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UNIVERSITY OF ST. THOMAS

# Undergraduate Catalog

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# University of St. Thomas

2115 Summit Avenue  
St. Paul, Minnesota 55105

## Catalog of the College 1998-2000

Telephone: (612) 962-5000 or (800)-328-6819

**Website:**

<http://www.stthomas.edu>

**Notice:**

All students are reminded to read carefully the sections of the catalog that concern them, as ignorance of the material contained in it will not be accepted as an excuse.

## Calendars

### Fall Semester

Classes begin  
Last day to register or add a class  
Last day to drop a class without notation on record  
Last day to designate grading option  
Mid-term grades due  
Mid-term break  
January and spring term registration  
Last day to withdraw from a class without a grade of "F" or "R"  
Thanksgiving recess begins  
Classes resume  
Incompletes due spring and summer  
Classes end  
Study day  
Final examinations  
Winter commencement  
Final grades due

### 1998

September 9  
September 22  
September 22  
October 14  
October 28  
October 30  
November 16 - December 4  
November 18  
November 26  
November 30  
December 1  
December 11  
December 14  
December 15 - 18  
December 18  
December 28

### January Term

Classes begin  
Last day to register or add a class  
Last day to drop a class without notation on record  
Last day to designate grading option  
Martin Luther King holiday (no classes)  
Last day to withdraw from a class without a grade of "F" or "R"  
Classes end/exams  
January term grades due

### 1999

January 4  
January 8  
January 8  
January 13  
January 18  
January 19  
January 28  
February 5

### Spring Semester

Classes begin  
Last day to register or add a class  
Last day to drop a class without notation on record  
Last day to designate grading option  
Mid-term grades due  
Mid-term/Easter break begins  
Classes resume  
Last day to withdraw from a Class without a grade of "F" or "R"  
Early registration for fall  
Incompletes due fall and January term  
Classes end  
Study day  
Final examinations  
Commencement  
Final grades due

### 1999

February 1  
February 12  
February 12  
March 3  
March 26  
March 29  
April 6  
April 15  
April 19 - 30  
May 3  
May 14  
May 17  
May 18 - 21  
May 22  
May 28

**Students are required to attend the first day of class in order to secure their place in the course. If the instructor chooses to drop a student from his/her class roster because of non-attendance on the first day, the student is still responsible for officially withdrawing from the course in the Office of the Registrar.**

**Fall Semester**

Classes begin  
 Last day to register or add a class  
 Last day to drop a class without notation on record  
 Last day to designate grading option  
 Mid-term break  
 Mid-term grades due  
 January and spring term registration  
 Last day to withdraw from a class without a grade of "F" or "R"  
 Thanksgiving recess begins  
 Classes resume  
 Incompletes due spring and summer  
 Classes end  
 Study day  
 Final examinations  
 Winter commencement  
 Final grades due

**January Term**

Classes begin  
 Last day to register or add a class  
 Last day to drop a class without notation on record  
 Last day to designate grading option  
 No classes (Martin Luther King day)  
 Last day to withdraw from a class without a grade of "F" or "R"  
 Classes end/exams  
 January term grades due

**Spring Semester**

Classes begin  
 Last day to register or add a class  
 Last day to drop a class without notation on record  
 Last day to designate grading option  
 Mid-term break begins  
 Classes resume  
 Mid-term grades due  
 Last day to withdraw from a class without a grade of "F" or "R"  
 Easter break begins  
 Classes resume  
 Early registration for fall  
 Incompletes due fall and January term  
 Classes end  
 Study day  
 Final examinations  
 Commencement  
 Final grades due

**1999**

September 8  
 September 21  
 September 21  
 October 13  
 October 22  
 October 25  
 November 15 - December 3  
 November 17  
 November 25  
 November 29  
 December 1  
 December 10  
 December 13  
 December 14 - 17  
 December 17  
 December 28

**2000**

January 3  
 January 7  
 January 7  
 January 12  
 January 17  
 January 18  
 January 27  
 February 4

