT 362, 363; MKGB 426.

Select 12 credits from: MATH 231, 232, 257, 329, 437 (or equivalents).

COURSE DESCRIPTIONS

140. Business Statistics I. Collection, presentation, and analysis of business data. Introduction to probability theory and classical statistical inference. It is recommended that the student complete MATH 131 before taking this course. 4 Cr. F, W, S, SUM.

141. Business Statistics II. Continuation of 140. Introduction to Bayesian statistical inference, analysis of variance, regression and correlation analysis, and forecasting techniques. Prereq.: 140. 4 Cr. F, W, S, SUM.

†235. Business Law. Policy and rationale of: legal process; contracts; sales; types of governmental regulation purposes and difficulties. (All law offerings emphasize the features of the legal system). The courses are not sequential. 4 Cr. F, W, S, SUM.

†238. Law and Society. Origins and development of law; examination of contemporary national legal issues and comparisons with treatments of specific problems in other countries and time; effects of different underlying political and social philosophies on law. 4 Cr. S.

250. Data Processing for Business. Role of the computer in information processing; components of a computerized business information center; manipulating, storing and transmitting computerized information; tools for analyzing and planning computer programs; introduction to procedure-oriented languages; and programming projects. 4 Cr. F, W, S, SUM.

251. Intermediate Cobol Programming. Intermediate and advanced features of the COBOL programming language as applied to business. Prereq.: 250 or consent of instructor. 2 Cr. W.

Business majors may enroll in the following courses only if they have completed 96 credits (junior standing).

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

†321. Consumer Behavior. Interdisciplinary approach to consumer buying habits, motives, mores, traditions and economic behavior; exploration and explanation of cognitive control and motivation and the Relevance of Dissonance Theory; interrelationship and dependencies of psychological, economic and socio-cultural actions and reactions as they relate to consumer behavior and consumption. Prereq.: 320 or consent of instructor. 4 Cr. F, W, S, SUM.

†322. Introduction to Advertising. Functions, theory, principles, and purpose of advertising. Includes methods of appeal, elementary problems of copy, layout, typography, and selection of media. Prereq.: 320 or consent of instructor. 4 Cr. F, W, S, SUM.

323. Personal Selling. Examination of personal sales practice with illustrations and demonstrations. Prereq.: 320 or consent of instructor. 4 Cr. W, S, SUM.

327. Industrial Marketing. Analysis of the industrial marketing system, its managerial aspects, and problems; the industrial market; the nature of industrial market behavior; and management strategies with emphasis on the managerial aspects, problems of pricing, selling, promotion, and managing customer services and relations. Prereq.: 320. 4 Cr. W.

†336. Business Law. Policy and rationale of the law of negotiable instruments, agency, partnerships and corporations; general functions and features of the legal system are emphasized. 4 Cr. F, W, S, SUM.

351. Introduction to Management Information Systems. Introduction to systems theory, information theory and the concept of management information; concepts of management information systems; analysis and design of information systems; tools for design and analysis; files in information systems; system's hardware and software; systems projects. Prereq.: 250. 4 Cr. F, W, S.

428. Independent Study in Marketing. Individual research and analysis of contemporary marketing problems and issues. Open to senior marketing majors only, with approval of department chairperson. Prereq.: 320. 1-3 Cr.

430. Marketing Seminar. Contemporary issues in marketing as well as an overview of the role of marketing in an ever changing market condition; relation between environmental changes and marketing adjustment. Prereq.: 320. 4 Cr. S.

433. Marketing Logistics. Provides an overview of physical distribution management and marketing channel management; covers channel selection and maintenance, transportation, storage, order processing and location decision making. Prereq.: 320. 4 Cr. F.

441. Operations Research I. Deterministic models such as assignment problems, transportation problems, traveling salesman problems, linear-programming, dynamic programming, and inventory models. Prereq.: 141 or consent of instructor. 4 Cr. F, W.

442. Operations Research II. Probabilistic models such as inventory problems, replacement, Markov processes, PERT/CPM, and introduction to decision theory. Prereq.: 441. 4 Cr. S.

COURSES FOR ADVANCED UNDERGRADUATE
AND GRADUATE STUDENTS

420-520. Retailing Management. Organization for retailing and functional activities involved; problems of inventory methods, credit and collections, personnel, location, layout, receiving, and delivery. Prereq.: 320. 4 Cr. F.

423-523. Advertising Management. Analysis of advertising policies and practices in campaign planning, media selection, client-agency relationships, research and testing. Prereq.: 322 or consent of instructor. 4 Cr. F, S.

424-524. 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. Prereq.: 323 or consent of instructor. 4 Cr. W.

425-525. Marketing Research. Research process as an aid to decision making in marketing management; research methodology; marketing research results; evaluation of the effectiveness of marketing research. 4 Cr. F, S, SUM.

426-526. 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. Prereq.: 320. 4 Cr. W.

427-527. International Marketing. Stresses the importance of international marketing to the American economy and analyzes United States international marketing with emphasis on the problems and practices of managing international marketing activities; analysis of characteristics, structures, and competitive factors of international markets. Prereq.: 320. 4 Cr. S.

429-529. Marketing Management. Integration of marketing with other business functions; marketing management and decision making; planning marketing programs, product, channels of distribution, pricing, selling and promotion policies. Prereq.: Senior standing and 425 or consent of instructor. 4 Cr. F, W, S, SUM.

†437-537. Business Law. Real and personal property, trusts, mortgages, bankruptcy, wills and estates, secured transactions. 4 Cr. F, S.

440-540. 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.: 141. 4 Cr. W.

445-545. Advanced Programming Projects I. Planning, coding, testing and documenting computer programs for selected business applications using a scientific oriented programming language. Prereq.: 250. 2 Cr. S.

446-546. Advanced Programming Projects II. Planning, coding, testing and documenting computer programs for selected business applications using a business oriented programming language. Prereq.: 250. 2 Cr. S.

450-550. Administration and Control of Management Information Systems. 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 management information systems; computer's impact on administration and control of management information systems. Prereq.: 351. 4 Cr. S.

451-551. Computer Simulation for Business. Rationale for computer simulation, techniques for random number generation, generation of stochastic variates for simulation, simulation of inventory systems, simulation of queuing systems, simulation of large-scale systems, simulation languages and the verification of simulation results. Prereq.: 141, 250, or consent of instructor. 4 Cr. W.

452-552. Advanced Topics in Management Information Systems. Recent developments in concepts, theory, practices in the analysis and design of management information systems, includes on-line real-time systems and data base theory. Prereq.: 351. 4 Cr. W.

454-554. Business Decision Theory. Principles used in decision making, the assumptions behind utility and application of utility, decision making under uncertainty, Bayes strategies and their applications in business. Prereq.: 141. 4 Cr. S Even years.

455-555. 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.: 440-540. 4 Cr. S Odd years.

456-556. Linear Programming. Formulation of linear programming problems, simplex methods, dual simplex, postoptimality analysis and parametric linear programming. Introduction to integer linear programming, cutting plane algorithm, branch and bound algorithms and their applications. Prereq.: 441 or consent of instructor. 4 Cr. S.

TEACHER EDUCATION PROGRAMS

COLLEGE OF EDUCATION

Kenneth A. Ames, Dean
Alvin H. Schelske, Associate Dean

DEPARTMENTS

Educational Administration
Elementary Education
Health, Physical Education and Recreation
Library and Audiovisual Education
Psychology
Secondary Education
Special Education

AUXILIARY PROFESSIONAL SERVICES

Campus Laboratory School
Student Teaching
Human Relations

The College of Education proposes to meet today's educational needs, in proper perspective to its heritage and to the future, as well as the broader, related needs of the communities which it serves. In concert with the total University mission, the College of Education strives to meet the following selected goals, illustrative of its total purpose:

1. The College of Education strives for excellence in education and is committed to the intellectual humanistic growth of all those who participate in its programs, with full respect for the academic freedom and individual rights of the students and faculty of the College.
2. Accepting the premise that people learn from and with each other, the College promotes the development of cooperative, trusting educational environments among students, faculty, and administration.
3. Programs are characterized by a unity of theory and practice, providing for balanced learning experiences.
4. The exchange of talents and ideas between the College and the communities and its agencies are encouraged through cooperative planning and decision making.
5. Serving as an educational human resource center, the College provides a comprehensive, pre-service and continuing education program for the preparation of:
 - a. elementary and secondary school teachers;
 - b. counselors;
 - c. administrators;
 - d. teaching specialists (e.g., special education, adult education);
 - e. non-degree oriented community persons;
 - f. persons in such community-based programs as health, recreation and early childhood and family education.

Supervised, professional laboratory experiences are integral to education programs. Students will participate in a variety of observations, internships, and student teacher experiences designed to help students develop the understandings and skills noted previously. Various models of education are available for students to learn about and participate in; the CATE (Cooperative Approach to Teacher Education) program, the Resident Teaching in Special Education program, Student Teaching, and the Thomas J. Gray Laboratory School are examples.

In addition to the primary purpose of the College of Education, the departments of Psychology and Health, Physical Education and Recreation offer courses contributing to the general education program for all university students; also, the Psychology Department offers a program leading to the Bachelor of Arts degree.

TEACHER EDUCATION PROGRAMS

St. Cloud State University operates on the approved-teacher-education-program basis for certification of those students who successfully complete the approved programs. Departments and Colleges in the University develop major and minor programs for teacher educa-

tion (Bachelor of Science Degree) which meet Minnesota State Department of Education Standards, Minnesota State Statutes, and Minnesota State Board of Education regulations. After approval by appropriate College and University committees and/or councils, the programs are forwarded to the State Department of Education through the Dean of the College of Education with a request that they be approved for certification.

When students successfully complete an approved program and apply for a Minnesota teacher's certificate, the College of Education verifies program completion and recommends the graduate for the appropriate certification. The procedure for certification in states other than Minnesota is similar.

GENERAL REQUIREMENTS IN THE TEACHER EDUCATION PROGRAMS

Bachelor of Science Degree

1. General Education — required by the University and approved program.
2. Major — Minnesota Department of Education approved teacher education major.
3. Minor — Minnesota Department of Education approved teacher education minor (Not required of students with a comprehensive major (84 Cr.) or who have a major of 60 credits or more and whose department does not require a minor.)
4. Professional Education Sequence for secondary and special area teachers. (Elementary, special education, and speech pathology majors include the professional sequence in their major programs).
PSY 262, 362, 463; ED 201 or 401, 447, 448; IM 468; Student Teaching
5. HLTH 125 or 498 — Minnesota State Statute 126.02.
6. HLTH 301 — Minnesota State Statute 126.05.
7. HURL 496, 497 — not required for graduation but *is required* for certification in Minnesota by Minnesota EDU 521(b) (2).

Graduates of teacher education programs in Minnesota who wish to be certified for teaching in Minnesota public schools must satisfactorily complete a Minnesota State Board of Education approved human relations program. The program does not have to be for credit or taken at St. Cloud State University; however, it must be an approved program.

ADMISSION TO TEACHER EDUCATION. All students preparing to teach will make application for Admission to Teacher Education and will be admitted when they have met the following requirements:

1. Admission to a major-minor program of study and completion of 96 quarter hours.
2. Satisfactory completion of ELED 200 or SEED 201 and PSY 262.
3. Completion of the required communication sequence (SPC 161, ENGL 162 or 172, and ENGL 262/263 or 264) with a minimum grade point average of 2.00. This requirement must be met by all transfer students who apply for admission to teacher education — regardless of previous degree status.
4. Grade point average of 2.25 in major(s).
5. Grade point average of 2.00 in minor(s). For Elementary, this means a grade point average of 2.00 in the Library Science minor and Special Education minor. For Secondary students, this means a 2.00 grade point average in all minors.

In cases where there is a question regarding a student's eligibility for Admission to Teacher Education for reason other than academic record, the case will be reviewed by the School Dean or the School of Education Selection and Retention Committee.

ADMISSION TO STUDENT TEACHING. Early in spring quarter students apply for student teaching assignments for the following academic year. Completed applications should be on file in the Student Teaching Office (A132, Education Building) by the end of the first week of spring quarter. The application process includes the following:

1. Admission to Teacher Education
2. General Scholarship — 2.00
3. Major field — 2.25
4. Minor field — 2.00
5. Professional Education Core — no grade of less than "C"
6. Health Examination

The College reserves the right to consider as part of admission to student teaching those personal qualities, general health, scholastic achievement, conduct, or other standards seen as appropriately related.

GRADUATION. A minimum of 192 quarter hours of credit are required for graduation. Candidates for the Bachelor of Science degree in teacher education must meet the following academic standards in order to qualify for graduation:

1. General Scholarship — 2.00
2. Major field — 2.25
3. Minor field — 2.00
4. Professional Education Core — 2.25

Application for graduation forms are obtained in the Office of Admissions and Records. The University Calendar lists the due dates for each quarter.

EDUCATION (ED)

Most of the education courses listed under departments of the College of Education in this Bulletin are exclusively or predominantly the domain or special requirement of the department under which they have been listed. There are a number of other courses which are required in a variety of programs in the different departments and/or which will be staffed by faculty from the Elementary and Secondary Education or Educational Administration Departments. Lowell Mortrude, Chairperson of the Secondary Education Department, coordinates these course offerings.

Human relations course and workshop activities are also a part of these education course listings. Information concerning the human relations undergraduate offerings may be obtained from Douglas Risberg, Director of Human Relations.

COURSE DESCRIPTIONS

†103. Community Experiences. Opportunity for supervised experiences with children and adults prior to professional laboratory experiences. Boy and girl scout work, playground supervision, church classes, field trips, and excursion. 0 to 4 Cr. F, W, S.

†436. History and Philosophy of American Education. Nature, aim, and objectives of education in society which have evolved in the United States. Emphasis on development of educational philosophies. 4 Cr. F,W,S.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

417-517. Developmental Reading in Junior and Senior High School. Nature of high school reading program, development of reading techniques and skills, development of vocabulary, reading interests, and reading ability in content fields, appraisal of reading abilities, diagnosis and remediation. 4 Cr. Undgr., 3 Cr. Gr. F,W.

†475-575. 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.

482-582. School Discipline. Behavior in the classroom environment. Development of school environments which promote effective functioning. 3 Cr. Demand.

EDUCATIONAL ADMINISTRATION (EDAD)

Chairperson James W. Anderson. **Graduate Faculty** Farrah, Holden, Holmgren.

The Department of Educational Administration includes graduate level programs for the preparation of educational leaders. The preparation programs are designed to qualify personnel for administrative and supervisory positions in the elementary and secondary schools: elementary principalship, secondary principalship, the superintendency, special education administration, and community education administration. Master of Science, Specialist Degree, and Sixth Year programs are available. Additional comprehensive information on these programs is available in the **Graduate Bulletin** of St. Cloud State University.

ELEMENTARY EDUCATION (ELED)

Chairperson G. Mortrude. **Faculty** F. Anderson, Bavery, Crawford, Farrell, Hagen, Huntzinger, Karakas, T. Park, Purdom, Roehl, Rouch, R. Schmidt.

BACHELOR OF SCIENCE

The Elementary Education Major is designed to provide students with opportunities: (1) to develop a rich philosophy of the educative process and to become sensitive to the needs of the boys and girls who fill elementary school classrooms; (2) to develop scholarship in various disciplines which are related to the programs found in elementary schools; (3) to develop understandings of child growth and development characteristics and the implementation of such knowledge in classroom teaching responsibilities; (4) to explore various theories of teaching and learning; (5) to understand the purposes and philosophical considerations which underline elementary school programs; (6) to become aware of the best of present practice and recommended programs for elementary schools; and (7) to explore materials and methodology of classroom instruction related to present day problems.

Students who complete this curriculum are recommended to receive an Elementary School Certificate qualifying them to teach in any rural or graded elementary school. Qualification in this field requires completion of the following courses for the Elementary Education Major. In addition, students must complete the General Education requirements and Required Content.

Elementary Education Major (91)

ELED 200, 290, 312, 402, 412, 455, 456, 457, 458, 459; PSY 262, 362, 463; MUS 250, 251; ART 296; PE 392; IM 468; EDT (appropriate numbers and credits).

Required Content: HLTH 301, 498; MATH 250; SSCI 320; IND 321; BIOL 326; PHYS 327 or CHEM 327; HIST 346 or GEOG 376.

Special Requirement for Certification in Minnesota: HURL 496, 497.

CONCENTRATIONS FOR ELEMENTARY EDUCATION MAJORS

Reading Instruction Major (41)

The Reading Instruction Major is designed to be a second major for undergraduate students currently enrolled in programs leading to teacher certification. It is intended to give students a comprehensive overview of a total school reading program in the areas of literature for children, materials for instruction, reading disability and working with children displaying learning problems.

Certification at the secondary level as a developmental reading teacher can be obtained through this major after two years teaching experience. With the addition of two graduate courses (ELED 623 and 625), two additional certifications are available after two years teaching experience — elementary school remedial reading teacher certification and secondary school remedial reading teacher certification.

The following courses are included in the 41 credit Reading Instruction Major. In addition, to the required forty-one credits, four of the sixteen hours of student teaching required of teaching majors will be devoted to the area of reading.

ELED 310, 311, 312, 358, 412, 413, 421; SPED 401, 405; PSY 469; ED 417; EDT 414 (4 Cr.)

Reading Instruction Minor (26)

Reading Instruction Minor for elementary, secondary, and special education major.

The reading instruction minor for education majors has a three fold purpose. First, it gives the education major an overview of the total reading program for pupils as they progress through their elementary and secondary school experiences. It also gives an overview of the literature for all ages. And finally, it gives the education major a background in working with children who have reading problems.

The reading instruction minor is designed to help the prospective teacher become a more proficient teacher of reading at both the elementary and secondary levels. Certification at the secondary level as a developmental reading teacher can be obtained through this minor after two years of teaching experience are obtained.

Elementary Education Majors

ENGL 353; ELED 358, 421; ED 417; SPED 401; 7 hours electives.

Secondary & Special Education Majors

ELED 312, 358, 412, 421; ED 417; ENGL 353; SPED 401.

Elementary or Secondary Remedial Reading Certificate

To be recommended for an Elementary or Secondary Remedial Certificate the student must: (a) Present an elementary or secondary teacher's certificate based on a Bachelor of Science

degree; (b) Prove two years of successful teaching experience; and (c) Complete one course in each of the following areas which may be a part of or beyond the bachelor's degree requirements:

Developmental Reading: ELED 312 or 412; ED 417-517 (Secondary only);

Diagnosis & correction of reading difficulties: ELED 421-521, 623, 625; PSY 686-687 or 469-569.

Kindergarten Endorsement (4)

Qualification in this field requires completion of the Elementary Education Major, ELED 351, and a minimum of 4 credits in kindergarten student teaching.

Information Media — see departmental listing.

Special Education — see departmental listing.

Elementary Education Electives

Students may choose to complete their programs by pursuing a selection of courses designed to enrich their professional development. This option must be approved by the adviser in advance.

COURSE DESCRIPTIONS

†200. Introduction to Elementary Education. Topics considered are: development of education; objectives of the American public school system; nature of the pupil population, etc. Includes three week field experience. 3 Cr. F,W,S.

†290. Literature for Children. An evaluative study of good books that may foster an active interest in wide reading and continuing appreciation of fine literature, prose, poetry, drama. 3 Cr. F,W,S.

†310. Our Pluralistic Society in Children's Books. Examines the crisis of identity, adaptation in living with others, appreciation of cultural differences, and coping with change as reflected in literature for children. 2 Cr. W,S.

311. Development of Early Reading Skills. Examines foundations of language and the communication process as it affects early reading behaviors. Development of prereading skills and methods for stimulating verbal expression. 4 Cr. W,S.

†312. Developmental Reading 1. Basic techniques for reading instruction. To be taken two quarters before student teaching unless in reading major or reading minor. 4 Cr. F,W,S.

351. Kindergarten, Primary Education. Aims, methods, philosophy, continuity of growth problems in unified kindergarten, first grade education. Required for students specializing in kindergarten-primary education. 4 Cr. F,W,S.

358. Current Research in Reading Instruction. An investigation of current research and its implications for teaching techniques and procedures in reading instruction. 4 Cr. F,S.

402. Departmental Seminar in Elementary Education. Designed to provide opportunities for students and staff to explore various problems and issues related to elementary education. 2 Cr. F, W, S.

412. Developmental Reading II — Practicum in Reading Instruction. Basic testing techniques are used with an emphasis on diagnostic teaching. Prereq.: ELED 312 or concurrent. 3 Cr. F,W,S.

413. Materials for Teaching Reading. An intensive study of materials used in teaching beginning reading. All age groups are considered. Prereq.: ELED 312 or equivalent. 4 Cr. F,W,S.

455. Elementary Education I. Methods and materials in teaching science. Prereq.: PHYS or CHEM 327 and BIOL 326. Must be taken the quarter immediately preceding teaching and concurrently with ELED 456, 457, 458. 3 Cr. F,W,S.

456. Elementary Education II. Methods and materials in teaching language arts. Must be taken the quarter immediately preceding student teaching. 3 Cr. F,W,S.

457. Elementary Education III. Methods and materials used in teaching social studies. Must be taken the quarter preceding student teaching. 4 Cr. F,W,S.

458. Elementary Education IV. Methods and materials used in teaching mathematics. Prereq.: MATH 250. Must be taken the quarter immediately preceding student teaching. 3 Cr. F,W,S.

459. Elementary Education V. Organization and curriculum in the elementary school. Classroom organization and management, appraisal and promotional policies, and curriculum organization. 3 Cr. F,W,S.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

421-521. Analysis and Correction of Reading Disabilities. Causes of reading difficulties and procedures to diagnose and correct them. Prereq.: A developmental reading course. 4 Cr. Undgr.; 3 Cr. Gr. F,S.

HEALTH, PHYSICAL EDUCATION AND RECREATION (HPER)

Chairperson John Kasper. **Faculty** A. Anderson, Anfenson, Basch, Bleick, Brink, Buckley Goemer, Helgelien, Hortis, J. Kelly, Nearing, N. Olson, Osendorf, Owens, Oxton, Serdula, Simpson, Stanek, D. Templin, K. Thompson, Troyer, Vinje, Waxlax, Whitlock, Wink, Ziemer.

Health, Physical Education, and Recreation is a means of education through knowledge, activities and experiences. These are selected and conducted to enable the individual to develop and maintain maximum mental and physical efficiency, to acquire skills, to conduct oneself in socially acceptable ways, and to enjoy wholesome living.

All students of the college are required to earn two credits in physical education activity courses (marked with a "4"). There is no gym uniform requirement for general education classes. Students enrolling in swimming classes must furnish their own suit.

All students are required to take a physical-medical examination. Individual courses are arranged for those found unable to take the regular work.

Women majors must purchase a regulation professional outfit. See Women's Physical Education Director for details.

HEALTH EDUCATION

BACHELOR OF SCIENCE

Major (67)

HLTH 210, 215, 301, 305, 315, 415, 438, 481; CHEM 211; SOC 260; PE 206, 248, 349; BIOL 201. Select 2 additional Biology courses and 2 Psychology courses with consent of adviser.

Minor (36)

HLTH 210, 215, 305, 315, 415, 438, 481; PE 206, 248, 349.

PHYSICAL EDUCATION

BACHELOR OF ARTS

Major (Men Only) (48)

PE 151, 152, 163, 206, 209, 221, 248, 251, 252, 253, 254, 255, 261, 265, 267, 304, 348, 349, 412. Electives: Select 16 credits with consent of adviser.

BACHELOR OF SCIENCE

Major (63)

PE 103, 109, 110, 112 or 151, 206, 248, 261, 348, 349, 357, 411, 449, 451, 452, 453; HLTH 215. Select 2 courses from: PE 332, 358, 375, 378. Must show swimming proficiency or take swimming course. Proficiency exam is given each quarter. Select 4 credits from following areas with adviser's consent: Dance, Fitness, Individual & Dual Sports, Team Sports. Select 10

credits from one of the following areas or 10 credits of electives with adviser's consent: Adapted Aquatics, Athletics, Dance, Elementary, Recreational Sports.

Minor (Men Only) (36)

PE 206, 248, 348, 411, 451, 452, 453. Select 2 courses from: 278, 332, 358, 375. Electives: Select 10 credits with consent of adviser. Must show swimming proficiency or take one swimming course.

Elementary Education Minor (24)

PE 206, 248, 348, 411*; REC 212.

Electives: Select a minimum of 6 credits from the following: PE 101, 103, 109, 110, 112, 132, 150, 151, 153, 235, 253, 263, 349, 412, 449, 451, 452. A maximum of one of the following may be included among the electives: PE 251, 254, 255, 265, 267, 301, 303.

*PE 411 is to be taken in lieu of PE 392 in the Elementary Education major.

Athletic Coaching Certificate for Women (25)

Select 23 or 24 credits from the following: PE 206, 248, 304(w), 312, 339, 348, 349, 355, 358 or 378 or 268. Select 1 or 2 credits from: PE 101, 103, 109, 112, 231, 236, 272, 301, 302, 303, 357, 449.

Athletic Coaching Certificate for Men (29)

PE 206, 248, 304, 305, 348, 349, 408, 456.

Select 6 credits from: PE 221, 251, 252, 253, 254, 255, 265, 267.

RECREATION

BACHELOR OF SCIENCE (NON-TEACHING)

Major (60-96)

REC 133, 135, 212, 233, 235, 333, 335, 433, 441, 444; PE 206, 355 or 415, 451. Select 6 credits — including any prerequisites — from: PE 103, 109, 163, 209, 261, 268. Select 12 credits with consent of adviser.

Students who wish to add an Activity and Coaching Emphasis to this major must also take: PE 248, 304, 348, 305 or 358, 375 or 378. Select 3 courses from: PE 221, 251, 252, 253, 254, 255, 265, 267, 301, 302, 303, 309. Select elective courses with consent of adviser to bring Emphasis to a total of 36 credits.

Minor (36)

PE 206; REC 133, 135, 212, 233, 235, 333, 335; SOC 260. Select 14 credits from the following skill areas with consent of adviser — maximum of 10 credits may be taken in any skill area: Arts, Crafts, Music, Nature Activities, Physical Education, Speech and Dramatic Art.

COURSE DESCRIPTIONS

The description (*) designates major-minor courses.

The description (+) designates general education courses.

HEALTH EDUCATION (HLTH)

+125. Health Education. Development of acceptable health information and practices including personal and community health for the present and future of the student and his family. 3 Cr. W.S.

210. Principles of Nutrition. Nutrition in child development. Diet, dietary problems, and school lunch. Lab experience. 3 Cr. F, W, S, Alt. SUM.

215. Personal and Community Health. Exploration of personal and community problems in selected emotional, social, physical, intellectual areas. 3 Cr. F, W, S, SUM, Demand.

301. Mood Modifying Substances in a Contemporary Society. A study of mood modifiers including alcohol and nicotine. Suggested educational strategies K-12. Complies with requirement of MSA 126.05. 3 Cr. F, W, S, SUM.

305. Principles of Safety Education. Theories of accident causation and prevention are discussed with special emphasis on the role of education. Includes home, farm, recreation, industry, transportation, and school. 4 Cr. SUM.

315. Organization of School Health Program. History; legal basis; curriculum; school health services and program; emotional climate of school; emergency care; evaluating results of health instruction; role of physical education in health. 4 Cr. F, S, Alt. SUM.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

415-515. Health Education Curriculum Development. Organization and development of a school health curriculum, K-12; techniques for course of study construction. Lab work. Prereq.: HLTH 210, 215, 301, 315, 481. 4 Cr. F, W, Alt. SUM.

438. Methods and Materials in Health Education. Activities, projects, and units in health curriculums at various age levels. Prereq.: HE 210, 215, 305, 315, 415, 481, and 301. Must complete *before* student teaching. 4 Cr. F, W, S, Alt. SUM.

481-581. 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, Alt. SUM.

498-598. Elementary School Health Program. Concepts of health, disease, safety, family life, nutrition and consumer information for the elementary school. 3 Cr. W, S, Alt. SUM.

PHYSICAL EDUCATION (PE)

101. Efficiency of Movement. Study of scientific principles that form the basis for developing a complete concept and understanding of human movement to be taken in conjunction with the first major activity course. 1 Cr. (*) F, W.

103. Softball, Track and Field. Techniques of fundamental skills and methods of teaching. 3 credits. (w*) S.

109. Fall-Winter Team Activities. Techniques of fundamental skills in hockey, soccer, volleyball, and basketball. 3 Cr. (*) F.

110. Professional Development in Physical Education. Orientation for women majors at St. Cloud State University. Also includes brief history, philosophy, qualifications, and opportunities in the profession. 2 Cr. (*) W.

111. Modern Dance. Techniques of fundamental and advanced skills, rhythm analysis, and dance composition. 2 Cr. (*) W, S.

112. Gymnastics for Women. Techniques of fundamental skills. 2 Cr. (*) F, W.

†120. Aerobics. Aerobic concepts of physical fitness. Adjustments for age groups and sex. Written evidence of recent physical examination is mandatory. 2 Cr. Demand.

†121. Wrestling. Skills in performing fundamental positions, holds and breaks, taking opponent to mat; riding opponent, offense, and defense. 1 Cr. (m) F, W.

†123. Weight Training. Skills and knowledge associated with dynamic and static conditioning. Course designed to assist in developing strength and learning the basic concepts of the three Olympic lifts. 1 Cr. F, W, S, SUM.

†125. Ballroom Dance Rhythms. Fundamentals of Waltz, Foxtrot, and Lindy emphasized. Rumba, Samba, Tango, and ChaCha included. 1 Cr. Demand.

†126. Gymnastic Stunts. Skills in balancing in both single and double stunts. 1 Cr. (m) W.

†130. Skating. Skills involved in beginning figure skating. Some recreational and speed skating. Student must furnish figure skates. 1 Cr. W.

†131. Stunts and Games for the Elementary School Child. Stunts, games, achievement, and efficiency tests for elementary level. 1 Cr. S.

†132. Individual and Recreational Games. Aerial Badminton, paddle tennis, aerial darts, table tennis, and volleyball. 1 Cr. Demand.

†133. Rhythms and Dances for the Elementary School Child. Simple folk dances, singing games, and free rhythms suitable for all elementary grade levels. 2 Cr. F, W, S.

†135. Water Polo. Terminology, fundamentals, techniques, strategy and skills. 2 Cr. Demand.

†136. Beginning Swimming. For students who cannot swim in deep water. Elementary strokes and diving. 1 Cr. F, W, S, SUM.

†138. Intermediate Swimming. Intermediate level swimming with emphasis on side, back, and crawl strokes. Prereq.: 136 or equivalent. 1 Cr. F, W, S, SUM.

†139. Advanced Swimming. Advanced strokes and diving. Prereq.: 138 or equivalent. 1 Cr. Demand.

†140. Self Defense for Women. Fundamental skills and techniques of fall, rolling, throwing and breaking holds. Specific emergency techniques of self defense and specific safety skills. 2 Cr. Demand.

†144. Volleyball. Volleyball skills and techniques. 1 Cr. Demand.

†145. Basketball for Women. Basketball skills and techniques. 1 Cr. Demand.

†150. Beginning Gymnastics for Women. Beginning skills and techniques in gymnastics developed through tumbling, and various pieces of apparatus. 1 Cr. (w) W.

- 151. Gymnastic Stunts.** Fundamental skills involved in doing exercises in tumbling and on apparatus. Progression in difficulty. 2 Cr. (*) F, W, S, SUM.
- †152. Physical Fitness.** Physical fitness tests, calisthenics, running, fitness, activities, leadership techniques. 1 Cr. (*) F, W, S, SUM.
- †153. Folk and Square Dancing.** Variety of folk, round, mixers and square dances. 1 Cr. F, W, S.
- †159. Team Handball.** Terminology, fundamentals, techniques, strategy and skills. 2 Cr. Demand.
- †160. Slow Pitch Softball.** Techniques, skills and strategy. 2 Cr. S.
- 163. Sports Education.** Skills and methods involved in soccer, volleyball and speedball. Training in directing conditioning exercises, games of low organization and lead up games. 2 Cr. (*) F, S.
- †180. Ice Hockey.** Basic techniques and knowledge used in playing. Student must furnish skates. Prereq.: 130. 1 Cr. W.
- †200. Beginning Skiing.** Basic techniques and knowledge. Students furnish own ski boots. 1 Cr. W.
- †201. Intermediate Skiing.** Techniques geared to those with some skiing experience. Students should have mastered beginning skills including snowplow turns, right and left, braking and stopping, rising and falling. 1 Cr. W.
- †202. Cross Country Skiing.** Beginning and intermediate work in ski touring. Physical conditioning emphasis, waxing technique and practice in overland skiing. Students furnish own equipment. 2 Cr. W.
- †203. Snowshoeing.** Basic techniques and knowledge. For beginners only. Snowshoes furnished. 1 Cr. W.
- †205. Horseback Riding I.** Basic skills involved in horseback riding. Fee assessed for use of horses and equipment. 1 Cr. Demand.
- 206. Standard First Aid and Personal Safety.** Standard and advanced skills and knowledge necessary to give first aid to victims of accidents or sudden illness. 3 Cr. F, W, S, SUM.
- 207. First Aid.** Designed to qualify students to teach standard first aid and personal safety and issue American Red Cross certificates. Prereq.: Current validated Standard Red Cross certificate. 1 Cr. S.
- †208. Horseback Riding II.** Development of the seat, especially at the canter. Emphasis on application of aids. Basic concepts of dressage. Prereq.: 205 or equivalent. 1 Cr. Demand.
- 209. Fundamental Skills in Individual and Dual Sports.** Techniques of fundamental skills in individual and dual sports such as archery, badminton, fencing, golf, tennis and bowling. 2 Cr. (m*) W, S.
- 211. Modern Dance Composition.** Fundamental compositional forms with emphasis on locomotor movements and spatial elements. Prereq.: 111. 1 Cr. (*) W.
- †213. Bicycling.** Intermediate level bicycling. Includes self-conditioning, bicycling maintenance, safety considerations, tours and skill activities. Student furnishes own bicycle. 2 Cr. F, S, SUM.
- 221. Coaching of Wrestling.** Theory and practice of coaching wrestling. Prereq.: 121. 3 Cr. (*) W.
- †222. Beginning Bowling.** Basic techniques and knowledges. Charge is made for equipment and lane fee. 1 Cr. F, W, S, SUM.
- †230. Beginning Tennis.** Court positions, footwork, and rules. Fundamental skills of serving, forehand, and backhand. Student must furnish racket and balls. 1 Cr. F, S, SUM.
- †231. Intermediate Tennis.** Strategy, singles, and doubles. Techniques used in advanced tennis tournaments. Student must furnish racket and balls. 1 Cr. Demand.
- †232. Badminton.** Terminology, fundamentals, techniques, grip, footwork, service stroking, strategy, and etiquette. Single and doubles game. 1 Cr. F, W, S.
- †233. Beginning Modern Dance.** Techniques to increase range, strength, flexibility, rhythm, and balance, and knowledge of musical notations, terminology, and form as these are related to dance. 1 Cr. F, W, S.
- †234. Advanced Modern Dance.** Development of movement vocabulary; skills in advanced dance technique and in dance composition. 1 Cr. W, S.

- †235. **Square Dance.** American square dance and other rhythms in areas of folk dance. 1 Cr. Demand.
- †236. **Intermediate Badminton.** Strategy, advanced techniques and skills, singles and doubles play. Prereq.: 232 or equivalent. 1 Cr. Demand.
- †238. **Beginning Archery.** History, basic techniques for target shooting. Terms, roles and etiquette. 1 Cr. F, W, S, SUM.
- †240. **Intermediate Archery.** Adaptation and variation, clout and tournament shooting. 1 Cr. Demand.
248. **Anatomy.** An introduction to gross human anatomy. A study of the structure of the organs and organ systems of the human. Lab.: T, R; Lec.: M. 4 Cr. (*) F, W, S, SUM.
- †250. **Fly and Bait Casting.** Dry and wet fly and artificial bait casting. Student must furnish fly and bait casting equipment. 1 Cr. F, S, SUM.
251. **Coaching Basketball.** Theory and practice of coaching basketball. 3 Cr. (*) F.
252. **Coaching Gymnastics.** Theory and practice of coaching gymnastics and tumbling. 3 Cr. (m*) W.
253. **Coaching Swimming.** Theory and practice of coaching swimming. 3 Cr. (*) W or S.
254. **Coaching Hockey.** Theory and practice of coaching hockey. 3 Cr. (*) W.
255. **Coaching Football.** Theory and practice of coaching football. 3 Cr. (*) F, W.
261. **Dancing and Rhythms.** Study and practice of simple rhythms, folk, square, and social dancing. Before student teaching. 2 Cr. (*) F, W, S.
265. **Coaching of Baseball.** Theory and practice of coaching baseball. 3 Cr. (m*) F, SUM.
- †266. **Advanced Lifesaving.** Theory and practice of methods used in Red Cross Life Saving and Water Safety. 2 Cr. Demand.
267. **Coaching of Track.** Theory and practice of coaching track and field events. 3 Cr. (*) S.
- †268. **Basic Swimming Instructor.** Methods and techniques of teaching; training of Water Front Safety Instructors. Prereq.: Current Red Cross Senior Life Saving Certificate. 2 Cr. Demand.
- †269. **Synchronized Swimming.** Skills and technical aspects of swimming productions. Prereq.: 139 or equivalent. 1 Cr. Demand.
- †270. **Foil Fencing.** Basic techniques and knowledge in the use of the foil. 1 Cr. Demand.
- †271. **Skin and Scuba Diving.** Techniques, knowledge and practices of skin and scuba diving (self-contained underwater breathing apparatus). Emphasis on safety factors. Prereq.: Special ear-sinus examination by Health Service. Charge for equipment. 2 Cr. F, W, S.
- †272. **Diving.** Techniques and knowledge of springboard diving. Prereq.: 138 or equivalent. 1 Cr. Demand.
- †273. **Canoeing.** Principles of safety and self-rescue plus basic strokes of canoeing. Prereq.: Intermediate level of swimming ability or approval of instructor. 1 Cr. F, W, S, SUM.
- †274. **Advanced Foil Fencing.** Advanced skills and strategies of foil fencing. Prereq.: 270 or equivalent. 1 Cr. Demand.
- †275. **Golf.** Fundamental strokes, rules, terms, etiquette. Each student must furnish own equipment. 1 Cr. F, S, SUM.
- †276. **Intermediate Golf.** Intermediate skills, strategies of golf. Must furnish own equipment. Prereq.: 275 or equivalent. 1 Cr. Demand.
- †277. **Golf for the Duffer and the Expert.** Instruction designed to improve one's game on all skill levels. Indoor instruction and practice and outside golf course experiences. Must furnish own equipment. 2 Cr. S.
- †290. **Basketball for Men.** Basic skills and knowledge used in playing. 1 Cr. (m). Demand.
301. **Advanced Track and Field Techniques.** Methods and materials of track and field for women physical education majors. Prereq.: 103. 2 Cr. (*) S.
302. **Advanced Aquatic Techniques.** Advanced techniques and methods of swimming, diving and related aquatic activities. 2 Cr. (*) W.
303. **Advanced Gymnastics Techniques.** To develop advanced skills and techniques in specific gymnastics events. Prereq.: 112. 2 Cr. (*) W.
304. **Care and Prevention of Athletic Injuries.** Care and prevention of athletic injuries in-

cluding practical experience in taking care of these injuries. Prereq.: 248. 2 Cr. (*) F, W, S, SUM.

305. Officiating — Football and Basketball. Techniques involved in officiating high school football and basketball. Rules governing these sports. 2 Cr. Demand.

306. Water Safety Instructor's Course for the Handicapped. Techniques and methods of swimming instruction designed specifically for use with handicapped individuals. Prereq.: Water Safety Instructors or equivalent. 2 Cr. Demand.

311. Advanced Modern Dance Techniques. Techniques and fundamentals of advanced skills, rhythm analysis, advanced composition and teaching methods for modern dance. Prereq.: 111 and 211. 2 Cr. S.

312. Sports Officiating for Women. Techniques, rules, problems and procedures in officiating volleyball, basketball, and softball. DGWS ratings possible. Acquaintance with officiating techniques in selected individual sports. 2 Cr. F, W.

332. Techniques in Teaching Dancing. Available materials and methods of teaching social, tap, folk, and modern dance. Must be completed before student teaching. 2 Cr. (*) F, W, S.

338. Practicum I in Physical Education. Student practicum experience in a teaching situation prior to student teaching. Prereq.: Completion of an appropriate physical education course and permission of instructor. 1 Cr. (*) F, W, S, SUM.

339. Women's Coaching Practicum. Student coaching practicum experience designed to fulfill requirements for certification. 1 Cr. F, W, S.

348. Kinesiology. The study and analysis of human motion based in anatomical, physiological, and mechanical principles, with particular reference to physical education skills. Prereq.: 248. 3 Cr. (*) F, W, S, SUM.

349. Human Physiology. Study of the basic systems of the human body and the mechanisms influencing these systems. Lab. Prereq.: 248. 3 Cr. (*) F, W, S, SUM.

355. Competitive Sports for Women. Critical analysis of interscholastic and intercollegiate programs for girls and women. 3 Cr. W, S.

357. Motor Learning. Knowledge of the learning process as utilized in the learning of motor skills. Pertinent to physical education activities. 2 Cr. (*) F, W, S.

358. Team Sports Teaching Techniques. Techniques of advanced skills, methods of teaching. Prereq.: 103 & 109. Before student teaching. 2 Cr. (*) F.

375. Methods in Physical Education. Organization and conducting of classwork and use of teaching aids on both elementary and secondary levels. Must be completed before student teaching 2 Cr. (*) F, W, S.

378. Individual and Dual Sports. Techniques of advanced skills, methods of teaching individual and dual sports. Prereq.: PE 230, 232, 238, 275, or pass skill-knowledge competency tests. Complete before student teaching. 2 Cr. (*) W, S.

392. Elementary School Physical Education. Materials, programming, and procedures. Open only to elementary education majors. Prereq.: PE 131 or PE 133 or both. 2 Cr. F, W, S, SUM.

438. Practicum II in Physical Education. Student practicum experience in a teaching situation prior to student teaching. Prereq.: Completion of an appropriate physical education course and permission of instructor. 1 Cr. (*) F, W, S, SUM.

449. Physiology of Exercise. A study of the physiological effects which exercise has upon the human organism. Lab. Prereq.: PE 349. 3 Cr. (*) F, W, S.

452. Tests and Measurements in Physical Education. Evaluative tools and techniques unique to physical education activities. Laboratory exercises in selected tests and evaluative procedures. Prereq.: 349. 3 Cr. (*) F, W, S.

453. Organization of Secondary Level Materials. Methods of presentation and adaptation of materials on secondary level for instructional, intramural, and special events programs. Complete immediately before student teaching. 3 Cr. (*) F, S.

454. Adaptation of Activities for the Handicapped. The adaptation and modification of the physical education curriculum in order to meet the needs of the handicapped. Prereq.: 451 or approval of instructor. 3 Cr. Demand.

COURSES FOR ADVANCED UNDERGRADUATE
AND GRADUATE STUDENTS

408-508. Principles and Philosophy of Physical Education. Biological, sociological, and psychological interpretations of physical education. Philosophical concepts from ancient Roman and Greek cultures to present. 3 Cr. SUM, Demand.

411-511. Organization and Development of Physical Education in Elementary School. Principles, problems, and procedures. Before student teaching. 3 Cr. F, W, S, SUM.

412-512. History and Philosophy of Physical Education. Role of physical education in the life of primitive man and ancient societies to the present. Impact of programs in foreign countries on the program in this country. 3 Cr. F, W, S.

415-515. Organization and Administration of Recreational Activities. Methods of materials of the recreational sports program in public schools. Content of program, and methods or organizing competition. 3 Cr. Demand.

450-550. Secondary Curriculum and Administration of Physical Education. Organization and administration of secondary programs in physical education. Must be completed before student teaching. 4 Cr. (*) F, W, S.

451-551. Adapted Physical Education. Common disabling conditions of the exceptional child and the organization and administration of the physical education program in order to meet their needs. Prereq.: 348. 3 Cr. F, W, S.

456-556. Administration of Interscholastic Athletics. History and objectives of high school athletics, local organizations, state and national control over high school athletics, safety and sanitation in athletics. 3 Cr. Demand.

RECREATION (REC)

133. Introduction to Recreation. Introduction to the field of recreation. Includes history, professional opportunities, organized recreation settings and professional and service organizations. 2 Cr. (*) F, W, S, SUM.

135. Practicum I in Recreation. Observation of recreation activities sponsored by the St. Cloud community and St. Cloud State University. Taken concurrently with REC 133. 1 Cr. (*) F, W, S, SUM.

212. Camping Education. Types of camps, underlying philosophies, trends, camp standards, program planning, cabin counseling, and camp craft skills. 4 Cr. F, S, SUM.

213. Wilderness Survival Techniques. Methods used to meet emergencies in the wilderness and how to survive with the least amount of physical and mental pain. 3 Cr. Demand.

233. Recreation Program Planning and Leadership Theory. Designed for recreation leader with guidelines for programming of activities and professional leadership to implement their programs. 3 Cr. (*) F, W, S, SUM.

235. Practicum II in Recreation. The observation and analysis of the administrative and leadership structures and programming of varied community organizations. Taken concurrently with REC 233. 1 Cr. (*) F, W, S.

333. Facilities in Recreation. A look into the planning and area management of Recreation facilities. 3 Cr. (*) F, W, S.

335. Practicum III in Recreation. Observation and analysis of a particular recreational facility. Taken concurrently with REC 333. 1 Cr. (*) F, W, S.

339. Therapeutic Recreation. Provides a theoretical rationale for the development of therapeutic recreation services for the physically disabled, mentally ill, mentally retarded, socially deviant or dependent aging persons. 3 Cr. Demand.

433. Seminar: Recreation Administration and Leadership Theory. Analysis of organizational and administration practices used in recreation programs and a discussion of the issues and problems encountered in internship. 3 Cr. (*) Demand.

444. Senior Internship. Practical on-the-job work experience to better acquaint him/her the operation and administration of agencies providing recreation programs and services. Taken concurrently with REC 433. 16 Cr. (*) F, W, S, SUM.

COURSES FOR ADVANCED UNDERGRADUATE
AND GRADUATE STUDENTS

440-540. Camping Administration. Organization and administration of camp, program planning, selection and training of staff, camp site selection and development, health and safety. 3 Cr. Demand.

441-541. Outdoor Education. Developments in outdoor education. Instructional principles of outing activities and outdoor education program materials and methods. 3 Cr. Demand.

HUMAN RELATIONS (HURL)

Chairperson Douglas Risberg. **Faculty** Acree, Andrzejewski, Downes, Falk, Hellwig, Levilain, Purdom, Roehl, Vega, Wolfner.

The functions of the Human Relations program are to provide a program to enable students to fulfill the State Education 521 teacher certification requirement in human relations which is to understand the contributions and life styles of the various racial, cultural, and groups in our society; to recognize and deal with dehumanizing biases, discrimination, and prejudice; to create learning environments which contribute to the self-esteem of all persons and to positive interpersonal relations; and to respect human diversity and personal rights.

Basically the program is to help students develop the necessary knowledge and skills to enable them to live successfully in a pluralistic society in a non-racist, non-sexist way. Courses are offered to enable students wishing to pursue human relations topics in depth.

COURSE DESCRIPTIONS

COURSES FOR ADVANCED UNDERGRADUATE
AND GRADUATE STUDENTS

496-596. Human Relations and the Teacher Part I. Part I of program to meet State Edu 521 Human Relations teacher certification requirement. The focus is upon parts bb, cc and dd of the State requirement. 3 Cr. F, W, S, SUM.

497-597. Human Relations and the Teacher Part II. Part II of the program to meet State Edu 521, Human Relations teacher certification requirement. The focus will be upon part aa of the State requirement. Prereq.: HURL 496-596. 3 Cr. F, W, S, SUM.

LIBRARY AND AUDIOVISUAL EDUCATION (IM)

Chairperson Luther Brown. **Faculty** Berling, Blaske, Busse, Campbell, Cassidy, Clarke, Costanzo, Daily, Elsen, G. O. Erickson, Fields, Foreman, F. Jensen, H. Jensen, Keable, Kinderski, LaQuier, Lee, J. M. Nelson, Pehler, Polesak, Rydberg, C. Savage, Schulzetenberg, Smelser, Weigel, Westby.

With the current emphasis on all media formats the Department of Library and Audiovisual Education has developed a program in Information Media to support persons in media (print and non-print library and audiovisual formats) for all levels of responsibility. Encompassed in the Information Media major at the graduate level and minor at the undergraduate level are concepts dealing with print (book) and non-print (audio, projected, and non-projected) materials.

UNDERGRADUATE DEPARTMENTAL REQUIREMENTS

BACHELOR OF ARTS

Information Media Minor (26)

IM 275, 471, 475, 476, 477, 478, 481.

BACHELOR OF SCIENCE

Information Media Minor (26)

IM 275, 471, 475, 476, 477, 478, 481.

Information Media Expanded Minor (36)

IM 275, 471, 473, 475, 476, 477, 478, 481.

Secondary Education Majors must complete ELED 459 and Elementary Education Majors must complete SEED 447.

May elect from: ELED 312; 412; SEED 370 if not part of their program, or Other IM courses.

COURSE DESCRIPTIONS

†204. Information Resources in Society. Information sources in libraries, media centers, and community resources (public, regional, school, and academic libraries) for General Education students). 4 Cr. F, W, S.

275. The Media Profession. An introduction to the library and audiovisual profession, its needs, and requirements. 2 Cr. F, W.

†468. Media Materials and Methods of Instruction. Theory and techniques of utilizing all media, including non-print and print materials in community and area resources. Opportunities to learn equipment operation. Lab. 3 Cr. F, W, S, SUM.

481. Reading, Listening, and Viewing Guidance. Types of materials for children and adolescents, their evaluation and use. Methods and approaches used in effective reading, listening, and viewing guidance. Prereq. or concurrent enrollment: 275, 4 Cr. F, S.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

471-571. Preparation of Media. Designing, producing, and utilizing projected and non-projected materials for instructional use. Lab. 4 Undgr. Cr., 3 Gr. Cr. W, S, SUM.

473-573. Photography in Media. Basic photographic processes in education, including still and motion photography, darkroom processes, and the operation of equipment. Lab. 4 Undgr. Cr., 3 Gr. Cr. F, S, SUM.

475-575. Administration of Media. Basic theory and techniques of administering media programs and service. Prereq. or concurrent enrollment: Undgr. 275; Gr. 275 and 468 or 603. 4 Undgr. Cr., 3 Gr. Cr. F, W, SUM.

476-576. Selection and Evaluation of Media. The selection of media materials, including theory, principles, techniques, and basic tools. Prereq. or concurrent enrollment: Undgr. 275, Gr. 275 and 468 or 603. 4 Undgr. Cr., 3 Gr. Cr. F, S, SUM.

477-577. Reference and Bibliography in Media. Reference and bibliographic works, including theory, practice, tools, and bibliographies. Prereq. or concurrent enrollment: Undgr. 275, Gr. 275 and 468 or 603. 4 Undgr. Cr., 3 Gr. Cr. W, S, SUM.

478-578. Technical Processes in Media. The basic processes for acquiring, cataloging, classifying, and organizing materials. Lab. Prereq. or concurrent enrollment: Undgr. 275; Gr. 275 and 468 or 603. 4 Undgr. Cr., 3 Gr. Cr. F, S, SUM.

PSYCHOLOGY

Acting Chairperson E. Rosenthal, Spr Qtr; **Faculty** Ames, C. Boltuck, M. Boltuck, Dwyer, Hark, Kleiber, Knutson, Kukuk, Lesar, Luker, Mason, Mertens, R. Murphy, Nunes, E. Perkins, M. Petersen, Prochnow, Redding, Steen, Wollin.

It is the intent of the department to maximize individual choice and responsibility in developing courses of study tailored to the needs of each student. In order to accomplish this, it is important that students consult with departmental advisers early in their college careers.

BACHELOR OF ARTS**Major (48)**

Psychology 250*, 251, and 259

Electives (36)

Minor (36)

Psychology 250*, 251, 259

Electives (24)

Minor (24)

Psychology 250*, 251, 259
Electives (12)

BACHELOR OF SCIENCE

Elementary and Secondary Education

Minor (36)

Psychology 250*, 251, 259
Electives (12)

Minor (24)

Psychology 250*, 251, 259
Electives (12)

BACHELOR OF ELECTIVE STUDIES

Major (48) Completion of any 48 credits in Psychology

Minor (36)

Completion of any 36 credits in Psychology

* Psychology 250, 251, 259 are a prerequisite to all other psychology courses for majors and minors. 362 and 463 are not open to B. A. students.

Students may choose to concentrate their studies in particular areas of psychology.

1. An emphasis in the area of general and research provides a broad-based background in psychology including theories and research in the following sub-fields: developmental, industrial, experimental, cognitive, motivational, and social.

Concentration in this area of psychology is designed to meet the needs of: (1) those who desire a general knowledge of psychology, (2) those who are bound for graduate knowledge of psychology, and (3) those who are taking other major programs and desire a minor in psychology.

Electives should be selected in consultation with an adviser and may be chosen from the following courses as well as other courses still in experimental stages.

Electives: 222, 262, 270, 360, 383, 390, 411, 422, 441, 443, 469, 471, 472, 474, 475, 482, 483, and 485.

2. An emphasis in behavior analysis may lead to (1) occupational placement at the bachelor's degree level or (2) graduate work in behavior analysis and/or experimental psychology.

Courses should be selected to include the areas of Applied Behavior Analysis I and II and Ethics of Behavior Analysis. Other courses for the bachelor's degree level are elective, but at least one of these electives must be a behavioral studies course. An internship is optional.

For those intending to do graduate work, Experimental Analysis of Behavior I, II, and III are recommended.

It is recommended that the student's minor be in mathematics, computer science, one of the natural sciences, or related fields.

3. An emphasis in human services prepares students with the necessary knowledge, understanding, and skills to enter an ever-increasing number of delivery systems for human care. Further study in graduate helping professions programs is recommended. Important areas recommended for study include: child development, adolescent behavior, marriage and family, women, aging, leisure, behavior analysis, and chemical dependency.

Students should complete an introductory course, courses in interviewing skills, small group processes, and a practicum. An optional internship is offered. Other courses still in the experimental stage may be selected in consultation with the adviser.

Electives: 222, 262, 270, 360, 390, 401, 411, 422, 441, 443, 469, 471, 472, 475, 482, 483, and 485.

COURSE DESCRIPTIONS

†111. Career Planning Seminar. A highly individualized course intended to help students consider careers in light of their own interests and value structure. 4 Cr. F, W, S.

- +121. General Psychology.** Scientific study of human behavior; implications for the general conduct of life. 4 Cr. F, W, S, IST, IIST.
- 222. Survey of Industrial Psychology.** Scientific study of the relationships between man and the world of work. Contents and methods of industrial psychology. 4 Cr. F, W.
- 250. Principles of Behavior.** A presentation of psychology as a science of behavior with emphasis on the experimental analysis and the applied analysis of behavior. 4 Cr. F, W, S, IST, IIST.
- 251. Introduction to Cognitive, Motivational and Social Processes.** Theories and research on reasoning, creative thinking, concept formation, memory drives, human motives, incentives, cognitive dissonance, aggression, altruism, conformity, and obedience. 4 Cr. F, W, S, IST.
- 259. Experimental Design and Statistical Analysis.** Emphasis on the design aspects of research. Consideration of the selection and interpretations resulting from stat. analysis procedures; computer facilities utilized. 4 Cr. F, W, S, IST.
- 262. Human Growth and Development.** From prenatal period through adolescence, significance of physical, intellectual, emotional, and social phases as related to total growth. 4 Cr. F, W, S, IST, IIST.
- +1270. Psychology of Women.** A survey of psychological theory, research, history, and current issues important to women in American society, with emphasis on mythical and real differences between men and women. 4 Cr. W, S, IST.
- 360. Experimental Psychology I.** Experimental psychology of learning; selected experiments performed by students; classical conditioning, operant conditioning, multiple response. Lectures and laboratory. 4 Cr. Prereq.: 259. Demand.
- 362. Educational Measurement and Test Construction.** Principles of Measurement, interpretation of standardized tests, construction of teacher made achievement test, evaluating and grading outcomes of learning. For teaching majors only. 4 Cr. F, W, S, IST, IIST.
- 380. Psychology of Aging, Dying and Death.** A study of the personal and situational aspects of the aging process with the basic emphasis on the psychology of the helping relationship in life stages of later maturity. 4 Cr. F, W, S, IST.
- +390. Differential Psychology.** The nature, extent, and causes of individual and group differences; the methodological problems of measuring human differences. 4 Cr. W.
- 401. Field Work.** Special arrangement with supervising professor, department chairperson, deans, and field institution supervisor. 1-4 Cr. Demand.
- 411. Physiological Psychology.** Survey of research establishing the physiological and biochemical correlates of such phenomena as arousal, emotion, motivation, learning and memory. Prereq.: BIOL 104 or equivalent course. 4 Cr. Demand.
- 422. Personal Psychology.** Psychological methods, procedures, and principles in personnel work; technical aids, psychological testing, vocational guidance, worker efficiency and morale. Prereq.: 222. 4 Cr. Demand.
- 441. Psychology of Childhood.** Early, middle, and later childhood; principles and philosophy of growth. Prereq.: 262. 4 Cr. F.
- 443. Psychology of Adolescence.** An investigation of selected topics and issues concerning adolescent development based on original research sources. W.
- 463. Application of the Principles of Learning.** Basic theories of learning and their application to classroom instruction; emphasis on motivation, concept formation, retention, transfer and problem solving. For teaching majors only. 4 Cr. F, W, S, IST, IIST.
- 480. Beginning Manual Communications.** Beginning skills in communication with deaf and hearing impaired persons using finger spelling and signed symbols. Not applicable to a major or minor in Psychology. 2 Cr. F, W.
- 481. Advanced Manual Communications.** Advanced skills in communication with deaf and hearing impaired persons using finger spelling and signed symbols. Not applicable to a major or minor in psychology. Prereq.: 480. 2 Cr. W, S.
- 490. Advanced Theoretical Psychology.** Critical examination of modern views and theoretical issues in the field of psychology. Limited to majors in psychology. 4 Cr. Demand.