**2000**

January 31  
 February 11  
 February 11  
 March 1  
 March 20  
 March 27  
 March 27  
 April 13  
 April 21  
 April 25  
 April 17 - May 2  
 May 1  
 May 12  
 May 15  
 May 16 - 19  
 May 20  
 May 26

**Students are required to attend the first day of class in order to secure their place in the course. If the instructor chooses to drop a student from his/her class roster because of non-attendance on the first day, the student is still responsible for officially withdrawing from the course in the Office of the Registrar.**

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## General Information

### Mission

The University of St. Thomas is a comprehensive, co-educational, Catholic university. It seeks to develop morally responsible individuals who combine career competency with cultural awareness and intellectual curiosity. In its undergraduate program, the university is committed to the development of the student through a liberal arts education within the living Catholic tradition and through a high degree of personal attention in a spiritually and intellectually stimulating campus environment. Graduate programs emphasize the integration of theory with practice, enhance the professional competence and ethical judgment of their students, and foster personal growth and an appreciation of lifelong learning. In all of its academic programs and other educational enterprises, the university is committed to meeting the diverse, changing needs of the community. Throughout, the university fosters in the student a tradition of service to the public welfare and an energetic, thoughtful approach to the challenges of contemporary life.

### Convictions

1. The University of St. Thomas is a Catholic, diocesan university, founded on belief in God and commitment to a life of worship leading to active participation in the mission of Christ and the Church to the world. In that context and as an important part of its religious witness, the university welcomes and respects faculty, staff and students who do not share this faith tradition. The Catholic tradition fosters a value-oriented education needed for complete human development and for responsible citizenship in contemporary society.
2. The university's educational program provides a liberal arts education as well as education for a career. It strives to give a student a foundation for clear thinking and expression; a sufficient understanding to read intelligently in fields with which an educated person ought to be acquainted; and proficiency in an area of specialization.
3. The university's curriculum emphasizes a search for and discovery of truth and judgments of value as well as preserving and transmitting enduring truths and values.
4. The university seeks to create an international perspective among its students including an appreciation of cultural diversity.
5. The university strives to anticipate and respond appropriately to changes in its environment.
6. The university emphasizes excellence in teaching. It also is committed to scholarship and encourages service to the uni-

versity and broader community throughout its faculty.

7. The university welcomes diversity among its students with respect to age and intellectual talents, financial resources, and credal, racial, and geographic characteristics.
8. The university fosters the total development of the student through close interaction with faculty, staff and other students within a supportive campus environment.
9. The university's metropolitan setting challenges it to participate in community life and to develop innovative programs for persons of all ages within the community.
10. The university, through its educational programs, student services, and other resources, assists its students in the transition to further education and employment.
11. The university cultivates lifelong personal contact and communication with its friends and former students.
12. The university embraces its role in independent liberal arts education because diversity is essential to the health of our educational system, to our national life, and to our responsibilities in the world community.

Within this context, the objectives of the undergraduate curriculum are: liberal learning, moral and ethical development, and career preparation.

### College Vision Statement

The university's mission and convictions and our objectives for undergraduate education provide the framework for the College Vision Statement, which was endorsed by the College Faculty Senate in December 1995.

The strengths of the undergraduate College are embodied in four commitments:

1. A commitment to the Catholic identity that informs its liberal and professional education;
2. A commitment to a common liberal arts foundation that serves as the core of the education in which all St. Thomas undergraduates participate;
3. A commitment to the integration of the liberal arts and career preparation, fostering in students a dedication to work for the common good;
4. A commitment to the underlying unity of the human person with an emphasis on the spiritual, intellectual, ethical and social development of all students.