COURSES FOR ADVANCED UNDERGRADUATE
AND GRADUATE STUDENTS

430-530. Seminar. (Selected topic in special areas in psychology.) May be repeated. 1-4 Cr. Demand.

464-564. Guidance Principles. Philosophy of guidance, individual appraisal, counseling, services, informational services, placement organization; group guidance activities, staff service and contribution, and program organization and administration. 4 Undgr. Cr., 3 Gr. Cr. IST.

466-566. Guidance for the Handicapped. Special problems. Counseling with children and parents. Psychological aptitude, achievement tests. 4 Undgr. Cr., 3 Gr. Cr. W, S, IST.

469-569. 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. 4 Undgr. Cr., 3 Gr. Cr. F, IIST.

471-571. Mental Hygiene. Characteristics of wholesome personality, methods and aims of mental hygiene; personal development and techniques of effective adjustments. Prereq.: 262. 4 Undgr. Cr., 3 Gr. Cr. F, S, IST.

472-572. 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 401 for B. S. students; PSY 441 or 433 for B. A. students. 4 Undgr. Cr., 3 Gr. Cr. F, S, IST.

473-573. Psychology of Mental Retardation. Etiology, characteristic, classification, diagnosis, assessment. Social control. Role of family, school, community agencies. Prereq.: ED 471-571 for B. S. students; PSY 441 or 443 for B. A. students. 4 Undgr. Cr., 3 Gr. Cr. F, W, S, IST.

474-574. Interpersonal Dynamics. Survey of research, experimentation, and theory of relationships between the individual and the group; inter-personal communication, influence, group structure and function, leader-member relations. 4 Undgr. Cr., 3 Gr. Cr. F, IST.

475-575. Abnormal Psychology. Functional and organic deviations for understanding normal behavior of human personality with greater clarity and precision. 4 Undgr. Cr., 3 Gr. Cr. F, W, S, IST.

476-576. 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.: 475-575. 4 Undgr. Cr., 3 Gr. Cr. Demand.

482-582. Motivation. Theory and research in animal and human motivation; physiological, social and personal aspects of motivation; basic, deficit, derived, growth motivation. 4 Undgr. Cr., 3 Gr. Cr. Demand.

483-583. History and Schools. Systems, experiments, personalities in the development of modern psychology; comparative study and analysis of study systems; contributions of outstanding persons. 4 Undgr. Cr., 3 Gr. Cr. Demand.

485-585. Theory of Personality. Basic theoretical concepts, factors of vital relationships within the individual personality, interpersonal relationships, individual and field frames of reference as they relate to mental health. 4 Undgr. Cr., 3 Gr. Cr. IST.

SECONDARY EDUCATION (SEED)

Chairperson L. Mortrude. **Professors** Bjorklun, Brewer, Grunerud, P. Johnson, V. Mork.

BACHELOR OF SCIENCE

The requirements of major and minor fields of study appropriate for the Bachelor of Science degree in Secondary Education are described by the following departments in the Bulletin:

American Studies	Health, Physical Education and Recreation	Mathematics
Art	History	Music
Biological Sciences	Industrial Education	Physics and Astronomy
Business Education	Interdisciplinary Studies	Political Science
Chemistry	Library and Audiovisual Education	Psychology
English	Mass Communications	Sociology and Anthropology
Foreign Languages		Speech Communications
Geography		Theatre

Secondary Professional Education Sequence

As sophomore or early junior (including transfer students): SEED 201/PSY 262 Block, or PSY 262. (Application for Admission to Teacher Education is made near the end of the sophomore year. See Academic Policies section in the front of this bulletin.)

As junior or early senior: SEED 447; PSY 362, 463; IM 468; Special Methods Course(s) in your major or minor (if any). Application for Admission to Student Teaching is made at least two quarters before assignment.

As senior: Student Teaching (16 CR.); SEED 448.

Cooperative Approach to Teacher Education (CATE) Program

The CATE Program is principally on-site instruction. It combines three to five courses and corresponding credit, depending on the student's need. Highly individualized work is stressed. Students are expected to be capable of considerable independent study and willing to give full mornings five days a week. Admission is by permission of the codirectors, Professors L. Mortrude and P. Johnson. The 201/262 Block or Psychology 262, and Admission to Teacher Education are prerequisites.

READING CERTIFICATION

Secondary Reading Certification. Qualification for secondary remedial reading certification requires (1) an elementary or secondary teacher's certificate based on a bachelor's degree, (2) two years of successful teaching experience, (3) and one course in each of the following areas, which can be a part of or beyond the bachelor's degree requirements.

Remedial Reading Certification

ELED 312 or 412, ED 417-517,
ELED 421-521, 623, 625,
PSY 686 or 687 or 469-569

Developmental Reading Certification

ELED 312 or 412, ED 417-517, ELED 421-
521,
ENGL 353

COURSE DESCRIPTIONS

201. Introduction to Secondary Education. The professional and personal characteristics of teachers, philosophies of teaching, school organization, classroom management, professional obligations, and ethical practices of teachers, and planning for a career in teaching. To be taken concurrently with PSY 262. 2 Cr. F, W, S.

370. Junior High School Education. Philosophy, developments, status, functions, curriculum, organization, management. 4 Cr. F, W, S, SUM.

447. Secondary School I. History, philosophy, curriculum, instructional practices; responsibilities of secondary school teacher. Prereq.: PSY 362. To be taken the quarter immediately preceding student teaching and immediately following PSY 362. 4 Cr. F, W, S.

448. Secondary School II. Nature of school, curricular and instructional problems, related responsibilities of the secondary school teacher. Prereq.: 447 and student teaching. 3 Cr. F, W, S, SUM.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

449-549. The Student, the Teacher, and the Law. Statutes and legal decisions affecting teachers and students in the public schools of the United States. Certification, contracts, tenure, teacher authority and liability with respect to students, curriculum, school property, and other related topics will be studied. 3 Cr. F, S, SUM.

SPECIAL EDUCATION (SPED)

Chairperson Stanley Knox. **Faculty** Ayers, Gunderson, James, Lewis, Lovelace, Malinen, Robley, Scribner, Timmers, Wellik.

The Department of Special Education offers programs which lead to certification to teach educable mentally retarded, trainable mentally retarded, and orthopedically handicapped children at the undergraduate level. Teachers can also be certified in special learning and behavior problems at the post-graduate level.

The comprehensive major in special education consists of a sequence of experiences which culminate in an academic year internship during the senior year. This internship is designed to provide the student with a range of practical experiences designated as resident teaching. The student must plan a program in such a manner so that he will be able to be off-campus for this year. Completion of the program leads to certification to teach the

educable mentally retarded, but by planning carefully the student can also be certified to teach trainable mentally retarded children as well. Students should consult their adviser for further information.

Enrollment in major program may be limited. Students who are anticipating the major should contact their adviser during their freshman year. Transfer students, in particular, should contact the department very early, to determine whether there will be the possibility of enrollment in the program.

In addition, minors are available for elementary education majors who wish to obtain certification to teach educable mentally retarded or orthopedically handicapped children. Secondary majors may be certified to teach educable mentally retarded children. Endorsements to teach trainable mentally retarded are also available.

BACHELOR OF SCIENCE

Comprehensive Special Education Major (70)

Major: SPED 401, 451, 404, 405, 423, 424, 425, 426, 455, 456, 457; PSY 466, 473.

Supportive Core: ELED 312; HE 301; MATH 250; IM 468; PSY 262, 362, 463.

Elementary Education Minor (Educable Mentally Retarded) (24)

SPED 401, 451, 423, 424, 452; PSY 473; TCHG 415 (Credits not applicable to minor) Min. of 4 Cr. SPED electives selected with adviser.

Elementary Education Minor (Orthopedically Handicapped Minor) (24)

SPED 401, 406, 423, 424, 451; EDT 416 (Credits not applicable to minor) Min. of 8 Cr. SPED electives selected with adviser.

Secondary Education Minor (Educable Mentally Retarded) (36)

SPED 401, 423, 424, 451; PSY 466, 473; TCHG 415 (Credits not applicable to minor) Min. of 14 Cr. SPED electives selected with adviser.

SPECIAL EDUCATION COURSE DESCRIPTIONS

†401. Introduction to Exceptional Children. Recognition, needs, and guidance of children who deviate in physical, mental, emotional, or social characteristics; implications for education. 4 Cr. F, W, S, SUM.

402. 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. F.

451. Junior Practicum in Special Education. Laboratory experience with handicapped children. Concurrent registration with 401 for majors and 424 for minors. 2 Cr. F, W, S.

452. Senior Seminar in Special Education. Individual projects, observations, and discussions related to experience while student teaching. Prereq. Student teaching in special education. 2 Cr. F, W, S, SUM.

455. Resident Teaching in Special Education I. Field internship with emphasis on community resources, program alternatives, and community activities. Taken first quarter of senior year concurrently with 423 and 425. 8 Cr. F.

456. Resident Teaching in Special Education II. Field internship. Individual and small group instruction with handicapped and non-handicapped children. Taken second quarter of the senior year concurrently with 424 and 426. 8 Cr. W.

457. Resident Teaching in Special Education III. Field internship in a special education program. Diagnosis and programming for educational problems of handicapped children. To be taken last quarter of senior year. 16 Cr. S.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

404-504. Cultural Diversity and Education. Problems of cognitive, linguistic, social, and emotional development. Pre-school, elementary and secondary school programs. Role of supportive agencies. 4 Undgr. Cr., 3 Gr. Cr. F, W, S, SUM.

405-505. Behavior Problems in the School. Introduction to the assessment and management of behavior problems in the classroom. Prereq. 401. 4 Undgr. Cr., 3 Gr. Cr. F, W, S, SUM.

406-506. Orthopedic Handicaps in the School. Characteristics, etiology, treatment, and prognosis of the various types of orthopedic handicaps. Role of the auxiliary services and other professions. 2 Cr. F, W, S.

407-507. Education of Children with Learning Disabilities. Introduction to learning disabilities. Survey of approaches to instruction. Laws and regulations governing disability programs. 4 Undgr. Cr., 3 Gr. Cr. W.

421-521. Education of Trainable Mentally Retarded Children. Evaluation and planning for trainable mentally retarded. Analysis of materials and methods. Observation and participation. Prereq. 401. 3 Cr. F, W, S, SUM.

422-522. Education of the Gifted. Identification, characteristics, instructional programs and educational problems. 4 Undgr. Cr., 3 Gr. Cr. S.

423-523. 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. 401. 4 Undgr. Cr., 3 Gr. Cr. F, W, S, SUM.

424-524. Methods and Materials in Special Education II. Analysis of curricular materials for mentally retarded and orthopedically handicapped. Observation and participation. Prereq. 423-523. 4 Undgr. Cr., 3 Gr. Cr. F, W, S.

425-525. Special Learning Disabilities I. Techniques of identification and evaluation of children with learning difficulties associated with language, emotional, neurological, and perceptual problems. Prereq. 401. 4 Undgr. Cr., 3 Gr. Cr. F, W, SUM.

426-526. Special Learning Disabilities II. Instructional methodology and treatment for children with learning disabilities. Prereq. 425-525. 4 Undgr. Cr., 3 Gr. Cr. W, S, SUM.

427-527. 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. 401 and background in developmental reading and developmental mathematics. 4 Undgr. Cr., 3 Gr. Cr. F, W, S, SUM.

STUDENT TEACHING (EDT)

Chairperson Floyd Perry. **Faculty** Campbell, Coppock, Deretich, Ellens, Grimstad, Kelsey, Krenz, Minier, Mortenson, Sentz, Steeves, Ziwick.

The student teaching experience may take place in the Campus Laboratory School or off-campus public schools. This experience is provided during the third quarter of the junior year or the first or second quarter of the senior year.

All student teachers in off-campus public schools are required to live in the community, participate in community activities, and study community life. The University will recommend approved housing during the off-campus assignment; however, it is the responsibility of the student teacher to make his/her own housing arrangements and bear the expense involved.

The prospective student teacher needs to make long-range plans for his/her total university program at an early date if he/she is to receive maximum benefits from the student teaching experience.

Application for student teaching assignments for the following academic year must be completed and on file in office A132, Education Building, by the end of the first week of the Spring quarter. The application process includes the following:

1. Certification of Readiness for Student Teaching:
 - a. Admission to Teacher Education.
 - b. An honor point ratio of 2.25 or more in the major(s).
 - c. An honor point ratio of 2.0 or more in the minor(s) and in total number of credit hours completed at the time of application.
 - d. No grade less than "C" in professional education courses.
2. Clearance by University Health Service.
3. Information requested on the Personal Data Form.
4. A copy of the tentative schedule for the quarter of student teaching.
5. Course sequence requirements.
 - a. Secondary student teachers must have PSY 362 and 463, SEED 201, 447 and IM 468 completed before student teaching. The appropriate communication sequence must be completed at the time of application. Check with your advisers to determine the required pre-student teaching courses in major and minor fields.
 - b. Elementary student teachers must have PSY 362 and 463 and ELED 200, 312, 412, 455, 456, 457, 458 completed before student teaching. The appropriate communication sequence must be completed at the time of application.

COURSE DESCRIPTIONS

- 402. Kindergarten Teaching.** Supervised teaching in the kindergarten. Required for elementary majors with kindergarten endorsement. Prereq.: ELED 351 (see 5-b above). 4-8 Cr.
- 404. Elementary School Teaching.** Supervised teaching in Campus Laboratory School during first summer session. Teaching done during second or third morning period; conferences held during second afternoon period. Prereq.: Teaching experience and 4 or more credits in elementary student teaching. 5 Cr.
- 405. Elementary School Teaching.** Supervised teaching in the elementary school for students on elementary school curriculum. Prereq.: (see 5-b above). 12-16 Cr.
- 406. Elementary School Teaching.** Supervised teaching in the elementary school. Required for elementary majors certified in any of the following areas: kindergarten, mentally retarded and cerebral palsied or orthopedically handicapped. Prereq.: (see 5-b above). 8 Cr.
- 412. Secondary School Teaching.** Supervised teaching in the secondary school for students on secondary school curriculum. Prereq.: (see 5-a above). 8-16 Cr.
- 414. Special Area Teaching.** Supervised teaching for students with majors in fine arts, music, industrial arts, health and physical education, speech science, pathology, audiology, and reading or a minor in library science. Prereq.: (see 5-a and 5-b above). 4, 8, or 16 Cr.
- 415. Teaching the Mentally Retarded.** Supervised teaching of the mentally retarded. Prereq.: SPED 424, 483 and completion of student teaching in major(s). (See 5-a and 5-b above.) Cr.
- 416. Teaching the Cerebral Palsied or Orthopedically Handicapped.** Supervised teaching of the cerebral palsied. Prereq.: PSY 362 and ELED 458 or SPED 423 and completion of student teaching in major(s). 8 Cr.
- 417. Elective Teaching.** Supervised teaching available to students desiring additional teaching in Psychological Services Center or special area in which major or minor is taken. Prereq.: PSY 362. 4-8 Cr.
- 418. Teaching the Child with Learning Disabilities.** Supervised teaching in the area of special learning disabilities. Prereq.: SPED 425, 426 and completion of student teaching in major(s) (see 5-a and 5-b above). 8 Cr.

COLLEGE OF FINE ARTS

H. Beresford Menagh, Dean

DEPARTMENTS

Art
Music
Theatre

The College of Fine Arts serves the needs of four groups of people.

1. **ALL STUDENTS**, regardless of vocational objectives, are helped to understand and enjoy communication through the various arts, to discover truth through the arts, to develop some basis for discrimination against cheap, tawdry, and dishonest art, and to have the uniquely human experience of creating something.
2. **FINE ARTS STUDENTS**, through concentrated work and study under outstanding artist-teachers, are prepared for professional life as creative or performing artists or artist-teachers. Students may obtain the Bachelor of Arts, Bachelor of Music, or Bachelor of Science degree at the undergraduate level and the Master of Arts or Master of Science at the graduate level and may obtain elementary or secondary school certification as teachers in a fully accredited program.
3. **THE FACULTY** in the arts are given encouragement and facilities to continue their own careers as artists, as performers, writers, composers, sculptors, painters, or wherever their creative talent lies.
4. **THE SURROUNDING COMMUNITY**, through a regular and extensive program created by faculty, students and visiting artists is provided a continuing cultural opportunity. The program includes exhibitions, demonstrations, concerts, plays, recitals, opera, musicals, and festivals in various of the arts.

The Departments of the College of Fine Arts are distinguished by the creative element in the disciplines with which they are concerned. Each Department seeks within the framework of creative talent and high standards of professional competence to develop students with the sensibilities, skills, and knowledge to meet the responsibilities and demands of a creative life. The broad general education portion of each student's program helps him/her to understand and appreciate his/her heritage, his/her social obligations and responsibilities, and the possibilities of human achievement.

ART (ART)

Chairperson James Roy. **Faculty** Aiken, Alhelm, Beck, D. Brown, Coen, Ellingson, Gutteter, L. Halberg, Korte, Rudans, Sherarts, Sykora, Wallin.

Art is the expression of man's experience by which tolerance and understanding is improved. Maturity, discernment and poise characterize the individual who, through alertness and intelligence, develops an appreciation for the beautiful through creative efforts.

The purpose of the Art Department is two-fold; first, that of training art teachers and supervisors for the elementary, junior high and secondary levels of education, and second, that of providing preparation for the studio artist and the student seeking enriched experiences through art.

The department offers course work pursuant to either the Bachelor of Arts or Bachelor of Science degrees on the undergraduate level. On the graduate level, it offers course work leading to the degrees of Master of Arts in Studio and Master of Science in Education.

BACHELOR OF ARTS

Comprehensive Art Major (84)

ART 101, 102, 103, 110, 111, 222, 240, 243, 250, 260, 270, 275, 280, 303, 315, 320.

Art History Electives (12); IND 169;

Electives (26)

Art History Major (48)

ART 320, 430, 431, 432, 433, 434, 435, 436, 437.

Select 20 Cr. from: (in any combination)

8 Cr. in FREN, GERM, or SPAN;

8 Cr. in HIST or AMST or 4 Cr. in HIST and 4 Cr. in PHIL (aesthetics);

8 Cr. in Drawing and Painting;

4 Cr. in Special Problems. This will be a major thesis on some problem in Art History.

8 Cr. in ANTH.

Major (48)

ART 101, 102, 110, 111, 222, 240, 250, 260, 270, 275, 280, 320. Electives (14).

Minor (36)

ART 101, 102, 110, 111, 222, 240, 250, 260, 270, 320. Electives (8).

Commercial Art: Advertising Art Minor (36)

ART 101, 102, 110, 111, 303, 304, 305, MKGB 332.

Select 14 Cr. from: ART 405; MKGB 321, 423; IND 224, 225, 424; COMM 220, 246, 255, 370, 371, 376; TECH 313, 314. Other electives may be substituted with permission of instructor and minor adviser.

BACHELOR OF SCIENCE

Comprehensive Art (84)

ART 101, 102, 103, 110, 111, 222, 240, 243, 250, 260, 270, 275, 280, 290, 303, 315, 320, 390, 391, 392, 490.

Art History Electives (12).

IND 169.

Electives (11).

Major (48)

ART 101, 102, 110, 111, 222, 240, 250, 260, 270, 275, 280, 290, 320, 390, 396, 490.

Elementary Minor (24)

ART 101, 110, 320, 391, 396. Select 9 Cr. from: ART 102, 111, 222, 240, 243, 250, 260, 270, 275, 280, 285, 305, or additional Art History.

Minor (36)

ART 101, 102, 110, 222, 240, 250, 260, 270, 290, 320, 390, 396.

BACHELOR OF ELECTIVE STUDIES

Majors

36, 48, and 84 credit majors are offered. Courses must be selected with the approval of the department chairperson.

Departmental Evaluation. Students seeking admission to an 84 or 48 quarter hours major or a 36 quarter hour minor in Art are required to successfully pass a departmental evaluation. The evaluation is based upon studio work from ART 101, 102, 110, and 111 and is conducted by members of the faculty in Art.

COURSE DESCRIPTIONS

†101. **Design I.** Principles and elements of two-dimensional design. 3 Cr. F, W, S, SUM.

†102. **Design II.** Principles and elements of three-dimensional design. 3 Cr. F, W, S, SUM.

†103. **Design III.** Investigation of various color theories; the nature and physical properties of pigment and light as color determinants; and the inter-relatedness of those color properties in developing color combinations, schemes, and/or coordinations. 3 Cr. F, W, S.

†110. **Drawing I.** Introductory experiences with varied drawing media. 2 Cr. F, W, S, SUM.

†111. **Drawing II.** Pictorial composition, problems in space division and three-dimensional representation. Prereq.: 110. 2 Cr. F, W, S, SUM.

†121. **Humanities.** Man as revealed by his expression through the visual arts. Includes architecture, painting, sculpture, and the minor arts. Lectures, discussions, movies, exhibits. 4 Cr. F, W, S, SUM.

- 210. Drawing III.** Practice in various techniques with different media such as charcoal, pen, pencil, and brush. Prereq.: 102, 111. 2 Cr. DEMAND.
- †222. Theory of Art.** Philosophies and definitions of the visual arts relative to the art major and minor. Emphasis on understanding the nature of art itself as revealed in various media of expression. 2 Cr. F, W, S.
- †240. Oil Painting I.** Nature of the various paints, surfaces, and styles of painting. 3 Cr. F, W, S.
- †243. Water Color Painting I.** Water color painting and various combined media. 2 Cr. S, SUM.
- †250. Printmaking I.** Basic graphic processes. 3 Cr. F, W, S.
- 253. Lithography.** Basic lithography techniques. Prereq.: 250. 3 Cr. DEMAND.
- †260. Sculpture I.** Three-dimensional work in many materials, stone, wood, plaster, metal, etc., modeling, carving, and casting. 3 Cr. F, W, S, SUM.
- †270. Ceramics I.** Creative experience in hand methods, glazing and firing. 3 Cr. F, W, S, SUM.
- †275. Weaving I.** Warping and weaving on floor and table looms. Reading of patterns. 3 Cr. F, W, S, SUM.
- †280. Jewelry I.** Creative experience in decorative and constructive processes in the use of silver or other metals and in enameling. 3 Cr. F, W, S, SUM.
- †285. Glassworking I.** Basic glassblowing techniques. 3 Cr. F, W, S, SUM.
- 290. Art in the Elementary School.** Analysis of a child's changing needs for artistic expression; parallel growth in creative and mental development, methods for different age levels and classroom situations. Majors and minors only. Prereq.: 12 credits in Art or permission of Department. Not open to Elementary Education Majors. 3 Cr. F, W, S.
- †296. Principles of Art.** Developmental stages of artistic activity. Art media for each stage. Experience with art materials to develop confidence in the student's own creative approach and the use of these materials in relation to creative needs of elementary students. 4 Cr. F, W, S, SUM.
- †302. Interior Designs.** Emphasis on basic principles of good design in furnishing a home. Brief study of period furniture. 3 Cr. DEMAND.
- †303. Graphic Design I.** Introduction to visual presentation and illustration. Principles and practices of advertising art, concepts and problems in the visual communication of messages, events, ideas or values. 3 Cr. F, W, S, SUM.
- 304. Graphic Design II.** Advanced problems in presentation and illustration. Prereq.: 303. 3 Cr. F, W, S, SUM.
- †305. Photography I.** Analysis of the qualities of good photography. Experimentation with various subjects and techniques. Prereq.: 102. 2 Cr. F, W, S, SUM.
- †306. Visual Illustration and Layout.** For non-art majors. Basic illustration techniques. Design, layout and presentation concepts. 3 Cr. DEMAND.
- 315. Life Drawing I.** Anatomy of the human body. Drawing and painting from models. Prereq.: 102, 111, 222. 3-12 Cr. F, W, S, SUM.
- †320. Art History Survey.** The art of man presented through a select number of works including painting, sculpture, architecture, prints, ceramics, and jewelry. Includes art from Prehistoric to Modern times and deals with both eastern and western traditions. 4 Cr. F, W, S.
- 340. Oil Painting II.** Oil painting and combined experimental media. Prereq.: 240. 3-12 Cr. F, W, S, SUM.
- 343. Water Color Painting II.** Transparent water color painting, casein, tempera and combined media. Prereq.: 243. 2 Cr. F, S, SUM.
- 350. Printmaking II.** Basic techniques in wood block printing, etching, and other processes. Prereq.: 250. 3-12 Cr. F, W, S, SUM.
- 353. Lithography II.** Basic lithography techniques with advanced individual artistic concerns. Prereq.: 253. 3-12 Cr. DEMAND.
- 360. Sculpture II.** Continuation of Sculpture I. Prereq.: 260. 3-12 Cr. F, W, S, SUM.
- 370. Ceramics II.** Work on potters wheel, study of ceramic materials and kiln operation. Prereq.: 270. 3-12 Cr. F, W, S, SUM.

- 375. Weaving II.** Emphasis on creative application of color, texture, and design in weaving. Prereq.: 275. 3-12 Cr. F, W, S, SUM.
- 380. Jewelry II.** Advanced experience in jewelry and enameling; developing previously learned techniques; introduction to casting processes. Prereq.: 280. 3-12 Cr. F, W, S, SUM.
- 385. Glassworking II.** Intermediate glassblowing techniques. Prereq.: 285. 3-12 Cr. F, W, S, SUM.
- 390. Art in the Secondary School.** Analysis and demonstration of methods and techniques which develop confidence and skill in creative art activity during adolescence. Must precede student teaching. Prereq.: 290. 3 Cr. F, W, S.
- 391. Materials.** Experimentation with media suitable for elementary grades. Not open to B.A. candidates. 2 Cr. F, W, S.
- †392. Functional Relationships in Crafts.** Relationships of materials, design and purpose in crafts discussed by means of outstanding products of different materials, periods and cultures. Not open to Elementary Majors or B.A. Candidates. 3 Cr. F, W, S.
- †396. Introductory Crafts.** Experiences with various materials and techniques suitable for elementary and secondary schools. 4 Cr. F, W, S.
- 405. Photography II.** Advanced work in photography. Prereq.: 305. 2-6 Cr. F, W, S, SUM.
- 415. Life Drawing II.** Advanced study of anatomy of the human body. Drawing and painting from models. Prereq.: 315. 3-15 Cr. DEMAND.
- 440. Oil Painting III.** Continuation of Oil Painting II with emphasis on development of individual expression and teaching techniques. Prereq.: 240. 3-15 Cr. F, W, S, SUM.
- 443. Watercolor Painting III.** Prereq.: 343. 2 Cr. F, S, SUM.
- 450. Printmaking III.** Intaglio, serigraphy, or lithography. Prereq.: 350. 3-15 Cr. F, W, S, SUM.
- 453. Lithography III.** Advanced lithography techniques and involvements. Concerns are for excellence of the printed image and improved artistic images. Prereq.: 353. 3-15 Cr. DEMAND.
- 460. Sculpture III.** Wood, direct metal, stone; critical evaluation of student and professional sculpture. Prereq.: 360. 3-15 Cr. F, W, S, SUM.
- 470. Ceramics III.** Advanced work on potters wheel, chemistry of glazes and firing. Prereq.: 370. 3-15 Cr. F, W, S, SUM.
- 473. Ceramic Sculpture.** Prereq.: 260, 270. 3 Cr. DEMAND.
- 475. Weaving III.** Design and completion of a major creative project in weaving, making use of the tapestry, rya, or other techniques. Prereq.: 375. 3-15 Cr. F, W, S, SUM.
- 480. Jewelry III.** Advanced experience in centrifugal and steam casting and an introduction to basic silversmithing processes. Prereq.: 380. 3-15 Cr. F, W, S, SUM.
- 485. Glassworking III.** Advanced glassblowing techniques. Prereq.: 385. 3-15 Cr. F, W, S, SUM.
- 490. Art Curriculum and Supervision.** Selection and organization of subject matter, methods, materials, and techniques for teaching and supervision of art. Not open to B.A. Candidates. Prereq.: must be taken after student teaching. 4 Cr. W, S, SUM.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- †430-530. Ancient & Classical Art.** The art of the great ancient civilizations including Egyptian, Mesopotamian, Aegean, Greek, Etruscan, and Roman. 4 Cr. DEMAND.
- †431-531. Early Christian & 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.
- †432-532. 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.
- †433-533. Baroque and Rococo Art.** European Art of the 17th and 18th centuries including El-Greco, Rembrandt, Bernini, etc. 4 Cr. DEMAND.
- †434-534. European 19th Century Art.** Non-Classicism, Romanticism, Realism, Impressionism and Post Impressionism emphasized. 4 Cr. DEMAND.
- †435-535. History of American Art I.** Art in America from the Indian cultures through the United States of the pre-Civil War period. 4 Cr. DEMAND.

†436-536. History of American Art II. Painting, sculpture, architecture, prints and crafts from the Civil War to present. 4 Cr. DEMAND.

†437-537. Modern Art. The great modern movements of the 20th century including Fauvism, Cubism, Constructivism, de Styl, Dada, Surrealism, Abstract Expressionism, etc. Also includes innovations in architecture such as those associated with the Bauhaus. 4 Cr. DEMAND.

MUSIC (MUS)

Chairperson David J. Ernest. **Faculty** Abbott, Allen, Barrett, Echols, Flom, Frohrip, Fuller, Gyllstrom, J. R. Johnson, Layne, J. Miller, A. Moore, C. Peterson, Schrader, Tessendorf, Wilhite.

The Department of Music of St. Cloud State University is a fully accredited member of the National Association of Schools of Music. The functions of the Department of Music are: to develop an awareness and perception within the student to the unique aesthetic experience of organized sound and its relationship to human senses and intellect; to offer a variety of curricula leading to the preparation of teachers of music for collegiate institutions, public schools and private studios, and musical performers, composers and researchers; to contribute to the musical life of the university, community, state and nation.

BACHELOR OF ARTS

Major (48)

MUS 103, 104, 203, 221, 222, 223.

3 credits of major instrument or voice.

3 credits of major performance organization.

3 credits of MUS 165*.

Electives: 18 or 20 credits from all music course offerings except MUS 209, 275, 300, 372, 373, 374, and 402.

Minor (24 or 36)

A free elective minor of either 24 or 36 credits, depending upon the size of the major program. Minor program developed with assistance of music adviser.

BACHELOR OF ELECTIVE STUDIES

Major (48)

Completion of 48 credits with the approval of the department.

Minor (36)

Completion of 36 credits with the approval of the department.

BACHELOR OF MUSIC

Major (124)

MUS 103, 104, 203, 204, 205, 221, 222, 223, 240, 303, 305, 307, 308, 321, 322, 332, 340 (or 342 for vocal), 345, 407, 408, 422, 445.

4 Cr. of theory electives.

36 Cr. of major instrument or voice lessons.

12 Cr. of major performance organization.

9 Cr. of minor instrument or piano.

3 Cr. of appropriate ensembles.

2 Cr. of electives.

BACHELOR OF SCIENCE

Major (84)

MUS 103, 104, 203, 204, 205, 209, 221, 222, 223, 240.

2 credits of theory electives from: MUS 303, 304, 305, 306, 307, 308.

2 credits of history electives from: MUS 321, 322, 421, 422.

Select one:

Comprehensive Emphasis

- MUS 103, 104, 203, 204, 205, 209, 221, 222, 223, 240, 300, 302, 340, 342, 402.
 2 credits theory or history electives from: MUS 303, 304, 305, 306, 307, 308, 321, 322, 421, 422.
 9 credits from: MUS 275, 372, 373, 374.
 9 credits of major performance organization.
 3 credits of voice lessons.
 3 credits of instrumental lessons.
 3 credits of either voice or instrumental lessons.
 6 credits of MUS 165.

Instrumental Emphasis

- MUS 275, 340, 372, 373, 374, 402.
 9 credits of major instrument.
 9 credits of major performance organization.
 6 credits of MUS 165*.
 4 credits of electives.

Instrumental Minor (36)

- MUS 103, 104, 203, 240.
 3 credits of history from: MUS 222 or 223.
 5 credits of major instrument.
 4 credits of major performance organization.
 3 credits of MUS 165*.

Select one:

Band Emphasis

- MUS 372, 373.
 Orchestral Emphasis
 MUS 275.
 One course from: MUS 372 or 373.

Vocal Minor (36)

- MUS 103, 104, 203, 240, 302.
 3 credits of history from: MUS 222 or 223.
 5 credits of voice lessons.
 5 credits of major performance organization.
 3 credits of MUS 165*.
 2 credits of electives from: MUS 222 or 223, 342, 165, 169.

Cultural Minor (24)

- MUS 103, 104.
 3 credits of history from: MUS 222 or 223.
 3 credits of major instrument.
 3 credits of major performance organization.
 3 credits of MUS 165*.
 4 credits of electives from: MUS 203, 222 or 223, 230, 240, 301, 321, 322.

*If a keyboard instrument is the student's primary performance medium, take these credits in one of the following: MUS 169, 171, 172, 173, 174.

Departmental Evaluation. Students seeking admission to a 124 or 84 quarter hour major are required to complete a department evaluation which is undertaken to determine strengths and weaknesses and provide guidance in program continuation. The evaluation is based upon course work which has been completed and excellence of musical performance. The evaluation is made during a student's sophomore year.

Private Lessons. The fee for lessons in voice, piano, band or an orchestral instrument is \$15 per quarter. The fee for lessons in organ is \$20 per quarter. Majors and minors in music are not required to pay the fee for required credit.

Students not majoring in music may register for private lessons as electives.

Instrumental Music Majors and Minors — A minimum of three years of high school experience in band or orchestra is recommended for prospective instrumental music majors and minors.

Vocal Music Majors and Minors — A minimum of three years of high school experience in a vocal group is recommended for prospective vocal majors and minors. Up to 12 credits of organizations, including ensembles, may be counted toward graduation.

Transfer Students. If a student transfers to St. Cloud State University after one year, a student should have completed two quarters of theory (8 credits) and three quarters of major applied lessons (3 credits) and 3 quarters of major performance organization (3 credits). (See courses numbered from MUS 265 through 274.) If a student transfers to St. Cloud State University after two years, a student should have completed one year of music history (9 credits), basic conducting (3 credits), an additional three quarters of theory (12 credits), a course in foundations and principles of music education (2 credits), and an additional three quarters of major applied lessons and major performance organization. A total of six quarters of private piano (1 credit per quarter) is required for the major, so some private piano would be desirable.

COURSE DESCRIPTIONS

- †100. **Introduction to Musical Concepts.** An introductory study of the language and basic concepts of music. (Not applicable for credit towards a major/minor program.) 2 Cr. F, W, S.
- †103. **Theory I.** A comprehensive study of the 18th and 19th century musical practices, including appropriate ear-training, keyboard, sight-singing, analysis, and notation. Prereq.: Ability to sing and to play the piano or an orchestral instrument. 4 Cr. F, W, SUM.
- †104. **Theory II.** Continuation of 103. Prereq.: 103. 4 Cr. W, S.
- †111. **University Choirs.** Concert Choir and Women's Chorus. 1 Cr. F, W, S.
- †112. **All-University Choir.** 1 Cr. F, W, S.
- †121. **Vocal Ensemble.** Prereq.: Permission of the instructor. Two rehearsals per week. 1 Cr. F, W, S.
- †123. **Man and the Musical Experience.** Significant aspects of man's creative works in music. 4 Cr. F, W, S, SUM.
- †124. **The Art and Music of the Native American.** Selective examination of representative art and musical works of the Native American of North America. Emphasis is placed upon perceptual viewing and listening. Team taught with multi-media development of sight and sound. 2 Cr. W.
- †141. **University Bands.** 1 Cr. F, W, S.
- †151. **String Ensemble.** Prereq.: Permission of the instructor. Two rehearsals per week. 1 Cr. F, W, S.
- †152. **Brass Ensemble.** Prereq.: Permission of the instructor. Two rehearsals per week. 1 Cr. F, W, S.
- †153. **Woodwind Ensemble.** Prereq.: Permission of the instructor. Two rehearsals per week. 1 Cr. F, W, S.
- †154. **Percussion Ensemble.** Prereq.: Permission of the instructor. Two rehearsals per week. 1 Cr. F, W, S.
- †155. **Jazz Ensemble.** Prereq.: Permission of the instructor. Two rehearsals per week. 1 Cr. F, W, S.
- †161. **University Orchestra.** 1 Cr. F, W, S.
- †164. **Class Piano.** Class instruction in piano for students who have had no previous experience at the piano, or up to one year of lessons. Fundamentals of music and practical application of piano techniques. 1 Cr. F, W, S, SUM.
- †165. **Private Lessons: Piano.** 1 or 3 Cr.* F, W, S, SUM.
- †166. **Private Lessons: Organ.** 1 or 3 Cr.* F, W, S, SUM.
- †168. **Class Voice.** Class instruction in voice for beginning students. Fundamentals and practical application of vocal techniques. (A max. of 2 cr. may be applied to music major or minor.) 1 Cr. F, W, S, SUM.
- †169. **Private Lessons: Voice.** 1 or 3 Cr.* F, W, S, SUM.
- †171. **Private Lessons: String Instruments.** 1 or 3 Cr.* F, W, S, SUM.
- †172. **Private Lessons: Brass Instruments.** 1 or 3 Cr.* F, W, S, SUM.
- †173. **Private Lessons: Woodwind Instruments.** 1 or 3 Cr.* F, W, S, SUM.
- †174. **Private Lessons: Percussion Instruments.** 1 or 3 Cr.* F, W, S, SUM.
- †198. **Classical Guitar.** Guitar techniques including the use of the right hand fingers, reading of notes in the first five frets, and chords played as arpeggios. 1 Cr. F, W, S.
203. **Theory III.** Continuation of 104. Prereq.: 104. 4 Cr. F.
204. **Theory IV.** Continuation of 203. Prereq.: 203. 4 Cr. W.
205. **Theory V.** Continuation of 204. Prereq.: 204. 4 Cr. S.
209. **Foundations and Principles of Music Education.** Historical, philosophical, and psychological principles of music education. 2 Cr. W.
- †221. **History of Music I.** Historical changes in music from the earliest times through the sixteenth century. Sacred and secular developments will be analyzed culminating with the works of Palestrina. 3 Cr. F, SUM.
- †222. **History of Music II.** The period from Palestrina to 1800 with emphasis on the development of opera and instrumental music; ending with a study of the works of Beethoven. 3 Cr. W, SUM.

†223. **History of Music III.** The period from Beethoven through our contemporary composers. Major literature and stylistic features of the important writers in the 19th and 20th centuries. 3 Cr. S, SUM.

†229. **Blues - Jazz - Rock.** A study of the relationships among three American musical styles. 3 Cr. F, W, S.

†230. **Italian Opera.** For non-initiated listener who wants to learn a stimulating approach to understanding of better-known Italian operatic works. Open to all students. 3 Cr. DEMAND.

†231. **Opera Theatre.** The techniques of the musical theatre including musical and dramatic study of operatic roles and actual performance. Audition required. 1 Cr. F, W, S.

†240. **Conducting.** Basic conducting principles in choral and instrumental music. Rehearsal techniques and examination of vocal and instrumental literature. Prereq.: 104. 3 Cr. F, W.

250. **Music in the Primary Grades.** Music fundamentals and procedures for grades K through 3. 3 Cr. F, W, S, SUM.

251. **Music in the Intermediate Grades.** Procedures and resources for grades 4 through 6. Prereq.: 250. 2 Cr. F, W, S, SUM.

264. **Class Piano.** Class instruction in piano for students who have had one quarter of class piano, or up to 2 years of previous non-university lessons. Prereq.: ability to read treble and bass clefs, ability to play simple pieces with both hands together. 1 Cr. F, W, S, SUM.

*B.S. candidates: one ½ hour lesson plus studio class for 1 cr. B.M. candidates: two ½ hour lessons, studio class plus ½ hour recital coaching session for 3 cr.

267. **Diction.** Basics of French, Italian, German, and Latin diction for vocalists and choral directors. 2 Cr. S.

275. **String Class.** Fundamental techniques and skills. Selection, care and assembly of the instrument; teaching techniques; and instructional materials. 3 Cr. S.

300. **Music Education — Elementary Grades.** Procedures used in kindergarten through sixth grade for developing children's musical growth in the various areas of the music program. 3 Cr. F.

301. **Music Resources — Elementary Grades.** Films, records, song literature, and community resources which are used in kindergarten through sixth grade. 2 Cr. F.

302. **Music Education — Secondary Grades.** Activities and resources of vocal music in the secondary grades. Prereq.: 300. 3 Cr. W.

303. **Form and Analysis.** A study of organization and structure of selected musical works. Prereq.: 205. 2 Cr. F Odd Year.

304. **Analysis of Twentieth Century Music.** An analysis of twentieth century musical forms. Prereq.: 205. 2 Cr. F Even Year.

†305. **Instrumental Arranging.** Band and orchestra instruments: register and tone quality. Experience in writing arrangements for all types of groups from the small ensemble to the large instrumental organization. Prereq.: 203. 2 Cr. W.

306. **Choral Arranging.** Arranging for choruses of all types and degrees of development. Prereq.: 203. 2 Cr. W.

307. **Eighteenth Century Counterpoint.** An examination of contrapuntal practices of the eighteenth century. Prereq.: 205. 2 Cr. S.

308. **Sixteenth Century Counterpoint.** An examination of contrapuntal practices of the sixteenth century as exemplified by Palestrina. Prereq.: 205. 2 Cr. W.

309. **Music Resources — Secondary Grades.** Films, records, literature and community resources which are used in the secondary grades. 2 Cr. W.

†321. **Symphonic Literature.** Orchestral music from its beginning. The Mannheim composers, the Viennese classics, the Romantics, the National schools, and the late European and American developments. Prereq.: 222 or 223. 2 Cr. W, Odd year.

†322. **Chamber Music Literature.** Literature of chamber music quartet, trio, quintet, etc., in various instrumental combinations. The literature will be presented through the analysis of formal structure and evaluation of their aesthetic values. Prereq.: 222 and 223. 2 Cr. W Even Year.

332. **Major Instrument Pedagogy.** Basic pedagogical problems and techniques of the instrument. Methods and materials for teaching. 2 Cr. Demand.

340. **Instrumental Conducting and Repertoire.** Qualities of a conductor, use of baton, re-

hearsal routine; problems of organizing and developing orchestras and bands in schools; orchestral and band literature. Prereq.: 240. 3 Cr. F.

342. Choral Conducting and Repertoire. Development of conducting skills in the vocal field at the junior and senior high school levels. Extensive materials. Prereq.: 240. 3 Cr. S.

345. Junior Recital. Presentation of one-half or full recital. 1 Cr. F, W, S.

372. Woodwind Class. Fundamental techniques and skills. Selection, care, and assembly of the instrument; teaching techniques; and instructional materials. 3 Cr. F.

373. Brass Class. Fundamental techniques and skills. Selection, care, and assembly of the instrument; teaching techniques; and instructional materials. 3 Cr. W.

374. Percussion Class. Fundamental techniques and skills. Selection, care, and assembly of the instrument; teaching techniques; and instructional materials. 3 Cr. S.

401. Vocal Music Administration in the Elementary School. Purchase and maintenance of materials and equipment; demonstration and observation lessons; workshops, staff relations. 2 Cr. W.

402. Administration of Public School Music. Problems inherent in the administration of a public school music program. 3 Cr. S.

445. Senior Recital. Presentation of a full recital. 2 Cr. F, W, S.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

406-506. Acoustics of Music. Nature of sound and its application in music; characteristics of sound waves; vibratory sources of music sounds; physical basis of harmony and scales. Prereq.: 205. 3 Undgr. Cr.; 2 Gr. Cr. IRR.

407-507. Composition I. The utilization of harmonic and contrapuntal techniques in developing original composition in various forms. Prereq.: 205. 2 Cr. F.

408-508. Composition II. A continuation of MUS 407-507. Prereq.: 407-507. 2 Cr. W.

†421-521. Contemporary Music. Trends in European and American music from about 1910 to the present day. Particular emphasis placed on music since 1920. Prereq.: 222 and 223. 2 Cr. S Odd Years.

†422-522. Choral Literature. The art-song, the large vocal forms, and opera. An evaluation of the aesthetic, stylistic, musical, and dramatic principles and their application in works from the 18th century to present. Prereq.: 222 and 223 or permission of instructor. 2 Cr. S Even Years.

458-558. Music for the Exceptional Child. An examination of methods and materials to be utilized in a music program designed for the exceptional child. 3 Cr. IRR.

†463-563. Electronic Music. The utilization of electronic sounds in the organization of contemporary music. 2 Cr. S.

470-570. Musical Instrument Repair. Consideration of instrument care, upkeep, and minor repair. 2 Cr. IRR.

478-578. Voice Pedagogy. Basic problems and techniques in the teaching of voice and chorus. Survey of procedures and materials. 2 Cr. W.

479-579. Piano Pedagogy. Professionalized subject matter intended to broaden the understanding of the basic pedagogical problems of teaching private and class piano; a survey of available methods and materials. 2 Cr. W.

482-582. 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 needs to fit the individual and instrument. 4 Cr. IRR.

THEATRE (TH)

Chairperson Dale L. Swanson. **Faculty** Baschky, Cermele, Jurik, Perrier.

The theatre is a medium of art and communication that is continually altering as it reflects the age in which it lives. Therefore, it is the aim of the Department of Theatre to provide a curriculum that is not only rooted in the traditional fundamentals of theatre art, but also incorporates the latest theoretical and practical discoveries and developments of our time.

The educational objective of the department is to train students in the arts of the theatre. To achieve this objective it is the intent of the Department of Theatre to provide each student with a comprehensive academic background that encompasses all of the major aspects of theatre as well as certain allied fields, and to interrelate academic theory with practical application through student participation in the various aspects of theatrical production.

BACHELOR OF ARTS

Major (60)

TH 235, 236, 244, 250, 253, 349, 446, 491, 492, 493.

Theatre and Inter-Dept. Electives (20-23 Cr.): 12 elective credits may be taken in related areas outside the Department of Theatre.

Major (48)

TH 235, 236, 244, 250, 253, 349, 446, 491, and 492 or 493.

Theatre Electives: 12-15 Cr.

Minor (36)

TH 235, 491, and 492 or 493.

Theatre Electives: 24 Cr.

BACHELOR OF SCIENCE

Major (48)

TH 235, 236, 244, 250 or 331, 253, 260, 349, 430, 446, 491.

Theatre Electives: 8-11 Cr.

Minor (36)

TH 235, 236, 244, 253, 349, 491.

Theatre Electives: 12 Cr.

Elementary Education Minor (24)

TH 235, 236 or 244, 331 or 349, 350, 351.

Theatre Electives: 4 Cr.

BACHELOR OF ELECTIVE STUDIES

Major (48)

Completion of 48 credits with the approval of the department.

Minor (36)

Completion of 36 credits with the approval of the department.

COURSE DESCRIPTIONS

+140. Introduction to the Theatre and Film. Designed for students who desire a greater appreciation of theatre and film as artistic, cultural and social forces. Lectures, demonstrations and films. Not open to majors and minors. 4 Cr. F, W, S.

235. Introduction to Theatre. The theatre, its artistic and technical components, and requirements. For the theatre specialist. Lab. Prereq. to all theatre courses. 4 Cr. F, W, S.

236. Design and Mounting of Stage Scenery. The fundamentals of scenic design and the construction of stage scenery. Lab. 4 Cr. W.

237. Technical Production Methods. An examination of the more complex problems involved in the construction and rigging of stage scenery. Lab. Prereq.: 236. 4 Cr. S.

240. Stage Make-up. Theory and practice of make-up techniques. 3 Cr. F.

244. What People Wore. Historical study of clothing specifically designed to illustrate and delineate the evolution of the garment from classical time to the present. 4 Cr. F.

245. Costume Design. The theatrical art of researching, analyzing, and designing clothing for the characters created and portrayed by the actor. 4 Cr. W.

246. Costume Construction. The theatrical art of analyzing and interpreting the costume designer's sketch and reproducing the design in the form of an actual garment. 4 Cr. S.

250. Voice and Diction. Training in correct speech production and practice in oral reading for the non-theatre major. 4 Cr. F, W, S.

253. Acting I. Development of basic acting skills and inner resources through exercises, improvisations, and emphasis on scenes from plays. Permission of instructor. 4 Cr. F, W, S.

+260. Art of the Cinema. Film as an art form with emphasis on the study of technique — especially film language. 4 Cr. F, W.

261. Development of the American Cinema. The development of the film medium, its possibilities for expressiveness and the ways it has been used by film makers in America from 1895-1950 in the process of shaping a film idea. 4 Cr. W.

262. Development of the Non-American Cinema. The development of the film medium, its

possibilities for expressiveness and the ways it has been used by film makers in Europe and Asia from 1895–1950 in the process of shaping a film idea. 4 Cr. S.

263. Studies in Cinema. Examination of a selected subject in cinema, such as film as propaganda, the female image in film, the gangster film, censorship and pornography, etc. May be repeated to a max. of 16 credits. 4 Cr. F, W.

331. Oral Interpretation. Theory and practice in reading aloud with emphasis on selection, study, and presentation of literature suited for oral interpretation. 3-4 Cr. F, W, S.

333. Play-Writing. Emphasis given to the conditions of theatre production. A one-act play required of each student. Special permission of instructor required. Enrollment limited to 15. 3 Cr. S.

334. Stage Properties. Design, materials, and construction methods utilized in set and hand properties for theatre production. Lab. 4 Cr. Demand.

346. Scenic Design I. Theory and practice of designing stage scenery. Lab. Prereq.: 236. 4 Cr. S.

349. Directing I. Selecting, analyzing, casting and rehearsing plays for production. Permission of instructor. 4 Cr. F.

350. Creative Dramatics. Principles of creativity as used in improvisation and dramatization. Methods of relating these to children's experiences and literature through supervised activity with elementary students. 4 Cr. W.

351. Children's Theatre. Selection, production and direction of plays for children's audiences. 4 Cr. S.

370-378. Creative Projects. Creative projects in all areas of theatre. Departmental approval required. Theatre majors only. 1-12 Cr. per area. F, W, S, SUM.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

430-530. Teaching Theatre. Materials and methods for curricular and co-curricular teaching in the secondary school, approached through informal seminars and direct observation of and teaching experience in various schools. 4 Cr. F.

442-542. Theory and Practice of Stage Lighting. Basic requirements of lighting for the stage. Lab. 4 Cr. F.

444-544. Internship in Theatre. In-residence training with a cooperating professional theatre. Admission by departmental approval only. A maximum of 8 credits may be used toward major; none toward minor. 4-16 Cr. F, W, S.

446-546. Advanced Theatre Practicum. Lab. course for advanced theatre majors allowing implementation of creative problems in acting, directing, design and other theatre areas. Special permission of staff. 1-4 Cr. F, W, S.

447-547. Scenic Design II. Continuation of Scenic Design I. Lab. Prereq.: 346. 4 Cr. Demand.

448-548. Acting II. Analyzing and creating a stage character. Prereq.: 253. Permission of instructor. 4 Cr. W.

449-549. Directing II. Advanced directing techniques. Prereq.: 349. Permission of instructor. 4 Cr. W.

458-558. Acting III. Concentration on period styles. Permission of instructor. 4 Cr. S.

459-559. Directing III. Continuation of Directing II. Permission of instructor. 4 Cr. S.

460-560. Theatre Promotion and Business Management. Principles and methods of management in educational, community and professional theatres. Emphasis on promotion, ticket office procedures and theatre administration. 4 Cr. S.

491-591. Drama I. The Beginnings to Ibsen. World drama, its origin and genesis. Primitive drama. Classical Greek and Roman, Oriental, Medieval, Elizabethan, Neo-classic French, Restoration, Eighteenth Century to 1875. 4 Cr. F.

492-592. Drama II. Modern drama from Ibsen to World War II. Literature and production techniques of the modern theatre. Prereq.: 491. 4 Cr. W.

493-593. Drama III. Contemporary Drama. Trends in the literature and the production techniques of today's theatre. Prereq.: 491. 4 Cr. S.

496-596. 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.

COLLEGE OF INDUSTRY

Alfred A. Lease, Dean

DEPARTMENTS

Industrial Education
Technology

SERVICES

Driver Education and Traffic Safety
Vocational-Technical Teacher Education
Aviation-Aerospace Education

The College of Industry is an administrative unit for the purpose of coordinating the administration and functions of programs which draw a considerable amount of their content from industry — industrial education (industrial arts and trade and industrial), engineering technology and industrial engineering.

Programs are offered leading to the Bachelor of Science and the Master of Science degrees, the Associate in Science degree, and the Driver Education Certificate.

Sequential courses in a particular subject area should be taken in order of numbering.

INDUSTRIAL EDUCATION (IND)

Chairperson William Kemp. **Faculty** Bergstrom, Bjorklund, Carter, Lacroix, Nestel, Rahkola, Royer, Stinson, Walton.

The Department of Industrial Education assists the individual in the development of concepts, understanding and appreciations regarding industry through a study of its tools, materials, processes, products, problems, conditions and workers. The functions of the Department of Industrial Education are to prepare industrial arts teachers for instruction on the elementary, junior and senior high school levels; to prepare teachers of aviation-aerospace education; to prepare teachers in vocational-technical education; and to offer opportunity for graduate study in industrial education. Ever increasing functions are meeting the needs of teachers, preprofessional people, recreational workers, rehabilitation workers and community groups.

BACHELOR OF SCIENCE

Industrial Arts Major (80)

Core (56) plus one Option (24)

Students who have not had higher algebra in high school must take MATH 130. Students who have not had a full year of physics in high school must take PHYS 201. All incoming Industrial Arts majors are required to take an advanced placement drafting test to determine their status. Students not meeting the minimum standard must take IND 110 with the three credits not to be counted toward the major.

Certification: A graduate with this major who has completed the professional education requirements is qualified for a Minnesota teacher's certificate in industrial arts. Certification requirements for entering Industrial Education teachers after July 1, 1979, will require occupational experience: 1500 clock hours for senior high school or 1000 clock hours for middle or junior high school. IND 498, Internship, hours will count 2 for 1 for certification purposes.

Core: (56)

IND 111, 131, 132, 150, 160, 180, 181, 211,
224, 244, 351, 450, 452; TECH 165, 170, 260;
IND or TECH Electives (9).

Option 1: Construction (24). Select from:
IND 242, 333, 365, 411, 430, 435; TECH 312,
326, 327; MGMF 378.

Option 2: Energy Systems (24). Select from:
IND 282 (or TECH 374), 384, 481, 482; TECH
152, 155, 271, 272, 373, 471, 472.

Option 3: Graphic Communications (24).
Required (12):
IND 225, 424; TECH 214, 317. Electives (12)
selected from: IND 411, 412, 425, 427;
TECH 265, 266, 267, 268, 313, 314, 361, 362,
461, 462; ART 303, 304.

Option 4: Manufacturing (24). Required (10):

IND 340, 346, 430; TECH 327; Electives (14) selected from: IND 242, 343, 344, 365, 440, 444, 446; TECH 326; ART 280.

Option 5: Institutional Therapy (24). IND 493; PSY 475; SOC 260, 261; IND Electives (4).

Option 6: Mathematics and Physics and/or Chemistry (24).

MATH (12): Courses must be equivalent to 131 and above; PHY and/or CHEM (12): PHY courses must be equivalent to 231 and above. CHEM courses must be equivalent to 211 and above.

Vocational-Technical Education Major (124)

Professional Education (43)

Required (31): IND 351, 431, 450, 454; BEOA 405; HLTH 301. Electives (12) selected from: IND 250, 251, 415, 417 (or BEOA 409), 418, 452, 453; BEOA 407, 408. (Those presently teaching in a vocational-technical station may earn the 16 credits in IND 454 at their regular positions under special supervision. Others must complete supervised teaching assignments in a vocational station.)

Subject Matter specialty (64)

Evaluated work experience and/or vocational-technical institute training plus competency examinations up to 64 credits. Students having three years or more of occupational experience or having satisfactorily completed a two-year post high school program in a public or private vocational-technical institute may apply for competency examinations. Residency requirement may be satisfied by these credits; however, a minimum of three courses must be taken on campus.

If above is less than 64 credits, the remainder must be earned in advanced technical courses in IND or TECH or in a supervised work experience, IND 498.

Note: Only those candidates who have had the occupational experience required in the State Plan may qualify for the vocational certificate required by the State Department of Education.

Electives (17). Courses in IND or other fields may be selected with the approval of the adviser.

It is recommended that additional credits be earned in vocational-technical professional education courses not listed above to assist one in re-certification.

Industrial Arts Minor (24) (For Elementary Education Majors Only)

IND 110, 130, 170, 224, 240, 260; Elect two of the following: IND 111, 160, 161, 210; TECH 151.

BACHELOR OF ELECTIVE STUDIES

Major (48)

Non-teaching

Completion of 48 credits with the approval of the department.

ASSOCIATE IN SCIENCE

Vocational-Technical Education (96)

General Education: (32)

See Page 5.

Professional Vocational-Technical Courses: (32)

Required (12): IND 351, 431, 450; BEOA 405. Electives (20) selected from: IND 150, 250, 251, 415, 417 (or BEOA 409), 418, 452, 453; BEOA 407, 408; Human Relations.

Technical Competence: (32)

May be earned in any of the following ways:

1. Three or more years of occupational experience, or two years of post-high school trade or technical training in an approved public or private technical or trade school. The student must demonstrate technical competence by passing comprehensive examinations in the trade or technical occupation. Each examination is 8 credits and may be taken after earning a minimum of 16 additional credits. (8, 16, 24, 32).

2. IND 498 (1-32)
3. Technical course work in IND or TECH approved by major adviser. (1-32)
4. Any combination of the above totaling 32 credits.

Note: Only those candidates who have had the occupational experience required in the State Plan may qualify for the vocational certificate required by the State Department of Education.

SEQUENCE

Aviation-Aerospace Education (12): IND 301; TECH 101, 201.

COURSE DESCRIPTIONS

INDUSTRIAL EDUCATION

110. Technical Drawing I. Use and care of instruments, lettering, freehand sketching, orthographic, pictorial, sections, auxiliary, revolutions and measurements. Not to be counted toward an industrial major. Lab. 3 Cr. F, W.

111. Technical Drawing II. Symbols and conventions common to working drawings of machines and machine parts. Special emphasis on dimensioning, tolerancing, threads, fasteners, springs, cams, gears, welding representation, microfilming, photodrafting, introduction to computer graphics theory, reproduction of drawings and graphics. Prerequisite: 110 or demonstrated competency. Lab. 3 Cr. F, W, S.

+130. General Woodworking. Fundamental tools, materials, and processes used in woodwork, primarily confined to handwork. Machines used only to dimension stock. Elementary wood finishes and finishing. Lab. 3 Cr. F, W, S, SUM.

131. Principles and Practices of Construction. A general overview of the world of construction. An analysis of the scope and import of major areas is made. The roles of the various personnel involved in construction are studied, and the laws and codes governing construction are discussed. 2 Cr. F, W.

132. Construction Technology. Various phases of a construction activity. Includes material for both light and heavy structures and for custom and factory construction. Experimentation with construction materials and techniques is considered an important aspect of the course. Prereq.: 131. Lab. 4 Cr. W, S.

150. History and Philosophy. History, objectives, and philosophy of industrial education. The distinction between industrial arts, trade-training and technical education. 2 Cr. F.

160. Industrial Finishes and Adhesives. Historical background relating the development of industrial finishes and adhesives as well as specific applications of varnishes and synthetic resin, comparison of the basic resins common to both finishes and adhesives. Emphasis placed on compounding finishes and adhesives for qualities required by industry. Experimentation with adhesives and finishes. Lab. 2 Cr. F.

+161. Industrial Crafts. Leather; plastics forming, shaping, casting and molding; metal spinning; ceramics, hand work, tile, molds; wood turning; metal etching; and engraving. Lab. 3 Cr. F, W, S, SUM.

+169. Tools and Machines. The care and use of tools and machines common to the Art, Speech and dramatic Art department. Not open to industrial majors. Lab. 1 Cr. F, W, S, SUM (ALT).

+180. Introduction to Energy. Theory of numerous forms of energy as they become prime movers in modern day technology. Experimentation with energy components as symbolic application of their working principles. 2 Cr. F, W.

+181. Small Gas Engines. Theory of operation of two and four stroke cycle internal combustion engines and associated systems with practical experiences in preventive maintenance procedures; minor tune-up and engine overhaul. Prereq.: 180. Lab. 2 Cr. W, S, SUM.

+192. Modern Technology and Civilization. Analysis of contemporary technology and its effects on the individual and society. Special emphasis is placed on change created by technology, as well as such topics as modern industrial structure, the labor force, leisure, automation and the resulting social consequences. 4 Cr. F, W, S, SUM.

+210. Construction and Upholstering. Construction, repair, and refinishing of covered home furnishings. Sources of essential fabrics and other materials. Comparisons of types of construction. Lab. 2 Cr. F, W, S, SUM.

211. Industrial Design and Illustrating. Application of principles of drawing in design. Projects functional in the several industrial arts areas and at various grade levels provide special problems. Prereq.: 110 or demonstrated competency. Lab. 3 Cr. F, S.

†224. Graphic Reproduction Processes. Introduction to graphic arts, history, design and layout, basic letterpress printing, basic screen process printing, basic lithography, basic intaglio, duplicating, paper, ink, and bookbinding. Lab. 3 Cr. F, W, S, SUM.

225. Photomechanical Processes. Photomechanical processes related to letterpress, offset lithography, gravure, screen process printing, and electrostatics. Character generation, photo conversion, sensitometry, image carriers, and image transfer. Prereq.: 224 (or consent of instructor) and TECH 165. Lab. 3 Cr. W, S, SUM (ALT).

240. Metal Technology. Processes of bench metal and art metal, and use of common metal working machines. Properties and characteristics of iron, steel, and the nonferrous metals. Lab. 3 Cr. F, W, S, SUM (ALT).

242. Sheet Metal. Principles of pattern development. Use of hand tools and machines common to the area. Manipulative work such as soldering, riveting, transfer, assembly and finishing of sheet metals. Lab. 2 Cr. F.

244. Welding I. Principles and practices of gas and arc welding and brazing of cast iron, mild steel and aluminum. Lab. 2 Cr. F, W, S, SUM.

250. Instructional Aids in Industrial Subjects. Involves the selection and use of instructional aids designed to supplement and enrich the educational program. Includes the planning and production of teacher-originated materials, as well as the application of commercially produced materials. Emphasis is placed on the multisensory approach to learning, with special consideration being given to the role of models and mockups as they are used to bring industry to the classroom. 3 Cr. F, SUM (ALT).

251. Shop Management and Control. Organization of procedures to facilitate teaching; setting up roll-checking devices, issuing procedures for tools and materials, keeping material inventory, using assignment and progress charts, using student leadership in routing non-teaching class and laboratory activities, keeping records and requisitioning technique. 3 Cr. W, SUM (ALT).

282. Electromechanical Control Systems. Theory, design and application of electromagnetic devices in both dynamic and static formats; research and experimentation in the development of model industrial control systems. Lab. 2 Cr. W (ALT).

†301. Aviation Education. To prepare teachers to use vocabulary, information and teaching materials of the Air Age. History, social implications, and related aerospace education material. No previous experience required. Not to be counted toward an industrial major. 4 Cr. W, S.

321. Elementary School Industrial Arts. Projects, tools, materials and processes of industry which provide experiences and exploration for motivation in the integration of subject matter. (Meets four hours per week.) Not open to industrial majors. Lab. 2 Cr. F, W, S, SUM.

333. Masonry and Concrete Technology. Study of knowledge and practice of skills required in masonry and concrete work. An analysis of the role of concrete, brick, stone and related materials in construction is made. Includes experimentation in designing forms, mixes, and finishes, and in testing masonry materials. Lab. 3 Cr. S.

340. Patternmaking, Foundry, and Heat Treatment. Casting of nonferrous metal; designing and constructing wood, metal, and/or plastic patterns; and heat treating of metals. Lab. 3 Cr. W.

343. Art Metal. The design and making of original and useful articles from common and semiprecious metals. Ornamentation is emphasized. Lab. 3 Cr. W (ALT).

344. Forging and Metallurgy. Principles and practices of hot and cold forging of ferrous and nonferrous metals and the treating and metallurgic testing of ferrous metals. Lab. 2 Cr. F (ALT).

346. Machine Metal I. Care and use of lathe, miller, shaper, metal saws, and other machinery common to metal area. Lab. 2 Cr. F, S.

351. Course Construction. Techniques employed in developing and evaluating course teaching content; innovative programs; developing behavioral objectives in the three learning domains. Prereq.: 150 or BEOA 405. 3 Cr. W, SUM (ALT).

†365. Plastics Technology. Identification, classification, properties and uses of plastics. Design theory and experimental techniques in basic processes. Lab. 3 Cr. F, S, SUM.

384. Power Plants and Trains. Theory of operation of multi-cylinder engines (gas and diesel), turbines, etc.; experience in maintenance, tune-up-overhaul; transmission of power through fluid and mechanical and electromechanical. Lab. 3 Cr. S.

411. Architectural Drawing. Standard symbols and conventions used in building construction drawing. Designing of plan and elevation views of an ideal home. Some work in landscaping and pictorial representations. Lab. 3 Cr. S.

412. Industrial Design II. Industrial design, stressing creativity, models and rendering in color. Lab. 2 Cr. F (ALT).

427. Graphic Arts Production. Practical experience in all phases of printing with emphasis on photo offset lithography. Management of a small graphic arts business and laboratory work involving the operation of numerous machines and equipment. Three contact hours per credit. Prereq.: 424. Lab. 1-4 Cr. F, W, S, SUM.

430. Machine 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. 2 Cr. S.

435. Junior High School Construction. An analysis of the role and directions in teaching construction in the junior high school. A study of an instructional system and the philosophical foundations of such a system. Laboratory activities including both software and hardware will be demonstrated and studied. Lab. 3 Cr. W (ALT).

440. Advanced Foundry Practice. Materials, equipment and techniques used in volume production using both ferrous and nonferrous metals. Lab. 2 Cr. S (ALT).

444. Technical Welding II. The application of industrial welding techniques in heli-arc, redi-spot, forge, furnace, flow and pressure and chemical welding of metals. Lab. 3 Cr. W (ALT).

446. Machine Metal II. Experimentation and application of metal working processes. Tool and die, application of automation to machine shop processes. Lab. 3 Cr. S (ALT).

450. Methods. Analysis and practical application of teaching techniques for contemporary and innovative programs; organization and guidance of learning experiences; design and use of instructional instruments; instructional evaluation; use of back-up personnel. Prereq.: 351. Required for student teaching. 3 Cr. S, SUM (ALT).

454. Supervised Teaching. A specially supervised teaching experience for those presently employed in a vocational school. A regular student teaching experience in a vocational school for others. By permission. 16 Cr. F, W, S.

481. Automotive Engine Analysis. Performance testing, evaluation, and trouble-shooting of automotive systems including ignition system, charging system, fuel system, and overall engine efficiency testing. Lab. 3 Cr. S (ALT).

482. Prototype Applications of Energy. Applications of energy system theory through the construction of prototype vehicles of power units which employ specific energy converters and power trains or combinations of several forms. Lab. 2 Cr. S (ALT).

493. Institutional Therapy. Placement in a supervised research or training project which may be a social service agency, correctional institutional, hospital, or other approved facility. Approval by college required for acceptance. 8 Cr. F, W, S, SUM.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

415-515. Vocational Guidance. Acquisition, development and the dissemination of occupational and guidance information. 3 Cr. S, SUM (ALT).

417-517. Organization and Administration of Industrial Education. Organization and administration of secondary, post-secondary, adult, and special needs classes. 3 Cr. W (ALT), SUM (ALT).

418-518. Conference Leading. Techniques and practices employed in leading and participating in conferences. 3 Cr. W (ALT), SUM (ALT).

424-524. Photo Offset Lithography. Advanced techniques in photo offset lithography including line and continuous tone copy preparation, line and halftone photography, stripping and flat making, platemaking, and press operation. Prereq.: 225. 3 Cr. S (ALT), SUM (ALT).

425-525. Color Separation. Introduction to color separation procedures. Basic color theory, direct and indirect color separation, continuous tone intermediates, filtering, masking, screening and color proofing. Prereq.: 424. 3 Cr. S (ALT), SUM (ALT).

431-531. 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), SUM (ALT).

451-551. Selection and Organization of Subject Matter. Techniques of trade and job analysis, selection of teaching content, and organization of content into instruction sheets and course material. 3 Cr. F (ALT), SUM (ALT).

452-552. Laboratory Planning and Safety. Theory and practice in planning industrial education laboratories; selection and arrangement of equipment; safety factors involved. 2 Cr. F, SUM (ALT).

453-553. 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, SUM (ALT).

498-598. Internship. Offered only to students who hold internships with industrial organizations for which advanced approval has been given by the department. 1-16 Cr. May be repeated; however, a maximum of 16 cr. will count toward an undergraduate degree and 8 cr. toward a graduate degree. F, W, S, SUM.

TECHNOLOGY (TECH)

Chairperson Robert Ryan. **Faculty** Bouril, Colomy, Goke, Hockert, Kanyusik, Lafler, Torborg.

The Department of Technology prepares individuals for professional and semi-professional positions in industry. Excellent opportunities exist in industrial administration, supervision, personnel training, research, development, production, distribution and sales. The curricula are based upon recommendations by industrialists, the American Society for Engineering Education, National Association of Industrial Technology, and universities having similar programs.

Students, other than Industrial Engineering majors, who have not had a full year of physics in high school must take Physics 201. Students who have not had high school algebra must take Mathematics 130.

Courses in a specific area should be taken in sequence.

BACHELOR OF SCIENCE

Engineering Technology (120)

TECH 114, 151, 152, 155, 170, 175, 260, 271, 272, 317, 325, 326, 327, 329, 373, 497; ACCT 291, 284; ECON 273; IND 240, 346; MGMF 361, 362, 363, 465; MKGB 235, 320; SOC 260. 8 credits from the following: MKGB 426, 429; MGMF 463, 464. 10 credits from the following: TECH 374, 425, 471, 472, 498 (only 4 credits will apply); IND 446.

Industrial Engineering (122-125)

TECH 114, 155, 170, 175, 260, 271, 272, 317, 325, 326, 327, 329, 373, 497; ACCT 291, 284; CHEM 211, 212 or 213; ECON 273; MKGB 235, 320; MGMF 361, 362, 363, 465; MATH 241, 242, 243, 244, 329; SOC 260.

Photographic Engineering Technology (122)

TECH 151, 152, 165, 166, 170, 175, 260, 265, 266, 267, 268, 271, 272, 317, 325, 326, 329, 361, 362, 364, 373, 461, 464, 497; ACCT 291, 284; CHEM 211, 212 or 213; IND 225; MGMF 361; MKGB 320. 10 credits from the following: TECH 155, 363, 364, 425, 462, 472, 498 (no more than 3 credits of 364 and 4 credits of 498 will apply), 8 credits from

the following: MGMF 362, 363, 463, 465. 8 credits from the following: MKGB 235, 322, 323, 424, 429.

Photographic Science and Instrumentation (122-125)

TECH 165, 166, 170, 175, 260, 265, 266, 267, 268, 271, 272, 317, 325, 326, 361, 362, 373, 461, 462, 472, 497; CHEM 211, 212 or 213, 214, 251, 252, 325; MATH 241, 242, 243, 244, 329; PHYS 231, 232, 233, 333.

Photographic Engineering Technology Minor (36)

TECH 151, 165, 170, 175, 265, 266, 361, 362. 12 credits from the following: TECH 166, 267, 268, 271, 272, 325, 326, 363.

BACHELOR OF ELECTIVE STUDIES

Program and credits to be determined by Department.

ASSOCIATE IN SCIENCE

Electronics Engineering Technology (59)

TECH 114, 151, 155, 170, 175, 260, 271, 272, 317, 325, 326, 327, 329, 373, 471, 472. Electives (5).

Photographic Engineering Technology (61)

TECH 151, 165, 166, 170, 175, 265, 266, 267, 268, 271, 272, 317, 361, 362; CHEM 211; IND 225; MGMF 361; MKGB 320.

Mechanical Engineering Technology (62)

TECH 114, 151, 155, 170, 175, 260, 271, 272, 317, 325, 326, 327, 329; IND 211, 240, 244, 340, 346. Electives (6).

COURSE DESCRIPTIONS

†101. **Aeronautics I.** Principles of flight, weather, navigation, aircraft and engine operation, flight instruments, flight computer, communications, flight planning and Federal Aviation Regulations. 4 Cr. F, W, S.

†102. **Private Pilot Flight.** Registration, airworthiness, documents, radio, navigation, and pre-flight check. Preparation for FAA private pilot flight test. All fees paid by student. Prereq.: 101. Not open to students with over 20 hours of dual instruction. 3 Cr. F, W, S, SUM.

114. **Engineering Graphics.** Working drawings, dimensioning, geometric tolerancing, descriptive geometry and nomography. 4 Cr. W, S.

151. **Technical Mathematics I.** Algebra, plane and solid geometry, basic trigonometry, logarithms, basic slide rule operation. Applications to technical situations. Prereq.: High school higher algebra or equivalent. 4 Cr. F, W, SUM.

152. **Technical Mathematics II.** Exponential functions, curve sketching, non-linear empirical equations, analytical trigonometry, introduction to calculus, handbook, applications. Prereq.: 151. 3 Cr. W, S.

155. **Fluid Energy Systems.** Hydraulics, pneumatics and fluidics. 3 Cr. F, S.

†165. **Photo Technology I.** History of photography. Camera types, systems and applications. Composition, filters. Basic darkroom techniques. 3 Cr. F, W, S, SUM.

†166. **Photographic Technology II.** Introduction to color photography. Color theory in subtractive color printing. Basic color chemistry and color darkroom procedures. Prereq.: 165. 4 Cr. F, W, S.

†170. **Electronics Technology I.** Atomic structure, charges and fields, conductors, semiconductors, insulators, resistance, capacitance, inductance, direct and alternating current circuit theory. 4 Cr. F, W, S, SUM.

†175. **Computers in Industry.** Survey of computer applications, present and future impact on industry and society; introduction to computer hardware and programming with emphasis on characteristics and limitations of modern computer systems. 4 Cr. F, S.

201. **Aeronautics II.** Advanced aviation fundamentals and aerodynamics, aircraft systems. Aviation meteorology, flight computer, navigation and communication. Federal Aviation Regulations and physiology of flight. Prereq.: 101. 4 Cr. W.

202. **Commercial Pilot Flight.** Gliding spirals; eight-on-pylons; lazy eights; chandelles, instrument flight. Preparation for FAA commercial pilot flight test. All fees paid by student. Prereq.: 201 and a minimum of 140 hours of flight time. 3 Cr. F, W, S, SUM.

203. **Instrument Pilot Ground School.** Instruments and systems, weather, IFR procedures, Federal Aviation Regulation, attitude instrument flying, cross-country procedures and instrument approaches. 4 Cr. S.

204. **Instrument Pilot Flight.** Supervised instrument flight instruction for the FAA instrument flight test. Approval of instructor. All fees to be paid by student. 3 Cr. F, W, S, SUM.

260. **Industrial Materials and Processes.** Theory, application and new development. 4 Cr. F, W, S, SUM.

265. **Photographic Sensitometry I.** Measurement, evaluation and controlled exposure on black and white photographic sensitized materials. Operation of sensitometers and densitometers. Prereq.: 165. 3 Cr. F, W.

- 266. Photographic Chemistry I.** Chemical reactions of black and white developer solutions. Equilibrium and catalysis on an intermediate level. Laboratory procedures and operation of densitometers. Prereq.: 265. 3 Cr. W, S.
- 267. Photographic Sensitometry II.** Study of color photographic sensitized materials. Advanced measurement and evaluation of controlled exposure on color film and paper. Prereq.: 266. 3 Cr. W, S.
- 268. Photographic Chemistry II.** Advanced photochemistry to include studies of various color chemistry that are commonly used in Industrial Photofinishing Plants today. Prereq.: 267. 3 Cr. F, S.
- 271. Electronics Technology II.** Impedance, resonance, filters, vacuum tubes, semiconductor theory, diode rectifiers, power supplies, transistors, transistor amplifiers, bias and stability, oscillators, manufacture and testing of transistors. Prereq.: 170. 4 Cr. W, S.
- 272. Electronics Technology III.** Multistage amplifiers, radio transmitters and receivers, basic television, field effect transistors, introduction to digital and linear integrated circuits. Prereq.: 271. 4 Cr. F, S.
- 284. Current Computer Systems.** Survey and comparison of currently popular computer systems, including small, medium and large scale systems; developing trends in hardware and software; system analysis and selection techniques. 3 Cr. Demand.
- †305. Technology and the Future.** The impact of technologies of the future on society by examining current technological innovation, future technologies with high probability of becoming reality, future problematic areas — the cause and exploration of prevention or solution. 4 Cr. F, W.
- †306. Technology Assessment.** To develop rational thought processes necessary to critically analyze the current technological era in order to maximize the public good while minimizing the public risks. 4 Cr. S.
- 317. Technical Writing.** Writing situations, methods of investigation; specifications; function of and techniques of Technical Report Writing. 3 Cr. W, S.
- †325. Industrial Safety I.** Human relations and safety. Accident prevention and loss control. Occupational Safety and Health Act. Workmen's Compensation. 4 Cr. F, W, SUM.
- 326. Quality Assurance.** Quality control measures; frequency distributions, control charts, sampling procedures and continuing analysis. Quality control statistics. 3 Cr. W, SUM.
- 327. Testing of Products and Materials.** Destructive and non-destructive testing of industrial products. Characteristics of materials. Applications. 4 Cr. W, S.
- 329. Mechanisms.** Modification and transmission of motion. 4 Cr. F, W.
- 361. Photographic Processing Mechanisms.** Mechanisms of Photofinishing equipment. Nomenclature, functions and design requirements of various machines and component parts. Photographic exposure, interrelation of light. Prereq.: 266. 4 Cr. F.
- 362. Photographic Process.** Quality assurance procedures for various automated processing systems, including black and white negative and paper, color negative and paper, and color transparency. Actual quality assurance techniques. Using automatic processing equipment. Prereq.: 361. 4 Cr. W.
- 363. Advanced Color Printing Theory.** The study and use of subtractive and additive color printing methods as they apply to professional photofinishing. Methods of color negative analysis, and automated enlarging equipment. Prereq.: 362. 4 Cr. F.
- 364. Photofinishing Management.** Managerial experience in an actual photofinishing environment. Responsibilities in print quality, processing, chemistry quality assurance, pollution control, and customer service. Prereq.: 362. 3-9 Cr. F, W, S.
- 373. Industrial Instrumentation and Control Circuits.** SCR's, triacs, bridge circuits, selection and use of instruments, measuring temperature, pressure, humidity, light, calibration techniques, counters, photo-electric control, alarm circuits. 4 Cr. F.
- 374. Electric Motors and Generators.** Major characteristics of typical motors and generators—A.C. and D.C.A.C. power distribution in single and three-phase. 4 Cr. Demand.
- 425. Industrial Safety II.** Industrial Hygiene. Accident prevention. Application of OSHA and Workmen's Compensation. Prereq.: 325. 2 Cr. S.
- 461. Unconventional Photographic Systems.** Holography, diazotype processes, deformable films, electro-photographic processes, dry silver systems, and other new systems. 2 Cr. S.
- 462. Photographic Seminar.** New photographic processes and processing mechanisms used in photographic industries. Approval of the instructor. 3 Cr. S.

464. Photofinishing Administration. To acquaint the Photographic Engineering Technology student of the problems, systems, procedures, policies and evaluations used daily in a photofinishing plant in both amateur and professional finishing. Concurrent registration with 364. 2 Cr. F, W.

497. Senior Seminar. The professional role of the engineer in a technological society. Field trips to selected industries. Senior standing. 1 Cr. W, S.

498. Internship. Offered only to students approved for internships with industrial organizations. Senior standing. 8-16 Cr. F, W, S, SUM.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

471-571. 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. 2 Cr. Demand.

472-572. 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.

CENTER FOR DRIVER EDUCATION AND SAFETY (DTS)

Director Howard Matthias. **Faculty** Dobey, Flicek, Schultz, Titzkowski.

The Center for Driver Education and Safety is a program designed to meet the needs of individuals and programs associated with traffic safety. Among the programs within the Center is the driver education program, certification, the traffic safety minor, the advanced driving program for professional drivers and various projects associated with research.

Driver and Traffic Safety Education Minor (30)

DTS 290, 390, 491; HLTH 305; Elect 15 credits from DTS 391, 392, 393, 394, 395, 396, 397, 398, 445, 485, 486, 487, 492.

CERTIFICATION

Driver Education (12): DTS 390, 491; HLTH 305.

DRIVER AND TRAFFIC SAFETY (DTS)

†290. Transportation Systems. A basic study of various transportation systems in the United States, their development, importance and future. An emphasis on highway transportation. 3 Cr. F, S.

†390. Driver and Traffic Safety Education I. Basic analysis of the driving task. Theory of teaching techniques and the practical application to classroom teaching. Individual driver orientation will be provided. 4 Cr. F, W, SUM.

391. Traffic Law, Enforcement, and Licensing. A study of the organization, administration and functioning of local, county and state political jurisdictions and their effect on traffic safety. 4 Cr. W.

392. Behavioral Influence on Accident Prevention. A study of behavior, attitude, motivation, personal interrelation and chance as related to accident causation and prevention. Relativity to traffic accidents will be emphasized. 3 Cr. S.

393. Alcohol and Drugs. A study of the role of alcohol and drugs pertaining to the human body, behavior and society, historical background; economic factors and legislation. 3 Cr. SUM.

†394. Basic Automotive Systems and Maintenance. A basic course for the automobile owner and driver education teacher covering basic vehicle functioning, identification of vehicle components, maintenance and recommendations. 3 Cr. F, W, S, SUM.

395. Organization and Administration of Safety Education. The development, administration and supervision of a safety education program at all educational levels. 3 Cr. F (ALT).

396. School Transportation. An analytical study of the organization, administration, supervision and evaluation of school transportation. 3 Cr. W (ALT).

397. Driver Education Simulation Instruction. A classroom-laboratory course designed to provide a student with a background of the philosophy, functioning and values of driving simulation. Practicum experience will be provided. 2 Cr. SUM (ALT).

398. Driver Education Multiple-Vehicle Instruction. A practical course involving design, construction and effective instructional techniques on an off-street, multiple-vehicle driving range. 3 Cr. SUM.

445. Driver Education Internship. Practical experience working with traffic safety agencies associated with school districts, governmental departments, industry and/or commercial establishments. Arrangements must be made through traffic advisers. 1-8 Cr. F, W, S, SUM.

485. Highway and Traffic Engineering. The planning, design, construction, operation and control of the highway system of the United States. 4 Cr. W.

491. Driver and Traffic Safety Education II. A practical application of sound educational techniques to classroom and laboratory phases of driver education. An emphasis on administration, supervision and evaluation. Laboratory teaching experience included. 4 Cr. S, SUM.

†492. Motorcycles and Other Recreational Vehicles. A basic course for teacher preparation in the areas of motorcycles and recreational vehicles. Laboratory experience will be provided. 2 Cr. S, SUM.

COURSES FOR ADVANCED UNDERGRADUATE
AND GRADUATE STUDENTS

486-586. Advanced Traffic Safety Teaching Techniques. An analysis and practical application of advanced teaching methods in classroom and laboratory. 3 Cr. F, S.

487-587. Problems and Methods of Driver Education. The identification, analysis and appraisal of selected problems related to the administration and supervision of traffic safety problems. 3 Cr. W, SUM.

490-590. Organization and Administration. State and Federal rules and regulations pertaining to Driver Education will be investigated. Administrative aspects related to scheduling, record keeping, report writing, and budgeting will be emphasized. 3 Cr. S.

COLLEGE OF LIBERAL ARTS AND SCIENCES

Robert H. Wick, Acting Dean; Louise H. Johnson, Associate Dean

DEPARTMENTS

Biological Sciences
Chemistry
Economics
English
Foreign Languages and Literature
Geography and Earth Science
History
Interdisciplinary Studies
Mass Communications
Mathematics and Computer Science
Philosophy
Physics and Astronomy
Political Science
Sociology and Anthropology
Speech Communication
Speech Science, Pathology,
and Audiology

INTERDEPARTMENTAL FIELDS

American Studies
Criminal Justice Studies
Environmental Studies
Latin American Studies
Medical Technology
Minority Studies
Physical Therapy
Public Administration
Sciences
Social Science
Social Work
Tri-College East Asian Studies
Urban Affairs Program
Women's Studies

The College of Liberal Arts and Sciences at St. Cloud State University serves two basic functions in education at this institution:

1. Through the General Education Program required of all students, the College of LA&S endeavors to provide a broad range of exposure to the varieties of knowledge and experience which makes possible a better understanding of the physical and social world in which we live. The College accepts its charge to introduce students to a wide range of ideas and experience so that they may be equipped to deal with their world more intelligently, productively, and humanely.
2. In addition, the College, through the specialized programs of majors and minors offered by its 16 departments and interdepartmental programs, provides education in a wide variety of professional skills. We aspire to the preparation of students who, upon completion of requirements, are prepared to assume various roles in society and who possess those skills and that knowledge necessary for not only useful and gainful employment, but an understanding of the varieties of the human condition, its experiences, and its possibilities.

More specifically, the College of Liberal Arts and Sciences strives to:

1. Foster independence of thought by encouraging a critical attitude toward conventional 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 may act with the wisdom and civility that should be the hallmark of the 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 preprofessional 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, LA&S 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 resource availability and utilization;

- b) LA&S seeks to give the student the tools, or methods, with which to gather, analyze, and evaluate information about his social and physical world, as well as the skill to communicate his thinking to others.

DEGREE PROGRAMS

The School of Liberal Arts and Sciences offers the following degrees: AA, AS, BA, BES, BS, MA and MS. Information concerning the graduate programs is available in the **Graduate Bulletin**.

ALLIED HEALTH PROGRAMS

Medical Technology

Coordinator Carol Pou.

The Bachelor of Science Degree in Medical Technology requires three years of study in a prescribed curriculum at St. Cloud State University and a fourth year of a 12-month internship. This internship consists of lectures and laboratory experience in the areas of clinical biochemistry, hematology, microbiology, immunohematology, immunology, urinalysis, mycology, parasitology and radioisotopes. Hospitals that have affiliation agreements with St. Cloud State University include St. Cloud Hospital, St. Cloud; Bethesda Lutheran Hospital, Midway Hospital, United Hospitals Miller Division, St. Joseph Hospital and St. Paul-Ramsey Hospital, all of St. Paul; and Hennepin County Medical Center and Northwestern Hospital of Minneapolis. During the senior year financial assistance may be available to the student by means of either a stipend, a scholarship, or room and board.

A modification of the one year senior intership has been implemented. This integrated program which has the internship distributed over 2 years instead of 12 months is with the St. Cloud Hospital. The clinical experiences begin fall quarter of the junior year. As specific courses are required for this internship, students interested should contact the coordinator early in their freshmen year.

Students may apply to the major program of study when their completed credits equal or exceed 32 quarter hours, including BIOL 201 and CHEM 211. The minimum scholarship requirement for admission to a major program of study is an honor point ratio of 2.0. The internship requires acceptance of the student by an affiliating hospital. While a grade point average of 2.5 is required for application into an internship program, those recently accepted as interns have an average of 3.0 or better overall and in the sciences.

A Bachelor of Science Degree in Medical Technology is conferred upon the satisfactory completion of a minimum of 192 quarter hours, which includes the General Education requirements, internship, and the following courses:

BIOL 201, 203, 303, 309, 332, 344, 445, 464, 465.
CHEM 211 and 212 or 213, 214, 251, 252, 323, 353.

MATH 132.

PHYS 201, 202.

Internship 48 Cr.

This curriculum in Medical Technology meets all of the requirements of The Board of Registry of the American Society of Clinical Pathologists and The American Society of Medical Technologists.

Nuclear Medical Technology

Chairperson Carol Pou.

This four year program is a variation of Medical Technology with the internship including lectures and laboratory experience in the areas of Nuclear Physics and Instrumentation, Radioisotope Measurements, Radiation Protection, Radiobiology and Radio pharmaceuticals, Clinical Application of Radioisotopes, Technical Evaluation of Nuclear Medicine Procedures, and Clinical Nuclear Medicine Practicum.

BIOL 201, 203, 303, 405, 446, 447, 464, 465

CHEM 211, 212, 251, 252, 324, 412, 413

PHYS 201, 202

MATH 132
Electives 14 Cr.
Internship 48 Cr.

The selection of interns will be made by the hospital School of Nuclear Medical Technology. Hennepin County Medical Center has an affiliation agreement with St. Cloud State University.

Physical Therapy

Adviser Caroline Bourestom

The physical therapy curriculum leading to the Bachelor of Science degree covers approximately five years of academic, technical, and professional preparation. Students who have met the graduation requirements of St. Cloud State University and have completed the certificate course in physical therapy at a school which is accredited by the Council on Medical Education and Hospitals of the American Medical Association will receive the Bachelor of Science degree from St. Cloud State University.

College courses covering the first three years' work are completed at St. Cloud State University. This program covers the general education courses and courses preparatory to the physical therapy internship.

The last phase of the degree will be completed in a fifteen month to two year internship.

Students who satisfactorily complete the internship will be granted 48 quarter credit hours. Students who wish to apply for admission to a school of physical therapy approved by the Council on Medical Education and Hospitals will communicate directly with the medical director of that school.

BIOL 201, 203, 303, 344, 464, 465

CHEM 211, 212; or 213; or 201, 202, 203

PHYS 201, 202.

HE 210

PE 248, 349 or BIOL 464, 465.

PE 348.

PSY 121, 262, 475.

Electives 20 Cr.

Internship:

Fifteen months to two years with the School of Physical Therapy. Credits are applied toward major (48).

A student may complete a B.A. degree in Biology and then complete his Physical Therapy Certificate course at a number of other institutions offering the program.

Most schools of Physical Therapy require a "B" average in the sciences for admittance. There is a great deal of competition for places in all schools.

For prerequisites for the Physical Therapy Program at the University of Minnesota, see page 12.

BIOLOGICAL SCIENCES (BIOL)

Chairperson Charles Rehwaltd. **Faculty** D. Barker, H. Barker, Bourestom, Bruton, Clapp, Coulter, Ezell, D. Grether, Grewe, Gundersen, Hopkins, Hopwood, V. Johnson, K. Knutson, Kramer, S. Lewis, Lindstrom, McCue, D. Mork, Partch, Peck, D. Peterson, C. Pou, S. Williams.

BACHELOR OF ARTS: BIOLOGY

Major (64-76)

BIOL 201, 202, 203, 301, 303, 332

BIOL electives (38)

CHEM 211

MATH 130 or High School Algebra

Math 132 or 134 or High School Trigonometry

Students planning to enter professional careers in Biology or graduate school are advised to include in their program:

PHYS 231, 232, 233

CHEM 212, 214, 251, 252, 325

MATH 241, 242, 243.

Minor (36)

BIOL 201, 202, 203, 301, 303, 332

BIOL electives (14)

If a student in a B.A. Biology Major meets the above-stated requirements and includes in his Biology electives and supporting courses a group of courses as described below, he may declare an emphasis in Aquatic, Botany, Ecology, Microbiology, Physiology, or Zoology. Only one emphasis may be declared. Details can be obtained from the major adviser.

Biology Major: Aquatic Emphasis

BIOL 433, 434, 438, 470
ESCI 284

Biology Major: Botany Emphasis

BIOL 343, or 345, 436, 437, 441, 458

Biology Major: Ecology Emphasis

BIOL 343 or 345, 350, 441, 451
ESCI 284

Biology Major: Microbiology Emphasis

A minimum of 16 credits from:

BIOL 344, 404, 432, 434, 440, 445, 446, 452,
469
CHEM 251

Biology Major: Physiology Emphasis

BIOL 435, 436, 463, 464, 465
CHEM 212, 251, 252, 353

Biology Major: Zoology Emphasis

BIOL 342, 453, plus a minimum of 20 credits
of Zoology courses

BACHELOR OF ARTS: BIOMEDICAL SCIENCE

Major (93-97)

This is a broad degree program in the Life Sciences designed for students who desire versatility instead of early specialization. The program provides the background needed for laboratory type positions, for graduate work, and for entrance into professional training in the health care fields, such as Medicine, Physician's Assistant, Medical Technology, Physical Therapy, Dentistry, and Veterinary Medicine. This program provides an excellent background for entrance into specialized training for new health care professions which may develop in the future. Proficiency in MATH 132 or 134 is required. In special cases, certain course substitutions may be made with the approval of the Adviser and Department Chairperson provided that the program consists of at least 48 credits in Biology and 36 credits in the Physical Sciences.

Students planning to enter graduate work and those expecting to enter medical schools may wish to supplement this major with a minor in Chemistry. The Chemistry minor requires proficiency in Calculus (MATH 243).

BIOL 201, 203, 303, 309, 332, 344, 439, 464, 465

CHEM 211, 212, 214, 251, 252, 323, (CHEM 325 may be substituted for 323)

PHYS 231, 232, 233

Electives to be selected from: (22)

BIOL 305, 366, 403, 405, 413, 420, 432, 442, 444, 445, 446, 447, 452, 455, 462, 463, 499
CHEM 324

PSY 250

Proficiency in High School Trigonometry or MATH 132 or 134 is required.

BACHELOR OF ELECTIVE STUDIES: BIOLOGY

Major (48)

Completion of any 48 credits in Biological
Sciences at the 200-level or higher.

Minor (36)

Completion of any 36 credits in Biological
Sciences at the 200-level or higher.

BACHELOR OF SCIENCE: BIOLOGY

Comprehensive Biology Major (84-88)

BIOL 201, 202, 203, 301, 303, 332, 344, 456, 457

A minimum of 4 credits from: BIOL 339, 340,
341, 343, 345

CHEM 211, 212, or 213, 251, or 291

PHYS 231, 232, 233

BIOL electives (26)

Supporting course: MATH 132 or 134 or
High School Trigonometry

Major (60-64)

BIOL 201, 202, 203, 301, 303, 332, 344, 456, 457

A minimum of 4 credits from BIOL 339, 340, 341, 343, 345

CHEM 211, 212 (or 213), 251 (or 291)

BIOL electives (14)

Supporting course: MATH 132 or 134 or High School Trigonometry

Minor (36)

BIOL 201, 202, 203, 301, 303, 332, 349, 457*

A minimum of 4 credits from

BIOL 341, 343, 344, 345, 347

BIOL electives (4)

*Must be taken before student teaching.

For Science Teacher Certification in Minnesota after July 1, 1979 in life science, grades 7-12, the candidate must have a minimum of 12 credits in each of three areas; life sciences, earth sciences, and physical sciences, and a total of 78 credits in the sciences. This may include appropriate General Education credits. For more information see the science section or a B.S. adviser.

Elementary Education Minor (24)

BIOL 201, 202, 203

BIOL electives (12)

(BIOL 341, 345, 347, or 349 are recommended)

COURSE DESCRIPTIONS

†101. **Life and Environment.** The living world and interrelationship with the environment offered as different topics: General Principles; Environmental Problems; Aquatic Environments; etc. May be repeated under different topics. Lab. 4 Cr. F, W, S, SUM.

†104. **Human Biology.** Biology of the human body offered as different topics: General Principles; Human Diseases; Genetics and Birth Defects; etc. May be repeated under different topics. Lab. 4 Cr. F, W, S, SUM.

†107. **Plants and Man.** Importance of plants in nature and human culture; plants and ecology; wild and cultivated edible plants; drug and medicinal plants; garden plants; plants and human nutrition; plant growth and reproduction. 4 Cr. S.

†201. **Biology I.** General Principles and concepts of Biology. Lab. 4 Cr. F, W, S, SUM.

*202. **Biology II.** Major principles of plant biology. Lab. Prereq.: 201. 4 Cr. F, W, S.

†203. **Biology III.** Major principles of animal biology. Lab. Prereq.: 201. 4 Cr. F, W, S, SUM, ALT.

301. **General Ecology.** Interrelationships between the biotic and physical aspects of the species, population, and community levels of organization. Prereq.: 202, 203. 3 Cr. W, S, SUM, ALT.

†303. **Cell Biology.** Molecular structure of protoplasm, surface and osmotic phenomena, permeability, nutrition, metabolism, mechanisms of energy exchange. Prereq.: 201, CHEM 211. 3 Cr. F, S.

305. **Microtechnique.** Introduction to methods for the preparation of histological specimens with special emphasis on clinical technique. 4 Cr. W.

†307. **Medical Terminology.** Practice in interpretation and building of medical terms from Latin and Greek roots. Sophomore, Junior, Senior. 2 Cr. F, W, S.

309. **Histology.** Microscopic structure and related functions of mammalian cells and tissues. Lab. Prereq.: 203. 4 Cr. F, W.

312. **Etiology and Pathogenesis of Disease.** Major disease etiologies; detailed study of the most common disease or conditions classified under each etiology. Prereq.: 307, 464. Not open to Biology majors or minors. 4 Cr. Demand.

326. **Biology for Elementary Teachers.** Concepts in biological sciences appropriate for the elementary school. Lab. 3 Cr. F, W, S, ALT.

†332. **Genetics.** Introduction to genetics with emphasis on human inheritance. Lab. Prereq.: 201. 4 Cr. F, S, SUM, ALT.

339. **Mammalogy.** Principles of classification, morphology, ecology, life histories and population dynamics of mammals. Lab. Prereq.: 203. 4 Cr.

- 340. Ichthyology and Herpetology.** Principles of classification, natural history of fishes, amphibians, and reptiles. Lab. Prereq.: 203. 4 Cr. Demand.
- 341. Entomology.** Morphology, physiology, and classification of common orders and families of insects. Lab. Prereq.: 203. 4 Cr. F, SUM.
- 342. Comparative Vertebrate Anatomy.** Development and structure of representative vertebrates. Dissection of cat and selected lower forms. Lab. Prereq.: 203. 4 Cr. W.
- †343. Spring Flora.** Taxonomy and ecology of spring vascular plants; principles of taxonomy, use of keys and taxonomic relationships of families. Lab. Prereq.: 202 or consent of instructor. 4 Cr. S.
- †344. Microbiology.** Morphology, classification, and culture of bacteria and other microorganisms of economic importance. Lab. Prereq.: CHEM 211. 4 Cr. F, W, S, SUM.
- †345. Summer Flora.** Taxonomy and ecology of summer vascular plants; principles of taxonomy, use of keys and taxonomic relationships of families. Lab. Prereq.: 202 or consent of instructor. 4 Cr. SUM.
- 347. Ornithology.** Identification, field study and life histories of birds. Lab. Prereq.: 203. 4 Cr. S.
- †349. Principles of Resource Management.** Conservation of natural resources with emphasis on soil, water forests, and wildlife. (May not be taken for credit if credit has already been received for GEOG 372). Lab. 4 Cr. S, SUM.
- †350. Soils.** Origin, development, classification, plant relationship, physical and chemical properties. Lab. Prereq.: CHEM 211. 4 Cr. F.
- 366. Microscopy and Photomicrography.** Principles and use of light microscopes including bright-field, dark-field, phase contrast, polarized-light, Nomarski and fluorescence optics. Lab. 4 Cr. S.
- 403. Research.** Independent laboratory or field research. Prereq.: consent of instructor. 1-4 Cr. F, W, S, SUM.
- 444. Biology Internship.** Full time participation in industry or a government agency. Offered every quarter. Arrangements must be made before registration. 4-16 Cr. F, W, S, SUM.

COURSE FOR ADVANCED UNDERGRADUATE
AND GRADUATE STUDENTS

- 404-504. Protozoology.** Taxonomy, ecology, physiology, economic importance of the protozoa. Lab. Prereq.: 203. 4 Cr. SUM, ALT.
- 405-505. Radiation Biology.** Introduction to radiation, laws governing its use, medical uses, and its effects on man. Prereq.: 202, 203, 332, CHEM 211. 4 Cr. W.
- 408-508. Cell Metabolism.** Metabolic processes of cells. Lab. Prereq.: 303, CHEM 212 or 213. 4 Cr. S.
- 409-509. Biological Techniques.** Collection, preparation, and display of biological materials. Lab. 2 Cr. S, ALT.
- †411-511. Human Heredity.** Human heredity as a component in function, behavior and evolution. Social and political interactions. Not open to biology majors or minors. 4 Cr. S.
- 413-513. Electron Microscope Techniques.** Specimen preparation, mechanics and operation of the transmission and scanning electron microscopes. Lab. Prereq.: 303. 4 Cr. F, W, S.
- 420-520. Seminar.** Lectures, readings, and discussion on selected topics. May be repeated once. 1 Cr. F, W, S, SUM.
- 421-521. Laboratory Practicum.** Technique, skills and practical experiences. May be repeated once. Designed for B.S. majors and minors in Biology. 1 Cr. F, W, S, SUM.
- 423-523. Environmental Science for Teachers.** Classroom and field techniques useful in the analysis and interpretation of the interrelations of biotic and abiotic environmental factors. Prereq.: 326 or consent of instructor. 3 Cr. F.
- 425-525. Common Animals of Minnesota.** Recognition, habits, and economic importance of invertebrates and vertebrates of Minnesota. Not open to biology majors or minors. Lab. 4 Cr. S, ALT.
- 432-532. Molecular Genetics.** Biochemical approach to inheritance and development. Lab. Prereq.: 332 and 344. 4 Cr. W.
- 433-533. Aquatic Plants.** Taxonomy and ecology of aquatic plants, including vascular plants, mosses and selected algae and fungi. Lab. Prereq.: 301 and 345. 4 Cr. SUM, ALT.

434-534. Freshwater Algae. Morphology, taxonomy and ecology of algae of lakes, ponds, streams, bogs, and soils. Lab. Prereq.: 202. 4 Cr. F, SUM, ALT.

435-535. Comparative Animal Physiology. Comparative study of functional mechanisms in the various phyla. Prereq.: 203, 303, CHEM 211. 3 Cr. S.

436-536. Plant Physiology. Principles of metabolic processes of high plants. Lab. Prereq.: 202, 303, CHEM 211. 4 Cr. W.

437-537. Plant Morphology. Survey of plant kingdom with emphasis on structure and form of primitive plants. Lab. Prereq.: 202. 4 Cr. W.

438-538. Freshwater Invertebrates. Collection, preservation and classification of local species. Lab. Prereq.: 341. 4 Cr. S, ALT, SUM, ALT.

439-539. General Parasitology. Animal parasites and their relation to diseases of man and other animals. Lab. Prereq.: 203. 4 Cr. F, S, SUM, ALT.

440-540. Mycology. Structure, development, and identification of fungi with emphasis on species of economic importance. Lab. Prereq.: 202. 4 Cr. F, ALT.

441-541. 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. SUM, ALT.

442-542. Embryology. Prenatal development of human body; laboratory emphasis on chick and pig. Lab. Prereq.: 203. 4 Cr. W.

443-543. Animal Behavior. Behavior of animals as interpreted through comparative studies and experimentation. Lab. Prereq.: 203 or consent of instructor. 4 Cr. W.

445-545. Medical Bacteriology. Morphology, classification, techniques of culture and rapid identification of pathogenic bacteria. Lab. Prereq.: 344. 4 Cr. W, S, SUM, ALT.

446-546. Immunology. Systems of infection and immunity with antigen-antibody relationships; and their effect on man with respect to protection and injury. Hypersensitivity; natural and acquired immunity. Prereq.: major or pre-professional. 3 Cr. W.

447-547. Laboratory Methods in Immunology. Preparation of antibodies, immune reactions, protein estimation, electrophoresis, fluorescent antibody and column chromatography. Lab. Prereq.: 446 or concurrent enrollment. 2 Cr. W.

448-548. Limnology. Lakes and streams, their physical environment, plant and animal life and dynamic interrelations. Lab. Prereq.: 301, CHEM 212. 4 Cr. F, SUM.

451-551. Animal Ecology. Distribution, life histories habitat requirements, and environmental interrelations of vertebrates and invertebrates. Lab. Prereq.: 301 and one of the following: 339, 340, 341, 347. 4 Cr. S, ALT.

452-552. Water and Sewage Microbiology. Indicators of pollution, determination of numbers and kinds of microorganisms, standards of pollution, purification of water, microbiology of sewage disposal. Lab. Prereq.: 344, CHEM 251. 4 Cr. W, ALT.

453-553. Invertebrate Zoology. Classification phylogeny, anatomy, physiology, and natural history of invertebrates. Lab. Prereq.: 203. 4 Cr. F.

454-554. Wildlife Management. General principles of wildlife management with detailed studies of selected species. Lab. Prereq.: 301. 4 Cr. F.

455-555. Physiology of Bacteria. Comparative study of the metabolism of growth and reproduction of microbes. Lab. Prereq.: 303, 344, CHEM 251. 4 Cr. F, ALT.

456-556. Methods for Teaching Junior High School Science. Modern approaches to teaching sciences in junior high schools. Not open to B.A. majors. Lab. 2 Cr. F, W, S.

457-557. Methods and Materials for Teaching Biology. Modern approaches to teaching high school biology in classroom and laboratory, including materials of Biological Sciences Curriculum Study. Lab. Not open to B.A. majors. 2 Cr. F, W.

458-558. Plant Anatomy. The structure, organization and development of the plant body of higher plants. Lab. Prereq.: 202. 4 Cr. W, ALT.

459-559. Organic Evolution. History, evidence, and processes of evolution. Prereq.: 332. 3 Cr. W, ALT.

+460-560. Evolution. Theories and processes of biological evolution; origins of life; evolutionary thought on human progress; concepts of species and biological race. Not open to biology majors or minors. 4 Cr. W.

461-561. Economic Entomology. Life histories and control measures for economically important insects. Lab. Prereq.: 341. 2 Cr. F, ALT.

- 462-562. Medical Entomology.** Study of arthropods of medical and veterinary importance with emphasis on vector biology and disease ecology. Lab. Prereq.: 439 or consent of instructor. 4 Cr. S, ALT.
- 463-563. Endocrinology.** A study of the morphology and physiology of the endocrine glands in physiological communication and regulation. Lab. Prereq.: 464, 465. 4 Cr. F, ALT.
- 464-564. Human Anatomy and Physiology I.** Structure and metabolic activity of organ systems including muscular, skeletal, nervous and integumentary. Lab. Prereq.: 201, 303. ½ Cr. F, W, SUM.
- 465-565. Human Anatomy and Physiology II.** Structure and metabolic activity of organ systems including respiratory, circulatory, digestive, urinary, endocrine and reproductive. Prereq.: 464. 4 Cr. W, S, SUM.
- 468-568. Limnological Methods.** Theory and practice in limnological sampling and analysis, emphasis on plankton, physical and chemical parameters. Lab. Prereq.: 448. 4 Cr. S, ALT.
- 469-569. Soil Microbiology.** The role of microorganisms in the soil, their identification, culture, and environmental significance. Lab. Prereq.: 303, 344. 4 Cr. W, ALT.
- 470-570. Fisheries Biology.** Natural history ecology, recreational and commercial aspects, and special methods. Lab. Prereq.: 340, 448. 4 Cr. F.
- 472-572. Plant Growth and Development.** Selected topics in plant physiology with emphasis on the hormonal control of plant growth and development. Lab. Prereq.: 436. 4 Cr. S, ALT.
- +475-575. Environmental Biology.** Readings and discussions relating to environmental problems as they concern man and other organisms. Designed for students with little or no background in biology. Biology majors and minors by permission only. 4 Cr. F.
- 477-577. Biology Institute.** Selected topics in biology for experienced teachers of science. Lab. 3-6 Cr. Demand.
- 489-589. Paleobiology.** Field and laboratory study of living and fossil species and geological aspects of the environment. Lab. Prereq.: 202, 203, ESCI 284. 4 Cr. F, ALT.
- +498-598. The Nature of Biological Science.** Assumptions, methods and limitations of science. Historical roots of biology and the development of major concepts. Communication in biology and society. Prereq.: Senior standing. 3 Cr. F, ALT.

CHEMISTRY (CHEM)

Chairperson John H. Carpenter. **Faculty** Arndts, Dendinger, J. M. Erickson, James, Kennedy, Laakso, Magnus, McMullen, Nickles, Sorensen.

Courses in chemistry are offered as part of the education of every college student and as a preparation for (1) careers in chemical industries or in governmental laboratories, (2) teaching in secondary schools, (3) professional careers in medicine, dentistry, pharmacy, medical technology, nursing, and allied professions, (4) graduate study in chemistry and its related fields. Students planning to major in chemistry are urged to consult with the chemistry staff at the earliest possible time.

In addition to the requirements for majors and minors given below, students who have not had higher algebra and trigonometry in high school are required to complete MATH 130 and 134. For those students taking the B.S. 28-credit minor, only high school algebra or MATH 130 is required.

BACHELOR OF ARTS

This program is designed for those interested in chemical industries, chemical professions, or graduate study in chemistry and its related fields.

Major (84)

CHEM 211 & 212, or 213*; 214, 291, 292, 393, 325, 420, 425, 426, 427, 428, 429, 434; MATH 241, 242, 243; PHYS 231, 232, 233 (or PHYS 234, 235, 236).

Select 13 Cr. from 300-400 level CHEM courses.

Recommended, but not required: 12 Cr. in foreign language.

Minor (60)

CHEM 211 & 212, or 213*; 214, 251, 252, 325, 425, 426, 427; MATH 241, 242, 243; PHYS 231, 232, 233.

Select 2 Cr. from 300-400 level CHEM courses.

BACHELOR OF ELECTIVE STUDIES

Major (48)

Completion of 48 credits with the approval of the department.

Minor (36)

Completion of 36 credits with the approval of the department.

BACHELOR OF SCIENCE

This degree is primarily for those interested in teaching chemistry and related sciences in high school.

Comprehensive Chemistry Major (84)

CHEM 211 & 212, or 213*; 214, 291, 292, 393, 325, 425, 426, 427, 428, 429, 434, 456, 458.

CHEM Elective 300-400 level (2 Cr.)

BIOL 201; 202 or 203.

MATH 241, 242, 243.

PHYS 231, 232, 233.

Minor (60)

CHEM 211 & 212, or 213*; 214, 251, 252, 325, 425, 426, 427, 428.

MATH 241, 242, 243.

PHYS 231, 232, 233.

Minor (28)

CHEM 211 & 212, or 213*; 214, 251, 252, 325 or 323.

CHEM Elective 300-400 level (3 Cr.)

Major (72)

To be taken with a 36-hour minor in some other field such as mathematics.

CHEM 211 & 212, or 213*; 214, 251, 252, 325, 425, 426, 427, 428, 429, 456, 458.

MATH 241, 242, 243.

PHYS 231, 232, 233.

Electives 300-400 level (6 Cr.)

For science teacher certification in Minnesota after July 1, 1979, in physical science, grades 7-12, the candidate must have a minimum of 12 credits in each of three areas; life sciences, earth sciences, and physical sciences, and a total of 78 credits in the sciences. This may include appropriate General Education credits. For more information see the science section of a B.S. adviser.

*Students who qualify for advanced placement may substitute 213 for both 211 and 212 and may petition for a 3 credit reduction in chemistry requirements.

COURSE DESCRIPTIONS

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

†102. **Concepts in Chemistry.** The course acquaints the student with the basic concepts of chemistry and helps him to understand and cope with the problems of our society and environment. The specific topic and emphasis for each section is selected by the instructor. (See class schedule for listing of topics.) 4 Cr. F, W, S, SUM.

†201, 202, 203. **Chemistry of Life Processes I, II, & III.** (3, 2) General organic and biological chemistry sequence. Appropriate for pre-nursing, mortuary science, and some pre-home economics, pre-forestry and other disciplines requiring no more than a year of chemistry. Lab. 4 Cr. per quarter. 201, F, W, S; 202 W, S; 203 S.

†211, 212. **General Chemistry I and II.** (3, 2) Atomic theory; chemical bond; molecular structure, nomenclature; chemical formulas and equations, stoichiometry; gases, liquids, solids; solutions, elementary thermodynamics, chemical kinetics; equilibrium; acids, bases, salts; descriptive chemistry. Lab. Prereq.: High School algebra or MATH 130; High School chemistry or CHEM 201 or 102 strongly advised. 4 Cr. per quarter. F, W, S, SUM.

†213. **General Chemistry II-A.** (4, 2) Includes the same topics as 211-212 with emphasis on advanced topics. Open to students who have passed the departmental advanced placement examination or by departmental approval. Lab. 5 Cr. F, W, S.

†214. **General Chemistry III.** (3, 4) Electrochemistry; nuclear reactions; inorganic chemistry including coordination compounds and qualitative analysis. Lab. Prereq.: 212 or 213. 5 Cr. F, W, S.

†251, 252. **Bio-Organic Chemistry I and II.** (3, 3) Structure, chemical and physical properties, nomenclature, synthesis and applications of the chief classes of carbon compounds. For

biological science majors and chemistry minors. Lab. Prereq.: 212 or 213. 4 Cr. per quarter. 251 F, W, SUM; 252 W, S, SUM.

291, 292. Organic Chemistry I and II. (3, 4) Structure, reactions and mechanisms, synthesis and applications of carbon compounds. For students (esp. chem. majors) who plan to take the 3 quarter sequence including 393. Lab. Prereq.: 212 or 213. 4 Cr. per quarter. 291 F; 292 W.

322. Introduction to Chemistry of Pollution. (3, 2) Source, identification, and control of specific chemicals which are potentially deleterious to the quality of our air, water, and land. Lab. Prereq.: 212 or 213. 4 Cr. S.

323. Analytical Chemistry of the Body Fluids. (2, 4) Quantitative clinical analysis. Emphasis on theory and application of modern instrumentation and related manual procedures currently in use in hospital labs. Prereq.: 214. 4 Cr. F, S.

325. Quantitative Analysis. (2, 6) The theory and techniques of volumetric and gravimetric analysis; an introduction to selected instrumental methods. Lab. Prereq.: 214. 4 Cr. F, S.