These commitments are manifested in the following features of the College:

- a. A strong core curriculum for all students that exposes them to enduring, transcultural human truths, provides for multicultural exploration, and encourages integration that crosses disciplinary boundaries;

- b. A comprehensive and strong set of major and minor fields that meet the increasing demands of career competency and interdisciplinary development, while maintaining a common liberal arts core curriculum;
  - c. An energetic, expert and diverse faculty who show their concern for the total development of students through extensive time and effort spent with them, and through their eagerness to involve students in the work of their fields through joint research projects, practicums, and service to the community;
  - d. A faculty who model for students a love of learning through continual efforts to enhance teaching effectiveness, ongoing professional engagement, and collaboration with their colleagues in teaching, research and other program initiatives;
  - e. A faculty who demonstrate a commitment to service through their willingness to serve as role models for students, demonstrating that compassion for others and lifelong dedication to service are ordinary aspects of being an educated, responsible citizen;
  - f. A strong support and professional staff throughout the university committed to fostering the social, spiritual, and intellectual development of students through co-curricular activities, with a special focus on cultivating leadership ability.
- g. Continue our strong emphasis on preparing students to think analytically, write and speak clearly, reason quantitatively, participate in a democratic society, contribute to the health of their communities and the environment, and know the natural world and their own and other cultures;
  - h. Continue to foster in our students an appreciation for the dignity of all human persons, created in the image of a just and loving God.

### History

The University of St. Thomas was founded in 1885 by Archbishop John Ireland, less than a year after he was installed as St. Paul's third bishop. What began as the St. Thomas Aquinas Seminary – with 62 students and a faculty of five – has grown to be Minnesota's largest independent university with four campuses and over 10,000 students.

Built near a river bluff on farmland that was still considered "far removed from town" in the late 1800s, the university's main campus is nestled today in a residential area midway between the downtowns of St. Paul and Minneapolis.

In its first decade, St. Thomas was a high school, college and seminary; students enrolled in either the classical or theological departments. In 1894 the theological department moved to an adjacent campus where it became The Saint Paul Seminary. The classical department, meanwhile, remained on the original campus and became the College of St. Thomas.

The classical department gradually grew to a four-year college curriculum. The first baccalaureate degrees were conferred in 1910 and St. Thomas was officially accredited in 1916. The classical department's first four years became the St. Thomas Military Academy, a high school that moved to a suburban campus in 1965.

After 92 years of all-male enrollment, St. Thomas became coeducational in 1977. Today, 50 percent of the undergraduates and more than 40 percent of the graduate students are women.

Coeducation, coupled with new graduate programs as well as new campuses, contributed to St. Thomas' growth over the past two decades. Enrollment increased from under 2,500 students in 1970 to over 10,000 today. The undergraduate College currently enrolls approximately 4,500 students.

Adult students at the undergraduate level were served through New College, which opened in 1975. The School of Continuing Studies, established in 1998, will continue to serve adult, part-time, and non-traditional students at both the undergraduate and graduate levels with degree and

As it looks to the future, the undergraduate College seeks to maintain these distinctive manifestations of its key commitments and to:

- a. Build on the strengths of our Catholic identity by promoting dialogue between faith and reason and by enabling students to acquire an organic vision of reality which integrates faith and secular learning;
- b. Increase efforts to cross departmental and disciplinary boundaries in order to enhance further the integration of liberal arts and professional education, faith and practice, principles and techniques, and education and service;
- c. Emphasize more the preparation of students for a life of service in an increasingly diverse world through the development of integrated service learning opportunities for students;
- d. Stress the importance of global awareness by encouraging study abroad opportunities, increasing participation in faculty and student exchanges, and increasing involvement with the university's urban community;
- e. Increase efforts to diversify the student body, the faculty, the staff, and the curriculum to reflect the diversity of the broader society;
- f. Emphasize the integration of technology

## General Information

non-credit programs.

Graduate programs in Education, Human Development and Professional Psychology were first established in 1950, and now offer degrees at the masters, specialist, and doctoral levels. The School of Education and the School of Social Work were both established in 1996.

Graduate programs in Management, begun in 1974, have developed into the Graduate School of Business, which offers a wide range of business-related masters degrees.

The Graduate School of Applied Sciences and Engineering offers masters degrees in software engineering and in manufacturing systems engineering.

St. Thomas' original "classical" and "theological" departments came together once again in 1987 through an affiliation between the seminary and university. Together they created The School of Divinity which offers graduate degrees in pastoral studies, divinity and theology.

In 1990, recognizing the many changes and the addition of graduate programs to the institution, the name of the College of St. Thomas was changed to the University of St. Thomas.

The Graduate School of Arts and Sciences begun in 1991, offers masters-level programs in art history, English, and music education.

Many non-degree programs are offered by St. Thomas through a number of specialized centers devoted to management and business, senior citizens, life-care, creative studies, Jewish-Christian dialogue, and music.

St. Thomas also is home to the undergraduate St. John Vianney Seminary, and to The Catholic Digest, the largest-selling magazine of its kind in the world.

## Locations

St. Thomas' main, 78-acre campus anchors the western end of St. Paul's historic Summit Avenue. In 1992 the university built a permanent campus in downtown Minneapolis, which is the home of the Graduate School of Business. In 1999, the School of Education and the graduate department of Professional Psychology will be located on the Minneapolis campus.

The university also offers a wide range of programs at its Owatonna-based Gainey Conference Center, established in 1982 and at a number of satellite locations, including the Mall of America.

## Vital Statistics

The University of St. Thomas is a private, coeducational, Catholic, liberal arts university located in St. Paul, Minnesota. The university awards the B.A., B.S., B.S.M.E., D.Min., Ed.S., Ed.D., M.A., M.B.A., M.B.C., M.Div., M.I.M., M.M., M.M.S.E., M.S., M.S.D.D., M.S.W., and Psy.D. degrees.

Enrollment figures for fall semester 1997 were: the undergraduate College 4,643; New College 484; School of Divinity 133; School of Education 1,060; School of Social Work 163; Graduate School of Business 2,921; Graduate School of Applied Sciences and Engineering, 766; Graduate School of Arts and Science, 83; Graduate Department of Professional Psychology 183. There were 339 full-time faculty.

## Accreditation and Memberships

The University of St. Thomas is accredited by the North Central Association of Colleges and Schools (800.621-7440), the Association of Theological Schools (412.788-6505), the National Council for the Accreditation of Teacher Education (202.466-7496).

All University of St. Thomas education licensure programs are approved by the Minnesota Department of Children, Families and Learning (651.296-2046).

Programs in chemistry are approved by the American Chemical Society (800.227-5558); the Social Work program is accredited by the Council on Social Work Education (703.683-8080); the masters programs in engineering are accredited by the Accreditation Board for Engineering and Technology (410.347-7700); the music programs are approved by the National Association of Schools of Music (703.437-0700).

The university is a member of the:

- American Association of Colleges for Teacher Education
- American Council on Education
- Association of American Colleges and Universities
- Association of Catholic Colleges and Universities
- Council on Undergraduate Research
- Institute of International Education
- International Federation of Catholic Universities
- Minnesota Private College Council
- National Association of Independent Colleges and Universities
- National Catholic Educational Association

The university is an associate member of the American Assembly of Collegiate Schools of Business

### Assessment of Programs

The program to assess student learning is an integral part of the university's commitment to excellent teaching and effective learning. The assessment effort is sustained by the faculty and is fully supported by the administration. Information is systematically collected and examined both to document and improve student learning. The assessment program itself is routinely updated, and the information gained from the assessment process becomes part of curricular development.

As a result, students are asked from time to time to participate in testing, surveys, interviews, or other methods of collecting data for the assessment of the academic programs.

### Admission Policies

The University of St. Thomas desires to provide an environment in which people of varied backgrounds can learn and grow through shared experiences. Therefore, we welcome all applicants without regard to race, religious preference, or national origin.

### Information and Visits

All correspondence and telephone calls concerning undergraduate day admissions should be directed to the Office of Admissions, Mail #32F-1, University of St. Thomas, St. Paul, Minnesota 55105-1096. The toll free number is (800) 328-6819, Ext. 2-6150.