†327. Physical Sciences for Elementary Teachers. Concepts in the physical sciences appropriate for the elementary school. Integrated Lab. 3 Cr. F, W, S, SUM.

353. Introductory Biochemistry. (3, 3) The structure, properties, and functions of biologically important compounds as they relate to the metabolic activities of living tissue. Lab. Prereq.: 252 or 292, 4 Cr. S.

393. Organic Chemistry III. (3, 4) A continuation of 291, 292 with emphasis on polyfunctional compounds, special reactions and individual project laboratory work. Lab. Prereq.: 292. 4 Cr. S.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

412-512. Radiochemistry. Concepts of nuclear stability and structure; decay systematics and energetics; interactions of radiation with matter; applications to chemical problems. Basic calculus desirable. Prereq.: 212 or 213. 2 Cr. W, SUM.

413-513. Radiochemistry Laboratory. (0, 4) Detection, characterization, and measurement of radiation; chemical operations and the applications of radioisotopes to chemical and biochemical problems. Prereq.: 412 or concurrent registration. 2 Cr. W, SUM.

420-520. Seminar. Lectures, readings, discussion on selected topics. May be repeated. 1 Cr. per quarter to a max. of 4 Cr. F, W, S.

425-525, 426-526, 427-527. Physical Chemistry. Application of fundamental laws and theoretical principles to atomic and molecular structure gases, liquids, solids, solutions, phase equilibrium, chemical reactions (equilibrium and kinetics) and electrochemical processes; to understand the macroscopic in terms of molecular behavior. Prereq.: 325; PHYS 232, 233; MATH 243. 3 Cr. per quarter. 425-525 F; 426-526 W; 427-527 S.

428-528, 429-529. Physical Chemistry Laboratory. (0, 4) These are lab. 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.: 426 or concurrent registration. 2 Cr. per quarter. 428-528 W; 429-529 S.

434-534. Advanced Inorganic Chemistry I. (3, 2) Development of the concepts of inorganic chemistry; electronic structures of atoms; crystal structure; chemical bonding including molecular orbital theory; coordination compounds. Lab. Prereq. or concurrent registration: 425 or consent of instructor 4 Cr.

435-535. Advanced Inorganic Chemistry II. 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.: 434. 4 Cr. W.

440-540. Instrumental Analysis. (2, 6) Major instrumental methods of chemical analysis including spectroscopic, electrometric, and chromatographic methods. 4 Cr. Prereq.: 425, 426 or concurrent registration. W.

450-550. Qualitative Organic Analysis. (1, 12) Identification of several single and mixed organic compounds by physical and organic qualitative methods. Lab. Prereq.: 393, 440. 4 Cr. S.

453-553. Biochemistry. (3, 4) Dynamic aspects of the intermediary metabolism of carbohydrates, lipids, proteins, and nucleic acids; energy production and utilization of living systems. Lab. Prereq.: 393, 427, or consent of instructor. 4 Cr. F.

456-556. Methods and Materials for Teaching Sciences. Modern approaches to teaching sciences in junior and senior high school. Integrated Lab. 2 Cr. F, W, S.

458-558. Methods and Materials for Teaching Chemistry. Modern approaches to teaching high school chemistry in classroom and laboratory including materials of Chemical Bond Approach Project and Chemical Education Materials Study. Integrated Lab. 2 Cr. W.

460-469, 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.

472-572. Advanced Organic Chemistry. Topics such as condensations, rearrangements, conservation of orbital symmetry, polymers, benzenoid and non-benzenoid aromaticity. Prereq.: 393, 434 or consent of instructor. 4 Cr. Alt.

481-581. Chemical Thermodynamics. Concepts of both classical and modern thermodynamics applied to problems encountered in chemistry. Prereq.: 426. 4 Cr. Alt.

CRIMINAL JUSTICE STUDIES (CJS)

Director Robert Prout. **Faculty** Becker, Cairns, J. Miller, M. Miller, Rouff.

The primary objective of the Criminal Justice Studies Program is to prepare individuals for professional careers at the federal, state, and local levels, in the areas of law enforcement, corrections, and the general areas of the administration of justice. However, the student will also be prepared to pursue graduate study in criminal justice planning, police science, corrections, or other areas related to the human services. Additionally, this program offers the in-service criminal justice employee the opportunity to enhance his professional development through higher education.

A student pursuing a major in Criminal Justice Studies receives a broad educational background, as well as professionally oriented courses. After the student receives an over-view of the criminal justice continuum, he has the option of specializing in one of the criminal justice subfields, or of continuing an in-depth study within the general field of the administration of justice.

Additional credit hours beyond the General Education requirements, prerequisite courses, and the minimum sixty quarter hours necessary for a major in Criminal Justice Studies are needed to meet the 192 quarter hours of credit necessary for the Bachelor of Arts degree. This additional course work is recommended in both cognate and elective areas; the former includes anthropology, economics, geography, industrial education, political science, psychology, social work, sociology and statistics; and the latter includes education, English, history, journalism, and philosophy.

Requirements for the Certificate in Criminal Justice Studies

It is imperative that the Criminal Justice Studies Program attract the in-service individual into the classroom along with the traditional pre-service student. Such a setting is necessary for up-grading the current field of criminal justice and will aid both student types in attaining a realistic perspective.

To assist in accomplishing this goal, the Criminal Justice Studies Program has been designed to serve the present as well as the future practitioner in the criminal justice system. Many people currently employed in the field work rotating shifts and cannot successfully operate within the traditional day or evening schedule of college classes. Therefore, the Certificate Program is developed to meet these individual needs. The student must meet the admission requirements of the University. He/She then will enroll for the following criminal justice courses at the times when they are offered for students pursuing a degree in the program: CJS 101, 188, 244 (4 credits), 288, 311, 320, 340, 351, 388, 451, 488, 489.

The individual instructor has the responsibility of assuring proper effort on the part of the certificate bound student who cannot attend all the scheduled classes of the specific course due to employment obligations. Sixteen hours of individual research (CJS 188, 288, 388, 488) will give the in-service student the opportunity to schedule a portion of his study time at appropriate hours. With such a program, the needs of the in-service individual can be partially met within the existing structure. Upon completion of the forty-eight credits, a certificate denoting completion, issued by the Program of Criminal Justice Studies, will be awarded to the student.

BACHELOR OF ARTS

Major

Criminal Justice Studies (60)

Required: (44 Cr.)

CJS 101, 311, 351, 488, and 489; ECON 281; PHIL 344; SOC 260*, 366, 367; POL 312*, 413, 492.

Electives: (16 Cr.)

CJS 187, 320, 340, 451; Public Service Internship 244 (1-16 Cr.); Individual Research 188-388 (1-12 Cr.); PHIL 122; ENGL 269; SPC 350, 420; HLTH 301; HIST 350; IND 391, 392; PSY 474, 475; SSCI 460; GEOG 490.

Minor

Criminal Justice Studies (30)

Required: (24 Cr.)

CJS 101, 311, 351; ECON 281; PHIL 344; SOC 260*, 367.

Electives: (6 Cr.)

The six credit hours of elective courses must be chosen from those courses offered as electives for the program major, or any combination is permissible from: SOC 366; POL 413*; POL 492*.

*SOC 260 is prerequisite to SOC 366 and 367. POL 312 (not 211) is prerequisite for POL 413 and 492 in the Criminal Justice Studies Program. POL 211 is not prerequisite for POL 312 for Criminal Justice Studies students.

COURSE DESCRIPTIONS

+101. Survey of Criminal Justice. Overview concerning an understanding of the purpose of law enforcement, courts, penal institutions, probation, parole, and the role of the police officer in contemporary society. 4 Cr. F, W, S.

244. Internship. Permission Required. 1-16 Cr. F, W, S. 1 ST, 2 ST.

311 Organization and Administration in Law Enforcement. The fundamentals of law enforcement organization, including the basic principles of administration and supervision. Considers areas of assignment and specialization in city police, state police, sheriff departments, and highway patrol organizations. Prereq.: 101, or permission. 4 Cr. F, W, S.

320. 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. Prereq.: 101, or permission. 4 Cr. Demand.

340. Substantive Criminal Law and Due Process. Deals with the definitions and processing of substantive offenses along with the bases of criminal liability, defenses, and complicity. Covers the scope of individual rights under due process, emphasizing arrest, interrogations, search and seizure. Prereq.: 101, or permission. 4 Cr. Demand.

351. Correctional Administration and Processes. Reviews the development of theories and practices regarding contemporary correctional administration; various correctional systems are historically traced and evaluated. Encompasses both the custodial and treatment functions of all correctional settings. Prereq.: 101, or permission. 4 Cr. F, W, S.

451. Theories and Methods of Offender Treatment. An examination of the principles and practices of correctional treatment procedures accorded offenders at the various types of detaining institutions. Prereq.: 101, 351, or permission. 4 Cr. Demand.

188, 288, 388, 488. Individual Research. Directed study in an approved area of the criminal justice continuum. Permission required. 1-4 Cr. per course. 16 Cr. max. F, W, S.

489. 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. Prereq.: Limited to students of senior standing or to non-majors pursuing the certificate who have completed 40 credit hours of courses in CJS. 4 Cr. F, W, S.

ECONOMICS (ECON)

Chairperson Harold A. Lofgreen. **Faculty** Bruhn, Gamber, Gleisner, Larsen, Luksetich, Masih, Wesley.

Economics is concerned with society's arrangements for the production and distribution of goods and services in an environment of scarce resources and unlimited wants. In the

United States, a modified, free-enterprise, capitalistic system, the basic problems are largely solved by the pricing process in a system of markets. The knowledge of economics as a discipline has witnessed great expansion during the last thirty years, and the means of influencing the level of income, employment, and prices are quite well known. Therefore, it is essential that the American citizen understand the basic subject matter of economics in order to participate intelligently for his economic life.

The Department of Economics is thoroughly committed to the pursuit of economic education in all its various forms. Specific courses are offered such as ECON 280, 602, 610, 631, 645, 679 and occasional workshops. For further information the reader is directed to a description, elsewhere in this bulletin, of the Center for Economic Education, an autonomous university unit of an interdisciplinary nature charged with furthering economic education.

Admission to a Major Program in Economics. The only prerequisite to admission as a major in economics other than the all-university requirements is the completion of ECON 273 and 274 with a grade of C or better in each course. The prospective major is advised to attempt to complete the core courses (see below) before admission or as early as possible in his/her program. The mathematics requirement is minimal as far as preparation is concerned. The Department recommends that the student continue his/her study of mathematics through MATH 242.

BACHELOR OF ARTS

Major (64)

ECON 273, 274, 471, 475, 476, 478, 480 or 481 or 483.

ACCT 291, 292; MATH 131 or 140; MATH 329 or MKGB 140.

Electives: 20 credits selected from 300-400 level ECON courses. Up to two of the following courses may be substituted for ECON electives: GEOG 271; HIST 345; MGMT 371, 473; POL 211, 251, 312, 313, 380, 452; SSCI 472.

Minor (24)

Required courses: 273, 274, 478. Electives in ECON: (12)

Elementary Education Minor (36)

Required courses: 259 or 273, and 274, 280, 445.

BEOA 216; Electives in ECON: (20-24). — It is recommended that the courses be taken in the sequence indicated.

Elementary Education Minor (24)

Required courses: 259 or 273, and 274, 280, 445.

BEOA 216; Electives in ECON: (8-12). It is recommended that the courses be taken in the sequence indicated.

BACHELOR OF ELECTIVE STUDIES

Major (48)

Completion of 48 credits with the approval of the department.

Minor (36)

Completion of any 36 credits in ECON.

For those students who would like to prepare to teach economics in the public schools, see the Social Studies Department in this bulletin for a description of the Social Science Major: Economics Emphasis.

INTERNSHIP PROGRAM. The Internship Program of the Department of Economics is designed to give competent, interested students an opportunity to participate in an approved off-campus learning and work situation in an area of interest which relates to the major. The Program will offer the student a method by which he can relate his course work and major requirements to the reality of its application in the working world. The Program will be an extension of the classroom in such a way as to broaden and deepen the student's understanding of the discipline of economics. See ECON 444 in the course listings. A maximum of four (4) Cr. may be applied to the elective credits needed in the major program and the balance, if any, apply as general electives toward graduation. Students interested in the Internship Program should contact the department as early as possible to apply for the Program.

HONORS IN ECONOMICS. The Department of Economics offers an Honors Program to its majors. The Program is designed to provide students with an opportunity to do individualized advanced-level work in the discipline, guided and supervised by interested individual faculty members, to add maximum flexibility to the major program, and to provide a way to reward superior performance.

Admission to the Honors Program:

3.0 Honor Point Ratio overall — on all work taken.

A grade of B or better in each of ECON 273 and 274.

Honors Requirements. The departmental requirements for the major must be met. However, the Department Honors Advisor may make suggestions for possible changes in the major program to tailor the program for individual honor students.

Work must be continued with a minimum of 3.0 HPR average on all subsequent courses taken in order to remain in the Program.

In addition to the above requirements the student must: (1) complete a senior thesis project; and (2) take a comprehensive oral examination in the major area. The thesis project should be selected after consultation with the faculty no later than the beginning of the senior year. The student may register for no more than four hours credit of ECON 499, Honors Thesis which will be counted as elective credit in the major. The comprehensive oral should be scheduled early in the final quarter before graduation. The oral may cover discussion of the thesis project and any part of the major work.

To graduate with department honors the student must satisfactorily complete all requirements as are in effect at the time of his admission to the department honors program, and have an honor point ratio of 3.3 or higher for all college work and a ratio of 3.5 or higher for work completed in the major.

Supplementary and/or Supporting Work. Some suggested areas of minor programs which complement the program of the honor student in economics are: Philosophy, Mathematics, Accounting, Marketing, Management and Finance, and Political Science.

For the student who is preparing to do graduate work in economics the following courses may be preferred to completing a minor:

Mathematics 140, 241, 242, 269, 271.

Foreign Language, 12 credit hours or more, French, German, or Russian.

COURSE DESCRIPTIONS

†259. Introduction to Economics. A basic terminal course in the fundamentals of economics. A study of the operation of markets and the national economy. Cannot be taken after 273 or 274. 4 Cr. F, W, S, SUM.

†260. Comparative Economic Systems. Description of different economic organizational structures and control mechanisms. Capitalism, Socialism, Communism in relation to economic systems. 4 Cr. F, S.

†273. Principles of Economics I. The economic process, nature of the free enterprise system, national income, money and the banking process, and other aspects of macro-economics. 4 Cr. F, W, S, SUM.

†274. Principles of Economics II. Theory of income distribution, pricing process under different market situations, emphasis on micro-economics. 4 Cr. F, W, S, SUM.

NOTE: ECON 273, **Section 1** and ECON 274, **Section 1** are always taught with 'Guided Learning' methodology. These are non-lecture sections utilizing individualized instruction techniques.

†280. Seminar in Applied Economics. The relating of basic economic concepts, theory, and analysis to current public policy issues, and/or to subject matter literature, and/or to the knowledge in the other social science disciplines. Prereq.: Consent of Department. 2 Cr. Demand.

†281. Economics of Crime and Justice. Topics include economic motivation for criminal behavior; costs of crime; optimal allocation of resources for prevention of crime; welfare costs of criminal behavior. 4 Cr. W, S, SUM.

377. Economics and Its Business Applications. The relevance of economic analysis to business decision-making. Demand, cost, capital, and profit analysis are the four major topical areas discussed. Prereq.: 273, 274. 4 Cr. W, S, Demand.

378. Economics of Agriculture. Agricultural production and its problems in the United States; scientific developments, organizations, programs, and legislation proposed to aid agriculture. 4 Cr. F.

444. Internship and Field Work. Participation as an intern-in-economics or as an intern-in-public service with a cooperating business, governmental, or civic organization whose intern program has been approved in advance by the department. 1-16 Cr. Demand.

†445. Economics of Underdeveloped Countries. Economic development and policy issues in underdeveloped countries. Prereq.: 273. 4 Cr. W, ALT.

486. Introduction to Mathematical Economics. Mathematical economics with emphasis on the application of mathematical tools to the problems of micro and macro economic theory. Prereq.: 476 and MATH 241 or equivalent. 4 Cr. Demand.

499. Honors Thesis. A senior thesis project the nature of which shall be determined by the student and the department. It must be a project that reveals scholarly effort, the ability to think critically, and the ability to handle bibliographic and research tools. 1-4 Cr. DEMAND.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

†451-551. Resource and Environmental Economics. Analysis of problems of natural resource allocation, including air and water quality control. Economic efficiency, externalities, and long run implications. Prereq.: 273, 274, or consent of instructor. 4 Cr. S, ALT, DEMAND.

†460-560. Public Finance. The role of government in the economy with emphasis upon public revenues and expenditures, tax structure, inter-governmental fiscal relations, fiscal policy, and public debt management. Prereq.: 273, 274, 4 Cr. W.

†461-561. Public Economics: State and Local. The economics of state and local government. Public projects, tax and revenue structures, and inter-governmental relations. Some emphasis on Minnesota. Prereq.: 273, 274, or consent of instructor. 4 Cr. S.

†465-565. Urban and Regional Economics. Analysis of regions, including the city as a regional center. Emphasis on regional development, location theory, central place theory, and financing. Some emphasis on Central Minnesota. Prereq.: 273, 274, 4 Cr. F, Demand.

470-570. Business Cycles and Forecasting. Factors causing fluctuations in national income and proposed methods of stabilization, with consideration of business forecasting techniques. Prereq.: 273, 274, 4 Cr. Demand.

†471-571. Money and Banking. Monetary and banking system of the United States; bank credit; the banking system; the Federal Reserve System, central bank policy and the relationship between bank credit, money, and price levels. Prereq.: 273, 274. 4 Cr. F, W, S, SUM.

472-572. Social Control of Business. Economic theory and government regulation controlling business activity in the United States. Prereq.: 273, 274. 4 Cr. F.

473-573. Labor Economics. Labor as a factor of production; growth of collective bargaining and labor legislation, and its effects upon society. Prereq.: 273, 274. 4 Cr. W.

474-574. International Economics. International economic relationships; commercial and financial policies; tariffs, exchange controls, international monetary standards, and international settlements. Prereq.: 273, 274. 4 Cr. W, ALT.

475-575. National Income and Employment Analysis. Flow of expenditures and income and their impact upon national income and price levels, with consideration of stabilization controls. Prereq.: 273, 274. 4 Cr. F, W, S, SUM.

476-576. Price and Distribution Theory. Economic processes in the free enterprise system; determination of price, output, and factor services in different market structures. Prereq.: 273, 274. 4 Cr. F, S.

†478-578. History of Economic Thought. Development of economic thought and analysis from Adam Smith to the present. Prereq.: 273, 274. 4 Cr. F, S.

479-579. Manpower Policy and Analysis. The factors which influence the quantity and quality of labor and the economic aspects of government policy toward labor as an individual entity. Prereq.: 273, 274. 4 Cr. W, ALT.

†480-580. Seminar in Area Economic Studies. The economy and current economic problems of selected regions, areas, or countries of the world. Prereq.: Consent of the Department. 1-4 Cr. May be repeated with different topics. Max. 9 Cr. DEMAND.

481-581. Seminar. Selected topics in economic theory. Prereq.: Consent of Department. 1-4 Cr. May be repeated with different topics. Max. 9 Cr. DEMAND.

†483-583. Contemporary Economic Problems. Solutions of problems arising from growth and development of modern institutions under the free enterprise system. Prereq.: Consent of Department. 4 Cr. May be repeated with different topics. Max. 9 Cr. DEMAND.

487-587. Economic Growth and Stability. Behavior of the aggregate output and income over time. Models of long-run growth and short-run cycles are utilized to examine policies and programs to maintain economic stability. Prereq.: 475. 4 Cr. DEMAND.

ENGLISH (ENGL)

Chairperson James Gottshall. **Faculty** J. B. Anderson, Bovee, J. Brunckhorst, Cairns, Coard, A. E. Falk, Hansen, Lawson, Leja, Lundquist, McCalib, Meinz, Meissner, Melton, Otto, L. Perkins, Regnier, Rylander, Summers, M. Thompson, R. Thompson, Tosh, E. Van Pelt, L. Van Pelt, L. Voelker.

The functions of the Department of English are four: first, to help all students of the university to achieve proficiency in writing, reading, and speaking; second, to help English majors and minors to develop critical appreciation for literary content and form and an understanding of the structure and history of the language; third, to prepare English majors and minors for teaching; fourth, to provide cultural enrichment for individual development.

Composition and creative writing are emphasized for those who wish to express themselves well or who become interested in the writing of poetry, drama, and fiction, or who wish to improve these skills for advertising, public relations, film, and television writing.

Literature is emphasized for those who wish to do graduate work, teach, or work in magazine or book publishing, or who desire to prepare themselves in the liberal arts tradition.

Departmental Honors in English. The English Department invites inquiry regarding Honors in English. Interested students should see the department chairperson not later than the last quarter of the sophomore year.

BACHELOR OF ARTS

Major (48)

48 credits selected by the student in consultation with his adviser. At least 29 credits must be at the 300 and/or 400 level. Students planning graduate study in English are advised to include ENGL 440, 441, and 443, and, in addition, to take at least 12 credits in a foreign language at the 200 level or above. Students should also consult the statement on university requirements for the B.A. degree on page 12.

Minor (24)

24 credits selected by the student in consultation with an English Department adviser. At least 14 credits must be taken at the 300 and/or 400 level.

BACHELOR OF ELECTIVE STUDIES

Requirements for the Bachelor of Elective Studies major and minor are the same as the requirements for the Bachelor of Arts major and minor.

BACHELOR OF SCIENCE

Major (72)

This program is designed for students who wish to meet certification requirements to teach English in secondary schools. Students are advised to take a minor along with this major to increase employment opportunities.

ENGL 221; 232; 331 or 338; 343; 352; 353; 421; 434 or 435 or 436. (ENGL 232, 352 and 353 must be taken before student teaching.)

One contemporary literature course: ENGL 368, 396, 468 or 498. (A course selected to meet this requirement may not be used to meet any of the following requirements.)

Three American literature courses: ENGL 260, 265, 366, 368, or 468. (368 and 468 may

not both be counted for this requirement.)

Four English literature courses from any 4 of the 7 groupings that follow: ENGL 370 or 440; 270 or 443; 277, 279 or 441; 284, 285 or 485; 286 or 287; 288 or 289; 396 or 498. (Students who are considering graduate study are advised to take ENGL 440, 441 and 443.)

One course in the theory and practice of public speaking to be chosen from the following: SPC 220, 324, 325, 420, or 440.

One course in oral interpretation or play production and direction: TH 331 or 349.

Electives: Select English courses from above the 100 level to bring the total for the English major to a minimum of 72 credits.

Minor (Secondary Teaching) (40-47)

ENGL 232; 331 or 338; 343; 352.

Four English literature courses: ENGL 370 or 440; 270 or 443; 277, 279 or 441; 284, 285 or 485; 286 or 287; 288 or 289; 396 or 498.

Two American literature courses: ENGL 260, 265, 366, 368, 468 (368 and 468 may not both be counted for this requirement.)

Choose one: SPC 220, 324, 325, 420 or 440. TH 331 or 349 (Prereq.: TH 235).

Minor (Elementary Education) (36)

ENGL 232; 331 or 338; 343.

Four English literature courses from any 4 of the 7 groupings that follow: ENGL 370 or 440; 270 or 443; 277, 279 or 441; 284, 285 or 485; 286 or 287; 288 or 289; 396 or 498.

Two American literature courses: ENGL 260, 265, 366, 368, 468 (368 and 468 may not both be counted for this requirement.)

Electives: Select English courses from above the 100 level to bring the total for the minor to a minimum of 36 credits.

Minor (Elementary Education) (26)

26 credits selected by the student from above the 100 level in consultation with an English Department adviser. The student is advised to include courses in English composition, English language, English literature and American literature.

B.S. or B.A.**Minor (Creative Writing) (32)**

ENGL 332, 333, 334, 468.

Choose two: ENGL 437: Fiction; 437: Poetry; 437: Playwriting. (The genre not chosen to meet the requirement may be taken as an elective.)

A final advanced independent project in poetry, fiction, or playwriting, or an approved substitution. (1-3 Cr.)

Choose one: ENGL 368, 396.

Approved elective courses in English and Mass Communications. (3-6 Cr.)

The English major who wishes to elect the creative writing minor:

- A. Must satisfy the requirements for the minor;
- B. May apply courses which have also satisfied his major requirements;
- C. Must, however, present a total of 21 hours in the minor program in addition to his English.

Other majors and minors who intend to take the creative writing minor should consult with the English Department chairperson in order to be assigned a minor advisor within the English Department.

The Creative Writing minors do not meet the teacher certification requirements for English.

COURSE DESCRIPTIONS

062. Individual Writing Problems. For the student whose diagnostic evaluation indicates deficiencies in written composition, and who is so notified. Instruction based on the individual student's needs. Permits a student to enter ENGL 162 upon successful completion. Credits not applicable toward graduation. 1-4 Cr. NOTE: When ENGL 062 is not offered, students needing remedial tutoring in composition may substitute work in the English Writing Clinic to remedy their deficiencies in written composition. The English Writing Clinic is free, and provides no credit. F, W.

063. English as a Second Language. For the student whose first language is not English and who needs intensive instruction in standard spoken and written English. Instruction based on the individual student's needs. Credits not applicable toward graduation. 1-4 Cr. Demand.

†124. Introduction to Literature. A study of fiction, poetry, and drama to improve the understanding and increase the enjoyment of imaginative literature. Thematic organization of course at option of instructor. 4 Cr. F, W, S, SUM.

125. Introduction to Fiction. The art of fiction as represented in the drama or short story or the novel. 4 Cr. S.

†162. Written Composition. Expository Writing: The common principles and practices of expository composition. 4 Cr. F, W, S, SUM.

†163. Written Composition: Based on Selected Topics. Further development of critical thinking and writing skills established in ENGL 162, with the selected topic to offer a concentrated focus for writing experiences. Prereq.: 162. 4 Cr. F, W, S, SUM.

220. The Forms of Non-fiction. Designs to equip the student with the skills and knowledge necessary for an intelligent reading of the various types of non-fiction prose, such as biography, narrative accounts, and essays. Attention to the individual student's needs. 3 Cr. Demand.

†221. Introduction to Poetry. The forms and techniques of poetry. Designed to equip beginning English majors or minors with the skills and knowledge needed for advanced work in poetry. Suggested as the first course for the English major or minor. 3 Cr. F, W, S, SUM.

230. History of Ideas About Language. Philosophical and scientific as well as popular belief and thought about language from ancient times to the present. 4 Cr. Demand.

†**232. Introduction to Linguistics.** Systematic study of language today. The nature of language vs. other communications systems, human and non-human. Linguistic analysis of sound patterns, structures and meanings in language, with special reference to present-day American English. (Must be taken before student teaching), 4 Cr. F, W, S.

†**250. Literature of the American Frontier.** The concept of the frontier as developed in American literature from the Colonial Period to the present. 4 Cr. Demand.

260. Poe, Irving, and Early American Literature. The rise of American literary forms: Franklin, Irving, Bryant, Cooper, Poe, and selected authors of the Colonial Period. 3 Cr. F, S.

265. The American Renaissance. The Transcendentalists and their critics: Emerson, Thoreau, Hawthorne, Melville, Whitman, and related authors. 4 Cr. F, W.

267. Literature of the Upper Midwest. Writers such as Fitzgerald, Garland, Lewis, Cather, Rolvaag, Bly, Wright, McGrath and Manfred, whose works deal with the culture of this area. 3 Cr. Demand.

†**269. Black Literature in America.** The contribution of Black Americans to literature from the late nineteenth century to the present, with an emphasis on contemporary authors. 4 Cr. F, W, S.

270. The English Renaissance. The Tudor poets from Wyatt to Sidney and Spenser, as well as the essayists, travellers, and dramatists (exclusive of Shakespeare). 3 Cr. W, ALT.

277. Seventeenth Century to the Restoration. John Donne and the metaphysical poets, Ben Jonson and the poets of the classical school, and the prose writers of the period. 3 Cr. W, ALT.

279. The Restoration. Dryden, Pepys, Butler, Wycherley, Congreve, and related authors. 3 Cr. S, ALT.

284. The Age of Pope. Defoe, Swift, Addison, Steele, Pope, Collins, and related authors. 3 Cr. F, ALT.

285. The Age of Johnson. Gray Boswell, Johnson, Walpole, Goldsmith, Cowper, Burns, and related authors. 3 Cr. W, ALT.

286. The Romantics I. The first generation of romantic poets: Blake, Coleridge, Wordsworth, Scott, Southey, and the minor poets, as well as the essayists and periodical writers of the period. 4 Cr. Demand.

287. The Romantics II. The second generation of romantic poets: Byron, Shelley, Keats, and the minor poets, as well as the essayists and periodical writers of the period. 3 Cr. Demand.

288. Victorian Studies I: Poetry. The poetry of Tennyson, Browning, Arnold, and related authors. 4 Cr. Demand.

289. Victorian Studies II: Fiction, Drama, and Essays. Carlyle, Ruskin, Huxley, Arnold, and related authors, as well as an introduction to the drama and novels of the period. 3 Cr. Demand.

†**290. Masterpieces of Literature.** Selected works of significance in Western culture. An adult education course designed for non-English majors and minors. Does not count towards an English major or minor. 4 Cr. W.

†**291. Literature of the Ancient World.** Selected literature of the Greeks and Romans in translation. 4 Cr. Demand.

†**292. The Bible as Literature.** Selections from those books of the Old and New Testaments which related most significantly to the literary heritage of the Western World. 4 Cr. W.

†**293. Recent European Literature.** Selected major authors in translation; literary forms and movements. 4 Cr. F, S.

†**294. Myth and Legend.** A study of mythology based on Greek, Roman, and other legends (especially Northern European) in relation to literature. 4 Cr. S.

331. Advanced Expository Writing. Exposition with an emphasis on the principles and practices of advanced expository composition. 3 Cr. F, W, S, SUM.

332. Creative Writing: Fiction. Narration and description with emphasis on creative writing. Prereq: 162, 163. 3 Cr. F.

333. Creative Writing: Play-Writing. Practice in dramatic composition at the introductory level. Prereq: 162, 163. 4 Cr. S.

334. Creative Writing: Poetry. Practice in creative writing at the introductory level. Prereq.: 162, 163. 3 Cr. W.

- 338. Advance Rhetorical Writing.** A rhetorical approach to writing and to the evaluation of various forms of written discourse. 3 Cr. W, ALT.
- 339. Writing for Government, Business, and Industry.** Study and practice in the standard types of writing required in government, business, and industry: proposals, abstracts, resumés, sales and advertising articles, business and administrative letters, and technical reports. 4 Cr. W.
- 343. Shakespeare I.** The histories, comedies, and tragedies. 4 Cr. F, W, S, SUM.
- 352. Teaching Language Arts in Secondary Schools.** The methods, materials and organization of the teaching of literature, language, and composition. (Must be taken before student teaching.) 4 Cr. F, W, S.
- 353. Literature for Adolescents.** The types of literature suitable for recreational reading in junior and senior high school; standards for selecting materials, methods of presentation, and bibliography. Should be taken before student teaching. 3 Cr. F, W, S, SUM.
- †359. Recent American Literature.** Designed for the student who specializes in some area other than English. Includes selections depicting modern America by authors writing after World War I. Not open to English majors and minors. 3 Cr. Demand.
- 366. The Rise of Realism in American Literature.** Post-Civil War literary trends and writers, including Mark Twain and Henry James. 3 Cr. F, S.
- 368. Modern American Literature.** Twentieth-century literary trends and writers to World War II. 3 Cr. F, W, S.
- 370. Medieval English Literature.** The literature and language of the Middle English Period: Chaucer, Langland, Malry, and the anonymous poets and playwrights. 3 Cr. Demand.
- †391. Literature of the Post-Classical Western World.** Selected literature in translation from the Middle Ages to modern times: Dante, Montaigne, Cervantes, Moliere, Voltaire, Goethe, Heine, and others. 4 Cr. Demand.
- †394. Literature of the Eastern World.** Major works of the Near and Far East, with some attention to primitive literatures. 4 Cr. Demand.
- 396. Twentieth-Century British Fiction.** Trends and authors in British fiction of the Twentieth Century, including major novelists of the period. 4 Cr. F.
- 400. Special Problems in English.** A seminar or conference course for advanced students wishing to work out a special problem in the academic area. 1-4 Cr. Demand.
- 440. Chaucer.** "The Canterbury Tales" and other works of Chaucer. 3 Cr. F.
- 443. Shakespeare II.** The texts, background, and criticism, with emphasis on the works of the later period. 3 Cr. W.
- 454. Composition Skills in the Secondary English Class.** Theory and method in teaching written, spoken, and multi-sensory composition in the secondary school English class. Preparation for school situations in which the communications concept of English prevails. 4 Cr. Demand.
- 456. Comprehension Skills in the Secondary English Class.** Theory and method in teaching the communications skills of reading, listening, and visual appreciation in the secondary school English class. Preparation for school situations in which the communications concept of English prevails. 4 Cr. Demand.
- 457. Public Service Internship.** Participation in a full-time position as an intern in an English-related activity with a cooperating business, industrial, or governmental organization whose program has been approved in advanced by the Department of English. Permission of Department Chairperson required. 1-16 Cr. Demand.
- 468. Contemporary American Literature.** Literary trends and writers since World War II. 4 Cr. W, S.
- 498. Twentieth-Century British Poetry and Drama.** Trends and authors in British poetry and drama of the Twentieth Century, including such authors as Yeats, Eliot, Auden, Thomas, Synge, Osborne, Beckett, and Pinter. 4 Cr. W.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 421-521. 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, W, S, SUM.
- 433-533. Computers and Language.** Introduction to computer applications in language data

analysis and processing; presentation of the fundamentals of SNOBOL. Prereq.: ENGL 232 or MATH 169 or consent of instructor. 4 Cr. F, ALT.

434-534. 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. 4 Cr. F.

435-535. 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. 3 Cr. W.

436-536. American English. Contemporary spoken American English, social and regional dialects, and their relationship to the written language. 4 Cr. S.

437-537. Advanced Practices in Creative Writing. Study and practice in writing of poetry, plays and fiction of publishable quality at the advanced undergraduate and graduate level. May be repeated for additional credit when content varies. Prereq.: 332, 333, or 334, or permission of the instructor. 4 Cr. S.

439-539. Topics in Linguistics. One or more topics of current importance in linguistics. 4 Cr. Demand.

441-541. Milton. The minor poetry, "Comus," "Paradise Lost," "Paradise Regained," "Samson Agonistes," and "Areopagitica." 4 Cr. S.

445-545. The Nineteenth-Century English Novel. Austen, Scott, Mary Shelley, Dickens, Thackeray, Meredith, Butler, Eliot, Hardy, and others. 4 Cr. F, ALT.

446-546. The American Novel. The development of the American novel. 4 Cr. S, ALT.

447-547. Seminar in Literary Themes. Selected recurrent themes in literature, such as science fiction, the gothic, minority literature, death and dying. 4 Cr. Demand.

448-548. Seminar in Literary Forms. The forms of literature, such as types of satire, comedy, and fantasy. 4 Cr. Demand.

451-551. 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. W, ALT.

†455-555. The Contemporary Mass Media as Literature. The creative productions of both print and electronic mass media today with a focus on the nature, potential and limitations of the different artistic and technical forms. 4 Cr. Demand.

485-585. The Eighteenth-Century English Novel. Defoe, Richardson, Fielding, Smollett Sterne, and related authors. 4 Cr. S, ALT.

490-590. European Writers of the Twentieth Century. 4 Cr. Demand.

491-591. Drama I. The Beginnings to Ibsen. World drama, its origin and genesis. Primitive drama. Classical Greek and Romans, Oriental, Medieval, Elizabethan, Neo-classic French. Restoration, Eighteenth Century, to 1875. 4 Cr. F.

492-592. Drama II. Modern Drama from Ibsen to World War II. Literature and production techniques of the modern theatre. 4 Cr. W.

493-593. Drama III. Contemporary Drama. Trends in the literature and production techniques of today's theatre. 4 Cr. S.

494-594. American Writers of the Twentieth Century. 4 Cr. Demand.

497-597. British Writers of the Twentieth Century. 4 Cr. Demand.

ENVIRONMENTAL STUDIES PROGRAM (ENV)

Director John Phillips. **Faculty Committee:** G. Anderson (Earth Science), Hopwood (Biology), E. Jones (Political Science), Lieberman (Interdisciplinary Studies), Lofgreen (Economics), McMullen (Chemistry), Paschall (Sociology-Anthropology), Rehwaltd (Biology), Tideman (Geography), Williams (Management and Finance).

Environmental Studies is an interdisciplinary program. The broad objectives are to provide information about the environment to student and the general populace, to extend the services of faculty and student to communities, industries or agencies needing assistance in environmental planning, monitoring or problem solving, and to continue ongoing involvement of faculty and students in basic and applied research.

The main feature of the program is early and continuing involvement in seminars and special studies courses for diverse perspectives on environmental issues.

The program offers a wide variety of preparation, from single courses in which any individual may satisfy his/her curiosity, to complete programs intended for the development of professional concepts and skills in environmental work. Students wishing to major in Environmental Studies may select one of two emphasis areas; Natural Science, or Social Science. The student is encouraged to combine the Environmental Studies Major with a departmental major. Up to 24 common credits may be counted in both majors if a second major is elected.

BACHELOR OF ARTS

Major (72)

Core (12) Courses required of all majors: ENV 210, 320 (Any 4 Cr.), 412.

Natural Science Emphasis (60)

Supporting Courses (36).

BIOL 201, 202, 203 (12 credits).

CHEM 211, 212, 251 (12 credits).

MATH 131, or 132 or equivalent, 321X or statistics equivalent (8 credits).

ESCI 284 (4 credits).

Natural Science Electives (16).

Select from: BIOL 301, 339, 340, 341, 344, 343 or 345, 347, 350, 405, 411, 433, 434, 438, 441, 448, 451, 452, 454, 461, 462, 468, 469, 470; CHEM 252, 322, 325, 393, 412, 413, 422, 423; ESCI 285, 307, 308, 325, 330, 340; PHYS 208, 221, 306.

Social Science Electives (8).

Social Science Emphasis (60)

Social Science Distribution (40).

Tool courses (Select at least two of the following): GEOG 350, 405; CSCI 169, 269 and 271; SOC 278, 279, 379.

Substantive courses (Select at least two courses from each area):

1. ECON 273, 274, 378, 445, 451, 460, 472, 483, HIST 345.
2. GEOG 270, 271, 273, 380, 394, 454, 459, 472, 474, 480, 490, 492.
3. POL 211, 312, 313, 411, 412, 413, 480, 491, HIST 343, 344.
4. SOC 447, ANTH 250, 260, 261, 265, 342, 347, 370, 442, 445, 476.

Social Science Electives (12).

Natural Science Electives (8).

Minor (24)

ENV 210, 320, (Any two different 320 courses), 350*.

Electives (12-14)**.

*Combined with electives as a high or low option to total 24 credits.

**Disciplinary electives from outside student's major as approved by the Environmental Studies adviser.

RESEARCH PAPER REQUIREMENT

All students enrolled as majors in Environmental Studies will be required to complete a senior research paper. This work will be done independently under the direction of the Environmental Studies faculty. The paper will be submitted in written form and presented orally in the Environmental Studies 412 Senior Seminar, as part of the requirements for that course.

COURSE DESCRIPTIONS

†210. Introduction to Environmental Studies. Principles and contributing factors of past, present and future human environments, survey of environmental concerns. Lectures, discussions, laboratory and televised experiences. 4 Cr.

320. Selected Environmental Studies. In-depth study of one or more environmental subjects (as announced in the quarterly class schedule). Format and subjects covered vary with instructors. May be repeated. Prereq.: 210. 1-3 Cr.

350. Plenary Seminar. Lectures, readings, discussion on selected topics. Participation by students, faculty, and visitors. May be repeated. 1 Cr.

412. Senior Seminar in Environmental Studies. Presentation of papers, discussions based upon independent research. Students should have projects in progress or near completion before registration. Prereq.: Senior standing, in major or minor environmental studies program. 3 Cr.

FOREIGN LANGUAGES AND LITERATURE

Acting Chairperson Barbara Bloomer. **Faculty** Escalas, Kiese, Langen, Larson, Levilain, O'Neill, Overy, Savage.

We live in a multilingual world. Educated people with a command of one or more foreign languages are needed in business and professional life.

Placement of entering freshmen: Courses at the 100 level (Elementary) are for those who are beginning the study of a particular language.

A student with one year of a language in high school may register for 131 of the same language in the St. Cloud program; with two or three years in high school, he may register for 211 and with four years in high school, 243, 311 or 312. During the first week tests will be given to ascertain if the placement is correct. Changes may be made on the basis of individual competence.

All major and minor credits must be earned at the 200-level or above, except as indicated for the comprehensive major.

All students who intend to major or minor in a foreign language which they have not previously studied in high school should note the following:

1. For a B.S. degree in Secondary Education, with a foreign language major or minor, 100-level language courses must be begun in Fall Quarter (or Winter Quarter, when offered) of the freshman year.
2. For a B.S. degree with an Elementary Education major and a foreign language minor, 100-level courses must be begun no later than Fall Quarter of the sophomore year.
3. For a B.A. degree with a major in a foreign language, 100-level courses must be begun in Fall Quarter (or Winter Quarter, when offered) of the freshman year.
4. For a B.A. degree with a minor in a foreign language, 100-level language courses must be begun no later than Fall Quarter of the sophomore year.

The requirements for these degrees are outlined below. All literature and civilization courses are conducted in the foreign language, unless they are marked as courses in translation.

Bachelor of Science programs are primarily for those who are preparing to teach a foreign language in elementary or secondary school.

BACHELOR OF SCIENCE: French, German, Spanish

Comprehensive Major (84)

Core: 48 to 60 qtr. cr. in the major foreign language (French or German) to satisfy all requirements of the 48-hour major in that language. Students who begin the language in college may count the credits for the elementary year (not to exceed 15 qtr. cr.) in the maximum of 60.

Electives: 24 to 36 qtr. cr. in related studies, to be approved by an adviser in the Department of Foreign Languages. At least two of the following groups must be represented:

1. **Social Sciences.** Courses which relate to the history and culture of regions where the language is spoken; see the listings for the Department of Economics, History, Geography, and Sociology and Anthropology.
2. **Linguistics.** Courses which relate to the study of language in general, or to the English language; see the listings for the Linguistics concentration in this Bulletin.
3. **Fine Arts, Literature, Philosophy.** Courses which relate to the theory, history, and criticism of the arts and letters related to the major foreign languages; see the listings for the Department of Art, English, Music, Philosophy, and Speech.
4. **Foreign Languages.** Courses in a second foreign language, for a minimum of 15 and a maximum of 27 qtr. cr. (Students who desire a greater concentration than this should elect a minor in the second foreign language.)

Elementary Minor (24)

Courses at 200-level, where necessary 0-12
 311 5
 455 and 456 5
 Electives at 300- or 400-level 2

BACHELOR OF ARTS: French**Major (36-48)**

Courses at 200-level, where necessary	0-12
311-312	10
Electives at 300- 400-level	26
(to include at least 15 cr. in literature)	

Minor (24-36)

Courses at 200-level, where necessary	0-12
311-312	10
Electives at 300- 400-level	14

BACHELOR OF SCIENCE: French**Major (36-48)**

Courses at 200-level, where necessary	0-12
311, 312	10
453 or 455, 454 or 456	5
Electives at 300- or 400-level	21
(to include at least 12 cr. in literature)	

Minor (24-36)

Courses at 200-level, where necessary	0-12
311,312	10
453 or 455, 454 or 456	5
Electives at 300- or 400-level	9

BACHELOR OF ARTS: German**Major (36-48)**

Courses at 200-level, where necessary	0-12
311, 312, 313	9
421, 422, 423	3
Electives at 300- or 400-level	24
(to include at least 15 cr. in literature)	

Minor (24-36)

Courses at 200-level, where necessary	0-12
311, 312, 313	9
421, 422, 423	3
Electives at 300- or 400-level	12
(to include at least 12 cr. in literature)	

BACHELOR OF SCIENCE: German**Major (36-48)**

Courses at 200-level, where necessary	0-12
311, 312, 313	9
421, 422, 423	3
453 or 455, 454 or 456	5
Electives at 300- or 400-level	19
(to include at least 12 cr. in literature)	

Minor (24-36)

Courses at 200-level, where necessary	0-12
311, 312, 313	9
421, 422, 423	3
453 or 455, 454 or 456	5
Electives at 300- or 400-level	7
(to include at least 12 cr. in literature)	

BACHELOR OF ARTS: Spanish**Major (36-48)**

Courses at 200-level, where necessary	0-12
311, 312, 313	9
6 cr. from 431-436	6
6 cr. from 437, 438, 439	6
421, 422, 423	3
Electives at 300- or 400-level	12

Minor (24-36)

Courses at 200-level, where necessary	0-12
311, 312, 313	9
3 cr. from 431-436	3
3 cr. from 437, 438, 439	3
Electives at 300- or 400-level	9

BACHELOR OF SCIENCE: Spanish**Major (36-48)**

Courses at 200-level, where necessary	0-12
311, 312, 313	9
6 cr. from 431-436	6
6 cr. from 437, 438, 439	6
421, 422, 423	3
453 or 455, 454 or 456	5
Electives at 300- or 400-level	7

Minor (24-36)

Courses at 200-level, where necessary	0-12
311, 312, 313	9
3 cr. from 431-436	3
3 cr. from 437, 438, 439	3
453 or 455, 454 or 456	5
Electives at 300- or 400-level	4

BACHELOR OF ARTS: Foreign Languages**Minor (36)**

12 cr. at the 200-level in each of three foreign languages (French, German, Spanish, or Russian)	36
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BACHELOR OF ELECTIVE STUDIES: French, German, Spanish**Major (48)**

To be arranged in consultation with and approved by adviser.

Minor (36)

To be arranged in consultation with and approved by adviser.

COURSE DESCRIPTIONS**DANISH (DAN)**

†131, 132, 133. **Elementary Danish I, II, III.** Basic vocabulary and grammatical structures with emphasis on the spoken language. Must be taken in sequence. 4 Cr. each quarter. 131 — W, S; 132 — S; 133 — Demand.

FRENCH (FREN)

†131, 132, 133. **Elementary French I, II, II.** Basic vocabulary and grammatical structures with emphasis on the spoken language. Must be taken in sequence. 4 Cr. each quarter. 131 — F, W; 132 — W, S; 133 — S, F.

†210. **Elementary Review Grammar.** A review of first year grammar and conversation designed to prepare the student for FREN 211. Intended for students whose backgrounds do not qualify them for intermediate French. Credits do not count toward major. Prereq.: Departmental permission. 4 Cr. F.

†211, 212. **Intermediate.** Review and expansion of basic vocabulary and grammatical structures; conversational practice. Must be taken in sequence. Prereq.: 133, or 2 or 3 years high school French. 4 Cr. each quarter. 211 — F; 212 — W.

†243. **Readings in Modern Literature.** Graded selections from prose, drama, and poetry. Prereq.: 4 quarter cr. at the 200-level, or 4 years high school French. 4 Cr. S.

Note: 12 quarter credits in French at the 200-level (or the equivalent as determined by the department) are prereq. to all courses at the 300-level.

†311. **Composition.** Practice in the writing of resumes, simple narratives, descriptions, and critiques; studies in vocabulary and syntax, directed toward appreciation of literary style. Must be taken before or concurrently with the first literary course at the 300- or 400-level. 5 Cr. F.

†312. **Conversation.** Intensive oral practice based on themes drawn from contemporary French culture. 5 Cr. W.

†321, 322, 323. **Form and Style in French Literature.** Representative works of French literature considered as varieties of artistic experience and expression. Need not be taken in sequence. Prereq.: see FREN 311.

321. **Poetry.** 3 Cr. F.

322. **Drama.** 3 Cr. W.

323. **Prose Fiction.** 3 Cr. S.

†341. **French Civilization I.** Studies in the history and culture of French-speaking countries. 4 Cr. Demand.

†351. **Phonetics.** Contrastive analysis of French and English phonological features; intensive oral practice. 3 Cr. S.

NOTE: 10 qtr. cr. in French at the 300-level are prereq. to all courses at the 400-level.

†431. **Medieval Literature.** Survey of the medieval heritage with emphasis on the *chanson de geste* and theatre. 3 Cr. Demand.

†432. **Renaissance Literature.** Survey of the 16th century with emphasis on Montaigne, Rabelais, and the Pleiade. 3 Cr. Demand.

†433. **Seventeenth-Century Literature.** The Age of Classicism, with emphasis on Corneille, Racine, Moliere. 3 Cr. Demand.

†434. **Eighteenth-Century Literature.** The "Enlightenment", with emphasis on philosophy, theater, and novel. 3 Cr. Demand.

†435. **Nineteenth-Century Literature.** Romantic and realistic trends in poetry, theater, and novel. 3 Cr. Demand.

- †436. **Twentieth-Century Literature.** Trends in Twentieth-Century poetry, prose, and drama. 3 Cr. Demand.
- †441. **French Civilization II.** Studies in the history and culture of French speaking countries. 4 Cr. Demand.
452. **Advanced Grammar.** Contrastive analysis of French morphological and syntactical features for native speakers of English. 3 Cr. Demand.
453. **French for Secondary Teachers.** Materials for class and extracurricular use, and practice in presenting them. Required for student teaching. 3 Cr. S.
- *454. **Teaching of Modern Foreign Languages in Secondary Schools.** Current curriculum developments, objectives and procedures in classroom and laboratory. Should be taken after student teaching. 2 Cr. W, S.
455. **French for Elementary Teachers.** Materials for class and extracurricular use, and practice in presenting them. Required for student teaching. 3 Cr. S.
- **456. **Teaching of Modern Foreign Languages in Elementary Schools.** Current curriculum developments, classroom objectives and procedures. Should be taken after student teaching. 2 Cr. W, S.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- †411-511. **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.: nine cr. of literature or consent of instructor. 1-4 Cr. each registration; max., 12 Cr. Demand.
- †414-514. **Advanced Studies in French Literature in Translation.** Seminar for intensive study of a particular movement, author, or work as announced in advance. Prereq.: nine cr. of literature or consent of instructor. 1-4 Cr. each registration; max., 12 Cr. Demand.
- †437-537. **Literature of the "Tiers-Monde".** Studies of leading writers in former French Colonies. 3 Cr. Demand.
- †460-560. **Study Abroad.** Prereq.: FREN 311, 312, or the equivalent and approval of Program Director. 8 Cr. undergraduate, 3-6 Cr. graduate. Demand.

GERMAN (GERM)

- †131, 132, 133. **Elementary German I, II, III.** Basic vocabulary and grammatical structures with emphasis on the spoken language. Must be taken in sequence. 4 Cr. each quarter. 131 — F; 132 — W, S; 133 — S, F.
- †210. **Elementary Review Grammar.** A review of first year grammar and conversation designed to prepare the student for GERM 211. Intended for students whose background do not qualify them for intermediate German. Credits do not count toward major. Prereq.: Departmental permission. 4 Cr. F.
- †211, 212. **Intermediate.** Review and expansion of basic vocabulary and grammatical structures; conversational practice. Must be taken in sequence. Prereq.: 133, or 2 or 3 years high school German. 4 Cr. each quarter, 8 Cr. 211 — F; 212 — W.
- †243. **Readings in Modern Literature.** Graded selections from prose, drama and poetry. Prereq.: 4 quarter credits at the 200-level or 4 years high school German. 4 Cr. S.
- NOTE:** 12 quarter credits in German at the 200-level (or the equivalent as determined by the department) are prereq. to all courses at the 300-level.
- †311. **Conversation and Composition I.** Written and oral practice based on themes drawn from the contemporary culture of German-speaking countries. Includes oral reports, writing of short narratives, resumes and critiques; studies in vocabulary and syntax, directed toward correct expression. Must be taken before or concurrently with the first literary course at the 300- or 400-level. 3 Cr. F.
- †312. **Conversation and Composition II.** Written and oral practice based on themes drawn

*French 454, German 454, and Spanish 454 are the same course, taught in English. A student with a major or minor combination in two languages may register for 454 only once, under one language designation.

**French 456, German 456 and Spanish 456 are the same course, taught in English. A student with a major or minor combination in two languages may register for 454 only once, under one language designation.

from the contemporary culture of German-speaking countries. Includes oral reports, writing of short narratives, resumes and critiques; studies in vocabulary and syntax, directed toward correct expression of a more sophisticated nature. Prereq.: GERM 311. 3 Cr. W.

†313. Conversation and Composition III. Written and oral practice based on themes drawn from the contemporary culture of German-speaking countries. Includes oral reports, writing of short narratives, resumes and critiques; studies in vocabulary and syntax, directed toward an appreciation of literary style. Prereq.: GERM 312. 3 Cr. S.

†321, 322, 323. Form and Style in German Literature. Representative works of German literature considered as varieties of artistic experience and expression. Need not be taken in sequence. Prereq.: see GERM 311.

321. Poetry. 3 Cr. Demand.

322. Drama. 3 Cr. S.

323. Prose Fiction. 3 Cr. W.

†341. Cultural History. Introductory studies in the history, culture and civilization of the German-speaking nations. 4 Cr. F.

351. Pronunciation and Intonation. Analysis of German phonology for native speakers of English; intensive oral practice. 3 Cr. S.

NOTE: 10 qtr. cr. in German at the 300-level are prereq. to all courses at the 400-level.

†412. Advanced Studies in German Language. Seminar for intensive study of a particular aspect of the German language, such as history or structure as announced in advance. Prereq.: GERM 452 or consent of instructor. 1-4 Cr. each registration; max., 12 Cr. Demand.

†413. Advanced Studies in German Civilization. Seminar for intensive study of a particular aspect of the historical, sociological, artistic, political or intellectual development of the German-speaking people as announced in advance. Prereq.: GERM 341 and 441 or consent of instructor. 1-4 Cr. each registration; max., 12 Cr. Demand.

415. Advanced Studies in the Teaching of German. Seminar for intensive study of a particular problem in the teaching of German language, literature or civilization. 1-4 Cr. each registration; max., 12 Cr. Demand.

†421, 422, 423. Advanced Conversation and Composition I, II, II. Advanced written and oral practice based on themes drawn from contemporary culture of German-speaking countries. Conducted on a tutorial basis and required for all majors. Course includes oral reports and discussion, writing of compositions and critiques; thorough study of vocabulary and syntax, directed toward fluent self-expression. Includes special student projects with different emphasis in each course to be decided upon by student and instructor. 1 Cr. per course. 421 — F; 422 — W; 423 — S.

†431. Medieval and Early Modern Literature. Emphasis on the Middle High German epic and courtly love lyric; writers of the Reformation, Renaissance and Baroque. 3 Cr. Demand.

†432. Classical Period. The Enlightenment and the Age of Goethe. 3 Cr. Demand.

†433. Faust. Examination of Goethe's classic within its historical and autobiographical context. 3 Cr. Demand.

434. Romanticism. Contributions of early and later Romantic authors. 3 Cr. Demand.

†435. Realism and Naturalism. Principal writers of the second half of the 19th century. 3 Cr. Demand.

†436. Twentieth-Century Literature. Trends in Twentieth-Century poetry, prose and drama. 3 Cr. Demand.

†441. German Civilization. Studies in the history and culture of the German language area of Europe. 4 Cr. Demand.

452. Advanced Grammar. Contrastive analysis of German phonological, morphological and syntactical features for native speakers of English. 3 Cr. Demand.

453. German for Secondary Teachers. Materials for class and extracurricular use, and practice in presenting them. Required for student teaching. 3 Cr. S.

***454. Teaching of Modern Foreign Languages in Secondary Schools.** Current curriculum developments, objectives and procedures in classroom and laboratory. Should be taken after student teaching. 2 Cr. W, S.

*French 454, German 454 and Spanish 454 are the same course taught in English. A student with a major or minor combination in two languages may register for 454 only once, under one language designation.

455. German for Elementary Teachers. Materials for class and extracurricular use, and practice in presenting them. Required for student teaching. 3 Cr. S.

****456. Teaching of Modern Foreign Languages in Elementary Schools.** Current curriculum developments, classroom objectives and procedures. Should be taken after student teaching. 2 Cr. W, S.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

†411-511. 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.: nine cr. of literature or consent of instructor. 1-4 Cr. each registration; max., 12 Cr. Demand.

†414-514. Advanced Studies in German Literature in Translation. Seminar for intensive study of a particular movement, author, or work as announced in advance. Prereq.: nine cr. of literature or consent of instructor. 1-4 Cr. each registration; max., 12 Cr. Demand.

†460-560. Study Abroad. German 311, 312 or the equivalent and approval of Program Director. 8 Cr. undergraduate, 3-6 Cr. graduate. Demand.

SPANISH (SPAN)

†131, 132, 133. Elementary Spanish I, II, III. Basic vocabulary and grammatical structures with emphasis on the spoken language. Must be taken in sequence. 4 cr. each quarter. 131 — F, W; 132 — W, S; 133 — S, F.

†120. Elementary Review Grammar. A review of first year grammar and conversation designed to prepare the student for SPAN 211. Intended for students whose backgrounds do not qualify them for intermediate Spanish. Credits do not count toward major. Prereq.: Departmental permission. 4 Cr. Demand.

†211, 212. Intermediate. Review and expansion of basic vocabulary and grammatical structures conversational practice. Must be taken in sequence. Prereq.: 133 or 2 or 3 years in high school. 4 cr. each qtr., 8 Cr. 211 — F, W; 212 — W, S.

†243. Readings in Modern Literature. Graded selections from prose, drama and poetry. Prereq.: 4 quarter cr. at the 200-level or 4 years in high school. 4 Cr. S.

NOTE: 12 quarter cr. of Spanish at the 200-level (or the equivalent as determined by the department) are prereq. to all courses at the 300-level.

†311. Conversation and Composition I. Written and oral practice based on themes drawn from the contemporary culture of Spanish-speaking countries. Includes oral reports, writing of short narratives, resumes and critiques; studies in vocabulary and syntax, directed toward correct expression. Must be taken before or concurrently with the first literary course at the 300- or 400-level. 3 Cr. F.

†312. Conversation and Composition II. Written and oral practice based on themes drawn from the contemporary culture of Spanish-speaking countries. Includes oral reports, writing of short narratives, resumes and critiques; studies in vocabulary and syntax, directed toward correct expression of a more sophisticated nature. Prereq.: SPAN 311. 3 Cr. W.

†313. Conversation and Composition III. Written and oral practice based on themes drawn from the contemporary culture of Spanish-speaking countries. Includes oral reports, writing of short narratives, resumes and critiques; studies in vocabulary and syntax, directed toward an appreciation of literary style. Prereq.: SPAN 312. 3 Cr. S.

†341. Culture and Civilization of the Spanish-Speaking Peoples. Introductory studies in the culture and civilization of Spain and Spanish America. 4 Cr. Demand.

351. Pronunciation and Intonation. Analysis of Spanish phonology for native speaking of English; intensive oral practice. 3 Cr. Demand.

NOTE: 6 qtr. cr. in Spanish at the 300-level are prereq. to all courses at the 400-level.

†421, 422, 423. Advanced Conversation and Composition I, II, III. Advanced written and oral practice based on themes drawn from contemporary culture of Spanish-American countries. Conducted on a tutorial basis and required for all majors. Course includes oral reports and

****French 456, German 456 and Spanish 456 are the same course, taught in English. A student with a major or minor combination in two languages may register for 456 once, under one language designation.**

discussion, writing of compositions and critiques; thorough study of vocabulary and syntax, directed toward fluent self-expression. Includes special student project with different emphasis in each course to be decided upon by student and instructor. 1 Cr. per course. 421 — F; 422 — W; 423 — S.

†431. **Medieval Literature.** From the *Cid* to the *Celestina*. 3 Cr. Demand.

†432. **The Golden Age.** Emphasis on Cervantes, Lope de Vega, Tirso de Molina, Calderon de la Barca. 3 Cr. Demand.

†433. **Neoclassicism.** Influence of French literature on Spanish literature of the 18th century. 3 Cr. Demand.

†434. **Romanticism.** Nineteenth century literature, with emphasis on Becquer, Duque de Rivas, and Zorrilla. 3 Cr. Demand.

†435. **The Generation of 1898.** Emphasis on Unamuno, Baroja, and Ortega y Gasset. 3 Cr. Demand.

†436. **Contemporary Literature.** Trends in Twentieth-Century poetry, prose and drama. 3 Cr. Demand.

†437. **Survey of Spanish American Literature I.** Spanish American literature from the Mexican Revolution to the present. 3 Cr. Demand.

†438. **Survey of Spanish American Literature II.** Major works and literary trends, Independence to the Mexican Revolution. 3 Cr. Demand.

†439. **Survey of Spanish American Literature III.** Spanish American literature of the Colonial period. 3 Cr. Demand.

†441. **Spanish Civilization.** Studies in the history and culture of Spain. 4 Cr. Demand.

452. **Advanced Grammar.** Contrastive analysis of Spanish phonological, morphological and syntactical features for native speakers of English. 3 Cr. Demand.

453. **Spanish for Secondary Teachers.** Materials for class and extra-curricular use and practice in presenting them. Required for student teaching. 3 Cr. S.

*454. **Teaching of Modern Foreign Languages in Secondary Schools.** Current curriculum development, objectives and procedures in classroom and laboratory. Should be taken after student teaching. 2 Cr. W, S.

455. **Spanish for Elementary Teachers.** Materials for class and extracurricular use, and practice in presenting them. Required for student teaching. 3 Cr. S.

456. **Teaching of Modern Foreign Languages in Elementary Schools. Current curriculum developments, classroom objectives and procedures. Should be taken after student teaching. 2 Cr. W, S.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

†411-511. **Advanced Studies in Spanish and Spanish American Literature.** Study of a particular Spanish or Spanish-American author or of specific topics in Spanish and/or Spanish-American literature. 1-4 Cr. each registration; max., 12 Cr. Demand.

†414-514. **Studies in Spanish and Spanish-American Literature in Translation.** Study of a particular Spanish or Spanish-American author or of specific topics in Spanish and/or Spanish-American literature. 1-4 Cr. each registration; max., 12 cr. Demand.

†460-560. **Study Abroad.** Prereq.: SPAN 311, 312 or the equivalent and approval of Program Director. 8 Cr. undergraduate, 3-6 Cr. graduate. Demand

RUSSIAN (RUSS)

†131, 132, 133. **Elementary Russian I, II, III.** Basic vocabulary and grammatical structures with emphasis on the spoken language. Must be taken in sequence. 4 Cr. each quarter. 131 — F; 132 — W; 133 — S.

†140. **Russian Conversation I.** A study of conversation utilizing first year grammar. 3 Cr. Demand.

*French 454, German 454 and Spanish 454 are the same course taught in English. A student with a major or minor combination in two languages may register for 454 only once, under one language designation.

**French 456, German 456 and Spanish 456 are the same course, taught in English. A student with a major or minor combination in two languages may register for 456 once, under one language designation.

†210. **Elementary Review Grammar.** A review of first year grammar and conversation designed to prepare the student for RUSS 211. Intended for students whose backgrounds do not qualify them for intermediate Russian. Credits do not count toward major. Prereq.: Departmental permission. 4 Cr. Demand.

†211, 212. **Intermediate.** Review and expansion of basic vocabulary and grammatical structures; conversational practice. Must be taken in sequence. Prereq.: 133 or 2 or 3 years high school Russian. 4 Cr. each quarter. 211 — F; 212 — W.

†243. **Readings in Modern Literature.** Graded selections from prose, drama, and poetry. Prereq.: 4 quarter cr. at the 200-level or 4 years high school Russian. 4 Cr. S.

†311. **Composition.** Practice in the writing of resumes, simple narratives, descriptions, and critiques; studies in vocabulary and syntax, directed toward appreciation of literary style. Must be taken before or concurrently with the first literary course at the 300 or 400 level. 5 Cr. F.

†312. **Conversation.** Intensive oral practice based on themes drawn from contemporary Russian culture. 5 Cr. W.

†321, 322, 323. **Form and Style in Russian Literature.** Representative works of Russian literature considered as varieties of artistic experience and expressions. Need not be taken in sequence. Prereq.: see RUSS 311. RUSS 311 must be taken before or concurrently with the first literary course at the 300- or 400-level.

321. **Poetry.** 3 Cr. Demand.

322. **Drama.** 3 Cr. Demand.

323. **Prose Fiction.** 3 Cr. Demand.

†435. **Nineteenth-Century Literature.** Romantic and realistic trends in poetry, theater, and novel. Trends in critical thought. 3 Cr. Demand.

†436. **Twentieth-Century Literature.** Trends in pre-revolutionary and Soviet prose, poetry and drama. 3 Cr. Demand.

452. **Advanced Grammar.** Intensive review and study of the principal phonological, morphological and syntactical difficulties of Russian. 3 Cr. Demand.

453. **Russian for Secondary Teachers.** Materials for class and extracurricular use and practice in presenting them. Required for student teaching. 3 Cr. Demand.

454. **Teaching of Modern Foreign Languages in Secondary Schools.** Current curriculum developments, objectives and procedures in classroom and laboratory. Should be taken after student teaching. 2 Cr. (Offered Winter and Spring.) Demand.

455. **Russian for Elementary Teachers.** Materials for class and extracurricular use and practice in presenting them. Required for student teaching. 3 Cr. Demand.

456. **Teaching of Modern Foreign Languages in Elementary Schools.** Current curriculum developments, objectives and procedures in classroom and laboratory. Should be taken after student teaching. 2 Cr. Demand.

GEOGRAPHY (GEOG) AND EARTH SCIENCE (ESCI)

Chairperson Henry Coppock. **Faculty** Addicott, A. Anderson, G. Anderson, Dockendorff, Erickson, Harper, Johnson, Nelson, Pietz, Shurr, Soroka, Tideman, Watkins, Wixon.

Two distinct programs, Earth Science and Geography, comprise the department. Each program has its own emphasis and orientation as identified below.

EARTH SCIENCE (ESCI)

The earth sciences available in this program include the geologic, atmospheric and oceanographic sciences.

The Bachelor of Science is intended to satisfy the requirements for teacher certification as set down by the State Department of Education. The Bachelor of Arts is designed for students who will terminate at the Bachelor's level to seek employment and for students who will be continuing in graduate school.

Earth Science is basically an applied science and as such draws heavily upon the disciplines of mathematics, physics, chemistry, and biology. Consequently, prerequisites in these basic sciences are required and Earth Science students are encouraged to take minors in these fields.

BACHELOR OF ARTS

Major (87)

ESCI 284, 285, 307, 308, 325, 340, 429, 450; BIOL 201; CHEM 211 & 212, or 213; MATH 241, 242, 243; PHYS 231 or 234, 232 or 235, 233 or 236, 306.

Elect 12 cr. from the following with the approval of the adviser: BIOL, CHEM, ESCI, GEOG, MATH, PHYS.

MATH 130 and 134 are required for students who have not completed high school algebra (or equivalent) and high school trigonometry (or equivalent).

Minor (36)

ESCI 284, 308, 340; PHYS 306; CHEM 211; PHYS 231 or 234.

Electives:

MATH, PHYS, CHEM, BIOL, ESCI, GEOG.

Courses to be taken with approval of adviser.

BACHELOR OF SCIENCE

Comprehensive Major (84)

ESCI 284, 285, 307, 308, 325, 340, 429, 456, 460; BIOL 201; CHEM 211 & 212, or 213; MATH 241, 242, 243; PHYS 231 or 234; 232 or 235, 233 or 236, 306.

Elect credits from the following with the approval of the adviser to bring total for major program to 84 credits: BIOL, CHEM, ESCI, GEOG, MATH, PHYS.

MATH 130 & 134 are required for students who have not completed high school algebra (or equivalent) and high school trigonometry (or equivalent).

For Science teacher certification in Minnesota after July 1, 1979 in earth science,

grades 7-12, the candidate must have a minimum of 12 credits in each of three areas: life sciences, earth sciences, and physical sciences, and a total of 78 credits in the sciences. This may include appropriate General Education credits. For more information see the science section or a B.S. adviser.

Minor (36)

ESCI 284, 308, 340; PHYS 306; CHEM 211; PHYS 231 or 234.

Electives:

BIOL, CHEM, ESCI, GEOG, MATH, PHYS, courses with approval of adviser.

BACHELOR OF ELECTIVE STUDIES

Major (48)

Completion of any 48 Cr. in Earth Science

Minor (36)

Completion of any 36 Cr. in Earth Science

COURSE DESCRIPTIONS

EARTH SCIENCE

†206. Concepts of Earth Science. Concepts from near-space astronomy, meteorology, oceanography, and geology. 4 Cr. F, W, S, SUM.

284. Physical Geology. Rocks and minerals, igneous activity, igneous rocks, weathering, erosion, sedimentary rocks, mountain building and metamorphism. Prereq.: CHEM 211. 4 Cr. F, W, S.

285. Historical Geology. Evolution of the Earth with emphasis on biological and physical events of the stratigraphic record. Lab. and some field work. Prereq.: 284. 4 Cr. W, S.

307. Field Geology. Comprehensive study of the physical and historical geology of Minnesota. Field and Lab. Prereq.: 284 and 285. 4 Cr. F.

308. Oceanography. Chemistry and Physics of the oceans, waves and tides, currents and circulation of the ocean waters, geology of the ocean basins and marine biology. Lab. Prereq.: PHYS 231 or 234. 4 Cr. F, W.

325. Mineralogy-Petrology. The properties of rocks and minerals, the crustal processes involved in the genesis of rocks and minerals. Lab. Prereq.: 284 and CHEM 212 or 213. 4 Cr. W.

330. Environmental Earth Science. A survey of the role of geology in the management and use of earth resources. Prereq.: 284. 3 Cr. W.

340. Atmospheric Physics. Atmospheric structure and processes will be presented and analyzed in terms of existing physical relationships. Prereq.: PHYS 231 or 234. 4 Cr. F, W.

345. Structural and Tectonic Geology. The study of the development and relationship of continents through the description and genesis of folds, faults and related structural features. Prereq.: 284. 4 Cr. S, even years.

429. Geophysics. The basic concepts of physics will be applied to the global earth and to the geologic processes at work in the earth. Prereq.: 284, PHYS 233 or 236, MATH 243. 4 Cr. W.

440. Dynamic Meteorology I. Thermodynamics of water vapor and moist air, hydrostatic equilibrium, lapse rates, atmospheric energy, forces, equations of motions. Mathematical treatment will include differential and integral calculus. Prereq.: PHYS 233 or equiv., MATH 242 or equiv. or approval of instructor. 4 Cr. W.

441. Dynamic Meteorology II. Rotating coordinate systems, Geostrophic flow, gradient flow, vorticity, divergence, numerical weather prediction. Prereq.: ESCI 440. 4 Cr. S.

450. Investigations in Earth Science. This course is designed to give the student an opportunity to pursue a program of concentrated study or research in some area of earth science that is of particular interest to him. All B.A. majors in ESCI are required to earn 4 Cr. 1-4 Cr. DEMAND.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

420-520. Seminar. Lectures, readings, discussions on selected topics. May be repeated. 1-4 Cr. F, W, S.

456-556. Methods and Materials for Teaching Sciences. Modern approaches to teaching science in junior and senior high school. Lab. 2 Cr. DEMAND.

460-560. Methods and Materials for Teaching Earth Science. Modern approaches to teaching junior high science in classroom and lab. including work on the major junior high science curricula with emphasis on the Earth Science curriculum projects. Lab. 2 Cr. DEMAND.

477-577. Earth Science Institute. Selected topics in earth science for experienced teachers. 3-6 Cr. DEMAND.

GEOGRAPHY (GEOG)

The GEOG program provides the student with an awareness that the earth's phenomena are spatially associated and often interdependent. Emphasis is placed upon the principles basic to a general geographic education and upon the associated skills required for the teaching of geography or for non-teaching professional employment. Important elements of geographic training include regional, topical, physical and cultural studies as well as applied skills in cartography, aerial photo interpretation, field observation and quantitative methods. Land use planning within an urban or regional framework also represents an important thrust in this program.

BACHELOR OF ARTS

Major (48)

GEOG 271, 273, 405.

Not less than 29 credits in upper division courses.

Minor (36)

GEOG 271, 273, 405.

Not less than 18 credits in upper division courses.

BACHELOR OF SCIENCE

Students who plan to seek certification as Social Studies teachers in Minnesota schools should consult their advisers to insure that certification requirements are met. Since new requirements go into effect on July 1, 1979, it is imperative that students who will complete their degrees after that date become informed of the new requirements.

Major (48)

A min. of four topical courses and four regional courses in GEOG.

SST 353.

Electives in two departments of Social Sciences other than GEOG (8).

Minor (36)

A min. of three topical courses and three regional courses in GEOG.

SST 353.

Electives in two departments of Social Sciences other than GEOG (8).

Elementary Education Minor (36)

A min. of four topical courses and four regional courses in GEOG.

Elementary Education Minor (24)

A min. of three topical and two regional courses.

Students interested in social studies programs with emphasis in Geography should refer to the interdepartmental course offerings, as listed in the section on Social Studies.

BACHELOR OF ELECTIVE STUDIES**Major (48)**

Completion of any 48 Cr. in Geography

Minor (36)

Completion of any 36 Cr. in Geography

COURSE DESCRIPTIONS**GEOGRAPHY**

†101. World Place Location. Practical, programmed course designed to teach the location and geographic significance of major cultural and economic centers, political units, and important physical features in the landscape. 4 Cr. F, W.

†171. Regional Human Geography. Fundamental concepts necessary for geographic thinking. Understandings of world patterns. Emphasis on relationships. 4 Cr. F, W, S, SUM.

230. Directed Study in Geography. Directed study of a specific topic as pre-determined by the instructor. Arranged with the consent of instructor. May be repeated with a different topic. S/U Grading. 1 Cr. DEMAND.

†270. Introduction to Cultural Geography. A topical treatment of those aspects of geography that are the result of man's modification of his environment. Topical. 4 Cr. F, W, S.

†271. Economic Geography. Types of industries. Emphasis on methods, practices, and relationships. Topical. 4 Cr. F, W, S.

†273. Physical Geography. Fundamentals of weather and climate, natural vegetation, soils, water, minerals, and landforms; emphasis on physical patterns and interrelationships. Recommended as a foundation course. Lab. Topical. 4 Cr. F, W, S, SUM.

†275. Geography of the United States. Study of how the cultural and physical elements of geography combine to impart regional identity to various areas of the country. Regional. 4 Cr. F, W, S, SUM.

†276. Geography of Canada. Regional contrasts and interrelationships, problems of human occupancy under varied environmental conditions. Regional. 2 Cr. W.

277. Geography of South America. Physical geography, resources, and people of various regions in each South American country related to economic stage and to possibilities of future development. Regional. 4 Cr. W.

279. Geography of Outdoor Recreation. Perception, use, and management of amenities of landscape, particularly landscape of the United States of America. Topical. 4 Cr. F, W.

345. Military Geography. Analysis of geographic conditions that may influence or constrain the exercise of Military Power. Topical. 4 Cr. W.

350. Aerial Photography Interpretation. Observation and analysis of photographic images on the earth's landscape for the purpose of identifying objects that reveal spatial relations, and interpreting their significance. Consent of instructor. Topical. 4 Cr. F, W, S, SUM.

368. Geography of North Africa and the Middle East. Geographical analysis of lands and peoples that occupy a world's crossroads positions; emphasis on present pattern of physical and cultural resources. Regional. 4 Cr. DEMAND.

369. Geography of Southeast Asia. Human and physical geography of Burma, Indochina, Indonesia, Malaysia, Philippines, and Thailand. Regional. 4 Cr. F.

†371. The Geography of Discovery and Exploration. Geographic interpretation of explorations of the Earth's surface, emphasizing their impact on the formation of cultural landscapes. Topical. 4 Cr. W ALT.

†372. Conservation of World Resources. Conservation movement and its expression in conservation policies and activities. Supply, use, and management of natural resources, their planned development and use for the greatest benefit of man. (May not be taken for credit if credit has already been received for BIOL 349.) Topical. 4 Cr. F, W, S.

374. Geography of Western Europe. Regional treatment of areas not dominated by the USSR. Interpretation of economic conditions. Regional. 4 Cr. F, W, SUM.

- 375. Climate & the Human Environment.** A study of climatology as related to both natural and man-modified environments. Emphasis is upon urban climates, climatic trends, and climate as applied to human activities. Topical. 4 Cr. S.
- †376. Geography of Minnesota.** Regional treatment of the geography of Minnesota, including distribution of surface features, natural resources, climatic differences, crops, and man. Regional. 3 Cr. F, W, S, SUM.
- 378. Geography of the USSR.** Physical, cultural, economical, historical and political study of geography of the land and peoples now a part of the USSR. Geographic analysis of Russia's strengths and weaknesses; limited regional work. Regional. 4 Cr. S, SUM.
- †379. American Wilderness.** Perception, delineation, use and analysis of wilderness land in the United States. Topical. 4 Cr. W, S.
- 380. Transportation Geography.** A study of the transportation networks of the world, and interpretation of the geographic, economic, and political differences from place to place that have produced transportation patterns. Special emphasis on transportation in the United States. Topical. 4 Cr. W.
- 388. Australia and New Zealand.** Regional study of those two parts of the world from standpoint of human response to environment. Regional. 2 Cr. S.
- 390. Geography Field Course.** Concepts and techniques of geographic field work. Practice in data collection and appraisal of cultural and physical features. Topical. 4 Cr. F.
- 394. Introduction to Urban Planning.** Examination of the theory, objectives, and methods of the Planning Process, particularly in the United States. Topical. 4 Cr. F, W, S.
- 427. Geography of Landscapes.** A study of landscape assemblage, its perception, attitudes, and values. Topical. 2 Cr. W.
- 444. Internship: Practical Geography.** Permission of instructor required. A maximum of 8 credits may be used toward a major; 4 credits used toward a minor; remainder will be used in general electives. 1-16 Cr.
- †471. Historical Geography.** Geographic factors acting upon discovery and settlement of North America to 1890. Topical. 4 Cr. W ALT.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 405-505. Cartography.** Map making and construction. Work with map making tools. Consent of instructor. Topical. 4 Cr. F, W, S, SUM.
- 406-506. Advanced Cartography.** Advanced map construction. Application of complex cartographic techniques to map making. Emphasis placed upon cartographic representation of statistical data. Prereq.: 405-505 and/or consent of the instructor. Topical. 4 Cr. S, SUM.
- 454-554. Regional Planning.** Examination of the attitudes, physical basis, and solutions to regional problems that are beyond being simply "rural" or "urban" in nature. Topical. Prereq.: Consent of instructor. 4 Cr. S.
- 459-559. Outdoor Recreation Land Use.** Case studies and field investigations of outdoor recreation land use and related activities. Topical. Prereq.: GEOG 279 or consent of instructor. 4 Cr. F, S.
- 470-570. Geography of East Asia.** Physical and human geography of China, Japan, and Korea; geographic aspects of population pressure, development and use of resources and international relationships. Regional. 4 Cr. S.
- 472-572. Geomorphology.** The configuration of the earth's surface and physical processes which have brought the surface to its present condition. Topical. 4 Cr. S.
- 474-574. Meteorology.** The study of atmospheric phenomena; familiarity with sensing and recording instruments; the analysis of weather maps and weather forecasting. Topical. 4 Cr. F.
- 475-575. 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. W.
- 476-576. Geography of Sub-Saharan Africa.** Physical geography, resources and people of the various regions of Africa related to economic stage and possibilities for future development. Regional. 4 Cr. S.

479-579. Geography of South Asia. Human and physical geography of India, Pakistan, Afghanistan, Ceylon and the Himalayan Kingdoms. Regional. 4 Cr. DEMAND.

480-580. Agricultural Geography. World area differences in crops, livestock, and technological patterns. Special emphasis on farming in the United States. Topical. 4 Cr. F.

484-584. Geography of the Pacific Basin. Human and physical geography of the Pacific Basin. Special emphasis given to the islands of Melanesia, Micronesia, and Polynesia. Regional. 2 Cr. S.

486-586. Political Geography. Geographical strengths and weaknesses of the Great Powers which influence political changes in the world today. An elective in Political Science. Topical. 4 Cr. W.

490-590. Urban Geography. The development of spatial patterns and relationships within and among urban centers and non-urban areas. Topical. 4 Cr. S.

492-592. Water Resources. Survey of major problems in the development and management of water resources: problems of supply, distribution, quality, pollution, floods and variability; case-studies in selected regions. Topical. 4 Cr. S.

498-598. Geography of Middle America. Geographic analysis of Mexico, Central American countries, and West Indian Islands. Regional. 4 Cr. S.

HISTORY (HIST)

Chairperson David Overy. **Faculty** Acrea, Gambill, Gower, Gruver, Liszka, Massmann, Medler, D. Peterson, Pluth, Samarrai, Vaughter.

The objectives of the History Department include providing an opportunity for students to learn about and to gain a historical perspective to past events and people; increasing the awareness and understanding of their own cultural heritage, the nature and backgrounds of contemporary civilizations, and the multicultural dimensions of the human experience and reality; helping students understand the patterns of change and to stimulate objective analysis and a broader perspective to the present and future conditions of man and societies; providing background courses for the other Humanities and Social Sciences and for area study and special programs; providing major and minor programs on the undergraduate and graduate levels for individuals seeking special career objectives as well as those interested in a program designed to broaden their perspectives and knowledge.

The general nature of historical study was pointed out by President Woodrow Wilson when he said "the worst possible enemy to society is the man who . . . is cut loose in his standards from the past, and universities which train men to use their minds without carefully establishing the connection of their thought with that of the past, are instruments of social destruction." According to E. H. Carr, history serves a dual function "to enable man to understand the society of the past and to increase his mastery over the society of the present."

Students interested in social studies programs with emphasis in history should refer to the programs listed in social studies.

BACHELOR OF ARTS*

Major (48)

At least 36 history cr. must be at the 200 level or above. A min. of one history course is to be taken from each of the following areas (16):

- U.S. (HIST 140 or 141).**
- Ancient, Medieval, and/or European up to 1500.
- Europe since 1500.
- Asia, Africa, or Latin America.

HIST Electives (32).

Student is required to either take a min. of 12 cr. in a foreign language or a minor outside of history.

Minor (36)

At least 24 history cr. must be at the 200 level or above. A min. of one history course is to be taken from each of the following areas (16):

- U.S. (HIST 140 or 141).**
- Ancient, Medieval, and/or European up to 1500.
- Europe since 1500.
- Asia, Africa, or Latin America.

HIST Electives (20).

BACHELOR OF SCIENCE***Major (64)*****

At least 32 history cr. must be at the 200 level or above. A min. of one history course is to be taken from each of the following areas (16):

- a. U.S. (HIST 140 or 141).**
- b. Ancient, Medieval, and/or European up to 1500.
- c. Europe since 1500.
- d. Asia, Africa, or Latin America.

HIST Electives (28).

SST 353 (4).

Electives outside of history dept. (16).

Major (48)***

At least 32 history cr. must be at the 200 level or above. A min. of one history course is to be taken from each of the following areas (16):

- a. U.S. (HIST 140 or 141).**
- b. Ancient, Medieval, and/or European up to 1500.
- c. Europe since 1500.
- d. Asia, Africa, or Latin America.

HIST Electives (28).

SST 353 (4).

Minor (36)***

A min. of one history course is to be taken from each of the following areas (16):

- a. U.S. (HIST 140 or 141).**
- b. Ancient, Medieval, and/or European up to 1500.

c. Europe since 1500.

d. Asia, Africa, or Latin America.

HIST Electives (8)

SST 353 (4)

Electives in two of the following depts.: ECON, GEOG, POL, or SOC and ANTH (8).

Elementary Education Minor (36)

A min. of one history course is to be taken from each of the following areas (16):

- a. U.S. (HIST 140 or 141).**
- b. Ancient, Medieval, and/or European up to 1500.
- c. Europe since 1500.
- d. Asia, Africa, or Latin America.

HIST Electives (12).

Electives in two of the following depts.: ECON, GEOG, POL, or SOC and ANTH (8).

Elementary Education Minor (24)

A min. of one history course is to be taken from each of the following areas (16):

- a. U.S. (HIST 140 or 141).**
- b. Ancient, Medieval, and/or European up to 1500.
- c. Europe since 1500.
- d. Asia, Africa, or Latin America.

HIST Electives (8).

* The study of language in addition to English is strongly recommended as a valuable means to increased comprehension of and competence in the history and culture of a people. Many graduate schools not only require language competence but also use such competence as part of their entrance requirements.

** (History 140 or 141) Student may petition to dept. chairperson for permission to substitute a course from History 340-344.

*** It is suggested you contact your history adviser to determine what course work you will need for Minnesota Certification in addition to the major or minor.

Since new requirements will go into effect on July 1, 1979, it is imperative that students who will complete their degrees after that date become informed of the new requirements.

BACHELOR OF ELECTIVE STUDIES

Students may present a self-selected pattern of courses to the department for an adviser approved 48 cr. major or 36 cr. minor.

Major (48)

4 HIST courses at 100 and/or 200 level (16).

4 HIST courses at 300 and/or 400 level (16).

HIST Electives (16).

Minor (36)

3 HIST courses at 100 and/or 200 level (12).

3 HIST courses at 300 and/or 400 level (12).

HIST Electives (12).

COURSE DESCRIPTIONS

†101. **Studies in World History.** An interpretive study of general trends and selected topics in various periods and subjects that are cross-cultural, national, and regional in scope. May be repeated with different instructor and subject. 4 Cr. F, W, S.

†105. **Studies in U.S. History.** An interpretive study of general trends and selected topics in

the social, cultural, political and economic history of the U.S. May be repeated with different instructor and subject. 4 Cr. F, W, S.

†111. Studies in European History. An interpretive study of general trends and selected topics in the social, cultural, political, and economic history of Europe. May be repeated with different instructor and subject. 4 Cr. W, S.

†131. Introduction to African History. An interpretive study of general trends and selected topics in the social, cultural, political, and economic history of Africa. 4 Cr. F, W, S.

†140. America to 1865. Interpretations of general trends and topics from colonization through the Civil War. 4 Cr. F, W, S.

†141. United States since 1865. Interpretations of general trends and topics from Reconstruction through the mid-twentieth century. 4 Cr. F, W, S.

†200. Ancient Civilizations. The origins of man, early developments in the Near East, Greece, and Rome. 4 Cr. F, W, S.

†201. Europe, 1500-1715. Renaissance and Reformation; rise of nation states. 4 Cr. F, W.

†202. Europe, 1715-1870. Revolutionary nationalism and decline of absolutism; Industrial Revolution and Imperialism. 4 Cr. W, S.

†203. Europe, Since 1870. Imperialism and nationalism; World Wars I and II; totalitarianism and democracy; rival state systems. 4 Cr. F, S.

323. Medieval Europe, 325-1500. The Germanic invasions, feudalism and manorialism; the feudal monarchies; the medieval church; intellectual life. 4 Cr. W.

324. The Medieval Mediterranean World, 622-1492. The rise of Islamic civilization; the relations between Islam, Byzantium and Europe. 4 Cr. Demand.

325. The Renaissance, 1300-1500. Growth of the secular spirit and state; rise of humanism; social and economic forces; beginnings of European expansion; the dawn of modern science. 4 Cr. F.

326. The Reformation, 1500-1648. Protestant and Catholic Reformations; religious wars, rise of the modern state, modern culture and capitalism. 4 Cr. W.

327. Ancient Regime, 1650-1789. Social and cultural forces in Western Europe before the French Revolution. 4 Cr. S.

328. The French Revolution and Napoleon, 1787-1815. Ideas and conditions which produce revolution; the Revolution in France and its extension throughout Europe. 4 Cr. Demand.

329. Europe, 1815-1850. Political, intellectual, and social developments; emphasis on the origins of the revolutions of 1848. 4 Cr. Demand.

330. Europe, 1850-1900. Political, intellectual, and social developments; emphasis on the unifications of Italy and Germany; rising international hostilities. 4 Cr. Demand.

331. Europe, 1900-1939. Political, intellectual, and social developments; emphasis on the origins of World Wars I and II. 4 Cr. F.

332. Europe Since 1939. Political, intellectual, and social developments; emphasis on the postwar recovery of major nations. 4 Cr. W.

336. England, 1485-1689. Political, constitutional, and social developments; growth of Parliamentary control. 4 Cr. Demand.

337. Great Britain Since 1689. Development of parliamentary democracy; the Empire; economic, social, and cultural developments. 4 Cr. Demand.

338. Modern Germany. Germany's rise from a nonpolitical entity to a modern state; emphasis on nationalism and militarism. 4 Cr. S.

339. Modern France. France since the Revolution; emphasis on development of French institutions, culture, and ideas. 4 Cr. W.

340. Colonial America, 1607-1783. European colonization; colonial society; Revolution. 4 Cr. Odd years.

341. United States, 1783-1848. Confederation; Constitutional government; Federalist era; Jeffersonian and Jacksonian Democracy; Manifest Destiny; Sectionalism. 4 Cr. Odd years.

342. Civil War and Reconstruction, 1848-1877. Sectionalism; disunion and war; the Confederacy; reunion and reaction. 4 Cr. F.

343. United States, 1877-1920. Protests by economic, social, and political groups affected by rapid urban-industrial development; Progressivism as a response to social change; the domestic impact of World War I. 4 Cr. W.

- 344. United States, 1920 to Present.** Development of the modern liberal state; domestic and foreign problems. 4 Cr. S.
- 345. American Economic.** Colonial times to present; transformation from an agricultural to an industrial economy. An elective for majors in Economics. 4 Cr. W.
- 346. Minnesota.** Indians, explorers, early settlement, territorial period, and statehood years. 3 Cr. F, W, S.
- 347. American Urban History.** A study of urban America from colonial to modern times, emphasizing the origin and growth of the cities and their impact upon the development of the United States. 4 Cr. S.
- 348. American Labor History.** A chronological survey of conditions of work and workers' movements from colonial times to the present. 3 Cr. Odd years.
- 350. Black Americans.** A topical and chronological survey including African background, Western racism, slave systems, beginning of Black institutions in U.S., early Black nationalism and protest and civil rights movements. 4 Cr. F.
- 351. Black American Cultural and Intellectual.** Topics include Black folk culture, middle class ideology, music, literary and historical writings, nationalism and assimilation, and the search for a Black aesthetic. 4 Cr. Odd years.
- 352. Native Americans.** A study of the Indian people in the United States from early man to modern times. Discussion of Indian cultures, Indian-white relations, and the Indian today. 4 Cr. S.
- 354. Mexican-Americans.** A historical study of the Mexican-Americans with some attention given to their Spanish and Indian backgrounds in Mexico, but with primary emphasis upon the Mexican-Americans in the U.S. since 1848. 4 Cr. Odd years.
- 356. Women in History.** Study of women's roles in shaping societies and cultures of the past and their struggle to achieve equality with men. 4 Cr. W.
- 358. Immigration to U.S.** A survey of the reasons why people migrated, the areas of settlement, their contributions to American society, and the problems they faced within the United States. 4 Cr. Odd years.
- 361. Latin America, 1492-1825.** Spanish and Portuguese colonial empires in America from their origins through the Wars of Independence. 4 Cr. F.
- 362. Latin America Since 1825.** Development of the major Latin American countries since the Wars of Independence. 4 Cr. W.
- 370. Africa to 1500.** Approaches to non-Western historiography; the origins of man in Africa; Ancient African kingdoms and Roman, Byzantine and Islamic influences up to the coming of the Portuguese. 4 Cr. W.
- 371. Africa Since 1500.** African reactions to European discovery, settlement, and colonial domination of Africa; European colonial regions to the advent of African self-rule. Prereq.: 370 or consent of instructor. 4 Cr. F, S.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 420-520. European Intellectual, 1500-1800.** Great ideas of the Renaissance, Reformation, and Enlightenment, and early scientific thought. 4 Cr. Demand.
- 421-521. European Intellectual Since 1800.** Origins of modern European ideologies: romanticism, nationalism, Liberalism, socialism, Darwinism, and totalitarianism. 4 Cr. Demand.
- 445-545. United States Military History.** Military problems and accomplishments from 1775 to the present. 4 Cr. Demand.
- 448-548. U.S. Social and Intellectual to 1865.** Puritanism, revivalism, early American political thought, economic values, agrarianism, reform movements, literary traditions, individualism, are among topics discussed. 4 Cr. Odd years.
- 449-549. U.S. Social and Intellectual Since 1865.** "Rugged individualism," pragmatism, reform movements, evolution, racism, liberalism, conservatism, radicalism, are among the topics discussed. 4 Cr. Odd years.
- 455-555. U.S. Foreign Relations, 1775-1898.** American foreign policy; neutral rights; Monroe Doctrine; influence of sectionalism on foreign relations; Civil War and its effects; overseas expansion. 4 Cr. Odd years.
- 456-556. U.S. Foreign Relations Since 1898.** The U.S. as a world power; diplomatic policies in two world wars and their aftermath. 4 Cr. Demand.

- 458-558. The American West.** Topical and chronological consideration of western land policy, territorial government; Indian policy, economic development. 4 Cr. Demand.
- 463-563. U.S. Latin American Relations.** General trends with emphasis on specific relations with selected Latin American countries or regions. 4 Cr. Demand.
- 472-572. European Historiography Since 1750.** Readings in and interpretations of important European historians. 3 Cr. Demand.
- 473-573. American Historiography.** Reading and discussion of historians and historical interpretation from Colonial America to the present. 3 Cr. Odd years.
- 474-574. African or Asian Historiography.** Problems, research, methods, writing and interpretation in selected African and Asian topics. 3 Cr. Demand.
- 478-578. 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. F. Odd years.
- 480-580. Seminar in American History.** Intensive reading and research in one area or topic of U.S. or Latin Amer. hist. Limited to senior or graduate students. 3 Cr. May be repeated with different topic. Max. 9 Cr. Demand.
- 483-583. Seminar in European History.** Bibliographical study, research, and discussion of a selected topic in European hist. Limited to senior or graduate students. 3 Cr. May be repeated with different topic. Max. 9 Cr. Demand.
- 486-586. Seminar in Africa or Asia.** Reading and research on a selected topic (Africa or Asia). Limited to senior or graduate students. 3 Cr. May be repeated with different topic. Max. 9 Cr. Demand.

INTERDISCIPLINARY STUDIES

Chairperson Harold Lieberman. **Faculty** Downes, Frost, Haniff, Hellwig, Hott, J. Kelley, Nunn, Redd, Rouff, E. Simpson, Stensland, N. Thompson, Wolfer.

The Department of Interdisciplinary Studies has general responsibility for the administration of Social Science and Social Studies programs and for the following broad interdisciplinary programs: American Studies, East Asian Studies, Latin American Studies, and Urban Affairs. In addition, each of the latter programs has a director and a program advisory committee.

AMERICAN STUDIES (AMST)

Director N. Thompson. **Faculty Committee** Bovee, Coen, Pluth, Simpson.

The American Studies program draws on the academic offerings of the whole university. The program is designed to produce "Americanists" who are intellectually capable of dealing with the complicated and often contradictory patterns of American civilization. It encourages the student to study humankind as it lives, to anticipate the innovative-conventional, rational-irrational patterns that mark human effort, to accept the rough texture of myth-reality-fancy that results from a people's experience, to recognize the impact of such cultural effects on the human psyche.

To gain the wide-ranging insights necessary to such an objective, the student is encouraged to plan a personal program, under the guidance of an adviser, which draws on a variety of the academic disciplines offered by the university. To aid the student in maintaining control of the resulting diversity of attitudes and thoughts, the American Studies faculty provides a series of courses which seek to cross-fertilize the findings of history, literature philosophy, the arts, the natural sciences and the social sciences in a manner that helps the student to examine critically that tension that creates both the equilibrium and the disequilibrium of American life.

The design of the American Studies program provides the flexibility needed by transfer students, junior college graduates and people investing in continuing education as well as giving the traditional resident student a large measure of freedom in developing a program of study to meet her or his individual interests.

BACHELOR OF ARTS

Major (60)

The program shall be constructed at the time the student elects the major. It will be prepared by the student in consultation with the major adviser from the List of Courses Available for American Studies (see adviser) and shall take the following form:

The AMST Synthesis: 17 Cr.

Amer. Hist.: 8–10 Cr.

Amer. Lit.: 9–12 Cr.

Amer. Philos. and the Fine Arts: 9–12 Cr.

The Amer. Society: 9–12 Cr.

Foreign Backgrounds to Amer. Civilization:
6–10 Cr.

Recognizing that the study of a single culture can defeat an important attitudinal objective of the program in American Studies, the faculty recommends that each student be involved in a non-American experience.

The study of a language in addition to English is strongly recommended as a valuable means to increased comprehension of and competence in the history and culture of a people. Many graduate schools not only require language competence but also use such competence as part of their entrance requirements.

BACHELOR OF SCIENCE

Major (84)

(For certification in Social Studies.)

The program shall be constructed at the time the student elects the major. It will be prepared by the student in consultation with the major adviser from the List of Courses Available for American Studies (see adviser) and shall take the following form:

The AMST Synthesis: 17 Cr.

Amer. Hist.: 16–20 Cr.

Minor (36)

AMST 101, 102, 201, 301, 390.

A program of 21 cr. selected from the List of Courses Available for American Studies (see adviser) under the direction of an adviser in American Studies.

Minor (36)

AMST 101, 102, 201, 301, 390.

A program of 21 cr. selected from the List of Courses Available for American Studies (see adviser) under the direction of an adviser in American Studies.

Amer. Lit.: 6–10 Cr.

Amer. Philos. and the Fine Arts: 4–8 Cr.

The Amer. Society: 4–8 Cr.

Foreign Backgrounds to Amer. Civilization:
16–20 Cr.

SST 353.

It is recommended that the student complete GEOG 171 as part of her/his General Education requirements.

Elementary Education Minor (36)

AMST 101, 102, 201, 301, 390.

A program of 21 cr. selected from the List of Courses Available for American Studies (see adviser) under the direction of an adviser in American Studies.

COURSE DESCRIPTIONS

+101. American Civilization I. Interdisciplinary exploration of significant cultural trends and periods in early America. Uses methods and materials of history, literature, the arts and the social sciences. Need not be taken in sequence. 4 Cr. F, W, S.

+102. American Civilization II. Interdisciplinary exploration of significant cultural trends and periods in later America. Uses methods and materials of history, literature, the arts and the social sciences. Need not be taken in sequence. 4 Cr. F, W, S.

201. Pro-Seminar in American Studies. An introduction to research techniques and materials and to preparation of research papers. 2 Cr. F, S.

301. Seminar in American Studies I. Selected problems in the development of a synthesis of American culture. Prereq.: 201 and Junior standing or consent of the instructor. 2 Cr. W.

+302. The Special Seminar. Small group discussion focusing on various trends and concepts in American Culture from political thought to popular music. Specific titles to be listed in the class schedule. May be repeated with the consent of the instructor. 2 Cr. W, S.

390. Classics in American Studies. Acquaints students with some important works by American Studies scholars. Materials illustrate the range of methods and subjects open to interdisciplinary investigation. Prereq.: 301 or consent of instructor. 3 Cr. S.

401. Seminar in American Studies II. Research on a theme in 20th century America that results in a synthesis. Prereq.: 301 and Senior standing or consent of instructor. 2 Cr. S.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

†490-590. Contemporary American Cultures. An interdisciplinary exploration of one of the cultures in contemporary America through its political, philosophical, literary and artistic creations. Specific titles to be listed in class schedule. May be repeated with consent of instructor. 4 Cr. W, S.

EAST ASIAN STUDIES (EAST)

Coordinator William Nunn. **Faculty Committee** Masih, Melton, J. Phillips, Pietz, Roy, Schmidt, Schwerdtfeger.

The Tri-College East Asian Studies Program is a cooperative effort to improve opportunities for students to learn about that area of the world. Students who participate in the program register and pay fees on their own campus, but may travel to one of the other two campuses for instruction. Courses listed at Saint Cloud State University (SCSU) are handled in the regular way, but students who elect to take courses at The College of Saint Benedict (CSB) or Saint John's University (SJU) should consult with the campus coordinator in advance.

BACHELOR OF ARTS AND BACHELOR OF SCIENCE

Minor (30)

Required Courses:

EAST 363 or 364

Select 12 cr. from at least 2 fields:

ANTH 356; ECON 480; GEOG 470; HIST 368, 369, 372, 373; POL 432, SSCI 470 (Area Studies — Japan or China); Comparative Communist Political Systems (SJU); Seminar in Historical Studies: Afro-Asian (SJU); East Asian History (CSB)

Select 4 cr. from:

ART 438; ENGL 394; PHIL 240, 340; Arts of Asia (CSB); Art of Japan Seminar (CSB); Asian Ceramics Seminar (CSB); Chinese Literature in English (CSB); Elementary Chinese (CSB); Intermediate Chinese (CSB); Independent Study-Chinese (CSB)

Electives to be selected from any of the above (8)

COURSE DESCRIPTIONS

†363. Tri-College Faculty-Student Seminar — Japan. An interdisciplinary study of Japan. Consent of coordinator required. 2 credits per quarter for three consecutive quarters for a total of 6 Cr. ALT.

†364. Tri-College Faculty-Student Seminar — China. An interdisciplinary study of China. Consent of coordinator required. 2 cr. per quarter for a total of 6 Cr. ALT.

LATIN AMERICAN STUDIES (LAST)

Director Dale Peterson (History). **Faculty Committee** G. B. Erickson (Geography), Hellwig (Interdisciplinary Studies), Kilkelly (Political Science), Lane (Sociology/Anthropology), A. Larsen (Economics), Melton (English), O'Neill (Foreign Languages).

BACHELOR OF ARTS

Major (66)

1. 30-31 required cr. in the social sciences: ANTH 354 or 463, ECON 480, GEOG 277, 498; HIST 361, 362, POL 333, SSCI 460 or 470.
2. 21 required cr. in Spanish: SPAN211, 212, 243, 311, 312, and SPAN437 or 438 or three one cr. courses in SPAN421, 422, and 423.
3. 14-15 elective cr. to be chosen from the following courses: ANTH 354, 463, ECON 445, 474, ENG 390, HIST 350, 463, 480, LAST 250, SSCI 460, 470, Independent Study 199-499.

Minor (36)

A student must complete all of the requirements of Group 1 as well as 5-6 cr. from Group 3.

COURSE DESCRIPTION

250. Introduction to Latin America. An interdisciplinary exploration of the Latin American experience, utilizing materials from geography, sociology, anthropology, history, economics, political science and literature. 4 Cr. S.

SOCIAL SCIENCE (SSCI)

Most of the problems confronting man may fruitfully be examined from many points of view. An understanding of the problem of poverty, for example, cannot be achieved without some attention to the economic, geographical, historical, political, psychological and sociological dimensions, not to mention other areas, including those outside the social sciences. Thus, the department's commitment in social science is an interdisciplinary one.

Students interested in a multidisciplinary approach to social science should consider programs offered below or those listed in the section on Social Studies. Students should also see programs offered in American Studies, Anthropology, East Asian Studies, Economics, Environmental Studies, Geography, History, Latin American Studies, Political Science, Sociology, and Urban Affairs.

Students seeking admission to a major or minor program in Social Science must have at least a 2.0 grade point average in all courses taken in the Departments of Economics, Geography, History, Interdisciplinary Studies (Social Science), Political Science, Psychology, and Sociology and Anthropology.

Transfer credits carrying a grade less than "C" are not usable in a major or minor.

A major or minor in Social Science may not be combined with a major or minor in Economics, Political Science, Sociology, or Anthropology.

Students who plan to seek certification as Social Studies teachers in Minnesota schools should consult their advisers to insure that certification requirements are met. Since new requirements go into effect on July 1, 1979, it is imperative that students who will complete their degrees after that date become informed of the new requirements.

BACHELOR OF ARTS

Social Science Major (48)

ECON 273, 274; POL 211, 312; SOC 260; ANTH 267 or SOC 465; SSCI 421.

One 3 or 4 credit elective from each of the following areas: ECON; GEOG or HIST; POL; SOC.

Electives in ANTH, ECON, POL, SOC, SSCI.

Social Science Minor (36)

ECON 273, 274; POL 211, 312; SOC 260; ANTH 267 or SOC 465; SSCI 421.

Electives in ANTH, ECON, POL, SOC, SSCI.

BACHELOR OF SCIENCE

Social Science Major (60)

ECON 273, 274; POL 211, 312; SOC 260, 465; ANTH 267; SSCI 421; SST 353.

One 3 or 4 credit elective from each of the following areas: ECON; GEOG or HIST; POL.

Electives in ANTH, ECON, POL, SOC, SSCI.

Social Science Minor (36)

ECON 273, 274; POL 211, 312; SOC 260; ANTH 267 or SOC 465; SSCI 421; SST 353.

One 4 credit course in GEOG or HIST.

Social Science Major (48)

(This major is open only to the student who elects a minor field.)

ECON 273, 274; POL 211, 312; SOC 260; ANTH 267 or SOC 465; SSCI 421; SSCI 460 or 470; SST 353.

One 3 or 4 credit elective from each of the following areas: ECON; GEOG or HIST; POL; SOC.

Elementary Education Minor (36)

ECON 273, 274; POL 211, 312; SOC 260; ANTH 267 or SOC 465; SSCI 421.

Electives in ANTH, ECON, POL, SOC, SSCI.

BACHELOR OF ELECTIVE STUDIES**Social Science Major (48)****Social Science Minor (36)**

Students will design their own programs of self-selected courses in accordance with established departmental guidelines. Proposed programs must then receive the approval of the department.

COURSE DESCRIPTIONS

+104. General Social Science. Economic, political, and sociological factors which affect the person in contemporary American society. Designed to lead to understanding of complexities and responsibilities of day-by-day living in the modern world. Specific topics to be listed in the class schedule each quarter. 4 Cr. F, W, S, SUM.

+204. Themes in the Social Science. Selected interdisciplinary social scientific tools will be applied to a special interest area such as "Death and Dying," "Poverty," "The Scientific Revolution," "The New American Indian." 4 Cr. F, W, S, SUM.

+301. Futuristics. An examination of the forces creating the rapid social changes which students will have to anticipate in adapting to their future life styles. 4 Cr. F, W, S, SUM.

320. Elements of Social Science. Concepts in social science appropriate for elementary school. Open to students not majoring in elementary education, but only as a general elective. Not open to secondary majors or minors in any of the social sciences. 3 Cr. F, W, S, SUM.

370. Orientation to Denmark. Intended primarily for students who will take part in the Study Center in Denmark, this course is designed to help them understand the people of Denmark and their social system. 2 Cr. S.

400. Special Problems in Social Science. 1-4 Cr.

+401. Concepts in Social Science. Application of economic, political, and sociological concepts to issues in contemporary societies. Specific titles to be listed in the class schedule each quarter. 4 Cr. F, W, S, SUM.

421. Integrated Social Science. Training in the modes of thought, the language, and the basic models common to the social science disciplines; practice in the application of social science to a number of typical policy decisions. Prereq.: one course in each of the following areas: ECON; POL; SOC or ANTH. 4 Cr. F, W.

444. Internship. 1-16 Cr.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

+460-560. 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. 1-4 Cr. F, W, S, SUM.

+470-570. 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. 1-4 Cr. F, W, S, SUM.

+476-576. Black and American: Contemporary Afro-American Thought. An exploration of contemporary Afro-American responses to their condition in American society utilizing concepts and materials from the social sciences. 4 Cr. W ALT.

SOCIAL STUDIES (SST)

Students interested in a comprehensive multidisciplinary approach to social science should consider programs offered below or those listed in the section on Social Science. Students should also see programs offered in American Studies, Anthropology, East Asian Studies, Economics, Environmental Studies, Geography, History, Latin American Studies, Political Science, Sociology, and Urban Affairs.

Students who plan to seek certification as Social Studies teachers in Minnesota schools should consult their advisers to insure that certification requirements are met. Since new requirements go into effect on July 1, 1979, it is imperative that students who will complete their degrees after that date become informed of the new requirements.

BACHELOR OF SCIENCE

Social Studies Major (84)

Economic Emphasis

ECON 273, 274; GEOG 271; HIST 345; POL 211; SOC 260; ANTH 267; SSCI 421; SST 353.

One course from: ECON 480, 483; HIST 480; SOC 379; SSCI 460, 470.

Elective credits: ECON (16); GEOG (8, including one topical and one regional course); HIST (8); POL (8); SOC and ANTH (4); the balance from any of the above fields.

Geography Emphasis

GEOG: 40 credits, with at least five topical and five regional courses.

ECON 273; POL 211; SOC 260; SSCI 421; SST 353.

Elective credits: ECON (4); HIST (8); POL (4); SOC or ANTH (4); related area (4).

History Emphasis

HIST: 28 cr. must be taken at 200 level or above.

16 Cr., with a min. of one course from each of the following areas: U.S. 140 or 141 (or with permission of dept. chairperson, a course from 340-344); Ancient, Medieval, and/or European up to 1500; Europe since 1500; Asia, Africa, or Latin America.

ECON 273, 274; GEOG (one regional and one topical course); POL 211; SOC 260; SSCI 421; SST 353.

Elective cr.: HIST (24); POL (4); SOC or ANTH (4); related areas (4).

Political Science Emphasis

POL 211, 251, 312; ANTH 250; ECON 273, 274; GEOG 271; HIST 140, 141 (or, with permission of the History department chairperson, courses from 340-344); SOC 260; SSCI 421; SST 353.

Elective credits: POL (24, except that 201 may not be used and no more than 8 credits from 444 may count toward the major); GEOG (4); ANTH, ECON, GEOG, HIST, SOC, or SSCI (8).

Social Science Emphasis

(Admission requirements are the same as for Social Science majors.)

ANTH 267; ECON 273, 274; POL 211, 312; SOC 260, 465; SSCI 421 (or other course in methods of social research); SST 353.

Elective credits in ECON, POL, SOC/ANTH, or SSCI (18, including at least one course in each of the first three fields named).

Other elective credits: GEOG (one topical and one regional course); HIST (8); related areas (12).

Elementary Education

Social Studies Minor (36)

(Admission requirements are the same as for Social Science majors.)

ECON 273; GEOG 271 or 273; HIST (any 200-level course); POL 211; SOC 260; SSCI 421.

One elective in each of three of the above fields (12).

COURSE DESCRIPTION

353. Teaching Social Studies in Secondary School. Philosophy, methods, and materials in the teaching of social studies in the secondary school. (It is recommended that this course be taken in the quarter immediately preceding student teaching.) 4 Cr. F, W, SUM.

URBAN AFFAIRS (URB)

Director James W. Kelley. **Faculty Committee** Stahlecker (Business), Lofgreen (Economics), Gambill (History), Downes (Interdisciplinary Studies), Addicott (Geography), and Paschall (Sociology).

The urban affairs program is an all-university program. The program is directed towards producing "urban generalists." Students will be encouraged to combine this program with an emphasis in one of the many disciplines offered by the university, which will aid in bridging the gap between depth and breadth. The program via the urban core, the emphasis, independent study, seminars, internships, applied research, and close contacts between students and urban affairs personnel is intended to focus on urban relationships and give an interdisciplinary perspective for advanced study and activities in the fields of urban studies.

While traditional methods of instruction, such as lectures and discussions are used, other approaches are also adopted. There is an emphasis on projects that direct students towards real problems and into contact with persons concerned with solving such problems. The program is especially adaptable to junior college transfer students, the part-time student, and those who are looking for mid-career development or new career directions. Career and "life style" planning is an ongoing and important part of the urban affairs program. Some of the careers and graduate programs that urban affairs majors might pursue include:

City and Regional Planning	Manpower Utilization
Environmental Planning	Public Safety Planning
Recreation Planning	Consumer Investigation
Environmental Design	Comprehensive Health Planning
Transportation Planning	Services to the Aged
Economic and Industrial Development	Urban-Rural Relations
Public Administration	American Urban History and Literature
Community and Social Services	Urbanism in Higher Education
Community Education	Community Public Relations

A major feature of the program is the internship. The internship will serve the student, the university, and society by providing the experiences in an urban setting. It is hoped that the "service-learning-research internship" will add to the student's enthusiasm for learning and motivate him through the excitement of discovery and creativity. Placement of the intern will depend upon each student's interests and needs. A wide variety of internships is available with planning agencies, fine arts centers, hospitals and health planning facilities, public and private consumer service organizations, numerous local, state and federal agencies, education agencies, and others.

It is strongly urged that before students begin taking any of the urban affairs courses they consult the urban affairs director.

BACHELOR OF ARTS

Major (64)

Students will complete the following requirements or demonstrate background in most, but not necessarily all, of these areas:

BIOL 349 or GEOG 372 or SPED 404; ECON 460* or 461* or 465*; GEOG 394; CSCI 269; POL 313*; SOC 370*.

After consulting the director, select one course from groups 1, 2, and 3. In group 4, select AMST 201 **plus** one other course.

Group 1: General Business
MGMF 361 or MKGB 320 or BEOA 216.

Group 2: Communications
ENGL 339 or COMM 240 or SPC 220, 223, or 350 or BEOA 309.

Group 3: Statistics
MKGB 140 or MATH 329 or PSY 259 or SOC 278.

Group 4: Research Methods
AMST 201 **and** one other from MKGB 425 or SOC 379 or GEOG 390.

Courses from groups 2, 3, and 4 must be completed prior to the internship. The following courses offered by the Urban Affairs program are required of all majors: URB 200, 402, 403, and 404.

Minor (27)

URB 200; SOC 370*; ECON 461* or 465*; GEOG 394 or 490; POL 313*.

Choose from the following related electives or from those approved in consultation with the director of the Urban Affairs program: HIST 347; BIOL 349 **or** GEOG 372; GEOG 394 **or** GEOG 490; ECON 461* **or** ECON 465*; MGMF 361.

Minor (38)

URB 200
SOC 370*
ECON 461* or 465*
GEOG 394 or 490
POL 313*
HIST 347

Choose from the following related electives or from those approved in consultation with the director of the Urban Affairs program: GEOG 394 or GEOG 490; SOC 347; MGMF 167; GEOG 380; ECON 461* or 465*; MKGB 238 or MGMF 361; POL 380; BIOL 349 or GEOG 372.

**Prerequisites to ECON 460, 461, 465; POL 313; and SOC 370 are not required for Urban Affairs Majors and Minors.*

BACHELOR OF ELECTIVE STUDIES

Major (48)

Completion of 48 credits with the approval of the director.

COURSE DESCRIPTIONS

199-499. Independent Study. Intended for the very able, motivated student whose intellectual needs are partially served by serious independent study. May be repeated. 1-4 Cr.

200. Introduction to Urban Affairs. Survey of the field of urban affairs. Examination of ways urban problems are dealt with and ways in which society sets priorities for dealing with these problems. Also pre-planning for internship and career areas. 3 Cr. F, W, S.