Our e-mail address is:  
*admissions@stthomas.edu*  
Our web site address is:  
*www.stthomas.edu*

When writing, inquirers should be sure to include their full name, address with zip code, telephone number and social security number.

The Office of Admissions is located at 32 So. Finn Street. It is open from 8 a.m. to 4:30 p.m., Monday through Friday, and 9 a.m. to noon on most Saturdays. Personnel are available during those times for counseling and campus tours. Please contact the Office of Admissions for an appointment.

### Application Procedures

Candidates for admission should complete the following steps.

1. The official application form should be filled out by the applicant and the appropriate high school authorities. It should be sent to the Office of Admissions with the application fee.
2. The admissions committee considers each student's academic record, non-academic recommendations and essay. Applicants are then notified whether they have been accepted officially by the university.
3. Each accepted applicant should make a \$100 standing (confirming) deposit. This standing deposit is refundable upon written request until May 1.
4. A resident applicant must also make a \$100 room deposit. The room deposit will be refunded if written notice of cancellation is received prior to June 15.
5. Each accepted applicant will receive a health form which is to be filled out by the family physician and returned to the Office of Admissions.

As of July 1, 1990, all students born after 1956 who are enrolled in a Minnesota public or private college or university are required by Minnesota law to be immunized against diphtheria, tetanus, measles, mumps, and rubella. These immunizations must have been done within a certain time frame. Questions about this requirement and

## Admission Information

exemptions allowed for by the law should be addressed to the Health Service. A record of immunization form is available from the Office of Admissions or the Health Service.

### Admission Credits

Students entering St. Thomas as first-time college students may have high school credits, advanced placement credits, or informal education that allows them to gain credit by examination. These various supplementary programs are explained in this section.

### High School Credits

It is recommended that an applicant's high school transcript include four units in English, four units in one foreign language, four units of mathematics (three units required), two units in natural sciences and two units in history or the social sciences. Some programs require additional courses in the above-mentioned fields.

Graduates of accredited high schools are admitted on the basis of their academic rank in their graduating class, recommendation of their high school staff and their scores on one of the following: the Scholastic Aptitude Test (SAT), or the American College Test (ACT).

The university's SAT code number is 6110. The ACT code number is 2102.

Students with a Graduate Equivalency Diploma should submit the GED, including scores, in lieu of a high school transcript.

### Advanced Placement

Unless otherwise noted, a student earning a score of three or higher on an Advanced Placement Examination sponsored by the College Entrance Examination Board will receive four credits and an "S" grade. This examination must be taken prior to matriculation to a college or university.

**Art History** – score of 3 or higher = ARTH 199 (may fulfill Fine Arts requirement; evaluation on individual course basis)

**Biology** – score of 3 or higher = BIOL 101 (fulfills Natural Science requirement)

**Chemistry** – score of 3 or higher = CHEM 100 (fulfills Natural Science requirement)

**Computer Science** – score of 3 or higher in Computer Science A or B = QMCS 237 score of 3 or higher in Statistics = QMCS 220 (fulfills third Math/Science requirement)

**Economics** – score of 4 or higher in macroeconomics = ECON 251; score of 4 or higher in microeconomics = ECON 252 (either course fulfills Social Analysis requirement)

**English** – score of 3 or higher in English Language/Composition = ENGL 100; score of 3 or higher in English Literature/Composition = ENGL 104;

(if both tests are taken, English Language/Composition = GNST 199)

**French** – score of 3 = FREN 211 (fulfills Language and Culture requirement); score of 4 = FREN 212  
score of 5 = FREN 300

**German** – score of 3 = GER 211 (fulfills Language and Culture requirement); score of 4 = GER 212  
score of 5 = GER 300

**Government** – score of 3 or higher in Government & Politics: U.S. = POL 199 (does not fulfill Social Analysis requirement); score of 3 or higher in Government & Politics: Comparative = POL 105 (fulfills Social Analysis and Human Diversity requirements)