402. Internship. Students will be involved in public and private organizations participating in urban study, planning, research decision-making and evaluation. Not to be taken during last quarter in residence. Prereq.: 200. 12 Cr. F, W, S.

403. Field Research. Applied research project begun as part of the internship program with further discussion, evaluation and completion the following quarter. 4 Cr. F, W, S.

404. Colloquium. An interdisciplinary perspective of urban life and an understanding of how urban problems are addressed by people who must deal with them on a day-to-day basis. Prereq.: 402 or by permission. 3 Cr. F, S.

MASS COMMUNICATIONS (COMM)

Chairperson R. John DeSanto. **Faculty** Bryce, T. Eveslage, Mackert, Martin, Reeder, F. Voelker.

The Department of Mass Communications has majors in the Print Media and Electronic Media. Specialties open to students selecting the Print Media include: (a) Advertising, (b) News Editorial, (c) Magazine, (d) Photojournalism, (e) Public Relations. Students selecting the Electronic Media may take specialties in (a) Cinematography, (b) Radio, (c) Television, (d) Radio-TV, (e) TV-Film. Minors include Journalism, Radio, Television and Cinematography.

While the two majors differ in scope and direction, their primary objective is to prepare students for responsible and rewarding careers in the mass media. The Mass Communications approach is based on the premise that the best preparation in either the Print or Electronic Media program involves broad course selection from principally the Liberal Arts and Social Sciences. Students are encouraged to take their Mass Communications electives in both the Electronic and Print Media areas. A substantial amount of the student's overall program in the major consists of course work other than Mass Communications courses. On-the-job practice and laboratory techniques are part of the overall program through course design and a varied internship program in each area of the mass media. Before students will be formally accepted into any major or minor program they must have successfully completed COMM 220 and one other Mass Communications course. Special Mass Communications programs include a Bachelor of Electives and External Studies.

BACHELOR OF ARTS

Major: Print Media with specialties in

- Advertising
- News Editorial
- Magazine
- Photojournalism
- Public Relations

Track I (64-71)

Required Core (24)

COMM 220, 240, 342, 346, 350, 460, 487.

COMM Electives (14-16). Consult with adviser. Support Area Courses from other departments (25-30). Consult with adviser.

Track II (48)

Required Core (24)

COMM 220, 240, 342, 346, 350, 450, 460.

COMM Electives (12). Consult with adviser. Support Area Courses from other departments (12). Consult with adviser.

Major: Electronic Media with specialties in

- Cinematography
- Radio
- Television
- Radio-TV
- TV-Film

Track I (71)

Required Core (23)

COMM 220, 371, 372, 376, 460, 473.

Specialty Requirements (28).

Cinematography		Radio	
246	(3)	333	(4)
370	(4)	433	(4)
470	(4)	451	(3)
475	(3)	475	(3)
346	(3)		
<hr/>		<hr/>	
17		14	

COMM Electives (11)		COMM Electives (14)	
TV		Radio/TV	
346	(3)	333	(4)
370	(4)	451	(3)
475	(3)	475	(3)
476	(4)	476	(4)
477	(4)	477	(4)
<hr/>		<hr/>	
18		18	

COMM Electives (10)		COMM Electives (10)	
TV/Film		Public Affairs	
333	(4)	240	(4)
370	(4)	342	(3)
470	(4)	346	(3)
476	(4)	420	(4)
477	(4)	475	(4)
<hr/>		<hr/>	
20		18	

COMM Electives (8) Support Areas (20). Consult with adviser.*

*Students specializing in radio or TV must select one of SPC courses 331, 220 or 250.

Track II (48)

Required Core (26)

COMM 220, 371 or 376 (select two), 372, (473 or 475 — select one), (451, 470 or 476 — select one), 460.

SPC 250 or 331 or 220 (except Cinematography specialty). (4).

COMM Electives (10). Consult with adviser. Support Area Courses from other departments (12). Consult with adviser.

BACHELOR OF ELECTIVE STUDIES

Major (48)

Completion of 48 credits with the approval of the department.

Minor (36)

Completion of 36 credits with the approval of the department.

BACHELOR OF ARTS MINOR

Radio-TV Minor (36)

COMM 220, 370, 371, 372, 376, 460, 475. Electives: Consult with adviser.

Journalism Minor (36)

COMM 220, 240, 342, 346, 350, 460, 487. Electives: Consult with adviser.

Journalism Minor (24)

COMM 220, 240, 346, 350, 460. Electives: Consult with adviser.

Radio Minor (24)

COMM 220, 333, 371, 451, 460. Electives: Consult with adviser.

Television Minor (24)

COMM 220, 371, 376, 460, 476. Electives: Consult with adviser.

Cinematography Minor (24)

COMM 220, 346, 370, 376, 460, 470. Electives: Consult with adviser.

BACHELOR OF SCIENCE MINOR

Radio-TV Minor (24)

COMM 220, 370, 371, 376, 481.

Electives: Consult with adviser.

Journalism Minor (24)

COMM 220, 222, 240, 346, 350, 480, 481.

Electives: Consult with adviser.

Journalism Minor (36)

COMM 220, 240, 350, 455, 460, 480, 487.

Electives: Consult with adviser.

Radio-TV Minor (36)

COMM 220, 333, 371, 376, 476.

Electives: Consult with adviser.

COURSE DESCRIPTIONS

†201. Mass Media for the Consumer. An overview of the structure, scope and functions of the mass media in society with emphasis on the consumer point of view. Not open to mass communications majors or minors. 3 Cr.

211. Editing College Publications and Production Laboratory. A general introductory, non-technical course in production, layout, design, copywriting and editing of college publications. Emphasis is on practical laboratory experience in all aspects of publications work. 4 Cr.

†220. Introduction to Mass Communications. History, nature, functions, and criticisms of the mass media and their role in society. 4 Cr.

222. History of the Mass Media. Development of American newspapers and periodicals from beginnings in Europe; rise of radio and television; role of journalism in American history and culture; significant journalists and their publications. 3 Cr.

240. Reporting and Newswriting. Gathering material and writing news stories. Practice in covering assignments and preparing copy. Prereq.: ability to type 35 words per minute or BEOA 101. 4 Cr.

246. Visual Communications. Communication of information and ideas through the visual media. Relationships between verbal and visual media; their special characteristics and supportive functions. 3 Cr.

309. Radio and Television Activities. Credit is earned by participants in radio-television activities. Departmental approval to register is required. 1-2 credits per quarter. Max. 6 Cr.

333. Announcing. Instruction and practice in voice and in various types of radio and television announcing. Prereq.: SPC 250 or 331 or consent of instructor. 4 Cr.

342. Advanced Reporting. Problems of reporting, especially on small and medium city media; interpretative and investigative reporting, feature writing, reporting of public affairs; law of libel; the New Journalism. Prereq.: 240. 4 Cr.

346. Photojournalism. Theoretical and practical considerations in planning and taking photographs for the media. Basic types of equipment and materials. Developing, printmaking, and other darkroom processes. Lab. 3 Cr.

350. Editing and Makeup. Principles and practices in news selection, copyreading, headline writing, illustrations, makeup and design for the print media. Prereq.: 220, 240. 4 Cr.

357. Community Journalism. The local media, their editors and reporters; their role and effect among American media. Problems of news and editorial direction, organization, and responsibility. 3 Cr.

370. Cinematography I. An introduction to film production, criticism and techniques. Theory and practice in filming. Lab. Prereq.: 346 or consent of instructor. 4 Cr.

371. Radio Broadcast Production I. The structure and operation of radio stations. Study of program types. Theory and practices in facilities and production techniques. Lab. 4 Cr.

372. Radio-Television News Writing and Editing. Groundwork in gathering, writing, and editing news copy and tapings for broadcast; radio and television news style. Lab. 3 Cr.

376. Introduction to Television Production and Direction. The use of basic television facilities and techniques. Introduction to theory and practice in production and direction. Lab. 4 Cr.

409. Advanced Radio and Television Activities. Credit is earned by advanced participation in radio-television activities. Departmental approval to register is required. 1-2 cr. per quarter. Max., 6 Cr.

- 420. Specialty Reporting.** Learning and practicing techniques of specialty reporting; print or electronic media students choose topics within course requirements. Prereq.: 240, 342, 372 or consent of instructor. 4 Cr.
- 433. Advanced Announcing.** Advanced study and practice in announcing procedures and techniques with emphasis upon the specialized announcing types. Study of pertinent FCC rules and regulations. Prereq.: 333. 4 Cr.
- 451. Radio Broadcast Production II.** Intensive study in the production of educational and commercial radio programs. Broadcast theory and history. Emphasis upon social responsibility. Lab. Prereq.: 371. 4 Cr.
- 455. Editorial Writing.** Logical organization and principles of persuasion. The column, critical review, letters to the editor, and other materials of the editorial page. Prereq.: 240. 3 Cr.
- 456. Sportswriting and Broadcasting.** Reporting, writing, editing and broadcasting news of sports and recreation. Prereq.: 240 or 372 or consent of instructor. 4 Cr.
- 464. Management of the Broadcast Station.** Advanced study of the organization and operation of the radio and television station from the standpoint of management. Research in the design of a broadcasting station. 4 Cr.
- 470. Cinematography II.** Advanced film production. Theory and practice in news, commercial and educational filming. Lab. Prereq.: 370. 4 Cr.
- 473. Radio-Television Public Affairs and Documentaries.** Fundamentals of public affairs programs and documentaries. Historical and critical study of the various types of these programs. 4 Cr.
- 475. Writing for Radio and TV.** Study and practice in the major forms of radio and TV writing. Commercial scripting techniques and methods. 3 Cr.
- 476. Advanced Television Production.** Production and direction of various program types. The use of television facilities coordinated with production techniques. Lab. Prereq.: 376. 4 Cr.
- 477. Advanced Television Direction.** Production and direction of more detailed program types. Emphasis is upon the central role of the television director. Experimental production. Lab. Prereq.: 376. 4 Cr.
- 484. Broadcast Law.** Analysis of the legal history and development, present laws and regulations and the future significance of the commercial and non-commercial broadcasting industry. 4 Cr.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 441-541. 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.
- 445-545. 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. 3 Cr.
- 450-550. Advanced Editing and Makeup.** Current trends in format, makeup and typography of newspapers, magazines and brochures; editing and makeup of special sections; attention to solutions of problems by outstanding publications. Prereq.: 350. 3 Cr.
- 460-560. Mass Communications Law.** Freedom of the press with emphasis on the electronic and printed media in the areas of First Amendment rights; libel, censorship and government regulations; major theories of the press. 4 Cr.
- 480-580. Advising School Publications.** Role of the faculty adviser; trends, philosophies, problems; theoretical and practical considerations; content of journalism curriculum. 4 Cr.
- 481-581. Teaching Mass Communications.** Theories, methods, materials and curriculum development for teaching mass communications in the secondary schools. 3 Cr.
- 487-587. Public Relations.** Interpreting the school, business, or other organizations for its publics; responsibilities of the public relations representative to the community served; the over-all public relations program. 3 Cr.

MATHEMATICS (MATH) AND COMPUTER SCIENCE (CSCI)

Chairperson Howard Bird. **Faculty** Bahauddin, Brink, Carlson, Crane, Dull, R. Earles, Ernst, J. W. Johnson, L. Johnson, M. Johnson, R. Johnson, Lahren, Leitch, Leung, Meyer, Miller, E. Stennes, F. Stennes, Van Akin, Vandell.

The Mathematics Department recommends that at least two mathematics courses at the college level be completed before a student applies for a major in mathematics. Some possible course combinations could be MATH 241, 242; MATH 140, 241; or MATH 134, 241. A student applying for a major must have had a high school course in geometry or the equivalent and must have at least a 2.0 average in the mathematics courses completed.

The student majoring in mathematics will also be required to complete a minor or to develop an area of concentration. The minor or area of concentration must be approved by the adviser. All mathematics courses required in the B.S. program must be completed before student teaching.

MATH 130 and 134 are required for students majoring or minoring in mathematics (except Elementary Education Minors) who have not completed high school algebra (or equivalent) and high school trigonometry (or equivalent).

BACHELOR OF ARTS — MATHEMATICS

Major (60)

MATH 241, 242, 243, 244, 254, 354, 356, 457.
28 cr. from: 300–400 level mathematics courses with at least 12 credits at the 400 level.

Minor (36)

MATH 241, 242, 243, 254.
20 credits from: 300–400 level mathematics courses.

Major (48)

MATH 241, 242, 243, 244, 254, 354, 356, 457.
16 cr. from: 300–400 level mathematics courses with at least 8 credits at the 400 level.

BACHELOR OF SCIENCE — MATHEMATICS

Major (60)

MATH 241, 242, 243, 254, 354, 356, 424, 425, 437, 451, 457 (CSCI 269 and 271 are required for non-computer science minors only.)

12–16 credits from: 300–400 level mathematics courses, MATH 244.

Minor (36)

MATH 241, 242, 243, 254, 356, 424, 329 or 437, 451.
4 credits from: 300–400 level mathematics courses.

Major (48)

MATH 241, 242, 243, 254, 354, 356, 424, 437, 451, 457.

8 credits from: 300–400 level mathematics courses, MATH 244.

Elementary Education Minor (24)

MATH 251, 254, 329, 352.
8 credits from: MATH 241, 315, 353, 354, 356; CSCI 269, 271.

BACHELOR OF ARTS — COMPUTER SCIENCE

Minor (24)

CSCI 270, 280, 301, 395, and 480 or 490.
Electives chosen from CSCI 365, 378, 383, 412, 417, 473, 271, 371, 444; MATH 329, 334, 346, 441, 470; ENGL 433; MKGB 251, 451, 452, 456; TECH 284.

Minor (36)

CSCI 270, 280, 301, 395, and CSCI 480 or 490.
One course from: MKGB 240; MATH 329; PSY 351; or SOC 279. A minimum of 8 credits from the following group: CSCI 365, 378, 383, 412, 417, 473, 271, 371, 444; MKGB 451. Additional electives from MATH 329, 334, 346, 441, 470; ENGL 433; MKGB 250, 251, 351, 452, 456; TECH 284; PHYS 332.

BACHELOR OF SCIENCE — COMPUTER SCIENCE

Minor (24)

CSCI 270, 280, 301, 378, 395, 477.

Minor (36)

CSCI 270, 280, 301, 365, 378, 395, 477; MATH 329; TECH 284.

BACHELOR OF ELECTIVE STUDIES

Major (48)

Completion of 48 credits with the approval of the department.

Minor (36)

Completion of 36 credits with the approval of the department.

COURSE DESCRIPTIONS

MATHEMATICS

†121. **Cultural Mathematics.** Topics selected by the instructor to demonstrate the various natures of mathematics. 4 Cr. F, W, S, SUM.

130. **Intermediate Algebra.** Fundamental operations of algebra, linear and quadratic functions; solution of elementary linear and quadratic equations; problem solving. 4 Cr. F, W, S, SUM.

131. **College Algebra.** Functions, permutations, combinations, probability, sequences, logarithms, systems of linear equations, matrices, determinants, inequalities, linear programming. Prereq.: 130 or high school higher algebra. 4 Cr. F, W, S, SUM.

132. **Mathematics for Biologists.** Ratio, proportion, and variation; probability; central tendency; variability; frequencies and distributions. Not to be taken by students who have received credit in 131 or 134. 4 Cr. F, W, S.

134. **Trigonometry.** Trigonometric functions; solution of right triangle; the fundamental identities; inverse trigonometric functions; complex numbers. Prereq.: 130 or equivalent. 4 Cr. F, W, S, SUM (Alt.).

140. **Pre-Calculus Mathematics.** Selected topics from algebra, trigonometry, and analytic geometry. Prereq.: Higher algebra and trigonometry. 4 Cr. F.

228. **Slide Rule.** Theory and use. Prereq.: 134 or high school trigonometry. 1 Cr. Demand.

231. **Calculus I.** Sequences and limits. Differential and integral calculus of one variable. Applications. Prereq.: 130 or 131, or equivalent. 4 Cr. F, W, S, SUM.

232. **Calculus II.** Three dimensional analytic geometry. Differential and integral calculus of more than one variable. Applications. Prereq.: 231. 4 Cr. S.

241. **Analysis I.** Inequalities, absolute value, functions, limits, continuity, differentiation of algebraic functions, applications of derivatives. Prereq.: Higher Algebra and Trigonometry in high school or 130 and 134, or 140. 4 Cr. F, W, S.

242. **Analysis II.** Definite integral, fundamental theorem of calculus, indefinite integral, differentiation and integration of transcendental functions, techniques of integration. Prereq.: 241. 4 Cr. F, W, S.

243. **Analysis III.** Topics in analytic geometry, applications of integration, sequences, series, L'Hospital's rule and improper integrals. Prereq.: 242. 4 Cr. F, W, S.

244. **Analysis IV.** Three dimensional analytic geometry and vectors, partial derivatives and multiple integrals. Prereq.: 243. 4 Cr. F, W, S.

250. **Foundations of Arithmetic.** Real number system and its subsystems. Selected topics from elementary number theory. Basic geometry concepts. For elementary education majors only. 4 Cr. F, W, S, SUM.

†251. **Foundations of Geometry.** Designed for the elementary teacher. Space, plane and line as sets of points; simple closed curves, geometric figures considered as sets of points, concepts of measurement. 4 Cr. F, S.

†254. **Fundamentals of Mathematics I.** Logic, sets, functions, countability, partitions and equivalence relations, binary operations. An introduction to abstract mathematics. 4 Cr. F, W, S.

257. **Elementary Matrix Algebra.** Matrices and matrix operations. Systems of linear equations. Vector spaces and linear transformations. Linear programming. Prereq.: 131. 4 Cr. S.

315. **Elementary Number Theory.** Study of the integers including such topics as the division

and Euclidean algorithms, prime and composite integers, divisibility, the fundamental theorem of arithmetic. 4 Cr. Demand.

329. Introduction to Probability. Finite and countably infinite sample spaces, probability measure. Prereq.: 130 or equivalent, not to be counted as an elective for the B.A. or B.S. mathematics major or minor. 4 Cr. F, W, S.

334. Differential Equations. Matrices, determinants, eigenvalues. First and second order differential equations. Systems of linear equations, series and numerical methods. Prereq.: 244. 4 Cr. F, S.

345. Topics in Advanced Calculus. Implicit function theorems, transformations and mappings, topics in vector analysis, uniform convergence, improper integrals. Prereq.: 244. 4 Cr. W, S.

346. Applied Mathematics I. Partial differential equations of mathematical physics, boundary value problems, classical solution methods, Bessel functions and Legendre polynomials. Prereq.: 334, 345. 4 Cr. Demand.

347. Applied Mathematics II. Topics selected from transform mathematics, integral equations, systems analysis. Prereq.: 346. 4 Cr. Demand.

352. Algebra for the Elementary Teacher. Properties of real numbers; linear equations and inequalities; quadratic equations and inequalities; modular arithmetic and algebraic structures; complex numbers; functions. 4 Cr. W.

353. Mathematics Laboratory for Elementary Teachers. Concrete experiences for the purposes of reinforcing mathematical ideas and learning new concepts through open-ended activities; materials and their use. 2 Cr. S.

354. Fundamentals of Mathematics II. A continuation of 254 with an emphasis on properties of the number systems. Natural numbers, integers as an integral domain, rational numbers as an ordered field. Prereq.: 254. 4 Cr. W, S.

356. Modern Algebra. Group Theory, topics from Ring Theory. Prereq.: 354. 4 Cr. F, S.

424. Elements of Geometry. An analysis of axiomatic systems, a critique of Euclid, and an axiomatic development of Neutral, Euclidean, Lobachevskian and Rumanian geometries. Prereq.: 254. 4 Cr. F, W.

425. Contemporary Geometry. Vectors and transformations on the Euclidean plane, and their application to problem solving. Prereq.: high school geometry and 254. 4 Cr. S.

426. Advanced Geometry. Projective geometry from both a synthetic and an analytic point of view. Primitive forms, projectivities, and conics. Prereq.: 424 or 425. 4 Cr. W.

441. Topics in Applied Mathematics. Convex sets, classical optimization, search techniques, linear programming. Prereq.: permission of instructor. 4 Cr. Demand.

451. Professional Subject Matter for Junior and Senior High School Mathematics. For teacher candidates. Current curriculum developments, topics in modern mathematics, lesson planning, teaching. Taken prior to student teaching. 4 Cr. F, S.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

415-515. Number Theory. Prime and composite integers, Diophantine analysis, number congruences, quadratic residues. Prereq.: 254. 4 Undgr. Cr., 3 Gr. Cr. W.

436-536. Complex Variables. The complex field, the theory of analytic functions, power series, Fundamental Theorem of Algebra. Prereq.: 354 or consent of instructor. 4 Undgr. Cr., 3 Gr. Cr. S.

437-537. Probability and Statistics I. Axiomatic development of probability; continuous and discrete sample spaces; random variables; probability density functions; Bayes' theorem. Prereq.: 243, 254. 4 Cr. F.

438-538. Probability and Statistics II. Distributions of functions of random variables; multidimensional random variables; t and F distributions; moment generating functions. Prereq.: 244, 437. 4 Undgr. Cr., 3 Gr. Cr. W.

439-539. Probability and Statistics III. Point estimation and sufficient statistics; maximum likelihood estimation of parameters; statistical hypotheses; statistical tests. Prereq.: 438-538. 4 Undgr. Cr., 3 Gr. Cr. S.

†440-540. History of Mathematics. Historical survey of the development of mathematics. Prereq.: 241. 4 Undgr. Cr., 3 Gr. Cr. S, SUM (Alt.).

- 445-545. Introduction to Real Analysis I.** Functions, complete ordered fields, sequences and series of real numbers. No calculus skills are required. Prereq.: 356. 4 Undgr. Cr., 3 Gr. Cr. F (Alt.).
- 446-546. Introduction to Real Analysis II.** Limits, metric spaces, continuous functions, connectedness, completeness, compactness, uniform continuity. Prereq.: 445-545. 4 Undgr. Cr., 3 Gr. Cr. W (Alt.).
- 447-547. Introduction to Real Analysis III.** Riemann Integral, derivatives, theorems of calculus, sequences and series of functions, Lebesgue integral. Prereq.: 446-546. 4 Undgr. Cr., 3 Gr. Cr. S (Alt.).
- 452-552. Recent Trends in Secondary School Mathematics.** Number systems, sets, deduction, algebras, geometries, vectors, limits, functions, probability, computers, decisions. The changing mathematics curriculum. 4 Cr. Demand.
- 455-555. Foundations of Mathematics.** Operations on sets, relations and functions, cardinal numbers, ordinal arithmetic, the axiom of choice, axiomatic theories. 4 Undgr. Cr., 3 Gr. Cr. SUM (Alt.).
- 457-557. Linear Algebra.** Vector spaces, Euclidean n-space, linear transformations, matrices. Prereq.: 242, 356. 4 Undgr. Cr., 3 Gr. Cr. F, W, SUM (Alt.).
- 459-559. Recent Trends in Elementary School Mathematics.** Modern approach to teaching arithmetic, teaching aids and devices, experimental work, recent research. 4 Cr. Demand.
- 460-560. Topology.** Metric spaces, topological spaces, separation axioms, connectedness, compactness. Prereq.: 356. 4 Undgr. Cr., 3 Gr. Cr. W (Alt.).
- 470-570. Numerical Analysis.** Difference tables and applications, interpolation, numerical integration and differentiation, error analysis, numerical solution of equations. Prereq.: 271, 243. 4 Undgr. Cr., 3 Gr. Cr. W.

COMPUTER SCIENCE

- +169. Computers in Society.** Introduction to timesharing; programming in the TTS language (BASIC, FOCAL, etc.); flowcharts; history and development of computers. 4 Cr. F, W, S, SUM. Not open to CSCI 269 students.
- +269. Introduction to Computers.** History of computer, current uses in business, industry and education. Algorithms, flowcharts, simple programming. 2 Cr. F, W, S. Not open to CSCI 169 students.
- 270. Fundamentals of Programming.** Algorithms and their representations. Analysis of a simple computer and its instruction set. Assembly language coding. Prereq.: CSCI 169 or 269 or equiv.; college algebra or equiv. 4 Cr. F, W, S.
- 271. Computer Programming-Compiler Language.** Algorithms; flowcharting; fundamental programming techniques and program structure; computer solution of problems using Fortran IV language. 2 Cr. F, W, S.
- 280. Assembly Language Programming.** Programming as a real assembly language; subroutine linkage conventions; macros; study of data structures appropriate to assembly language. Prereq.: 270. 4 Cr. F.
- 301. Higher Level Languages and Data Structures.** Survey of several high level languages and their compiler and inherent data structures. Formal description of high level languages. Prereq.: 270. 4 Cr. W.
- 365. Discrete Computational Structures.** Basic forms and operations, binary trees, formal and natural languages, Boolean algebras. Prereq.: Knowledge of one high level programming language. 4 Cr. Demand.
- 371. Advanced Fortran.** Multi-dimensional arrays; logical operators; function subprograms; subroutine programs; disk and tape operations. Lab. Prereq.: 271. 2 Cr. S.
- 378. Artificial Intelligence and Heuristic Programming.** Heuristic versus algorithm methods, game playing programs, pattern recognition and picture processing, and decision making programs. Prereq.: 395. 4 Cr. Demand.
- 383. Minicomputer Systems and Applications.** Hardware organization, control concepts, characteristics of minicomputer I/O devices, current applications. 4 Cr. Demand.
- 395. Systems Programming.** Multiprogramming goals. Theory and practical experience with resource allocation and memory management. System structure, utilization and operation. Prereq.: 301. 4 Cr. S.

412. Computer Graphics. Graphical data processing, introduction to psychophysical photometry and display parameters, picture models and data structures, display software. Prereq.: 395. 4 Cr. Demand.

417. Compiler Construction. One-pass compilation techniques, storage allocation, procedure, and blocking, data types and transfer functions, languages designed for writing compilers. Prereq.: 395, 365. 4 Cr. Demand.

444. Internship. Supervised training opportunity provided by industry or educational institution. Maximum of 8 credits toward minor. Prereq.: Department consent. 1-16 Cr.

473. Analysis of Algorithms. Computing time functions, maximum, minimum, and average computing time of various algorithms. Prereq.: MATH 329. 4 Cr. Demand.

477. Computers in Society and the Classroom. Historical development of computing, use of BASIC language in timesharing, Instructional Timesharing in the school. Prereq.: 395, 378. 4 Cr. Demand.

480. Computer Seminar. Reading, research, and discussion of selected topics. Prereq.: Consent of instructor. 2 Cr. F, W.

490. Practicum in Computer Science. Supervised programming for various departments. Can be repeated for a maximum of 8 credits. Prereq.: Approval of department. 2-4 Cr. S.

MINORITY STUDIES

Director Edward Pluth. **Faculty Committee** Jones (Political Science), Lane (Anthropology), Risberg (Human Relations), Simpson (American Studies), Summers (English).

The Minority Studies Program is designed for students who desire some study of minorities as complementary to their major course of study. The program is cross-disciplinary in nature and provides some degree of flexibility within its framework.

Note 1. Courses marked with an asterisk (*) are applicable to the program only when they focus on minority groups.

Note 2. SOC 260 is a prereq. for SOC 268.

Note 3. ANTH 267 is a prereq. for ANTH 359.

BACHELOR OF ARTS AND BACHELOR OF SCIENCE

(NON TEACHING)

Minor (32)

8 cr. from Humanities: *AMST 490; ENGL 269; *ENGL 447; PHIL 413.

8 cr. from History: HIST 350, 351, 352, 354, 356, 358.

8 cr. from Sociology/Anthropology: SOC 268 or 470; ANTH 359.

Electives: 8 cr. from courses listed above or from: ANTH 354; SPED 404; POL 492; *SSCI 460; PSY 270; *SPC 230.

PHILOSOPHY (PHIL)

Chairperson M. G. Anderson. **Faculty** Bahde, Corliss, Fischmann, Kohlenberg, A. Phillips, J. Phillips, White, Yoos.

The Department of Philosophy has three main functions: first, to provide all students with an introduction to the ideas, problems, and methods of philosophers; second, to give courses serving the particular needs of students who are majoring or minoring in other fields; third, 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.

BACHELOR OF ARTS**Major (48)**

PHIL 220, 280, 281, 282.

Two courses from: 225, 325, 333, 344, 345, 431, 442.

Two courses from: 320, 321, 332, 334, 433, 444, 446, 447.

Two courses from: 410-429, 434, 435, 440, 445.

Electives: 8 credits in above 100 level courses.

Minor (24)

PHIL 220, 280, 281, 282.

Electives: 8 credits in above 200 level courses.

Major (36)

PHIL 220, 280, 281, 282.

Two courses from either of two groups: (1) 225, 325, 333, 344, 345, 431, 442; (2) 320, 321, 332, 334, 433, 444, 446, 447.

Two courses from: 410-429, 434, 435, 440, 445.

Electives: 4 credits in above 100 level courses.

BACHELOR OF ELECTIVE STUDIES**Major (48)**

Completion of any 48 credits in Philosophy.

Minor (36)

Completion of any 36 credits in Philosophy.

COURSE DESCRIPTIONS

†110. **Introduction to Philosophy.** Basic issues in such areas as the theory of knowledge, the mind-body problem, morality, politics and religion. 4 Cr. F, W, S, SUM.

†120. **Introduction to Logic.** The principles of accurate reasoning, emphasizing topics in informal logic and rhetoric. Definition, fallacies, explanation, and induction. 4 Cr. F, W, S, SUM.

†122. **Introduction to Ethics.** Factors, issues, or controversies involved in reaching moral decisions. 4 Cr. F, W, S, SUM.

†140. **Elements of Religion.** Religious symbols and structures, religious communities, priests; one or two religious systems will be studied in detail. 4 Cr. F, W, S.

†150. **Philosophy: Humanities Pre-1600.** A survey of the major intellectual landmarks in human history before 1600. Ideas, ideals, and theories that have proved to be revolutionary in both thought and action, and that have left their imprint on contemporary civilization. 4 Cr. F, W, S.

220. Introduction to Symbolic Logic. A basic course in the propositional and predicate calculi. Special emphasis on learning how to construct proofs of formulae. 4 Cr. F, S.

225. Ethics: Classical Theories. Plato, Aristotle, Epicurus, the Stoics, Hobbes, Butler, Hume, Kant and the Utilitarians. 4 Cr. F.

240. Religions of South Asia. Hinduism, Buddhism, and Zoroastrianism. 4 Cr. W ALT.

245. Ancient Western Religion. Egypt, the Fertile Crescent, Greece, Northern Europe. 4 Cr. S ALT.

250. Philosophy in Literature. Issues raised by selected works of literature. A wide range of sources and viewpoints is considered and active discussion encouraged. 4 Cr. W.

†270. **Existentialism.** Marcel, Sartre, Kirkegaard, Buber, Heidegger. 4 Cr. F.

†280. **History of Philosophy Survey: Classical and Early Christian.** Presocratics, Socrates, Plato, Aristotle, Hellenistic and Roman philosophers, Neoplatonism and early church fathers. 4 Cr. F.

†281. **History of Philosophy Survey: Late Medieval through Enlightenment.** Scholasticism, renaissance, reformation, rise of science, Cartesian influence, continental rationalism, British empiricism, and the Kantian revolution. 4 Cr. W.

†282. **History of Philosophy Survey: 19th and 20th centuries.** Post-Kantian and Hegelian philosophy, positivism, utilitarianism, dialectical materialism, pragmatism, phenomenology, existentialism, and analytic philosophy. 4 Cr. S.

320. Formal Logic I. An introductory study of some of the properties of formal systems: consistency, completeness, and decidability. Also, elementary semantics and set theory. Prereq.: 220 or consent of instructor. 4 Cr. Demand.

- 321. Formal Logic II.** Non-standard systems of logic: intuitionist, multi-valued, deontic, modal, and/or tense logic. Prereq.: 320 or consent of instructor. 4 Cr. Demand.
- 325. Ethics: Contemporary Theories.** 20th Century metaethical theories and problems, particularly ethical naturalism, ethical intuitionism and varieties of noncognitivism. 4 Cr. W.
- 332. Philosophy of Science.** Analysis of the fundamental concepts used in the physical and social sciences, such as law, theory confirmation, explanation, and probability. 4 Cr. F.
- 333. Social and Political Philosophy: Classical Theories.** Political philosophy of Plato, Aristotle, Augustine, Aquinas, Machiavelli, Locke, Rousseau, Hegel, and Marx. 4 Cr. S.
- 334. Philosophy of Behavioral Science.** The epistemological and metaphysical foundations and methodology of the behavioral sciences. 4 Cr. W ALT.
- 340. Religions of China and Japan.** Confucianism, Taoism, later forms of Buddhism, ancient and modern forms of folk religion in Japan. 4 Cr. F ALT.
- 342. Modern Western Religion.** One period in the religious history of Europe and America will be studied in detail. Possible subjects include: free thought in the 18th century, evolutionism and science in the 19th century, imperialism and Christianity. 4 Cr. W ALT.
- 344. Philosophy of Law and Punishment.** Classical and contemporary theories of law and punishment. 4 Cr. F, W, S.
- 345. Philosophy of Religion.** Proofs of the existence of God, the nature of religious beliefs, and the place of reason and evidence in religion. 4 Cr. F ALT.
- 434. History of Philosophy Seminar.** Seminar for intensive study of one philosopher, or of one period of controversy in the history of philosophy. 4 Cr. W ALT.
- 435. Metaphysics.** The nature of reality, existence, time, change, mind, matter, and other fundamental topics. 4 Cr. F ALT.
- 440. Theory of Knowledge.** Nature and justification of knowledge and belief; problems of sense-perception, memory, truth, and meaning. 4 Cr. S ALT.
- 445. Value Theory.** Nature, types, criteria, and justification of values, intrinsic and instrumental values, the relation of values to facts. 4 Cr. F ALT.
- 446. Analytic Philosophy.** Readings from Moore, Schlick, Carnap, Hempel, Ryle, Reichenbach, Feigl, and others of the contemporary movement. 4 Cr. S ALT.
- 447. Philosophy of Language.** The sentence-statement-proposition distinction. Quine's attack upon analyticity and translation, the nature of speech acts and their relevance for and analysis of meaning, and the implications of Chomsky's work. 4 Cr. S ALT.
- 448. Philosophy of Mind.** Analyses of intentions, intensions, volitions, emotions, and mental states generally and our knowledge of other minds. The debate between dualists, behaviorists, identity theorists, and criterialists. 4 Cr. W ALT.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 410-429, 510-529. Special Studies.** Seminar for intensive study of a particular philosopher or of the philosophical problems in a special discipline, such as history, biology, or behavioral sciences. Prereq.: Consent of instructor. 2-4 Cr. Demand.
- 431-531. Philosophy of Art.** A general introduction to philosophical questions relating to the fine arts. 4 Cr. W ALT.
- 432-532. Film Aesthetics.** Motion pictures as an art form. Critical examination of various theories of film. Special attention to Russian theories of montage, the Auteur theory, and the realist thesis. 4 Cr. S.
- 433-533. Philosophy of History.** The nature of historical explanation, historicism, objectivity, and meaning of history. 4 Cr. W ALT.
- 442-542. History of American Philosophical Thought.** The course of development of American philosophy from its beginnings: Puritanism, Transcendentalism, Idealism, Pragmatism, Realism, and Contemporary Analysis. 4 Cr. W ALT.

PHYSICS AND ASTRONOMY (PHYS)

Chairperson Philip Youngner. **Faculty** Eckroth, Ellis, Garrity, Jerde, Lesikar, McWilliams, Moore, Pou, Trummel.

Physics is a human activity dedicated to observing nature and to organizing these observations in the form of fundamental concepts. These concepts form the foundation upon which the important principles of the other sciences are based. Consequently some physics is required in many of the preprofessional programs and other science programs. To accommodate the various backgrounds and needs of students in these various programs the physics department offers a wide variety of introductory courses ranging from courses which use only elementary high school algebra and up through courses which require calculus.

MATH 130 and 134 are required for students majoring or minoring in physics who have not completed high school algebra (or equivalent) and high school trigonometry (or equivalent).

BACHELOR OF ARTS

Physics Major (60)

PHYS 234, 235, 236, 328, 329, 332, 334, 430, 435, 437; CHEM 211, 212; MATH 241, 242, 243. (MATH 241, 242, 243 should be taken concurrently with PHYS 234, 235, 236.)

Physics Comprehensive Major (84)

Students may elect an 84-hour Comprehensive Physics major with an emphasis in some area by fulfilling the requirements of the 60 credit major described above and by selecting 24 additional credits from one of the tracks described below:

Professional Physics Track: PHYS 333, 335, 431, 432, 436, 438; MATH 244, 334, 345, 346, 347. At least 3 courses must be PHYS.

Electronics Track: PHYS 251, 252, 333, 335, 342, 438; MATH 244, 333, 334; CSCI 269, 271. At least 4 courses must be PHYS.

Mathematical Physics Track: PHYS 431, 432, 436, 438; MATH 244, 254, 334, 345, 346, 347, 354, 356, 357. At least 2 courses must be PHYS.

Systems Analysis Track: MATH 254, 437, 438, 439, 470; CSCI 269, 271, 272, 370, 371, 480.

Chemical Physics Track: CHEM 214, 291, 292, 325, 409, 425, 426, 427, 428, 429.

Biophysics Track: Select at least 1 course from PHYS 333, 335; Select at least 1 course from CHEM 251, 252, 325; Required: BIOL 303, 332; Select at least 1 course from BIOL 201, 366, 405, 464, 465.

Self Selection Track: 24 credits selected by the student under the supervision of a physics adviser.

Physics Minor (48)

PHYS 234, 235, 236, 328, 329, 332, 430; MATH 241, 242, 243; Physics electives (6).

BACHELOR OF SCIENCE

Comprehensive Physics Major (84)

PHYS 234, 235, 236, 328, 329, 332, 333, 430, 456, 459; MATH 241, 242, 243; CHEM 211, 212 or 213; BIOL 201, Electives in science (22).

NOTE: For Science Teacher Certification in Minnesota in the physical sciences for grades 7-12, after July 1, 1979, the candidate must have 12 credits minimum in earth science and 12 credits minimum in life science in addition to a total of 54 credits minimum in physical science.

Physics Major (60)

PHYS 234, 235, 236, 238, 329, 332, 333, 430, 456, 459; MATH 241, 242, 243; PHYS electives (10).

Physics Minor (48)

PHYS 234, 235, 236, 328, 329, 332, 430, 459; MATH 241, 242, 243; PHYS electives (4).

Physics Minor (40)

PHYS 234, 235, 236, 328, 329; MATH 241, 242, 243; PHYS electives (5).

NOTE: For Science Teacher Certification based upon a minor preparation in physics in Minnesota after July 1, 1979, the candidate must have 12 credits minimum in earth science, 12 credits minimum in life science, and 8 credits minimum in chemistry, in addition to a total of 27 credits minimum in physics.

COURSE DESCRIPTIONS

+103. Concepts in Physics. Natural forces controlling the universe; energy sources and forms; important principles of mechanics, electricity, radiation, atomic and nuclear physics. Lab. Not open to majors or minors. 4 Cr. F, W, S, SUM.

+106. Planetarium Astronomy. The night sky as it appears at different seasons and at various

latitudes, constellations, planetary motions, measurements in astronomy, various kinds of stars and their characteristics, cosmology. 4 Cr. F, W, S, SUM.

†107. Man in the Universe. Development with historical perspective of methods of obtaining knowledge about the universe, evolution of the stars and of the universe as a whole, the galactic red shift, cosmological theories. 4 Cr. Alt.

†201. Mechanics and Heat. Basic principles of mechanics of solids, liquids, and gases; laws of motion; work and energy; thermometry; simple heat engines; kinetic theory of gases. Lab. Prereq.: MATH 130 or high school algebra. 4 Cr. F, W, S, SUM.

†202. Electricity, Magnetism, and Light. Electrostatics, magnetic effect of electric currents, electrical circuits. Propagation of light, image formation, spectra. Diffraction, interference, and polarization. Lab. Prereq.: 201. 4 Cr. F, W, S, SUM.

†207. Concepts in Modern Science. Contemporary theories in science, their development from a historical point of view, and their effect upon human thought and culture. The methods and central ideas of science are emphasized. 4 Cr. Alt.

†208. Energy and Man's Environment. Energy types and conversion processes. Energy in primitive and industrial societies. Environmental problems associated with processing, transmission, and use of energy. Future energy sources. 4 Cr. Alt.

231. Mechanics. Vectors, statics, moments, rectilinear motion. Newton's law of motion, work and energy, impulse and momentum, rotational and harmonic motion, elasticity, hydrostatics, hydrodynamics. Lab. Prereq.: High School Trig. 4 Cr. F, W, S.

232. Electricity and Magnetism. Coulomb's law, electric field, electrical potential, DC circuits, magnetic effects of current, electrical instruments, capacitance and inductance, AC circuits. Lab. Prereq.: 231 or 234. 4 Cr. F, W, S.

233. Heat, Light, and Sound. Temperature, heat, thermodynamics. Wave motion, vibrating bodies, acoustical effects. Nature of light, reflection and refraction, optical instruments, interference and diffraction. Lab. Prereq.: 231. 4 Cr. F, W, S, SUM.

234. Classical Physics I. This is the first quarter of the sequence for Physics majors and minors and for pre-engineering students. Topics from mechanics, heat, light and electricity. Concurrent enrollment required in MATH 241. 5 Cr. F, W, S.

235. Classical Physics II. A continuation of Physics 234. Topics from mechanics, electricity, magnetism, sound and light. Mathematical treatment will include differential calculus. Concurrent enrollment required in MATH 242. 5 Cr. F, W, S.

236. Classical Physics III. A continuation of Physics 234 and 235. Topics from mechanics, thermodynamics, electricity and magnetism. Mathematical treatment will include integral calculus. Concurrent enrollment required in MATH 243. 5 Cr. F, W, S.

251. Circuit Analysis I. DC circuits. Kirchoff's laws, mesh analysis, nodal analysis, source transformations, superposition, Thevenin's and Norton's theorems, transient circuits, RLC circuits, damping. Prereq.: 235, MATH 242. 4 Cr. F.

252. Circuit Analysis II. AC circuits. Sinusoidal forcing function, phasors, sinusoidal steady-state response, power, complex frequency and response, magnetically coupled circuits, two-port networks. Prereq.: 251. 4 Cr. W.

283. Geometrical Optics and Applications. Laws of geometrical optics, thin and thick lenses, mirrors, optical instruments, monochromatic aberrations, colorimetry and color theory. Prereq.: 202 or 232. 4 Cr. Alt.

306. Astronomy. Astronomical instruments. Solar system configurations and energy relations. Stellar distances and motions. Stars and constellations. Binary stars. Variable stars. Galaxies. Cosmogony. Prereq.: 231 or 234. 4 Cr. W.

309. Practical Astronomy. Measurement of angles and arcs, right ascension and declination of planets, stars, and galaxies, time keeping and the measurements of time. Lab. Prereq.: 306. 2 Cr. Alt.

328. Modern Physics I. Kinetic theory of matter, photon dynamics, Bohr-Rutherford picture of the atom, the wave-particle duality, the Schroedinger equation in one dimension, hydrogen atom wave functions. Prereq.: 233 or 236, MATH 243. 4 Cr. F.

329. Modern Physics II. The vector model of the atom, electron spin, many electron atomic systems, introduction to the solid state, molecular bonding, nuclear structure, radioactivity, nuclear reactions. Prereq.: 328. 4 Cr. W.

332. Electronics. DC and AC circuit theorems and analysis, rectifiers, power supplies,

semiconductors, transistor amplifier design and analysis, feedback, oscillators, digital logic circuits. Lab. Prereq.: 232 or 235. 4 Cr. S.

333. Optics. Refraction, diffraction, interference, polarization, optical instruments, spectra and other aspects of physical optics. Prereq.: 1 year of college physics and MATH 243. 4 Cr. W.

334. Thermodynamics. Measurement of temperature and thermal energy, heat transfer, radiation, change of phase, equations of state, real gases, laws of thermodynamics, thermodynamic cycles, entropy. Prereq.: 233 or 236, MATH 243. 3 Cr. S.

335. Electrical Measurements. Precision measurement of resistance, capacitance, inductance, potential differences, and currents. Operational amplifier circuit design and analysis. Instrumentation. Lab. Prereq.: 232 or 235, MATH 243. 3 Cr. W.

340. Atmospheric Physics. Atmospheric structure and processes analyzed in terms of existing physical relationships. Prereq.: 231 or 234. 4 Cr. Alt.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

420-520. Seminar. Lectures, readings, discussion on selected topics. May be repeated. 1-4 Cr. Demand.

429-529. Geophysics. The basic concepts of physics applied to the global earth and to the geologic processes at work in the earth. Prereq.: 233 or 236, MATH 243. ESCI 284. 4 Cr. Demand.

430-530. Advanced Physics Laboratory. Advanced experiments relating to topics studied in senior college physics courses. Prereq.: 328. May be repeated. 3 Cr. F, W, S.

431-531. Introduction to Quantum Mechanics I. The Schrodinger wave equation and solutions for some simple cases, potential barrier problems, the harmonic oscillator, the hydrogen atom, expectation values. Prereq.: 329. 4 Cr. F.

432-532. Introduction to Quantum Mechanics II. A continuation of physics 431-531 in which the concepts of quantum mechanics are extended and some applications of quantum mechanics are discussed. Prereq.: 431-531. 4 Cr. W.

433-533. Modern Physics. Energy bands in solids; theories of the electrical and magnetic properties of solids; semiconductors. Prereq.: 432. 3 Cr. S.

435-535. Intermediate Mechanics I. Particle dynamics in one dimension, energy conservation principles, angular momentum conservation, introduction to rigid body dynamics, relativity. Prereq.: 234, MATH 243. 3 Cr. F.

436-536. Theoretical Physics — Mechanics II. Conservative forces, mechanics of constrained particles, generalized coordinates, Lagrange's equations, Hamilton's equations, variational principles. Prereq.: 435-535. 4 Cr. Demand.

437-537. Intermediate Electricity and Magnetism I. Electromagnetic fields and potentials, dielectric theory and electric displacement, magnetic vector potential, introduction to Maxwell's Equations, electromagnetic waves. Prereq.: 235, MATH 243. 4 Cr. W.

438-538. Theoretical Physics — Electricity and Magnetism II. Poisson's equation, Laplace's equation, Maxwell's equations. Poynting vector, electromagnetic waves. Prereq.: 437-537. 4 Cr. Demand.

440-540. Biophysics-Instrumentation and Material Properties. Mechanical, electrical and optical properties of biological material. Prereq.: 231, 232, 233; CHEM 211, 212; concurrent enrollment in BIOL 303. 3 Cr. Alt.

441-541. Biophysics-Neurophysics and Bioelectricity. Electroneurophysiology, signal analysis, sensory and motor transduction. Prereq.: 231, 232, 233; CHEM 211, 212; concurrent enrollment in BIOL 303. 3 Cr. Alt.

442-542. Bioengineering System Analysis. Biological feedback and control mechanisms, biocommunication theory, bionics and computer aspects of living systems. Prereq.: 231, 232, 233; CHEM 211, 212; concurrent enrollment in BIOL 303, 464, 465. 3 Cr. Alt.

456-556. Methods for Teaching Junior High School Science. Modern approaches to teaching sciences in junior high schools. Not open to BA majors. Lab. 2 Cr. W, S.

459-559. Methods and Materials for Teaching Physics. Modern approaches to teaching of high school physics in classroom and laboratory, including materials of Physical Science Study Committee. Lab. 2 Cr. W.

477-577. Physics Institute. Selected topics in physics for experienced teachers of science. Lab. 3-6 Cr. Demand.

POLITICAL SCIENCE (POL)

Acting Chairperson Evan Jones. **Faculty** Becker, Carlson, Graham, Kairouz, Kilkelly, Schmidt, Williamson.

BACHELOR OF ARTS

Political Science Major (48)

POL 211, 251, 312, 429 or 3 or more credits.

Two courses from POL 313, 380, 411, 412, 413, 471, 491, 492.

One course from POL 331, 332, 333, 334, 335, 336.

One course from POL 361, 463.

Electives: 16-19 credits.

Any POL course not used to meet the above requirements may be used, with two exceptions. POL 201 may not be used, and a maximum of 8 credits from POL 444 may be counted towards the major. A maximum of 8 credits may be counted from non-department offerings including ECON 445, 460, 461, 474, 483; SOC 370, 445; and other courses by petition to, and with the approval of the Department of Political Science.

Political Science Minor (36)

Same as for the major, except that only 4-7 credits in electives are required.

Public Administration Major (76)

36 credits from POL 211, 312, 380, 429, and 485; MGMF 361; MKGB 140 and 250; ECON 460, or 461.

Electives: 28 credits; may be selected from POL 313, 400, 413 and 491; MGMF 362, 370, 371, 461, 467; MKGB 240, 351; SOC 370, 445 and 456; GEOG 394 and 454; ACCT 291; ECON 461; COMM 487; CSCI 169.

Internship of 12 credits from POL 444.

Students are advised to consult with the program coordinator before drawing up a final program.

A Minor in Public Administration is being considered to become effective Spring 1976. Please check with the Program Director or Department Chairperson.

Political Science Minor (24)

POL 211, 251, 312.

One course of POL 313, 380, 411, 412, 413, 471, 491, and 492 is a required option.

One course of POL 331, 332, 333, 334, 335, and 336.

Any one of POL 361 and 463.

POL electives: 0-2 credits.

POL 201 may not be used.

BACHELOR OF ELECTIVE STUDIES

Political Science Major (48)

Students may present a self-selected pattern of courses to the designated departmental advisers for approval.

Political Science Minor (36)

Students may present a self-selected pattern of courses to the designated departmental advisers for approval.

BACHELOR OF SCIENCE

Major

(Students who desire to complete a major program in Political Science in preparation for teaching should examine the **Social Studies Major: Political Science Emphasis** under Interdisciplinary Studies. That major is an 84 cr. program, with 36 cr. in Political Science.)

New certification requirements for social studies teachers with an emphasis on political science were approved in Minnesota effective July 1, 1971. A new program is being developed to meet those requirements; it is imperative that students who complete their degrees and seeking certification after that date become informed of the new requirements.

Secondary Education Minor (28)*

POL 211, 251, 312.

Electives: 12 credits.

Any Political Science course not used to meet the above requirements with two exceptions: POL 201 may not be used, and a maximum of 4 credits from 444 may be counted towards the minor.

Social Studies 353 (4).

*Additional course work in other social science areas is required to obtain Minnesota certification to teach in the secondary schools. Consult your Political Science adviser.

Elementary Education Minor (36)

POL 211, 312
POL electives (28)

Elementary Education Minor (24)

POL 211, 312
POL electives (16)

PUBLIC ADMINISTRATION PROGRAM

Faculty Committee: **Coordinator** Homer E. Williamson (Political Science), James T. Addicott (Geography), Roger K. Baer (Sociology), Akl Kairouz (Political Science), David Krueger (Marketing and General Business), Harold Lofgreen (Economics), Albert Pabst (Management and Finance).

Advisory Committee: Thomas J. Kelley (Ramsey County Administrator), Jack Kleinbaum (State Senator), Robert McEachern (State Representative), Elmer Malinen (City Administrator-City of St. Cloud), Al Patton (State Representative), Wheelock Whitney (Citizen Member).

Honorary Members: U.S. Senator Hubert Humphrey, Congressman Richard Nolan.

The B.A. Program in Public Administration is primarily intended to prepare generalist administrators. It does orient the student toward a particular profession by combining course work in business administration and political science. The business administration courses should give the student a desirable competence in the techniques of management. The political science sequence introduces the student to the unique political environment experienced by government personnel. At the same time, the program preserves a liberal arts orientation by encouraging the student to take supporting course work in a variety of academic fields. Finally, a required internship with local, state and national agencies gives the student the practical experience necessary to do well in future government work. For guidance on selection of electives and further information on the curriculum, see the program coordinator.

COURSE DESCRIPTIONS

†201. Political Ideas and Institutions. A comparative analysis of the major philosophies, institutions, and processes of government. 4 Cr. F, W, S, SUM.

†211. National Government. Functions of three branches of national government of the U.S. Emphasis on participation of the people in democratic processes of government. Prereq. to all other American courses in Political Science. 4 Cr. F, W, S, SUM.

†251. Introduction to World Politics. The nation-state; national power; restraints on national power such as international law and organization. 4 Cr. F, W, S, SUM.

282. State and Local Government. Places subnational politics in its social, ideological and federal setting. Concerns both formal structure and political process. Focus on the individual role. Emphasis on Minnesota. Prereq.: 211. 4 Cr. F, W, S, SUM.

313. Metropolitan Area Government. Examines government forms and political activities in large urban areas. Shows relationship between politics and such problems as transportation, crime, race, metro reform. Prereq.: POL 211. 4 Cr. F, W.

315. U.S. Foreign Policy. Examination of American foreign policies and practices since 1945 and an evaluation of processes involved in the formation, trends, and implementations of contemporary foreign policy of the U.S. 4 Cr. SUM, DEMAND.

331. Governments of Western Europe. Comparison of governmental organization and processes in nations of Western Europe. Emphasis on United Kingdom, France, West Germany, and Italy. 4 Cr. DEMAND.

332. Governments of the USSR and Eastern Europe. Emphasis on ideology and organization of the communist Party, governmental institutions, patterns of administration, and diplomatic relations. 4 Cr. DEMAND.

333. Latin American Government and Politics. Political behavior and institutions in countries of Latin America with emphasis on Argentina, Brazil, Chile, Mexico, and Cuba. 3 Cr. DEMAND.

†334. Middle East Government and Politics. Political behavior and institutions in countries of the Middle East. 4 Cr. DEMAND.

†335. African Government and Politics. Political behavior and institutions in independent African nations. Emphasis on problems caused by transition from colonialism to independence. 4 Cr. DEMAND.

†336. Asian Government and Politics. Political behavior and institutions in countries of East and South Asia with emphasis on Communist China, Japan and India. 4 Cr. DEMAND.

†361. Western Political Thought. Evolution of western political thought with a particular emphasis on the modern liberal-conservative mainstream and on the attacks on this mainstream from the left and right extremes. 4 Cr. DEMAND.

380. Public Administration. Introduction to administrative processes with special emphasis on the political role and setting of public agencies. Prereq.: POL 211. 4 Cr. F, S.

444. Internship. Supervised research or training opportunities provided by government agencies or political groups. Maximum of 8 cr. toward major and 4 cr. toward minor. Prereq.: Departmental consent. 1-12 Cr. F, W, S, SUM.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

411-511. The Presidency. Analysis of the American Presidency, its leadership role, legislative involvement, relations with the media and the American public and internal relationships between members of the Executive Branch. Prereq.: POL 211. 4 Cr. DEMAND.

412-512. Legislative Process. Problems faced by democratic legislatures such as the influence of committees, political party influence, pressure groups. Prereq.: POL 211. 4 Cr. DEMAND.

413-513. 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 American political system. Prereq.: POL 211. 4 Cr. F, S.

429-529. Seminar. —. Discussion, readings, research under faculty guidance and supervision. Specific topic selected each time offered. Prereq.: Previous course work in subject matter area, or permission. May be repeated. 1-4 Cr. F, S.

452-552. United Nations and Regional Organization. Organization, authority, achievements and problems of the United Nations and of its auxiliary components. 4 Cr. F.

463-563. 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.: POL 211. 4 Cr. DEMAND.

471-571. Political Parties and Elections. The structure and activities of American political parties and their impact on individual and group political behavior. Prereq.: POL 211. 4 Cr. DEMAND.

485-585. Administrative Law. Legal problems arising out of use of administrative agencies; administrative procedure; judicial relief against administrative action. 4 Cr. W.

491-591. 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.: POL 211. 4 Cr. W.

492-592. The Courts and Civil Rights. Supreme Court decisions concerning discrimination, speech, religion, search and seizure, counsel and other individual rights. Prereq.: POL 211. 4 Cr. F, S.

SOCIOLOGY (SOC) AND ANTHROPOLOGY (ANTH)

Chairperson Claude F. Del Zoppo. **Faculty** (Anthropology) Hatcher, Lane, Schwerdtfeger. (Social Work) Herbison, Hilton. (Sociology) Baer, Brunckhorst, Craik, Davis, Deininger, Goodrich, Harper, Havir, Kroeger, Paschall, Wise.

The undergraduate program provides courses in Anthropology, Social Work, and Sociology as a means of promoting a liberal arts education. Areas of concentration are obtainable in Anthropology, Social Work, and Sociology. Undergraduate majors who are primarily interested in career preparation should plan their programs in joint consultation with the sociology adviser and an adviser representing the career into which entrance is sought. Students interested in Social Science or Social Studies programs should refer to the course offerings in this bulletin.

BACHELOR OF ARTS

Anthropology Major (48)

ANTH 250, 265, 267, 480, 490; SOC 278.*
ANTH Electives: 20 Cr.

Sociology Major (48)

SOC 260, 278, 283, 379, 465, 485; ANTH 267.
SOC Electives: 20 Cr. 16 or more of which
must be on the 300-400 levels.

Social Work Major

Track 1 (60)

(for those who plan to seek work as soon
as they graduate)

ANTH 267. (4)
SOC 260, 278, 379, 465. (16)
SW 210, 211, 310, 311, 312, 420, 444. (32)
SOC Electives (to be selected within an area
of concentration with faculty adviser). (8)

Track 2 (60)

(for those intending to begin work toward
an MSW immediately upon graduation)

ANTH (same as Track 1). (4)
SOC — Courses listed for Track 1 plus: 281,
476. (24)
SW 210, 211, 310, 311, 312, 475. (24)
SOC Electives (8)

Anthropology Minor (24)

ANTH 250, 265, 267.
ANTH Electives: 12 Cr.

Select courses from those with a 250 pre-
req.

Anthropology Related Fields Minor (36)

In consultation with ANTH adviser, 18 Cr.
from the following list, including no more
than 12 Cr. in any one department, plus 18
Cr. in a concentration from the list below
(A or B).

ART 320; BIOL 201, 203; ENGL 432; FOR.
LANG. GEOG 270, 273; HIST 200; MATH
132, 329; PHIL 220, 240, 332, 334, 447; SOC
268, 279, 379; SSPA 285, 420.

A. Concentration in Museology: ART 101,
102, 430; TECH 110, 165; IM 275, 468, 478;
GEOG 405.

B. Concentration in Archeology: BIOL 203,
301, 342, 350, 489; GEOG 390, 405, 472;
HIST 320, 321, 370, 371; ESCI 284, 285.

Sociology Minor (36)

SOC 260, 278, 283, 379, 465; ANTH 267.
SOC Electives: 12 Cr. 8 or more of which
must be on the 300-400 level.

Related Fields Minor (35-36)

For Sociology Majors Only

ECON 273, 274
PHIL 333
POL 211
PSY 250

Select one course from each of four of the
five groups below: (15-16)

GEOG 372, 490
PHIL 240, 245, 332
POL 312, 492
PSY 390, 475
SSCI 460 and/or 470.

*Anthropology majors may substitute ANTH 250 & 265 for SOC 260 as a prerequisite for SOC 278.

BACHELOR OF SCIENCE

Sociology Major (48)

SOC 260, 261, 366, 465, 268, 485; ANTH 250;
SST 353.

Electives: 17 Cr. 4 must be in ANTH.

For teacher certification with a Sociology
emphasis, at least one course in college
history, geography, economics, and polit-
ical science are required. General Educa-
tion courses are sometimes used to satisfy
this requirement for Social Science cer-
tification. Students should check with
their advisers for new requirements in
1979.

Sociology Minor (36)

SOC 260, 261, 465; ANTH 250; SST 353.
Electives: 16 Cr. 4 must be in ANTH

Elementary Education Minor (24 or 36)

SOC 260, 465; ANTH 267.

SOC and ANTH Electives:

for 24-Cr. minor (12).

for 36-Cr. minor (24).

BACHELOR OF ELECTIVE STUDIES

Anthropology Major (48)

Completion of any 48 Cr. in ANTH.

Social Work Major (60)

All social work majors must take all courses

as specified under the B.A. program listed
above.

Sociology Major (48)

Completion of any 48 Cr. in SOC.

COURSE DESCRIPTIONS**ANTHROPOLOGY (ANTH)**

†250. Introduction to Anthropology. A brief survey of human origins. The nature and origins of culture, its development through prehistoric ages. Comparative analysis of cultures and social organization. 4 Cr. F, W, S.

255. Anthropology of Art. The relation of art to other aspects of culture; survey of styles in the visual arts from the ethnographic and archeological contexts, art as visual communications. 4 Cr. Demand.

265. Physical Anthropology. An introductory survey of the methods and aims of physical anthropology. Emphasizes the significance of variations, adaptations, and adjustments of the human species. 4 Cr. F.

267. Cultural Anthropology. Cultural: its meaning, analysis, changes. Significance of culture in human relations. Study of ways of life found in small societies throughout the world. 4 Cr. F, W, S.

270. World Prehistory. Comparison of prehistoric cultural materials from both hemispheres to demonstrate processes of cultural evolution and rates of cultural and human biological evolution. 4 Cr. W.

350. Social Anthropology. Basic concept and methods in social anthropology applied to problems of kinship and group formation, maintenance, and interaction. Prereq.: 267. 4 Cr. Demand.

354. Mesoamerican Civilizations. Brief history of Mesoamerican civilizations and study of their crafts, arts, cities, religions, and other institutions. Special attention to Maya and Aztec civilizations. Prereq.: 267. 4 Cr. Demand.

355. Ethnology of Africa. Culture history of the continent and social anthropology of traditional societies. Background factors related to the problems of modern Africa. Prereq.: 267. 4 Cr. Demand.

356. Ethnology of Asia. Survey and analysis of cultural diversity and unity on the continent of Asia. Prereq.: 267. 4 Cr. Demand.

358. Ethnology of Oceania. An analysis of the native peoples and cultures of Melanesia, Micronesia, and Polynesia; impact of industrial societies on the indigenous populations. Prereq.: 267. 4 Cr. Demand.

359. Indians of North America. The cultural anthropology of selected tribes and culture areas of pre-Columbian North America; impact of European conquest upon these cultures. Prereq.: 267. 4 Cr. F.

444. Internship. A maximum of 8 credits may be used toward a major; 4 credits used toward a minor; remainder will be used in general electives 1-16 Cr.

471. Culture and Personality. Personality development in context of cultural patterns for behavior in both preliterate and modern societies. Prereq.: 267. 3 Cr. W.

472. Anthropological Analysis and Interpretation. A survey of various anthropological methods and techniques of data analysis and interpretation obtained from prior field work. Prereq.: 267. 4 Cr. Demand.

475. Museology. An introduction to the operation and functions of anthropology museums for education, research, and preservation; practicum in preparation of exhibits, cataloguing, and restoration. Prereq.: 267. 4 Cr. Demand.

480. Theories and Methods in Anthropology. History of anthropological thought; emphasis on basic methods used in the sub-disciplines and the relationship of method to theory. Prereq.: 267 and 12 Cr. in ANTH. 4 Cr. S.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

463-563. Seminar. Discussion and readings in advanced anthropology. A specific topic selected each time offered. May be repeated. Prereq.: 250 or permission of department chairperson. 4 Cr. Demand.

467-567. Principles of Cultural Anthropology. Concepts and theories of anthropology. Analysis of tribal and peasant cultures; comparison with more complex societies. Prereq.: 250 or SOC 260. 4 Cr. Demand.

469-569. Theory of Cultural Change. An examination of various theoretical approaches to the dynamics of cultural change. Prereq.: 250 or Soc 260, 267. 4 Cr. Demand.

490-590. Field Methods in Anthropology. Anthropological field methods in one of the major subdisciplines of anthropology-archaeology, ethnography, or linguistics. Prereq.: 250 or Soc 260, 267 or consent of instructor. 1-8 Cr. Demand.

SOCIOLOGY (SOC)

†260. Principles of Sociology. Human relations, including culture, group, group and personality, group interaction; community, social institutions, cultural change, social disorganization. 4 Cr. F, W, S, ISS.

†261. Social Problems. Nature, origins, and types of social problems of contemporary society. Societal efforts to eliminate or alleviate these problems. Not open to juniors or seniors majoring in Sociology. Prereq.: 260. 4 Cr. F, W, S.

†264. School and Society. Community structure and institutions. Relationship between school and personality growth. School and society relationships; the community school; youth and community surveys. Prereq.: 260. 3 Cr. Demand.

†268. Minority Group Relations. Problems of ethnic and racial differentiation. Causes and consequences of prejudice and discrimination. Action programs to reduce ethnic and race conflict. Prereq.: 260. 4 Cr. Demand.

273. Sociology of Sex Roles. Examination of the social factors and/or forces affecting the definition, acquisition, maintenance, and change of sex role sin the U.S. Prereq.: 260, 4 Cr. F, W, S.

278. Social Statistics I. Statistical tools for problems in sociological research; types of measurement; classification and presentation of quantitative data; univariate and bivariate descriptive techniques. Prereq.: 260. 4 Cr. F, W, S, ISS.

279. Social Statistics II. Multivariate analysis and interactions; statistical inference, sampling, and probability theory; hypothesis tests for various levels of measurement. Prereq.: 260, 278 or consent of instructor. 4 Cr. Demand.

280. Sociology of Conflict. Investigation of interpersonal and social conflicts caused by changing values and life styles as generations evolve in modern urbanizing society. Prereq.: 260. 4 Cr. Demand.

†281. Class, Status, and Power. Nature, functions, criteria, and significance of social stratification systems; trends and factors in social mobility. Prereq.: 260. 4 Cr. F, S.

283. Development of Sociology. Sociological thought from folklore to social science; principle stages, central ideas, and major approaches with reference to social and cultural contents. Prereq.: 260. 4 Cr. F, W, S, IISS.

340. Mass Media and Society. Analysis of structure, functions, (ideal and actual), content, and other institutional aspects of the mass media. Prereq.: 260. 4 Cr. F.

342. Industrial Sociology. Analysis of industrial organizations, ideologies of workers and managers, cooperation, conflict, morale, communication, and relationships of industrial organization to the society. Prereq.: 260. 3 Cr. Demand.

347. Principles of Population. Factors and processes determining population size, composition, and distribution; relations of population to social organization and human welfare; recent trends in population. Prereq.: 260. 3 Cr. Demand.

350. Sociology of Age and Aging. A study of age statuses in the U.S. with concentration on the social status and role of the elderly. Prereq.: 260. 4 Cr. Demand.

360. Social Change. A theoretical and empirical investigation of ever-present change in interpersonal relationships and in societal institutions. Prereq.: 260. 4 Cr. Demand.

364. Social Dynamics of Law. Sociological aspects and origins of law and legal institutions: analysis of the effects of law upon society; of legal procedures on civil, criminal and family law. Prereq.: 260. 4 Cr. Demand.

366. Juvenile Delinquency. Problems of definition, extent and distribution, theoretical interpretations of causality, and methods of treatment of juvenile delinquency. Prereq.: 260. 4 Cr. F, W, S, IISS.

367. Criminology. Problems of definition, extent and distribution, theoretical interpretations of causality, and methods of treatment of criminal behavior. Prereq.: 260. 4 Cr. F, W, S, IISS.

- †369. Modern Courtship and Marriage.** Dating, mate selection, marriage and divorce regulations, marital roles, marital adjustment, parenthood. Prereq.: 260. 4 Cr. F, W, S.
- 370. Urban Sociology.** History and functions of the city; urban social relations, ecology and institutions; social change and problems of urban life. Prereq.: 260. 4 Cr. F.
- 372. Sociology of the Family.** The family as a dynamic institution; relations to other institutions; research based variations and trends in family life. Prereq.: 260. 4 Cr. F.
- 375. Medical Sociology.** Study of sociocultural aspects of illness, disease, treatment and health care administration. Social organization of medical institutions, current issues and special problem areas. Prereq.: 260 or consent of instructor. 4 Cr. Demand.
- 379. Research Methods.** Conceptual clarification, design, data gathering, data analysis, derivation of conclusions, writing of reports. Prereq.: 260, 278 or consent of instructor. 4 Cr. F, W, S, IISS.
- 380. Sociology of Religion.** Relation of religion to society. Various forms of religion and their relation to other institutions. Prereq.: 260. 4 Cr. S.
- 400. Special Problems in Sociology.** A seminar or conference course for advanced students wishing to work out a special problem in sociology. 1-4 Cr. Demand.
- 444. Internship.** A maximum of 8 credits may be used toward a major; 4 credits used toward a minor; remainder will be used in general electives. 1-16 Cr.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 440-540. Public Opinion and Propaganda.** Nature, function, formations and measurement of public opinion; attempts to influence public opinion; propaganda. Prereq.: 260. 4 Cr. Demand.
- 442-542. Social Movements.** Analysis of social movements, their origin in discontent; role of ideas, personal relationships, organizational factors in their development. Some contemporary social movements. Prereq.: 260. 3 Cr. Demand.
- 445-545. Political Sociology.** An analysis of structural and ideological factors influencing the development and legitimation of political institutions, and the sociological conditions influencing the political processes. Prereq.: 260. 3 Cr. Demand.
- 447-547. World Population Problems.** World population trends and pressures; their causes and consequences; war; international relations; standards of living; technological change; and cultural contacts. Prereq.: 260. 3 Cr. Demand.
- 454-554. Collective Behavior.** Unstable collectivities with changing social structures. Nature, causes, and consequences of collective behavior in mobs, crowds, publics, etc. Prereq.: 260. 3 Cr. Demand.
- 456-556. Complex Organizations.** Social and cultural characteristics of a variety of formal organizations, with emphasis on both theoretical and practical problems. Prereq.: 260. 4 Cr. Demand.
- 461-561. Sociology of Knowledge.** Analysis of environmental and social correlates of a variety of belief systems as well as a study of the genesis, development, and decline of these belief systems. Prereq.: 260. 4 Cr. Demand.
- 462-562. Seminar.** Discussion, readings, evaluation of sociological theory, social issues, or contemporary events. A specific topic selected each time offered. May be repeated. 1-4 Cr. Demand.
- 465-565. Social Psychology.** Influence of human relations and culture on development of personality. Culture approaches to the development of attitudes, prejudices, roles, and groups. Prereq.: 260. 4 Cr. F, W, S, IISS.
- 470-570. Minority Group Cultures and Contributions.** Minority-group cultures and contributions and the position of minority groups in American society. Different groups will be focused upon in the course. 4 Cr. Demand.
- 476-576. American Social Institutions.** The structure and interrelations of the major American institutions. Institutions as agencies of social control. Disorganization as an effect of social change. Prereq.: 260. 4 Cr. Demand.
- 485-585. Contemporary Sociological Theory.** Systematic organization of concepts and principles of the explanation of social phenomena as a guide to contemporary sociological research. Prereq.: 260. 4 Cr. F, W, S, ISS.

SOCIAL WORK (SW)

210. Social Welfare as a Social Institution. Social welfare and an analysis of the relationship between social welfare and other social institutions. Issues in the social welfare system of the United States. Prereq.: SOC 260. 4 Cr. F, W, S, ISS.

211. Introduction to Social Work. Survey of the development of the values, theories, and methods of the profession of social work in the United States. Introduction to social work practice. Prereq.: SOC 260. 4 Cr. F, W, S, ISS.

310. Social Work Methods I. (Social Work 310-312 must be taken in sequence.) Introduction to, and practice in basic helping skills; communication, observation, recording, and interviewing. Prereq.: 210, 211; SOC 260. 4 Cr. F.

311. Social Work Methods II. (Social Work 310-312 must be taken in sequence.) Development of generalist social work skills/methods. Understanding and use of effective worker-consumer relationships. Prereq.: 210, 211; SOC 260. 4 Cr. W.

312. Social Work Methods III. (Social Work 310-312 must be taken in sequence.) Application and integration of field experience with course work in working with communities. Prereq.: 210, 211; SOC 260. Recommended SOC 278, 379. 4 Cr. S.

420. Seminar in Social Work. Reading and discussion, skill exercises, or field experience related to social work theory, research, or practice. A specific topic selected each time offered. Prereq.: 310-312. 4 Cr. Demand.

444. Internship in Social Work. Extensive educationally directed social work field placement in approved social agency. Prereq.: 310-312. A maximum of 8 credits may be used toward major; 4 credits used toward a minor; remainder will be used in general electives. 1-16 Cr.

475. Field Work. Supervised field experience in a social service agency, correctional institution, or other approved facility. Admission by department approval. 4 Cr. Demand.

SCIENCE (SCI)

Science Education Committee: Chairperson John Coulter (BIOL). **Members** J. Carpenter (CHEM), P. Johnson (SEED), K. Kelsey (EDT), K. Kennedy (CHEM), D. Kramer (BIOL), D. Magnus (CHEM), B. Moore (ESCI), G. Mortrude (ELED), D. Peterson (BIOL), C. Rehwaldt (BIOL), A. Schelske (College of Education), R. Schmidt (ELED), P. Tennison (Campus Lab School), P. Younger (PHYS).

BACHELOR OF SCIENCE

Comprehensive General Science Major (84)
BIOL 201, 202, 203; CHEM 211, 212 or 213, 251; PHYS 231, 232, 233; ESCI 284, 285, 306; BIOL 456

Select one: BIOL 457; CHEM 458, PHYS 459, ESCI 460
Electives (28)

Comprehensive Physical Science Major (84)
CHEM 211, 212 or 213, 214, 251, 252, 325, 458; PHYS 231, 232, 233, 328, 329, 332, 459; MATH 241, 242, 243, 244

Electives from CHEM, PHYS and MATH, selected so as to make a total of 36 credits in either CHEM or PHYS and 28 credits in the other (16).

For Science teacher certification in Minnesota after July 1, 1979 in physical science, grades 7-12, the candidate must have a minimum of 12 credits in each of three areas; life sciences, earth sciences, and physical sciences, and a total of 78 credits in the sciences. This may include appropriate General Education credits. For more information see a B.S. adviser.

†110. An Introduction to the Metric System. Activities stressing the development of the metric system; its prefixes, its history to English system relationships and its effects on industry and social life. 2 Cr. DEMAND.

460-469, 560-569. Non-sequence courses designed for intensive study of a special topic. Topic will be announced in class schedule. 1-4 Cr. DEMAND.

SPEECH COMMUNICATION (SPC)

Chairperson Arthur Grachek. **Faculty** Adams, Andrzejewski, Detra, Hannah, Kendall, Park, Sikkink, Vick, Wick.

Extending the knowledge, appreciation and techniques that contribute to the full understanding and practice of effective communication is the goal of the Department of Speech Communication. The rhetorical tradition of speech has long been considered central to a liberal education. People must use speech effectively to function well in education, business, politics, government, the community and the family. In addition to offering a variety of major and minor programs, **the speech communication curriculum is open to all students** and is designed to complement and integrate most programs of study.

BACHELOR OF ARTS

Speech Major (36)

Select three: SPC 220, 324, 325, 331, 350.
Select two: SPC 415, 420, 430.
Electives in Speech (16).

Speech-Interdepartmental Major (60) (No Minor)

Select two: SPC 220, 324, 325, 331, 350.
Select two: SPC 415, 420, 430.
Electives in Speech (14).
Interdepartmental Electives (30).

Speech Minor (24)

Select two: SPC 220, 331, 350.
Select two: SPC 415, 420, 430.
Electives in Speech (8).

BACHELOR OF SCIENCE

Speech Major* (48)

SPC 220, 331, 415, 452.
SPC 324 or 325.
SPC 420 or 430.

Participation in one forensic activity.

Registration for credit is optional.

Select one: COMM 220, 371, 376.

Select one: SSPA 220, 230, 320.

Electives in Speech Communication
Courses to reach a total for the major of 48 credits.

*A student who **includes** in the above requirements as electives TH 235 and 260 and participates in a second activity (interpretation or theatre), will have the major listed as a **Speech-Theatre Arts Major**. Students completing this major are certified to teach full-time in speech and up to half-time in theatre.

Speech Minor* (24-32)

SPC 220, 331, 452.
SPC 324 or 325.
SPC 415 or 430.

Participation in one forensic activity.

Registration for credit is optional.

Select *one* of these six courses:

COMM 220, 371, 376.
SSPA 220, 230, 320.

*A student who **adds** to the above requirements TH 235 and 260 and participates in a second activity (interpretation or theatre), will have the minor listed as a **Speech-Theatre Arts Minor**.

BACHELOR OF ELECTIVE STUDIES

Major (48)

Completion of any 48 credits in speech communication.

Minor (36)

Completion of any 36 credits in speech communication.

COURSE DESCRIPTIONS

†161. **Introduction to Speech Communication.** Person to person and small group communication, oral reading and public speaking. Theory and experience to relate meaningfully, think critically, organize clearly and speak and listen effectively. 4 Cr. F, W, S, SUM.

†220. **Public Speaking.** Theory and practice of public speaking. Includes an introduction to rhetorical criticism. Prereq.: 161. 4 Cr. F, W, S, SUM.

- †222. Parliamentary Procedure.** Instruction and practice in applying parliamentary rules of order to group meetings. 3 Cr. W.
- †223. Effective Listening.** Instruction and practice in discriminative, appreciative, and critical listening. 4 Cr. F, W, S.
- †226. Dynamics of Interpersonal Communication.** Study of the dynamic interactional elements of communication in a one-to-one relationship through experiential exercises and selected readings. 4 Cr. F, W, S, SUM.
- 227. Speech Activities.** Credit is earned by participation in speech activities. One credit per session per quarter. May be repeated up to a maximum of 6 Cr. F, W, S.
- 230. Contemporary Problems in Speech.** Undergraduate seminar on a selected rhetorical problem, such as black rhetoric, school administration rhetoric, classroom dialogue, etc. May be repeated to a maximum of 12 credits. 4 Cr. F, W, S.
- 250. Voice and Diction.** Analysis of and practice in vocal pitch, loudness, and quality; speaking rate; articulation and pronunciation. 4 Cr. F, W, S.
- †280. Ethics and Free Speech.** Inquiry into the philosophical and legal foundations of free speech, and exploration of the communicator's ethical responsibilities. 4 Cr. F, ALT.
- †321. Significant Speeches.** A critical study of selected significant speeches, debates and discussions, from ancient to contemporary times, in historical perspective. Recommended to follow 220. 4 Cr. F, ALT.
- †324. Argumentation and Debate.** Theory and practice in argumentative speaking and debate. Prereq.: 220 or permission of instructor. 4 Cr. F.
- †325. Problem Solving Discussion and Conference Leadership.** Study and practice of problem solving by groups (small and large, closed and public) and the planning of both informational and problem-solving conferences. Lab. 4 Cr. W.
- †331. Oral Interpretation.** Instruction and practice in oral reading, with emphasis on selection, study, and presentation of literature suited for oral interpretation. 4 Cr. F, W, S.
- 350. Laboratory in Small Group Process.** Laboratory experience in small group process enabling the student to become more aware of human interaction and to gain greater insight into the dynamics of small groups. 4 Cr. F, W, S.
- 427. Undergraduate Assistantship.** Assisting in a 100-200 level course in Speech. Prereq.: B average or above for all courses in Speech. Approval of instructor and chairperson one quarter in advance of registration. May be repeated to a maximum of 9 credits. 3 Cr. F, W, S, SUM.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 415-515. Rhetorical Criticism.** Concepts, terminology, methods and literature of rhetorical criticism. Prereq.: 220 or permission of instructor. 4 Cr. F.
- 420-520. 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. 4 Cr. S.
- 421-521. American Public Address.** Major speakers in American history studies from a rhetorical perspective. Prereq.: 415. 3 Cr. Demand.
- 430-530. 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. W.
- 435-535. Theories of Small Group Process.** Introduction to theories of small group process, particularly as they relate to communication within and between small groups. 4 Cr. Demand.
- 440-540. Advanced Public Speaking.** Exploration in depth of speech principles through speech making and selected readings. 4 Cr. Demand.
- 452-552. Teaching of Speech.** Materials and methods for curricular and co-curricular teaching of speech in the secondary schools. Must precede student teaching. Prereq.: 15 hours of speech. 4 Cr. F.
- 480-580. Seminar in Speech Communication.** Discussions and readings in advanced speech topics. A specific topic will be listed each time offered. May be repeated. Prereq.: Senior/graduate standing or permission of instructor. 4 Cr. Demand.

SPEECH SCIENCE, PATHOLOGY AND AUDIOLOGY (SSPA)

Chairperson Martin Kammermeier. **Faculty** Germono, P. Hopkins, Jacobson, E. Patton, Powers.

Two avenues of study are available to the student major in this field, the Bachelor of Science and the Bachelor of Arts degree. The student must select one or the other in conference with a departmental faculty member. Admission to the major program requires that the student have an interview with a departmental faculty member. To be recommended for certification as a school speech clinician the student must complete either a Fifth Year program or a Master's degree.

BACHELOR OF ARTS

Major (69)

SSPA 220, 230, 240, 320, 331, 334, 341, 342, 344, 422, 432, 443, 450, 451, 455, 456, 460, 461.

Additional requirements of the Minnesota State Department of Education for all workers in the public schools: HLTH 301; HURL 496, 497.

BACHELOR OF SCIENCE

Major (110)

SSPA 220, 230, 240, 320, 331, 334, 341, 342, 344, 422, 432, 443, 450, 451, 455, 456, 460, 461; ELED 312; SPED 401; IM 468.

Elect 6 Cr. from: ELED 200, 412, 456; SPED 402.

Elect 8 Cr. from: SPED 404, 405, 407.

HLTH 301; HURL 496, 497.

Student Teaching: 16 Crs.

Minor in Speech Pathology (30)

SSPA 220, 230, 240, 320, 334, 341, 344, 460, 461.

Minor in Speech and Hearing Sciences (22)

SSPA 220, 240, 320, 341, 420, 443, 460.

BACHELOR OF ELECTIVE STUDIES

Major (48)

Completion of 48 credits with the approval of the department.

Minor (36)

Completion of 36 credits with the approval of the department.

COURSE DESCRIPTIONS

220. Phonetics. Speech sounds from a sociological, physiological and acoustical point of view. Instruction and training in the use of the International Phoenetic Alphabet. 3 Cr. F, S.

230. Introduction to Speech Pathology and Audiology. Verbal communication disorders in children and adults; their incidence and effect on the individual and community; treatment; speech pathology as a profession. 4 Cr. F, S.

240. Hearing Science. Basic acoustics, the auditory mechanism, theories of hearing and auditory phenomena as perceived by normal hearing listeners. 3 Cr. F.

280. Fundamentals of Speech. Processes of respiration, phonation, resonance and articulation as the requisites for speech production. Manipulation of those processes for improvement of speech. 2 Cr. W.

320. Speech Science. Acoustics of speech production: processes of respiration, phonation, resonance and articulation; perception of speech. 3 Cr. W.

331. Voice. Voice disorders (pitch, loudness, quality) as related to hyperfunction of the processes of respiration, phonation, and resonance, their symptomatology, etiology, diagnosis, and treatment. 3 Cr. S.

- 334. Articulation.** Research and theory of the nature, etiology, and treatment of functional articulation problems. Clinical observation required. Prereq.: 230. 3 Cr. W.
- 341. Hearing Disorders.** Symptoms and pathology of hearing disorders, their medical, surgical and audiologic management; amplification; educational and psychological management. 3 Cr. W.
- 342. Speech Reading and Auditory Training.** Importance and role of speech reading and auditory training in auditory rehabilitation. History, theories, and methods of teaching speech reading and auditory training. 4 Cr. F, S.
- 344. Clinical Management of Hearing-Handicapped Children.** Language growth in hearing-impaired children: family and community as potential contributors to language for the hearing-impaired. Prereq.: 341. 3 Cr. S.
- 380. Language Remediation for the Mentally Retarded and Language Handicapped Child.** Language development; tests of language; methods and materials. Not open to majors in speech pathology. 4 Cr. F, W, S.
- 420. Experimental Phonetics.** Relationship between the acoustic features of speech sounds and perception of speech. 3 Cr. F.
- 422. Speech Physiology.** Gross anatomy and physiology of the structures related to respiration, phonation, articulation, and audition. 3 Cr. F.
- 432. Stuttering.** Research in stuttering from the 1930's to the present. Emphasis placed upon describing stuttering behaviors and formulation of a remedial program for an individual who stutters. 3 Cr. W.
- 443. Hearing Measurement.** Hearing conservation; air and bone conduction audiometry; speech audiometry and the testing of hearing aids; tests for site of lesion, recruitment and functional losses. 3 Cr. F.
- 450. Introduction to Practicum.** Facilities and equipment; directed, critical observation of speech and language behavior; report writing, planning, therapy for the types of disorders. 4 Cr. F, W, S.
- 451. Practicum.** Supervised training in speech and hearing therapy techniques. Prereq.: 450 and staff approval. (3 cr. required for SSPA Major. May be repeated to 6 cr.). 1-3 Cr. F, W, S.
- 455. Behavioral Management of Speech and Language Problems.** Study of behavior modification principles. The application of behavioral procedures to problems in speech and language pathology. 4 Cr. S.
- 456. The Speech and Hearing Clinician in the Public School.** Philosophy, responsibility, and operating procedures of the professional worker in the public schools. Prereq.: 230. 3 Cr. W.
- 460. Language Development.** Normal development of speech and language. Development of the major aspects of speech and language-phonological, syntactic, and semantic; and current explanation of language acquisition. 4 Cr. F.
- 461. Language Appraisal and Intervention.** Strategies for assessing linguistic knowledge and usage. Training procedures for the remediation of language disorders. 4 Cr. W.

WOMEN'S STUDIES (WS)

Coordinator Eleanor Simpson (American Studies). **Faculty Committee** Coen (Art), M. Craik (Psychology), Goemer (Health, Physical Education and Recreation), Hannah (Speech Communication), Haver (Sociology), Medler (History), Paschall (Sociology), Summers (English), Wollin (Psychology).

Women's Studies is a multidisciplinary program which integrates course work from the humanities, social and natural sciences, and the College of Education. The program is designed to enhance the student's understanding of women as a distinct group with its own history, experience, needs, and achievements. The courses are, therefore, of value to any student interested in broadening his/her knowledge of society and the world. For women students, the program offers, in addition, an opportunity for increased self-understanding. Persons majoring in the liberal arts, education, social work, public service, business, or in pre-professional programs such as law or medicine find Women's Studies of particular

value. Flexibility and opportunities for independent study are notable aspects of the program.

The 24-hour minor is designed as a short or second minor; the 36-hour minor provides for those wishing more extensive study. Both minors are available to persons in all degree programs.

Minor (24)

Four courses from Group A; electives from Groups A or B.

Minor (36)

WS 201, 401, four additional courses from Group A; electives from Group A or B.

Group A: AMST 490; ENGL 451; HLTH 481; HIST 356; PSY 270; SPC 230 or 438; WS 201, 401.

Group B: ANTH 471; BIOL 411; POL 492; SOC 369, 372, 465; WS 199-499*, 400*.

*Or other Departmental Designation approved by adviser.

COURSE DESCRIPTIONS

201. Introduction to Women's Studies. Introduction to the nature of multidisciplinary study and to concepts, issues, and bibliography basic to Women's Studies. Prereq.: declared minor in Women's Studies or consent of the instructor. 2 Cr. F, S.

401. Senior Seminar. Multidisciplinary research aimed at integrating the diverse data gained from specialized courses in the program. Prereq.: 201 or consent of the instructor. 2 Cr. S.

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Douglas Johnson, Principal, Campus Laboratory School

Louise Johnson, Associate Dean, College of Liberal Arts and Sciences

Jack Jones, Director, Campus Laboratory School

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Ruth Kelly, Assistant to Vice President for Administrative Affairs

Richard Kisch, Director, Alumni Affairs

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Randy Kolb, Director, Academic Computer Services

Patricia Krueger, Program Director, Atwood Memorial Center

Nick LaFontaine, University Business Manager
Walter Larson, Director, Career Planning and Placement
Alfred Lease, Dean, College of Industry
Wayne Little, Associate Dean, College of Business
William Lynch, Director, Sports Information
Vernon Ludeman, Director of Summer School; Assistant Dean, School of Graduate Studies
James Marmas, Dean, College of Business
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Peggy Meyer, Editor, Publications
Terry Montgomery, Vice President, University Relations; Assistant to the President
David Munger, Associate Dean of Students
Andrew Nappi, Special Assistant to the Vice President for Academic Affairs; Director, Center
for Economic Education
James Paull, Recreation Director, Atwood Memorial Center
Patricia Potter, Associate Dean of Students
William Radovich, Vice President for Administrative Affairs
Keith Rauch, Director, Admissions and Records
Sherwood Reid, Director, High School and Community College Relations
John Rock, Housing Coordinator
Ray Rowland, Director, Information Services
Alvin Schelske, Associate Dean, School of Education
Shirley Schrader, Acting Assistant Dean, School of Graduate Studies
Joseph Schwartz, Assistant Director, Institutional Research
David Sprague, Vice President, Student Life and Development
Brenton Steele, Director, Student Activities
Myron Umerski, Registrar
Howard Weise, Director, Continuing Education
Robert Wick, Distinguished Service Professor; Acting Dean, College of Liberal Arts and
Sciences

FACULTY

Graham, Charles J. (1971)

President
B.A., M.A., Ph.D., University of Illinois

Abbott, Thomas D. (1966)

Instructor in Music
B. Mus., Cincinnati Conservatory of Music;
M. Mus., Chicago Musical College

Acree, Kenneth C. (1967)

Associate Professor of History
B.A., M.A., Drake University; Ph.D.,
University of Wisconsin

Adams, Mary E. (1966)

Instructor in Speech Communication
B.E., St. Cloud State University; M.A.,
University of Minnesota

Addicott, James T. (1968)

Assistant Professor in Geography and Earth
Science
B.S., North Dakota State University; B.S.,
Moorhead State University; M.A.,
University of Kentucky

Aiken, Joseph G. (1969)

Associate Professor of Art
B.A., M.F.A., University of Washington

Alhelm, Frank A. (1966)

Professor of Art
B.A., M.A., University of Northern Iowa;
Ed.D. University of New Mexico

Allen, Thomas O. (1966)

Instructor in Music
B.Mus., M.Mus., University of Colorado

Ames, Kenneth A. (1974)

Professor; Dean, College of Education
B.S., University of Wisconsin — River Falls;
M.A., University of Minnesota; Ed.D.,
University of Wyoming

Anderson, Alan (1965)

Assistant Professor of Geography and Earth
Science
B.S., St. Cloud State University; M.S.,
Colorado State University

Anderson, Arlynn L. (1966)

Instructor in Health, Physical Education &
Recreation
B.S., Wisconsin State University; M.S.,
Bemidji State University; B.S., University
of Minnesota-Duluth

Anderson, Derwyn L. (1968)

Associate Professor of Psychology
B.A., North Park College; M.A., Ph.D.,
University of North Dakota

Anderson, Florence M. (1969)

Assistant Professor in Elementary Education
B.S., St. Cloud State University; M.A.,
Ed.D., University of Minnesota

Anderson, Garry G. (1971)

Assistant Professor of Geography and Earth
Science
B.A. University of Northern Iowa; M.A.,
Ph.D., Indiana University

Anderson, James B. (1966)

Assistant Professor of English
B.A., M.A., Southern Illinois University

Anderson, James W. (1966)

Professor of Educational Administration;
Chairperson
B.S., St. Cloud State University; M.A.,
Specialist in Education; Ph.D., University
of Minnesota

Anderson, Myron G. (1965)

Professor of Philosophy; Chairperson
B.A., M.A., University of Minnesota; Ph.D.,
Brown University

Andrzejewski, Julie R. (1971)

Instructor in Speech Communication
B.A., M.A., University of Washington

Anfenson, Rodney E. (1958)

Assistant Professor of Health, Physical
Education & Recreation; Director of
Athletics
B.S., Bemidji State University; M.S., St.
Cloud State University

Arndts, Russell T. (1959-63; 1968-)

Professor of Chemistry
B.S., Bemidji State University; M.S., North
Dakota State University; Ph.D., Louisiana
State University

Ayers, Floyd W. (1969)

Professor of Special Education
B.A., Cornell University; M.A., Syracuse
University; Ph.D., University of
Minnesota

Azzeh, Jawad (1975)

Assistant Professor in Accounting
B.S., Ein Shams University, Cairo, Egypt;
M.S., University of Utah; M.A., Utah State
University; Ph.D., University of Nebraska

- Baer, Roger K.** (1972)
Associate Professor of Sociology and Anthropology
B.S., American University; M.A., Catholic University; Ph.D., University of Chicago
- Bahaiddin, Mohammed** (1970)
Associate Professor of Mathematics and Computer Science
B.Sc., Osmania University (India); M.Sc., Karachi University (Pakistan); M.S., University of Minnesota; Ph.D., New Mexico State University
- Bahde, John E.** (1969)
Assistant Professor of Philosophy
B.A., University of Colorado; M.A., Cornell University
- Barker, Dorothy E.** (1972)
Associate Professor of Biological Sciences
B.S., M.S., Ph.D., University of Minnesota
- Barker, S. Hugh** (1946)
Professor of Biological Sciences
B.Ed., Wisconsin University - Whitewater; Ph.M., Ph.D., University of Wisconsin
- Barrett, Roger L.** (1949)
Professor of Music
B.M.E., M.M., Drake University; Ph.D., University of Iowa
- Bartlett, Gary E.** (1973)
Instructor, Director of Atwood Memorial Center
B.S., Central Washington State College; M.A., University of Iowa
- Basch, Charles J.** (1968)
Instructor in Health, Physical Education & Recreation
B.S., Concordia College; M.S., St. Cloud State University
- Baschky, Richard** (1969)
Assistant Professor of Theatre
B.A., San Diego State University; M.F.A., State University of Iowa
- Batdorf, Leland C.** (1966)
Assistant Professor of Management and Finance
B.S., U.S. Coast Guard Academy; M.B.A. Harvard Business School
- Bates, William B.** (1972)
Associate Professor; Counseling and Related Services
B.S., College of Steubenville; M.Ed., University of Virginia; Ph.D., Kent State University
- Bavery, Edgar A.** (1968)
Professor of Elementary Education
B.S., M.S., Western Illinois State University; Ed.D., University of Northern Colorado
- Bayne, Robert D.** (1971)
Assistant Professor; Counseling and Related Services
B.S., M.A., Eastern Michigan University; Ph.D., Kent State University
- Beck, Catherine A.** (1964)
Assistant Professor of Art
B.A., M.A., University of Minnesota
- Becker, Robert W.** (1963)
Associate Professor of Political Science, Special Assistant to the President
B.A., Hamline University; M.A., Michigan State University; J.D., William Mitchell College of Law
- Behr, Philip R.** (1962)
Instructor in Geography and Earth Science
B.S., M.S., St. Cloud State University
- Benson, Joanne E.** (1973)
Assistant Instructor, Campus Lab School
B.S., St. Cloud State University
- Benson, Robert G.** (1958)
Professor of Marketing and General Business
B.S., M.S., St. Cloud State University; Ph.D., University of Iowa
- Bergstrom Phillip G.** (1969)
Associate Professor of Industrial Education
B.A., M.A., Central Washington State College; Ed.D., Washington State University
- Berling, John G.** (1968-69) (1975)
Associate Professor; Learning Resources and Library & Audiovisual Education
B.S., St. Cloud State University; M.S., Wayne State University; Ph.D., University of Nebraska - Lincoln
- Bird, Howard A.** (1966)
Associate Professor of Mathematics and Computer Science, Chairperson
B.S., Minot State College; M.S., University of North Dakota; Ph.D., Kansas State University
- Birr, Shirley J.** (1968)
Instructor; Campus Lab School
B.S., M.S., St. Cloud State University
- Bjorklun, Eugene C.** (1967)
Professor of Secondary Education
B.S., M.A., Ed.D., University of Nebraska

Bjorklund, Lorimer R. (1969)

Assistant Professor of Industrial Education
B.A., University of Northern Iowa; M.S.,
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Blaske, Virginia (1971)

Instructor; Learning Resources and Library
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B.S., University of Detroit; M.L.S.,
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Bleick, Frances A. (1958)

Professor of Health, Physical Education &
Recreation; Director of Women's Physical
Education
B.S., University of Nebraska; M.A., New
York University; D.P.E., Indiana
University

Bloomer, Barbara J. (1964)

Assistant Professor; Acting Chairperson of
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B.A., St. Olaf College; M.A., University of
Illinois

Bohnen, Howard W. (1973)

Instructor; Business Intern Program
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B.A., University of Minnesota; M.B.A., St.
Cloud State University

Boltuck, Charles J. (1966)

Professor of Psychology
B.A., Sir George Williams University; Ph.D.,
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Boltuck, Mary E. (1965)

Assistant Professor of Psychology
B.A., Miami University; M.A., State
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Borash, Elaine E. (1974)

Assistant Instructor; Residence Hall
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B.A., University of Minnesota - Morris

Bouie, Lee A. (1974)

Assistant Instructor in Campus Lab School
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Bouril, John P. (1973)

Instructor in Technology
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Bovee, John R. (1966)

Professor of English
B.S., M.S., Bemidji State University; Ph.D.,
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Braun, Thomas R. (1969)

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Brewer, A. Wilbur (1965)

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Brink, Allen L. (1959)

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Brink, Carol (1972)

Instructor in Health, Physical Education &
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Brown, David R. (1965)

Professor of Art
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Brown, Luther (1956)

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Education
B.S., Northeastern (Oklahoma) State
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College

Bruhn, Marcus C. (1972)

Professor of Economics
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Brunckhorst, Jeannette I. (1966)

Instructor in English
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Northwestern University

Brunckhorst, Louis A. (1966)

Professor of Sociology and Anthropology
B.A., Central College; M.A., Drake
University; L.L.B., J.D., Marquette
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Bruton, Charles W. (1957)

Professor of Biological Sciences
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Bryce, E. Scott (1964)

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Buckley, Chester W. (1966)

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Bunn, Radie (1972)

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Burnes, Bruce B. (1967)

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Busse, Lawrence R. (1967)

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Cairns, Paul E. (1967)

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Calhoun, Robert J. (1970)

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Campbell, Charles E. (1963)

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Carlson, Barbara (1975)

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Carlson, David (1971)

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Carlson, Kent F. (1962)

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Carlson, Ronald (1972)

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Carpenter, John H. (1968)

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Carrigan, Cynthia (1974)

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Carter, P. John (1970)

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Cassidy, Michael F. (1975)

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Cermele, D. J. (1968)

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B.A., Antioch College; M.F.A., Boston University

Chang, Chia - hao (1974)

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Clapp, Thomas W. (1967)

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Char, Lynette Y. (1970)

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Clarke, Norman F. (1974)

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Coard, Robert L. (1960)

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B.A., Quincy College; M.A., Ph.D., University of Illinois

Coen, Rena N. (1969)

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B.A., Barnard College; M.A., Yale University; Ph.D., University of Minnesota

Coppock, Henry A. (1972)

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Corliss, Richard L. (1966)

Professor of Philosophy
B.A., Taylor University; B.D., Northern Baptist Seminary; M.A., Ph.D., University of Illinois

Costanzo, Louis C. (1975)

Instructor; Learning Resources and Library & Audiovisual Education
B.S., M.S., University of Wisconsin - LaCrosse

Coulter, John C. (1967)

Professor of Biological Sciences
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Cox, LaVerne A. 1967)

Professor; Chairperson, Management and Finance
B.A., M.A., Ph.D., University of Nebraska

Craik, James S., Jr. (1968)

Instructor in Sociology and Anthropology
B.G.E., University of Nebraska - Omaha; M.A., University of Iowa

Craik, Mary B. (1968)

Professor of Psychology
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Crane, Edward J. (1966)

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B.S., University of Wisconsin - Eau Claire; M.S., University of Wyoming

Crawford, Audrey R. (1949)

Assistant Professor of Elementary Education
B.S., Mankato State University; M.A., University of Minnesota

Daily, Marcia A. (1972)

Instructor, Library Education, Learning Resource Services
B.S. Winona State University; M.A., University of Minnesota

Davidson, Daniel V. (1975)

Assistant Professor in Marketing & General Business
B.S., J.D., University of Indiana

Davis, Leland E. (1966)

Assistant Professor of Sociology and Anthropology
B.S., St. Cloud State University, M.A., New Mexico Highlands University

Deane, Sharon (1975)

Instructor, Information Services; Editor, News Service
B.S., Mundelein College; M.A., University of Minnesota

Deininger, Marian M. (1968)

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B.A., M.A., Ph.D., University of Minnesota

DeZoppo, Claude F. (1957)

Professor of Sociology and Anthropology; Chairperson
B.S., M.S., St. Cloud State University; Ph.D., University of Iowa

Dendinger, Richard D. (1965)

Associate Professor of Chemistry
B.S., Minot State College; M.S., North Dakota State University; Ph.D., South Dakota State University

DeSanto, R. John (1972)

Associate Professor of Mass Communications; Chairperson
B.S., M.S., University of Minnesota - Duluth; Ed.D., University of Northern Colorado

Detra, Elinor M. (1962)

Instructor in Speech Communication
B.S., M.S., St. Cloud State University

Dobey, Rodney G. (1973)

Instructor in Industrial Education
B.S., M.S., Southern Illinois University

Dockendorff, Thomas P. (1966)

Assistant Professor of Geography & Earth Science
B.A., St. Mary's College; M.A., Chicago State College

Downes, Alan J. (1969)

Professor of Interdisciplinary Studies
B.A., M.A., Florida State University of Washington; Ph.D. University of Washington

Dull, Alyn N. (1956)

Professor of Mathematics and Computer Science
B.S., St. Cloud State University; M.Ed., Ed.D., University of South Dakota

Dwyer, Mary A. (1974)

Associate Professor of Psychology
B.S., Trenton State College; M.Ed., Rutgers University; Ed.D., Teachers College/Columbia University

Earles, Gail A. (1975)

Instructor of Mathematics & Computer Science
BSED, Illinois State University; M.S., Rutgers State University

- Earles, Robert W.** (1969)
Associate Professor of Mathematics and
Computer Science
B.S., M.S., Illinois State University; M.S.,
Rutgers University; D.Ed., University of
Northern Colorado
- Echols, Charles L.** (1972)
Assistant Professor of Music
B.M., B.A., Belhaven College; M.M.,
University of Texas; D.M.A., University
of Southern California
- Eckroth, Charles A.** (1969)
Professor of Physics and Astronomy
B.A., St. John's University; Ph.D., Iowa
State University
- Ellens, David H.** (1966)
Instructor; Admissions and Records
B.S., M.S., St. Cloud State University
- Ellens, Joan C.** (1974)
Assistant Instructor; Elementary Education
B.S., St. Cloud State University
- Ellingson, William J.** (1963)
Professor of Art
B.F.A., Minneapolis School of Art; M.F.A.,
State University of Iowa
- Ellis, Bruce W.** (1964)
Associate Professor of Physics and
Astronomy
B.A., Jamestown College; M.S., University
of North Dakota; Ph.D., University of
Minnesota
- Elsen, Marie K.** (1967)
Assistant Professor; Learning Resources
and Library and Audiovisual Education
B.S., M.A., University of Minnesota
- Erickson, George B.** (1966)
Instructor in Geography and Earth Science
B.S., M.S., St. Cloud State University
- Erickson, George O.** (1951)
Assistant Professor; Learning Resources
and Library and Audiovisual Education
B.S., M.S., St. Cloud State University
- Erickson, Jerald B.** (1969)
Assistant Instructor; Residence Hall
Director
A.A., University of Minnesota; B.A., M.S.,
St. Cloud State University
- Erickson, John M.** (1960)
Professor of Chemistry
B.S., University of Wisconsin; M.S., South
Dakota State University; Ph.D., Iowa
State University
- Ernest, David J.** (1963)
Professor of Music; Chairperson
B.M., Chicago Musical College; M.S.,
University of Illinois; Sorbonne,
University of Paris; Ed.D., University of
Colorado
- Ernst, Charles I.** (1962-66; 1968)
Professor of Mathematics & Computer
Science
B.S., St. Cloud State University; M.A.,
University of South Dakota; Ph.D., Ohio
State University
- Escalas-Caimary, Jaime** (1968)
Assistant Professor; Foreign Languages and
Literature
B.A., College of LaSalle; M.A., University of
Barcelona; M.A., University of Minnesota
- Eveslage, Thomas E.** (1969)
Assistant Professor; Mass Communications
B.S., St. Cloud State University; M.A.,
University of Minnesota
- Ezell, Wayland L.** (1970)
Associate Professor of Biological Sciences
B.A., M.A., University of the Pacific; Ph.D.,
Oregon State University
- Falk, Ardis J.** (1973)
Assistant Instructor; Campus Lab School
B.S., Concordia College
- Falk, Armand E.** (1968)
Professor of English
B.S., University of Minnesota; M.A.,
University of Montana; Ph.D., Michigan
State University
- Farrah, George A.** (1968)
Professor of Educational Administration
B.S., M.Ed., Ed.D., Wayne State University
- Farrell, Kathleen M.** (1965)
Instructor in Elementary Education
B.S., M.S., St. Cloud State University
- Fields, Dennis C.** (1971)
Associate Professor; Learning Resources
and Library and Audiovisual Education
B.S., M.S.T., Wisconsin State University -
Stevenspoint; Ed.D., East Texas State
University
- Fischmann, Ruel E.** (1968)
Assistant Professor of Philosophy
B.A., M.A., University of California
- Flom, James R.** (1965)
Professor of Music
B.S., M.A., Ph.D., University of Minnesota
- Ford, Rosalind E.** (1975)
Instructor of Mass Communications
B.S., M.A., University of Wisconsin-
Madison; M.A., University of Minnesota
- Foreman, Allan E.** (1970)
Instructor; Learning Resources and Library
and Audiovisual Education
B.S., Eastern Montana College; M.A.T.,
University of Montana
- Frohip, Kenton R.** (1965)
Professor of Music
B.S., M.Ed., South Dakota State University;
Ph.D., University of Minnesota

Frost, C. Robert (1972)

Professor, Director of International Studies
and Program Development
B.A., Ph.D., University of Denver

Fuller, Stephen R. (1975)

Instructor of Music
B.A., St. Olaf College; M.M., University of
Southern California

Gamber, Gerald K. (1964)

Instructor in Economics
B.B.A., M.A., University of Iowa

Gambill, Edward L. (1966)

Associate Professor of History
B.A., St. Olaf College; M.S., University of
Wisconsin; Ph.D., University of Iowa

Garrity, Michael K. (1967)

Associate Professor of Physics and
Astronomy
B.S., St. John's University; M.S., Ph.D.,
Arizona State University

Gerber, Quentin N. (1965)

Assistant Professor of Accounting
B.S., Northern State College; M.S.,
University of North Dakota

Gerds, Kathleen L. (1973)

Instructor; Campus Lab School
B.S., M.S., Mankato State University

Germono, Joseph F. (1971)

Assistant Professor of Speech Science,
Pathology and Audiology
B.S., M.S., University of Wisconsin; Ph.D.,
University of Minnesota

Gilbert, Paul L. (1970)

Associate Professor; Assistant Vice
President for Academic Affairs
A.B., Lambuth College; B.D., M.Th.,
Garrett Theological Seminary

Gillett, Lowell R. (1963)

Professor; Dean, Graduate Studies
B.A., Gustavus Adolphus; M.A., University
of Minnesota; Ed.D., University of North
Dakota

Gleisner, Richard F. (1968)

Associate Professor of Economics
B.A., St. Mary's College; M.A., Ph.D.,
Georgetown University

Goemer, June M. (1967)

Assistant Professor of Health, Physical
Education and Recreation
B.S., M.Ed., University of Minnesota

Goke, James B. (1972)

Instructor in Industrial Education
B.S., M.S., Winona State University

Goodrich, Herbert (1964)

Professor of Sociology and Anthropology
B.S., City University of New York; M.A.,
Pennsylvania State University; Ph.D.,
University of Illinois

Gottshall, James K. (1972)

Professor of English; Chairperson
B.A., Oberlin College; M.A., University of
Pennsylvania; Ph.D., University of
Cincinnati

Gower, Calvin W. (1957)

Professor of History
B.A., Western State College; M.A.,
University of South Dakota; Ph.D.,
University of Kansas

Grachek, Arthur (1971)

Associate Professor of Speech
Communication; Chairperson
B.S., M.S., St. Cloud State University;
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Grachek, Barbara A. (1963-68; 1973)

Instructor, Self-Selection Program Director
B.S., M.S., St. Cloud State University

Gregg, Michael (1974)

Associate Professor in Health Services,
Medical Director
B.S., M.D., University of Minnesota

Greig, Alan M. (1968)

Instructor; High School and Community
College Relations; Assistant Director
B.A., University of Minnesota - Morris;
M.S., St. Cloud State University

Grether, David F. (1952)

Associate Professor of Biological Sciences
M.S., Ph.B., University of Wisconsin

Grewe, Alfred H., Jr. (1965)

Professor of Biological Sciences
B.A., St. Cloud State University, M.A.,
University of Minnesota; Ph.D.,
University of South Dakota

Grimstad, Donald (1964)

Instructor in Student Teaching
B.S., Mankato State University; M.S.,
University of Minnesota

Grunerud, James A. (1959)

Professor of Secondary Education
B.A., B.Sc., University of Saskatchewan;
M.S., University of Minnesota; Ph.D.,
University of California

Gruver, Calvin D. (1967)

Assistant Professor of History
B.A., M.A., University of Minnesota

Gruver, Terrance B. (1971)

Assistant Instructor, Campus Lab School
B.S., St. Cloud State University

Guimaras, Nestor (1974)

Instructor in Marketing and General
Business
B.S., M.B.A., California State University

Gunderson, Ralph W. (1964)

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Gunderson, Barbara J. (1972)

Instructor in Speical Education
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Cloud State University

Gust, John J. (1969)

Instructor; Financial Aids Officer
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Gutteter, Lee J. (1966)

Associate Professor of Art
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Milwaukee; Ed. D. Indiana University

Gyllstrom, Mabeth (1968)

Professor of Music
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Northwestern University; A.M.D.,
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Hagen, Owen A. (1959-61; 1964)

Professor of Elementary Education
B.S., Moorhead State University; M.S., St.
Cloud State University; Ed.D., Columbia
University

Halberg, Laurie L. (1963)

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B.S., University of Wisconsin; M.F.A., State
University of Iowa

Hall, Robert R. (1958)

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B.S., St. Cloud State University; M.A.,
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Hanafy, Abdalla A. (1968)

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Business
B. Com., Ein Sham University, Cairo; M.S.,
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Haniff, Ghulam Mohammed (1965)

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Studies
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Hannah, Mary Emily (1962-64; 1967)

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Hansen, Theodore A. (1966)

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Hark, Edwin C. (1968)

Assistant Professor of Psychology
B.A., Loyola University; M.A., University of
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Harper, Carmen W. (1963)

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Science
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Harper, Jessie G. (1963)

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Hartman, Linda K. (1975)

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Hatcher, Evelyn P. (1968)

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Havir, Linda M. (1972)

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Hayman, Michael (1972)

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Heakal, Mohamed S. (1968)

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Heath, Richard D. (1973)

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Hein, B. Roy (1974)

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Helgelien, Earleen K. (1968)

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B.S., Northern State College; M.S., St.
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- Hellwig, David J.** (1966)
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Studies
B.A., University of New Mexico; M.S.,
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University, New York
- Herbison, Priscilla** (1974)
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B.A., College of St. Catherine; M.S.W.,
University of Illinois
- Highsmith, James M.** (1975)
Assistant Professor of Marketing & General
Business
B.B.A., J.D., University of Ohio
- Hilton, Susanne T.** (1974)
Instructor in Sociology & Anthropology
B.A., M.S.W., University of Minnesota
- Hirschfeld, Margaret T.** (1973)
LPN Health Care Practitioner
- Hockert, Robert A.** (1975)
Instructor of Technology
B.S., St. Cloud State University
- Hoffman, Patricia A.** (1965)
Assistant Professor; Counseling and Related
Services
B.A., Carleton College; M.S., St. Cloud
State University
- Hoffman, Patrice** (1974)
Assistant Instructor; Residence Hall Director
B.S., George Williams College
- Holden, Donald M.** (1975)
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Administration
B.S., Bemidji State University; M.A., Ed.D.,
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- Holmgren, Marvin E.** (1949)
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- Hopkins, Harold H.** (1957)
Professor of Biological Sciences
B.A., M.S., Fort Hays Kansas State College;
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- Hopwood, Alfred** (1962)
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- Hortis, Theophanis C.** (1975)
Assistant Professor in Health, Physical
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- Hott, Leland E.** (1967)
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B.A., M.A., University of Iowa
- Huntzinger, Janet M.** (1969)
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B.S., Kearney State College; M.S., Kansas
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- Ingwell, Paul E.** (1955)
Professor; Director of Institutional Research
B.S., M.S., University of Wisconsin-Stout;
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- Jacobson, Joan** (1962)
Professor of Speech Science, Pathology &
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B.A., Morningside College; M.A., Ph.D.,
Syracuse University
- James, Nadine** (1975)
Assistant Instructor of Special Education
B.S., St. Cloud State University
- James, Richard E.** (1966)
Assistant Professor in Chemistry
B.S., Mayville State Teachers College; M.A.,
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Kansas State University
- Jensen, Fordyce C.** (1968)
Assistant Professor; Learning Resources &
Library & Audiovisual Education
B.S., M.S., Mankato State University;
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- Jensen, Harlan J.** (1970)
Assistant Professor, Learning Resources and
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B.S., M.S., St. Cloud State University
- Jerde, David A.** (1969)
Assistant Professor of Physics and
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B.S., St. Cloud State University; M.A.,
University of Minnesota
- Johnson, Douglas H.** (1968)
Associate Professor of Education; Principal
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B.S., M.S., St. Cloud State University; Ed.D.,
Western Michigan University
- Johnson, Elias** (1967)
Assistant Professor in Geography & Earth
Science
B.S., M.S., Northern Illinois University
- Johnson, James R.** (1965)
Professor of Music
B.A., St. Olaf College; M. M.E.D.,
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Johnson, James W. (1967)

Professor of Mathematics and Computer Science
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Johnson, Keith H. (1975)

Instructor of Political Science
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Johnson, Louise H. (1963)

Professor of Mathematics and Computer Science; Associate Dean, College of Liberal Arts and Science
B.A., Augsburg College; M.A., University of Illinois; M.A., Ed.D., University of Northern Colorado

Johnson, Milford P. (1968)

Instructor; Director, Financial Aids
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Johnson, Monte J. (1967)

Assistant Professor of Mathematics and Computer Science
B.S., Black Hills State College; M.A., University of South Dakota

Johnson, Peter J. (1966)

Professor, Secondary Education
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Johnson, Robert W. (1974)

Assistant Professor of Mathematics and Computer Science
A.B., Columbia College; M.S., Ph.D., City University of New York

Johnson, Vincent A. (1967)

Professor of Biological Sciences
B.S., M.S., Ph.D., University of Nebraska

Jones, Evan M. (1968)

Assistant Professor; Acting Chairperson of Political Science
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Jones, Jack R. (1955)

Professor of Education; Director Campus Lab. School
B.A., Tulane University; M.E., Wichita State; Ed.D., University of Kansas

Jurik, Harvey P. (1973)

Assistant Professor in Theatre
B.F.A., Carnegie-Mellon University; M.A., University of Denver

Jussila, Stephanie (1974)

LPN Health Care Practitioner

Kairouz, Akl T. (1969)

Associate Professor of Political Science, B.A., College Oriental; M.A., Goethe-Institute; M.A., Brigham Young University; Ph.D., University of Utah

Kalash, Willard L. (1968)

Assistant Professor; Director, Counseling and Related Services
B.S., University of Minnesota; M.S., St. Cloud State University

Kammermeier, Martin A. (1968)

Professor of Speech Science, Pathology and Audiology, Chairperson
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Kanyusik, Robert A. (1975)

Instructor of Art
B.A., St. John's University; MFA, Tyler School of Art

Karakas, Louis J. (1969)

Associate Professor of Elementary Education
B.S., M.A., University of Minnesota - Duluth; Ed.D., University of North Dakota

Kasper, John D. (1949)

Professor of Health, Physical Education and Recreation; Chairperson
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Keable, Doreen M. (1975)

Instructor; Learning Resources and Library & Audiovisual Education
B.S., M.S., St. Cloud State University

Kelley, James (1972)

Associate Professor, Director of Urban Affairs
B.S., Oregon State University; M.A., Ph.D., University of Denver

Kelley, Ruth C. (1974)

Instructor, Assistant to the Vice President of Administrative Affairs
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Kelly, John M. (1969)

Professor of Health, Physical Education and Recreation
B.S., Slippery Rock State College; M.S., University of Oregon; D.P.E., Springfield College

Kelsey, Kenneth W. (1970)

Assistant Professor, Student Teaching
B.S., Mankato State University; M.A., Ph.D., University of Minnesota

- Kemp, William H.** (1967)
Professor of Industrial Education,
Chairperson
B.S., St. Cloud State University; M.A.,
University of Minnesota; Ed. D.,
University of Northern Colorado
- Kendall, Robert** (1971)
Assistant Professor in Speech
Communication
B.A., University of Denver; M. Div., Drew
University; M.A., Ph.D., University of
Minnesota
- Kennedy, Keith A.** (1964)
Associate Professor of Chemistry
B.A., M.A., University of Northern
Colorado; Ph.D., University of Iowa
- Kiese, Jorn R.** (1969)
Assistant Professor of Foreign Languages
and Literature
B.A., Brigham Young University; M.A.,
University of Minnesota
- Kilkelly, John C.** (1966-68; 1969)
Instructor in Political Science
B.A., St. Cloud State University, M.S.S.,
University of Mississippi
- Kinderski, Judy F.** (1974)
Instructor in Learning Resources and Library
and Audiovisual Education
B.A., Northwestern University; M.S.,
Florida State University
- Kisch, Richard** (1972)
Director, Alumni Affairs
B.S., M.Ed., Mankato State University
- Kitchen, James** (1972)
Assistant to the Vice President of Academic
Affairs and Director of Minority Cultural
Center
B.S., M.S., Eastern Illinois University
- Kleiber, Douglas A.** (1974)
Assistant Professor in Psychology
A.B., Cornell University; Ph.D., University
of Texas
- Klinefelter, Diane R.** (1974)
Assistant Instructor in Elementary Education
B.S., St. Cloud State University
- Knox, Stanley C.** (1962)
Professor; Chairperson of Special Education
B.A., M.S., Ph.D., University of Minnesota
- Knutson, Jack M.** (1971)
Professor, of Psychology
B.A., Harvard; Ph.D., Stanford University
- Knutson, Keith M.** (1966)
Associate Professor of Biological Sciences
B.S., M.A., St. Cloud State University,
Ph.D., North Dakota State University
- Kohlenberg, Philip A.** (1972)
Assistant Professor of Philosophy
B.A., Lawrence University; M.A., University
of Wisconsin; M.A., Ph.D., University of
Chicago
- Korte, Gerald J.** (1961)
Professor of Art
B.S., M.S., St. Cloud State University;
Ed.D., University of Kansas
- Kramer, David C.** (1971)
Associate Professor of Biological Sciences
B.S., Indiana University; M.S., Ed.D., Ball
State University
- Kroeger, Virgil** (1971)
Professor of Sociology and Anthropology
B.S., South Dakota State University; M.A.,
Ph.D., University of Minnesota
- Krueger, Albert H.** (1956)
Professor of Psychology
B.S., University of Wisconsin; M.Ed.,
Marquette University; Ph.D., University
of Wisconsin
- Krueger, David D.** (1969)
Associate Professor of Marketing & General
Business
B.S., Wisconsin State University; M.S.,
Ph.D., Kansas State University
- Krueger, Patricia A.** (1967)
Assistant Instructor; Program Director
Atwood Memorial Center
A.A., Stephens College; B.A., University of
Iowa
- Kukuk, William D.** (1968)
Associate Professor of Psychology
B.S., Carroll College; M.A., Michigan State
University; Ph.D., Brigham Young
University
- Laakso, John W.** (1948)
Professor of Chemistry
B.S., Winona State University; M.S.,
Montana State University; Ph.D.,
University of Minnesota
- Lacroix, William J.** (1966)
Associate Professor of Industrial Education
B.S., M.S., St. Cloud State University;
Ph.D., Iowa State University
- Lafler, Lawrence R.** (1969)
Assistant Professor in Technology
B.S.E.E., M.S., Michigan State University

Lahren, David R. (1966)

Professor of Mathematics & Computer Science

B.A., Concordia College; B.D., Luther Seminary; M.S., North Dakota State University; D.A., University of Northern Colorado

Lane, Richard B. (1968)

Assistant Professor of Sociology and Anthropology

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Langen, William G. (1969)

Assistant Professor of Foreign Languages and Literature

B.A., University of Arizona

LaQuier, Ruth E. (1969)

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B.S., Wisconsin State University; M.A., University of Minnesota

Larsen, Allen F. (1966)

Assistant Professor of Economics

B.A., Augustana College; M.A., Indiana University

Larsen, Virginia M. (1966)

Assistant Professor; Counseling and Related Services

B.A., Millikin University; M.S., Ed.Spec., Indiana University

Larson, Susan V. (1975)

Instructor of Foreign Languages & Literature

B.A., University of Wisconsin; M.A., University of Michigan

Larson, Walter G. (1960-65; 1967)

Assistant Professor; Director, Career Planning and Placement Center

B.A., St. Olaf College; M.A., University of Northern Iowa

Lawson, Jonathan N. (1970)

Assistant Professor of English B.F.A., M.A., Ph.D., Texas Christian University

Layne, Richard D. (1972)

Associate Professor of Music

B.S., Utah State University; M.M., University of Redlands; Ph.D., University of Southern California

Lease, Alfred A. (1959)

Professor; Dean, College of Industry

B.S., M.S., St. Cloud State University; Ph.D., University of Minnesota

Lee, Dae Choon (1974)

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B.A., Keim yung Christian College (Korea); M.A., University of Korea; M.L.S., SUNY, College of Liberal Arts and Sciences at Geneseo

Leitch, Vernon D. (1965)

Professor of Mathematics and Computer Science

B.A., Moorhead State University; M.A., Bowling Green State University; Ed.D., University of Northern Colorado

Leja, Alfred E. (1968)

Professor of English

M.A., Columbia University; Ph.D., University of Texas

Lesar, David J. (1967)

Professor of Psychology

M.S., St. Cloud State University; Ed. D., Indiana University

Lesikar, Arnold B. (1966)

Associate Professor of Physics and Astronomy

B.A., Rice University; Ph.D., California State Polytechnic College

Leung, Leo K. (1968)

Assistant Professor of Mathematics and Computer Science

B.S., M.S., University of Illinois

Levilain, Guy (1967)

Assistant Professor of Foreign Languages and Literature

B.A., University of Bordeaux, France; M.A., E.S.C., Bordeaux, France

Lewis, James F. (1969)

Associate Professor of Special Education

B.S., M.Ed., Ed.D., University of Nebraska

Lewis, Standley E. (1968)

Associate Professor of Biological Sciences

B.A., M.S., University of Nebraska-Omaha; Ph.D., Washington State University

Lieberman, Harold (1956)

Professor of Interdisciplinary Studies, Chairperson

B.A., University of Toledo; M.A., University of Chicago; D.S.S., Syracuse University

Lindstrom, Lester E. (1967)

Professor of Biological Sciences

B.S., M.A., South Dakota State University; Ph.D., Kansas State University

- Liszka, Stanley W., Jr.** (1969)
Assistant Professor of History
B.S., Westfield State College; M.A.,
Duquesne University
- Little, Wayne G.** (1969)
Professor of Business Education & Office
Administration; Associate Dean of the
College of Business
B.A., Hamline University; B.S., M.A., Ph.D.,
University of Minnesota
- Lofgreen, Harold A.** (1972)
Assistant Professor of Economics,
Chairperson
B.A., Simpson College; M.A., Ph.D.,
University of Iowa
- Lorenzini, Jerry** (1971)
Assistant Professor in Industrial Education
B.S., M.S., Ed.S., Central Missouri State
University
- Lovelace, William E.** (1963)
Professor of Special Education
B.S., Northwestern University; M.Ed.,
Colorado University; M.S., University of
South Dakota; Ed.D., University of North
Dakota
- Lu, Debra** (1972)
Assistant Professor of Accounting
B.S., Cheng Kung University; M.S., Ph.D.,
University of Minnesota
- Lu, Ming-te** (1970)
Associate Professor of Marketing and
General Business
B.S., Cheng Kung University; M.S., Ph.D.,
University of Minnesota
- Ludeman, Vernon L.** (1969)
Professor; Assistant Dean, School of
Graduate Studies; Coordinator Summer
Programs
B.S., Mankato State University; M.A., Ed.D.,
University of Northern Colorado
- Luker, Albert G.** (1956)
Professor of Psychology
B.S., M.A., University of South Dakota;
Ed.D., University of Northern Colorado
- Luksetich, William A.** (1972)
Assistant Professor of Economics
B.S., M.A., DePaul University; Ph.D.,
Northern Illinois University
- Lundquist, James C.** (1967)
Associate Professor of English
B.A., Westminster College; Ph.D.,
University of Florida
- Lynch, William C.** (1975)
Acting Director, Sports Information
B.S., M.Ed., Springfield College
- Mackert, Robert** (1971)
Assistant Instructor; Information Services
Photographer
B.S., University of Wisconsin
- Madsen, Russell D.** (1960)
Professor of Business Education and Office
Administration
B.S., M.A., Ph.D., University of Minnesota
- Magnus, Douglas L.** (1965)
Associate Professor of Chemistry
B.S., M.S., St. Cloud State University; Ed.
D., University of North Dakota
- Malinen, Vonna M.** (1974)
Assistant Professor in Special Education
B.S., University of Minnesota-Duluth; M.S.,
St. Cloud State University
- Marmas, James G.** (1962)
Professor; Dean, College of Business
B.S., St. Cloud State University; M.A.,
University of Minnesota; Ed.D., Stanford
University
- Marsden, William E.** (1974)
Instructor of Industrial Education
A.A., Mira Costa College; B.A., M.A., San
Diego State University
- Marsh, Robert J.** (1975)
Assistant Professor; College physician in
Health Services
B.A., University of Minnesota; B.S.,
University of South Dakota; M.D.,
University of Minnesota
- Martin, Richard O.** (1967)
Professor of Mass Communications
B.A., American University; M.A., University
of Oregon; Ph.D., Syracuse University
- Masih, Nolin** (1964)
Assistant Professor of Economics
A.B., Southwestern College; M.A.,
University of Kansas
- Mason, John** (1971)
Assistant Professor of Psychology
B.S., M.A., Eastern Michigan University;
Ph.D., Kent State University
- Massmann, John C.** (1963)
Professor of History;
B.A., St. John's University; M.A., Ph.D.,
University of Minnesota

Matthias, Howard E. (1969)

Professor of Industrial Education
B.S., River Falls State College; M.S.,
University of Wisconsin; Ph.D., Michigan
State University

McCalib, Paul T. (1964)

Assistant Professor of English
B.A., University of California (Los Angeles);
M. Journalism, University of Texas

McCormick, Margaret (1975)

Assistant Instructor in Human Relations
B.S., St. Cloud State University

McCue, John F. (1967)

Associate Professor of Biological Sciences
B.S., St. John's University; M.S., Ph.D.,
University of Notre Dame

McLean, Samuel J. (1966)

Assistant Professor of Accounting
B.S.B.A., M.S., University of North Dakota

McMullen, James C. (1969)

Assistant Professor of Chemistry
B.S., Wisconsin State University; Ph.D.,
University of South Dakota

McWilliams, Alexander S. (1962)

Professor of Physics and Astronomy
B.A., M.S., University of Connecticut;
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Medler, Meredith A. (1968)

Assistant Professor of History
B.A., University of Wisconsin; M.A.,
University of Iowa

Meinz, Richard J. (1946)

Assistant Professor of English
B.E., St. Cloud State University; M.A.,
University of Minnesota

Meissner, William J. (1972)

Assistant Professor in English
B.S., University of Wisconsin; M.F.A.,
University of Massachusetts

Melton, John L. (1968)

Professor of English
B.A., M.A., University of Utah; Ph.D., Johns
Hopkins University

Menagh, Harry B. (1972)

Professor; Dean, College of Fine Arts
B.A., B.S., Bowling Green State University;
M.A., University of Southern California;
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Mertens, Gerald C. (1964)

Assistant Professor of Psychology
B.S., Wisconsin State University; M.A.,
University of Mississippi

Meyer, Roger G. (1966)

Instructor in Mathematics and Computer
Science
B.S., M.S., North Dakota State University

Miller, Donald P. (1966)

Assistant Professor of Mathematics and
Computer Science
B.S., Valley City State College; M.A.,
University of Northern Iowa

Miller, Joan D. (1969)

Instructor in Music
B.A., Cardinal Stritch College; M.A., Case
Western Reserve University

Miller, Julie K. (1975)

Assistant Instructor of Speech
Communication
B.S., St. Cloud State University

Miller, Martin B. (1975)

Assistant Professor of Criminal Justice
A.B., M.Crim, University of
California-Berkeley

Minars, Leonard F. (1973)

Assistant Professor of Accounting
B.S., M.B.A., St. Cloud State University

Minier, Judith E. (1974)

Instructor in Elementary Education
B.S., M.S., St. Cloud State University

Montgomery, Terrence P. (1964)

Assistant Professor; Vice President for
University Relations and Assistant to
President
B.S., St. Cloud State University, M.S.,
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Moore, Albert (1971)

Instructor in Music
B.M.Ed., Texas Tech University; M.S.,
University of Illinois

Moore, Ben H. (1960)

Associate Professor of Geography and Earth
Science
B.A., Park College; M.S., Kansas State
University

Mork, David P. (1968)

Associate Professor of Biological Sciences
B.S., Moorhead State University; M.S.,
Ph.D., Purdue University

- Mork, Vernon N.** (1958)
Professor of Secondary Education
B.S., Ed.D., University of North Dakota;
M.A., University of Minnesota
- Mortenson, Jerene** (1971)
Instructor in Student Teaching
Bryant/Clinton Project
B.S., M.S., St. Cloud State University
- Mortrude, Gordon E.** (1960)
Professor of Elementary Education;
Chairperson
B.S., Moorhead State University; M.S., St.
Cloud State University; Ed.D., University
of North Dakota
- Mortrude, Lowell A.** (1961)
Professor, Secondary Education,
Chairperson
B.A., B.S., St. Cloud State University;
M.Ed., Ed.D., University of North Dakota
- Munger, David** (1967)
Assistant Professor; Associate Dean of
Students, Student Life and Development
A.B., Olivet College; M.A., Michigan State
University
- Murphy, Robert J.** (1969)
Associate Professor of Psychology
B.S., Fordham University; Ph.D., University
of Tennessee
- Murray, Richard E.** (1973)
Assistant Instructor, Residence Hall
Director
B.S., M.S., Mankato State University
- Nappi, Andrew** (1967)
Professor; Director, Center for Economic
Education and Special Assistant to Vice
President for Academic Affairs.
B.S., M.S., Central Connecticut State
College; M.A., Purdue University; Ph.D.,
Ohio University
- Nearing, Ruth J.** (1970)
Instructor of Health, Physical Education &
Recreation
B.S., M.Ed., East Stroudsburg State College
- Neils, Linda K.** (1973)
R.N. Health Care Practitioner
St. Gabriel's Hospital School of Nursing,
Diploma
- Nelson, Charles L.** (1975)
Assistant Professor in Geography & Earth
Science
B.A., Gustavus Adolphus; M.S., Ph.D.,
University of Chicago
- Nelson, J. Michael** (1972)
Associate Professor, Learning Resources
Services & Library & Audiovisual
Education
B.S., M.S., Ed.D., East Texas State
University
- Nestel, Gerald E.** (1969)
Associate Professor of Industrial Education
B.S., University of Wisconsin-Stout; M.S.,
Southern Illinois University; E.D.,
University of Arkansas
- Nickles, William C.** (1966)
Professor of Chemistry
B.Ch.E., University of Minnesota; M.S.,
University of Wisconsin; Ph.D., North
Dakota State University
- Nunes, Dennis L.** (1975)
Assistant Professor of Psychology
B.A., Lindfield College; M.R.E., North
American Baptist Seminary
- Nunn, William H.** (1954)
Associate Professor of Interdisciplinary
Studies; Coordinator, East Asian Studies
B.S., M.S., North Texas State University
- Ochu, Jean M.** (1974)
Assistant Professor in Accounting
B.S., M.B.A., St. Cloud State University
- Oliphant, Robert A.** (1966)
Instructor, Assistant Director Career
Planning & Placement
B.S., M.S., St. Cloud State University
- Olsberg, Michael D.** (1967)
Assistant Professor of Accounting
B.S., Valley City State College; M.S.,
University of North Dakota
- Olson, Harry** (1958)
Professor of Business Education Office
Administration; Chairperson
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Minnesota
- Olson, Noel W.** (1969)
Assistant Professor of Health, Physical
Education & Recreation; Assistant
Athletic Director
B.A., St. Olaf College; M.S., University of
North Dakota
- O'Neill, James E.** (1964)
Assistant Professor of Foreign Languages
and Literature
B.A., M.Ed., College of St. Thomas
- Osendorf, Frank P.** (1967)
Associate Professor of Health, Physical
Education & Recreation
B.S., M.S., St. Cloud State University;
Ph.D., Indiana University

- Oswald, Carl A.** (1975)
Instructor of Accounting
B.A., Luther College; M.B.A., University of Denver
- Otto, Don H.** (1969)
Professor of English
B.A., Quincy College; M.A., Drake University; Ph.D., University of Southern California
- Overy, David H.** (1970)
Professor of History, Chairperson
B.A., Knox College; M.S., Ph.D., University of Wisconsin
- Overy, Diane** (1975)
Assistant Instructor of Foreign Languages and Literature
B.A., St. Cloud State University
- Owens, Joanne B.** (1975)
B.S., Auburn University; M.S., Indiana State University
- Oxton, John R.** (1967)
Instructor in Health, Physical Education & Recreation
B.S., Dickinson State College; M.S., University of South Dakota
- Pabst, Alfred** (1972)
Professor of Management and Finance
B.S., United States Military Academy; M.A., Columbia University; M.S.B.A., Ph.D., George Washington University
- Park-Fuller, Linda M.** (1971)
Instructor in Speech Communication
B.A., University of North Dakota; M.A., University of Missouri
- Park, Thomas C.** (1965)
Professor of Elementary Education
Diploma, Seoul Teachers College; B.A., M.A., Ed.D., University of Florida
- Partch, Max L.** (1949)
Professor of Biological Sciences
B.S., University of Minnesota; Ph.D., University of Wisconsin
- Paschall, Billy L.** (1964)
Assistant Professor of Sociology and Anthropology
B.A., M.A., University of Iowa
- Patton, Dale W.** (1963)
Professor, Counseling and Related Services
B.Ed., St. Cloud State University; B.Mus., Northwestern University; M.Ed., Syracuse University; Ed.D., Arizona State University
- Patton, Eleanor M.** (1963-64; 1966)
Instructor; Speech Science, Pathology and Audiology
B.S., Northwestern University; M.A., Arizona State University
- Paull, James F.** (1975)
Instructor; Recreation Director, Atwood Memorial Center
B.A., Hiram College; M.S., University of Oregon
- Peck, John H.** (1968)
Associate Professor of Biological Sciences
B.A., Clark University; Ph.D., University of California
- Pehler, James C.** (1967)
Instructor; Learning Resources and Library & Audiovisual Education
B.S., M.A., St. Cloud State University
- Perkins, Eugene R.** (1958)
Professor of Psychology
B.S., St. Cloud State University; M.S., University of Minnesota; Ed.D., University of Northern Colorado
- Perrier, Ronald G.** (1975)
Assistant Professor in Theatre
B.S., University of Wisconsin-River Falls; M.A., Ph.D., University of Minnesota
- Perry, Floyd P.** (1952)
Professor; Director of Student Teaching
B.S., Eastern Oregon College of Education; M.A., Central Washington State College; College of Education; Ed.D., University of Northern Colorado
- Petersen, Mary L.** (1949)
Assistant Professor of Psychology
B.S., University of Minnesota; M.Ed., University of Oregon
- Peterson, Charles B.** (1973)
Instructor in Music
B.M.E., Indiana University; M.A., Western Washington State College
- Peterson, Dale W.** (1966)
Associate Professor of History
B.A., Macalester College; M.A., Ph.D., University of Minnesota
- Peterson, Donald G.** (1965)
Professor of Biological Sciences
B.S., M.A., Ph.D., University of Minnesota
- Peterson, Robin T.** (1973)
Associate Professor Marketing and General Business, Chairperson
B.S., M.S., University of Wyoming; Ph.D., University of Washington

- Phillips, Alan M.** (1966)
Associate Professor of Philosophy
A.B., Knox College; M.A., Ph.D., Michigan State University
- Phillips, John N.** (1962)
Professor of Philosophy, Director of Environmental Studies
B.A., Northwestern University; A.M., University of Southern California; Ph.D., University of North Carolina
- Phillips, Mary H.** (1965)
Instructor; Campus Lab School
B.A., B.S., M.S., University of Minnesota
- Pierce, A. Dean** (1971)
Instructor in Sociology and Anthropology
B.A., College of Idaho; M.S.W., West Virginia University
- Pietz, Reuel H.** (1965)
Assistant Professor of Geography & Earth Science
B.A., Gustavus Adolphus College; M.A., East Carolina University
- Pluth, Edward J.** (1966)
Associate Professor of History
B.S., M.S., St. Cloud State University; Ph.D., Ball State University
- Polesak, Fred G.** (1964)
Instructor; Learning Resources Services
B.S., St. Cloud State University; M.A., University of Northern Colorado
- Potter, Patricia S.** (1963)
Assistant Professor; Associate Dean of Students, Student Life and Development
B.S., M.S., University of Wisconsin
- Pou, Carol Ritter** (1969)
Assistant Professor of Biological Sciences
B.A., Viterbo College; M.S., Ph.D., The Catholic University of America
- Pou, Wendell M.** (1966)
Associate Professor of Physics & Astronomy
B.S., Millsaps College; M.S., Ph.D., Vanderbilt University
- Powell, Wayne R.** (1975)
Instructor of Sociology & Anthropology
B.A., University of Oklahoma
- Powers, Gerald L.** (1974)
Associate Professor in Speech Science, Pathology & Audiology
B.S., St. Cloud State University; M.A., Ph.D., University of Minnesota
- Prochnow, Robert** (1972)
Associate Professor of Psychology
B.A., North Central College; M.A., University of Wisconsin; Ph.D., University of Texas
- Prout, Robert S.** (1972)
Associate Professor; Director of Criminal Justice Studies
B.A., Muskingum College; M.Ed., Ohio University; Ph.D., Ohio State University
- Purdum, Boyd A.** (1968)
Professor of Elementary Education
B.A., M.A., University of Kentucky; Ed.D., George Peabody College for Teachers
- Radovich, William** (1966)
Assistant Professor; Vice President, Administrative Affairs
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- Rahkola, William A.** (1974)
Assistant Professor in Industrial Education
B.S., University of Minnesota-Duluth; M.S., Ed.S., University of Wisconsin-Stout
- Rajender, Gandi R.** (1967)
Professor of Management and Finance;
B.S., University of Madras, India; M.S., Ph.D., University of Wyoming
- Rauch, Keith J.** (1965)
Assistant Professor; Director of Admissions and Records
B.S., M.S., St. Cloud State University
- Rauch, Margaret M.** (1974)
Instructor in Counseling and Related Services
B.S., M.S., St. Cloud State University
- Redd, Kathleen M.** (1974)
Assistant Professor of Interdisciplinary Studies
A.B., M.A., Ph.D., University of Alabama
- Redding, Arthur J.** (1968)
Professor of Psychology
B.A., Mankato State University; M.A., University of Northern Colorado; Ed.D., University of North Dakota
- Reeder, Richard F.** (1972)
Instructor in Mass Communications,
B.F.A., University of South Dakota; M.A., University of Minnesota
- Regnier, Robert E.** (1966)
Assistant Professor of English
B.S., St. Cloud State University; M.A., University of Oregon
- Reha, Rose K.** (1968)
Professor of Business Education and Office Administration
B.S., Indiana State University; M.A., Ph.D., University of Minnesota
- Rehwaldt, Charles A.** (1965)
Professor of Biological Sciences; Chairperson
B.A., B.S., Mankato State University; M.S., University of Minnesota; Ph.D., State University of New York

Reid, Sherwood J. (1966)

Instructor; Director High School and Community College Relations
B.A., Hamline University; B.S., M.S., St. Cloud State University

Riley, William B., Jr. (1975)

Assistant Professor of Management & Finance
B.B.A., M.A., Memphis State University; Ph.D., University of Arkansas

Risberg, Douglas (1972)

Associate Professor, College of Education; Director of Human Relations Program
B.S., Illinois State University; M.A., Northern Illinois University; Ph.D., University of Wisconsin

Robley, Quentin D. (1970)

Assistant Professor of Special Education
B.S., St. Cloud State University

Rock, John L. (1966)

Instructor; Housing Coordinator
B.A. University of Minnesota

Roehl, Rosemary F. (1966)

Instructor in Elementary Education
B.S., M.A., University of Minnesota

Rosenthal, Eugene (1972)

Assistant Professor of Psychology
B.A., University of Michigan; Ph.D., University of Minnesota

Rouch, Roger L. (1967)

Professor of Elementary Education
B.S., Indiana Central College; M.S., Butler University; Ed.D., Ball State University

Rouff, William (1974)

Assistant Professor of Interdisciplinary Studies
B.S., M.A., University of Oregon; Ph.D., University of Maryland

Rowland, Howard Ray (1959)

Professor; Director of Information Services
B.J., University of Missouri; M.S., Southern Illinois University; Ph.D., Michigan State University

Roy, James P. (1964)

Professor of Art; Chairperson
B.A., Concordia College; M.A., University of Iowa; D.Ed., Pennsylvania State University

Royer, Lewis R. (1968)

Instructor in Industrial Education
B.S., Mankato State University; M.A., University of Minnesota

Rudans, Eriks P. (1969)

Associate Professor of Art
B.S., M.S., M.F.A., University of Wisconsin

Russell, Mary F. (1961)

Assistant Professor; Learning Resources Services & Library & Audiovisual Education, Campus Lab School
B.S., College of St. Scholastica; M.S., St. Cloud State University

Ryan, Robert D. (1962)

Professor of Technology; Chairperson
B.A., Wayne State College; M.A., Ed.D., University of Northern Colorado

Rydberg, David G. (1966)

Associate Professor; Learning Resources & Library & Audiovisual Education
B.S., M.S., St. Cloud State University; M.A., University of Minnesota; Ed.D., University of Arizona

Rylander, John D. (1965)

Assistant Professor of English
B.A., M.A., San Jose State College

Samarrai, Alauddin I. (1968)

Professor of History
B.A., M.S., Ph.D., University of Wisconsin

Savage, Carl C. (1968)

Professor; Learning Resources & Library & Audiovisual Education
B.A., Belmont College; M.R.E., Ed.D., New Orleans Baptist Seminary

Savage, Mary A. (1966)

Instructor in Foreign Languages & Literature
B.A., College of St. Catherine; M.A., University of Wisconsin

Schelske, Alvin H. (1952)

Professor; Associate Dean, College of Education
B.S., Mankato State University; M.A., Ed.D., Teachers College, Columbia University

Schmidt, Orville H. (1967)

Professor of Political Science
B.A., University of Minnesota; M.A., George Washington University; Ph.D., University of West Virginia

Schmidt, Russell H. (1969)

Professor of Elementary Education
B.S., Winona State University; M.S.E.E., University of Minnesota; Ed.D., Florida

Schneider, Kenneth C. (1974)

Assistant Professor of Marketing and General Business
B.A., M.S., University of Minnesota

Schrader, Shirley L. (1967)

Professor of Music
B.A., B.Mus., University of Northern Colorado; M.A., University of Denver; Ph.D., University of Michigan

- Schulzetenberg, Anthony C.** (1965)
Professor; Learning Resources & Library & Audiovisual Education
B.A., St. John's University; M.S., St. Cloud State University; M.A.L.S., University of Minnesota; Ed.D., University of North Dakota
- Schwartz, Joseph J.** (1970)
Instructor; Assistant Director of Institutional Research
B.S., M.S., Mankato State University
- Schwerdtfeger, Dale W.** (1971)
Instructor in Sociology and Anthropology
B.A., McKendree College; M.A., Southern Illinois University
- Scribner, Richard S.** (1974)
Assistant Professor of Special Education
B.S., Mississippi Southern College; M.S., Ph.D., University of Southern Mississippi
- Segar, Thomas L.** (1974)
Assistant Instructor in Special Education
B.S., St. Cloud State University
- Sentz, Erma I.** (1964)
Instructor of Student Teaching
B.S., M.A., University of Minnesota
- Serdula, George** (1957)
Professor in Health, Physical Education & Recreation; Director of Health Education
B.A., Muskingum College; M.A., Ohio State University; H.S.D., Indiana University
- Sherarts, Theodore R.** (1966)
Assistant Professor in Art
B.Ph., University of North Dakota; M.F.A., California College of Arts and Crafts
- Shurr, George W.** (1967)
Assistant Professor in Geography & Earth Science
B.A., University of South Dakota; M.S., Northwestern University
- Sikkink, Donald E.** (1963)
Professor of Speech Communication,
B.A., M.A., Ph.D., University of Minnesota
- Simpson, Dorothy J.** (1975)
Assistant Instructor of Music
B.A., St. Olaf College
- Simpson, Eleanor E.** (1969)
Associate Professor of Interdisciplinary Studies
B.A., Park College; M.A., San Francisco State University; Ph.D., University of Minnesota
- Simpson, Wayne** (1972)
Instructor in Health, Physical Education & Recreation
B.S., St. Olaf College; M.S., University of Minnesota-Duluth
- Smelser, Lawrence B.** (1969)
Professor; Library & Audiovisual Education
B.S., Southwest Missouri State University; M.A., Washington University; Ed.D., University of Oklahoma
- Sorensen, David T.** (1964)
Professor of Chemistry
B.S., M.S., North Dakota State University; Ph.D., University of Kansas
- Soroka, Leonard G.** (1975)
Instructor of Geography & Earth Science
B.S., Temple University; M.Ed., Westchester State College
- Sprague, David S.** (1969)
Professor; Vice President, Student Life and Development
B.S., Dakota State College; M.Ed., South Dakota State University; Ed.D., University of South Dakota
- Sporleder, Victor** (1970)
Assistant Instructor in Campus Lab School
B.S., St. Cloud State University
- Stachowski, Thomas** (1970)
Assistant Instructor in Campus Lab School
B.S., St. Cloud State University
- Stahlecker, Winston D.** (1968)
Professor of Marketing and General Business
M.A., University of Northern Colorado; B.S., Southern State College; D.B.A., Arizona State University
- Stanek, James F.** (1967)
Assistant Professor of Health, Physical Education and Recreation
B.S., St. Cloud State University; M.Ed., University of Minnesota
- Steele, Brenton H.** (1970)
Instructor; Director of Student Activities
B.S., State University of New York (Buffalo); M.A., New York University
- Steen, Joseph B., Jr.** (1974)
Assistant Professor in Psychology
B.A., University of Minnesota; M.S., Mankato State University
- Steeves, LeRoy R.** (1964)
Assistant Professor in Student Teaching
B.S., M.S., St. Cloud State University
- Stein, Thomas E.** (1968)
Instructor; Assistant Director Admissions and Records
B.S., M.B.A., St. Cloud State University
- Stennes, Ernest K.** (1955)
Associate Professor of Mathematics & Computer Science
B.A., Concordia College; M.A., University of Wyoming

- Stennes, Florence s.** (1961)
Assistant Professor of Mathematics and
Computer Science
B.A., M.A., University of Illinois
- Stensland, Allen G.** (1967)
Assistant Professor of Interdisciplinary
Studies
B.A., Hamline University; M.S., Bemidji
State University
- Stinson, James S.** (1975)
Assistant Professor in Industrial Education
B.S., Jamestown College; M.S., University
of North Dakota
- Stinson, Marilyn** (1975)
Assistant Professor in Business Education
and Office Administration
B.A., Sacramento City College; M.A., Ph.D.,
University of North Dakota
- Summers, Marcia A.** (1969)
Associate Professor of English
B.A., Geneva College; M.A., Ph.D.,
University of Illinois
- Sundby, Lawrence C.** (1975)
Associate Professor of Accounting
B.A., M.B.A., St. Cloud State University;
Ph.D., University of Nebraska
- Swanson, Dale L.** (1966)
Assistant Professor of Theatre, Chairperson
B.S., Mankato State University; M.S.,
University of Wisconsin
- Sweeney, Connie E.** (1968)
Instructor in Campus Lab School
B.S., M.S., St. Cloud State University
- Swenson, Alf A.** (1963)
Assistant Professor of Management &
Finance
B.A., St. Olaf College; M.S., University of
Minnesota
- Sykora, Merle H.** (1964)
Assistant Professor of Art
B.S., Mankato State University; M.S.Ed., St.
Cloud State University
- Syverud, DelFaye** (1968)
Instructor in Campus Lab School
B.S., M.S., St. Cloud State University
- Templin, Dorothy E.** (1968)
Instructor in Health & Physical Education &
Recreation
A.A., Compton Jr. College; B.S., Southwest
Missouri State University; M.S.,
University of Wyoming
- Templin, Erwin W.** (1970)
Instructor; Assistant Director of Financial
Aids
B.S., Northland College; M.B.A., St. Cloud
State University
- Tennison, Philip C.** (1967)
Instructor in Campus Lab School
B.S., M.S., St. Cloud State University
- Tessendorf, Richard W.** (1961)
Assistant Professor of Music
B.S., Bemidji State University; M.S.,
Mankato State University
- Theis, Lois M.** (1975)
Assistant Professor in Student Teaching
B.A., University of Iowa; M.A., University of
Minnesota; Ed.D., University of Northern
Colorado
- Thompson, Karen D.** (1975)
Instructor of Health, Physical Education and
Recreation
B.A., Muskingum College; M.S., St. Cloud
State University
- Thompson, Marvin O.** (1956)
Professor of English
B.A., Macalester College; M.A., Ph.D.,
University of Minnesota
- Thompson, Neil B.** (1967)
Professor of Interdisciplinary Studies,
Director of American Studies
B.S., M.S., Kansas State University; Ph.D.,
University of Minnesota
- Thompson, Ruth M.** (1963)
Assistant Professor of English
B.S., Mankato State University; M.S., St.
Cloud State University
- Tideman, Phillip L.** (1957-66; 1970)
Professor of Geography and Earth Science
B.A., University of Minnesota; B.S., St.
Cloud State University; M.A., Ph.D.,
University of Nebraska
- Timmers, Beverly A.** (1966)
Instructor in Special Education
B.S., M.S., St. Cloud State University
- Torborg, Francis G.** (1968)
Assistant Professor in Technology
B.M.E., University of Minnesota
- Tosh, Leo W.** (1969)
Professor of English
B.A., M.A., Ph.D., University of Texas

- Troyer, Beverly J.** (1967)
Associate Professor of Health, Physical Education & Recreation
B.S., M.A., Ph.D., University of Minnesota
- Trummel, Donald R.** (1960)
Associate Professor of Physics and Astronomy
B.S., M.S., Western Illinois University; Ph.D., Southern Illinois University
- Turkowski, Adelaide** (1975)
Assistant Instructor, Residence Hall Director
B.S., Bemidji State University
- Umerski, Myron S.** (1965)
Instructor; Registrar, Admissions & Records
B.S., M.S., St. Cloud State University
- Van Akin, Everett F.** (1968)
Professor of Mathematics and Computer Science
B.A., M.A., State University of New York; Ph.D., University of Minnesota
- Van Nostrand, M. E.** (1948)
Professor of Psychology
B.A., University of Rochester; B.D., Colgate-Rochester Divinity School; Ph.D., Boston University
- Van Pelt, Elizabeth S.** (1963)
Professor of English
B.A., M.A., Ph.D., University of Illinois
- Van Pelt, Lyle E.** (1963)
Assistant Professor of English
A.B., Bradley University; M.A., University of Illinois
- Vandell, Roland A.** (1943)
Professor of Mathematics & Computer Science
B.S., St. Cloud State University; M.A., University of Colorado; Ed.D., University of North Dakota
- Vaughter, Paul H.** (1962)
Associate Professor of History
B.A., M.A., University of Tulsa; Ph.D., University of Kentucky
- Vega, Flavio** (1974)
Assistant Professor in Human Relations
B.S., University of Indiana; M.A., University of Minnesota
- Vick, Charles F.** (1971)
Associate Professor of Speech Communication
B.A., Ph.D., University of Denver
- Vinje, John L.** (1966)
Instructor in Health, Physical Education & Recreation
B.S., M.S. Ed., Bemidji State University
- Voelker, Francis H.** (1959)
Assistant Professor of Mass Communications
B.A., St. John's University; M.S., St. Cloud State University
- Voelker, Ludmila A.** (1965)
Instructor in English
B.A., College of St. Benedict; M.A., St. Cloud State University
- Vossen, Joseph F.** (1973)
Instructor in Marketing and General Business
B.S., M.S., University of Minnesota
- Wagenius, R. Terry** (1970)
Assistant Instructor in Campus Lab School
B.S., St. Cloud State University
- Wallin, Leland D.** (1967)
Associate Professor of Art
B.F.A., Kansas City Art Institute; M.F.A., University of Cincinnati
- Walton, Howard R.** (1955)
Associate Professor of Industrial Education
B.S., St. Cloud State University; M.A., University of Minnesota
- Watkins, Ivan W.** (1963)
Professor of Geography and Earth Science
B.S., M.S., University of Kansas; Ph.D., Texas A & M University
- Waxlax, Robert G.** (1970)
Associate Professor of Health, Physical Education and Recreation
B.S., St. Cloud State University, M.S., Central Missouri State College; Ph.D., University of Minnesota
- Weigel, Patricia A.** (1970)
Instructor; Learning Resources and Library and Audiovisual Education
B.A., Cornell College; M.L.S., University of Iowa
- Weise, Howard R.** (1966)
Instructor, Director of Continuing Education
A.A., B.S., St. Cloud State University; M.A., University of Northern Colorado
- Wellik, Jerry J.** (1972-73; 74)
Instructor in Special Education
B.S., University of Iowa; M.S., St. Cloud State University

- Wentworth, Darrell F.** (1969)
Associate Professor of Management & Finance
B.S., University of Nebraska; M.S., University of Wyoming; Ph.D., University of Nebraska
- Wesley, Clare J.** (1967)
Assistant Professor of Economics
B.S., B.A., University of Denver; M.A., St. Mary's University
- Westby, Gerald B.** (1969)
Assistant Professor; Learning Resources Services & Library & Audiovisual Education
B.S., M.A., University of Minnesota; M.S., University of North Dakota
- White, James E.** (1964)
Professor of Philosophy
A.B., Dartmouth College; Ph.D., University of Colorado
- Whitlock, Delores C.** (1969)
Professor of Health, Physical Education & Recreation
B.S., Mankato State University; M.A., University of Iowa, Ed. D., University of New Mexico
- Wick, Robert H.** (1948)
Distinguished Service Professor, Speech Communication; Acting Dean, College of Liberal Arts & Sciences
B.A., University of Northern Iowa; M.A., University of Southern California; Ph.D., University of Iowa
- Wilcox, Gloria L.** (1971)
Assistant Instructor in Campus Lab School
B.S., St. Cloud State University
- Wilhite, Carmen I.** (1974)
Assistant Professor of Music
B.M., M. Mus., Eastman School of Music
- Williams, Melvin D.** (1969)
Associate Professor of Management & Finance
B.S., Millikin University; M.S., Ph.D., University of Illinois
- Williams, Steven F.** (1974)
Assistant Professor of Biological Sciences
B.S., University of Washington; M.A., University of California; Ph.D., Oregon State University
- Williamson, Homer E.** (1973)
Assistant Professor in Political Science
B.A., Carleton College; M.A., Northwestern University; Ph.D., University of Minnesota
- Wink, Jack S.** (1955)
Instructor in Health, Physical Education and Recreation
B.S., M.S., University of Wisconsin
- Wise, Jeffery M.** (1975)
Instructor in Sociology and Anthropology
B.S., Brigham Young University
- Wixon, Lewis G.** (1966)
Assistant Professor in Geography and Earth Science
B.A., University of Michigan; M.S., Indiana State University
- Wolfer, Alton C.** (1968)
Assistant Professor in Interdisciplinary Studies
B.S., North Dakota State University; M.S., Utah State University
- Wollin, Dorothy D.** (1973)
Assistant Professor of Psychology
B.A., University of Louisville; M.A., St. University of New York
- Woolman, Claude** (1974)
Instructor in Theatre
B.F.A., Carnegie-Mellon University
- Wurster, Susan L.** (1975)
Instructor in Speech Communication
B.A., University of Louisville M.A., State University of New York
- Yoo, George E.** (1962)
Professor of Philosophy
M.A., Ph.D., University of Missouri
- Youngner, Philip G.** (1949)
Professor of Physics & Astronomy; Chairperson
B.S., St. Cloud State University; M.S., Ph.D., University of Wisconsin
- Yunger, Ramona M.** (1970)
Instructor, Health Service, Administrative Director
Diploma, Fairview School of Nursing
- Ziemer, Gladys L.** (1968)
Assistant Professor in Health, Physical Education & Recreation
B.S., Mankato State University; M.S., University of New Mexico

MEDICAL TECHNOLOGY — ADJUNCT FACULTY

Bethesda Lutheran Hospital

Alvin W. Waters, M.D., Director
 Robert W. Anderson, M.D., Pathologist
 Bernadine Goyette, B.S., M.T. (ASCP)
 Education Coordinator
 Dona Hiltunen, B.S., M.T. (ASCP) Teaching
 Supervisor

Hennepin County General Hospital

Robert L. Strom, M.D., Director
 Mieko Ikeda, B.S., M.T. (ASCP) Education
 Coordinator

Midway Hospital

Benjamin Lyne, M.D., Director
 Helen Vulu, B.S., M.T. (ASCP) Education
 Coordinator

United Hospital Miller Division

Jesse Edwards, M.D., Director
 Barbara Jones, B.S., M.T. (ASCP) Education
 Coordinator

Northwestern Hospital

Frederick H. Lott, M.D., Director
 Esther Ditmanson, B.S. M.T. (ASCP)
 Education Coordinator

St. Cloud Hospital

Milosh Bozanich, M.D., Director
 Jane Ceyner, B.S., M.T. (ASCP) Education
 Coordinator

St. Joseph Hospital

Lowell Kuam, M.D., Director
 Sister Roland, B.S., M.T. (ASCP) Education
 Coordinator

St. Paul-Ramsey Hospital

Bertram F. Woolfrey, M.D., Director
 Thelma N. Erickson, B.S., M.T. (ASCP)
 Education Coordinator

NUCLEAR MEDICAL TECHNOLOGY — ADJUNCT FACULTY

Hennepin County General Hospital

Robert L. Strom, M.D., Director
 Mary Shaw, B.S., N.M. (ASCP) Education
 Coordinator

EMERITUS FACULTY

Rowland C. Anderson

Mathematics
 1933-1974

Josephine Banta

Foreign Languages
 1946-1962

M. Elizabeth Barker

Health
 1937-1957

Helen Bottum

Campus Lab School
 1926-1953

Albert F. Brainard

Health, Physical Education & Recreation
 1930-1967

Agnes Brohaugh

Education
 1925-1950

L. Ruth Cadwell

Geography & Science
 1924-1969

John C. Cochrane

Social Science
 1926-1959

Edward Colletti

Health, Physical Education & Recreation
 1933-1974

Clair Daggett

Marketing & General Business
 1939-1974

Amy Dale

English
 1931-1968

Martha Dallmann

Elementary Education
 1969-1972

Alice English
Student Teaching
1959–1969

Carl Folkerts
Economics
1949–1972

Ruth Gant
Music
1946–1970

Beth Porter Garvey
Dean of Women
1925–1953

Floyd Gilbert
Psychology
1937–1970

Harry Goehring
Math & Science
1946–1971

Raymond H. Larson
Industrial Education
1940–1974

Victor Lohmann
Psychology
1948–1974

H. P. Lohman
Sociology
1942–1969

George Lynch
Health, Physical Education
and Recreation
1903–1953

Lucille Maier
Counseling
1949–1974

Freda Martin
English
1957–1969

Mamie R. Martin
Library
1922–1955

Lorene Marvel
Music
1945–1973

Eva McKee
Physical Education for Women
1947–1964

Fred Menninga
Secondary Education
1948–1972

Majorie Morse
History
1951–1974

Ruth Moshier
Library
1958–1974

Sue Holcomb Moss
Library
1953–1967

Frances Neale
Elementary Education
1931–1969

Arthur F. Nelson
Science
1947–1969

Ruth M. Nelson
Interdisciplinary Studies
1963–1974

Grace Nugent
Elementary Education
1931–1968

Ruben Parson
Geography
1967–1973

Howard Russell
English
1963–1972

Mary Scharf
Psychology
1952–1975

Harvey Waugh
Music
1933–1970

John Weismann
Dean of Men
1927–1969

Anna Larson West
Geography
1927–1956

Audra Whitford
Business Education & Office Administration
1943–1974

Hannah Beatrice Williams
Campus Lab School
1926–1959

Virginia Williams
Business Education
1952–1971

UNIVERSITY SERVICES

ACADEMIC AFFAIRS

Center for Economic Education

The Center 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 Department 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.

Common Market

St. Cloud State University is a participating member of the Minnesota State University Common Market plan which permits a student who has spent one year in residence at St. Cloud to spend up to three quarters at any of the other Minnesota state universities. The university also arranges internships for students through the Common Market program. Interested students should contact the Admissions Office.

Extension and Continuing Education

Extension classes held in off-campus centers and continuing education classes held on the campus for the community are a part of the educational services to people in the St. Cloud State University service area. Regular courses and specially designed workshops, on both undergraduate and graduate levels, are offered to meet the needs of various community groups, including those in education, industry, business, and the general community. This is an all-college program under the coordination of the Director of Academic Services.

LEARNING RESOURCES SERVICES

Centennial Hall, the Learning Resources Center for St. Cloud State University, serves all disciplines of the university. It is located as a focal point in the approximate center of the campus.

The Learning Resources Center includes all print and nonprint materials (and any attendant hardware) for the academic community. Seating in the reading areas and study carrels accommodates about two thousand. It contains over 405,000 cataloged books, about 46,000 pamphlets, about 72,000 paper copies of federal documents, over 450,000 units of microform (including total Educational Resources Information Center [ERIC]), over 80,000 microbook units, over 40,000 maps, about 25,000 items of audio records and tapes, realia, slide sets, transparency sets, and videotapes, and approximately 2,000 magazines and news papers. This collection of print and nonprint items represents more than one million units. In addition to the resources in this collection, St. Cloud State University has access to the MINITEX network system of Minnesota which provides access to the major collections of the University of Minnesota and the University of Wisconsin and other colleges and universities in the area and their respective collections.

ADMINISTRATIVE AFFAIRS

Auxiliary Services. This office assumes responsibility for the care, maintenance and operation of university-owned equipment and facilities. Also under the jurisdiction of Auxiliary Services are the custodial and maintenance operations, security, parking, and the motor pool.

Computer Services. The Computer Center provides both educational and administrative services. A UNIVAC 1106 located at St. Cloud services the administrative data processing needs of the entire state university system. The primary academic requirements are served by a 1004 terminal to Mankato's UNIVAC 1106. Local time sharing service is also available.

Institutional Research. This office conducts studies to support administrative decisions, processes educational and governmental questionnaires, advises faculty in research activities and initiates research projects. The office also coordinates federal, state and private grants.

Printing Services. A central duplicating, xeroxing and printing facility for university-related materials is provided by this office.

UNIVERSITY RELATIONS

Alumni Affairs. The Alumni Office maintains a file of graduates and serves as the liaison between the alumnus and the university. It keeps the alumnus informed about the university and his/her classmates. It provides opportunities for alumni to keep in touch with their university acquaintances through activities on and off campus. It is the vehicle through which alumni may give gifts of cash or property to the university.

Career Planning and Placement. The function of this office is to assist the undergraduates in developing their career plans and relating these plans to the employment market. Once the degree has or is about to be obtained, the office assists both current graduates and alumni in their search for suitable positions. The primary services include the assembling of a set of placement credentials, distribution of job opportunity lists, forwarding of credentials to prospective employers, coordinating on-campus interviews, maintaining a career library, providing statistical information, and advising students regarding career opportunities and employment techniques.

High School and Community College Relations. St. Cloud State University is represented at University 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 their high school counselors. Tours are provided for campus visitors.

Information Services. This office disseminates information of general interest about the university to various publics served by the institution. It provides the mass media with university news and photographs. It prepares and coordinates all official university publications. The office also assists outside groups in scheduling activities on the campus.

BUILDINGS AND GROUNDS

The date after each building indicates the year that 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). School of Business classrooms and offices, together with the Center for Economic Education and Bureau of Business Research.

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, speech pathology and audiology, guidance and counseling and student teaching are located in this building.

Gray Campus Laboratory School (1958, 1962). Elementary school for approximately 225 students. A 200-seat auditorium, children's library and closed-circuit television. Named for Thomas J. Gray, president, 1881–1890.

Halenbeck Hall (1965). Health, physical education and recreation building with a main gymnasium seating 7,500, a swimming pool, diving pool and two small gyms. Named for Dr. Philip L. Halenbeck, a St. Cloud physician.

Headley Hall (1962). College of Industry 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, speech and theatre classrooms and offices, with a main theatre seating 485, 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). Classrooms, offices, bookstore and an auditorium seating 1,200. Named for Warren H. Stewart, State College Board member, 1938–1948.

RESIDENCE HALLS

Benton Hall (1967, 1968). Apartment-type residence for men and women. 300 beds. Named for Benton County.

Case Hall (1964). Men's residence hall with 200 beds. Named for Marie E. Case, former faculty member.

Hill Hall (1962). Women's residence hall with 200 beds. Named for Helen Hill, former faculty member.

Holes Hall (1965). First high-rise with nine stories, housing 400 men and women. Named for W. W. Holes, former member of the State University Board.

Mitchell Hall (1957, 1959). Women's residence hall with 420 beds. 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). Capacity for 520 students. Named for Waite A. Shoemaker, president, 1902–1916.

Stearns Hall (1966). Companion building to Holes Hall housing 400 men and women. Named for Stearns County.

SERVICE BUILDINGS

Administrative Services Building (1975). Offices for the president, administrative affairs, academic affairs, institutional relations and part of student life and development. Located at the west entrance to the campus.

Alumni House (1973). Former private residence, acquired by the university in 1973. The facilities are used to provide services for alumni and retired faculty.

Atwood Memorial Center (1966), (1972). Houses dining and recreation facilities and meeting rooms for students and faculty. Named for the Clarence L. Atwood family.

Carol Hall (1946). Originally a private home, then a women's residence hall, now an office building. Named for Carol Selke, wife of President George A. Selke.

Centennial Hall Learning Resources Center (1971). Houses the Learning Resources Center which includes all materials and services usually found in the library and audiovisual services; a random/remote access information system; classrooms and laboratories for the Department of Library and Audiovisual Education; and Computer Services. Ground was broken during the university's Centennial year, 1969.

Garvey Commons (1962, 1965). Two dining rooms with cafeteria service seating 500 at one time. Named for Beth Porter Garvey, first dean of women.

Lawrence Hall (1905). Faculty office building. Oldest structure on campus. Named for Isabel Lawrence, president, 1915-1916.

Maintenance Building (1964). Provides shops, warehouse and vehicle storage for the campus. Attached to the Heating Plant.

Whitney House (1956). Former residence now used for offices. A gift to the university from the heirs of A. G. Whitney.

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 130-acre tract one mile east of the campus contains granite quarry ponds and extensive pine plantings used for nature study and recreation. 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 St. Cloud Reformatory, 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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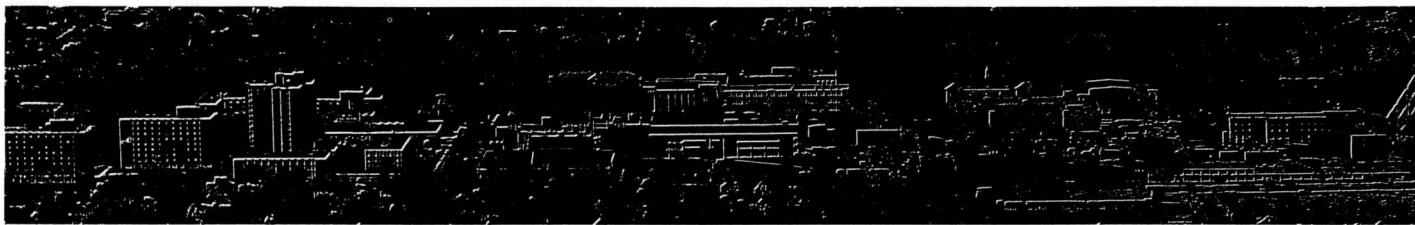
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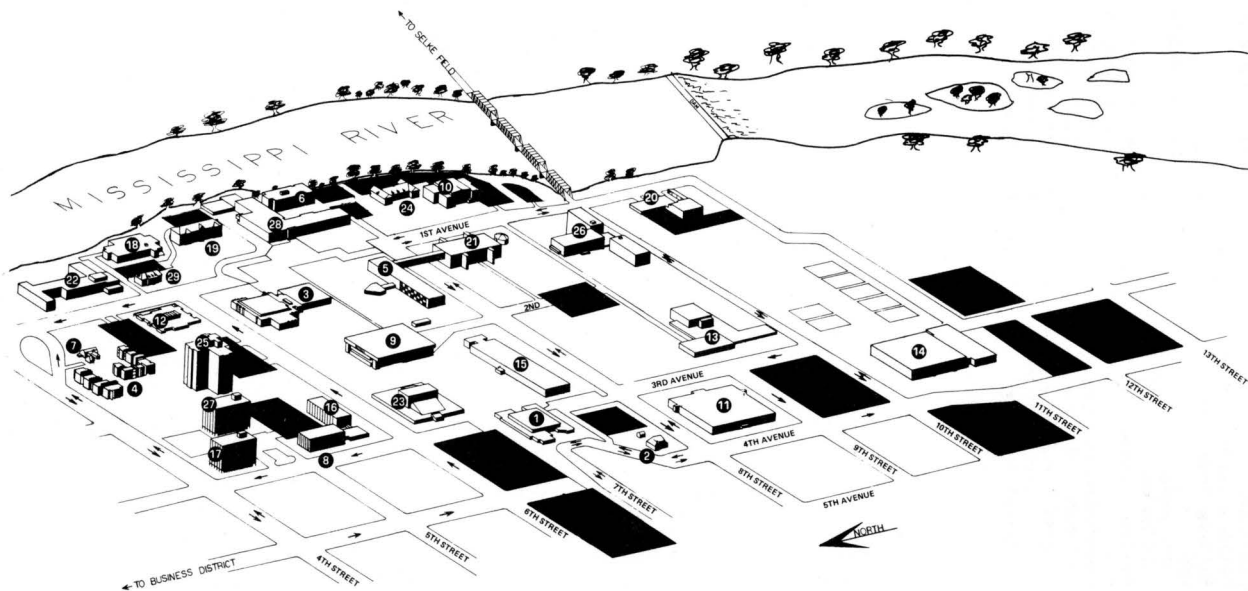
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- ④ Benton Hall
- ⑤ Brown Hall
- ⑥ Business Building
- ⑦ Carol Hall
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- ⑨ Centennial Hall
- ⑩ Eastman Hall
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- ⑱ Kiehle Hall
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- ㉒ Mitchell Hall
- ㉓ Performing Arts Center
- ㉔ Riverview
- ㉕ Sherburne Hall
- ㉖ Shoemaker Hall
- ㉗ Stearns Hall
- ㉘ Stewart Hall
- ㉙ Whitney House

■ Parking Lots

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