**History** – score of 3 or higher = HIST 199 (fulfills Historical Studies requirement)

**Latin** – score of 3 or higher = LAT 212 (fulfills Language and Culture requirement)

**Mathematics** – score of 3 or higher in Calculus AB = MATH 113 (fulfills Mathematical Reasoning requirement); score of 3 or higher in Calculus BC = MATH 113 and MATH 114

**Music Theory** – score of 3 = MUSC 113; score of 4 or higher = MUSC 212 (does not fulfill fine arts requirement)

**Physics** – score of 3 or higher = PHYS 101 (fulfills Natural Science requirement)

**Psychology** – score of 4 or higher = PSY 111 (fulfills Social Analysis requirement)

**Quantitative Methods** – see Computer Science above

**Spanish** – score of 3 = SPAN 211 (fulfills Language and Culture requirement); score of 4 = SPAN 212  
score of 5 = SPAN 300

### International Baccalaureate

Students who pass the International Baccalaureate Examination(s) in subjects included in the St. Thomas curriculum with a score of 4 will ordinarily receive 4 credits toward graduation. Students who receive a score of 5, 6, or 7 will ordinarily receive 8 credits toward graduation. The specific courses for which credit would be awarded will be determined by the appropriate academic department. With the exception of Foreign Language, the examinations referred to are at the *higher level*.

Following is a list of guidelines according to which credit may be obtained by examination in specific departments. In each case the decision as to whether or not it is suitable to seek credit by examination for a particular course will be made by the chair of the department.

Credit awarded will be assigned an "S" grade (satisfactory).

**Biology** – score of 4 or higher = one

course. Students with scores of 5 or above should consult with the department chair about possible placement/credit beyond one course. All students who intend to major in biology should consult with the department chair.

**Chemistry** – A score of 4 or higher usually equals CHEM 111. Students with scores of 5 or above should consult with the department chair. Students should consult with department chair if they intend to major in science, especially chemistry.

**English** – score of 4 or higher usually equals one course, but students should consult with the department chair. The exact course and placement will be determined at that time.

**Foreign Language** – score of 4 or higher (in the subsidiary examination) usually equals 211 or 212 depending on the results of the departmental placement examination.

**History** – score of 4 or higher = one course. Students with *very high* scores should consult with the department chair about placement/credit beyond one course.

**Mathematics** – score of 3 or 4 will allow MATH 113 to be waived as a prerequisite (but no course credit will be given). Students are encouraged to take the departmental examination to receive credit for MATH 113.

– score of 5 or higher = MATH 114 (but no course credit will be given). Students are encouraged to take the departmental examination to receive credit for MATH 114.

**Physics** – score of 4 or higher will be considered for the awarding of credit on a case by case basis.

### Post-Secondary Option Credits

The Post-Secondary Enrollment Options program is a Minnesota State program which allows qualified high school students to earn credit toward their high school diplomas by attending colleges, universities, vocational-technical institutes and other post-secondary institutions. In order to participate, a student must be enrolled as a junior or senior at a Minnesota public high school and must meet the admissions requirements set by the post-secondary institution. Legislation passed by the State of Minnesota in 1997 allows students in private and home schools to participate in the same program as alternative pupils.

The University of St. Thomas has participated in the program since its inception in the fall of 1985. Students of high ability who need a greater academic challenge than their high school provides may take a maximum of six courses through the PSEO program at

St. Thomas. The university considers for admission students who are in the top 10 percent of their high school class and who have pursued a rigorous academic program including honors or accelerated coursework.

High school juniors may register for a maximum of eight credits at St. Thomas. High school seniors may register for a maximum of sixteen credits at St. Thomas. Since PSEO students are considered non-degree, the maximum number of credits that may be applied toward a degree program at St. Thomas is twenty-four.

The program allows for registration in fall and spring semesters. January term and summer sessions are not included.

Students are allowed to enroll in any course for which they have adequate preparation, provided that there is space available after the degree-seeking students have registered. There are some courses which are not offered for PSEO students. For instance, they may not enroll in theology courses, since the state will not pay for religion courses. Applied music courses, such as instrumental or vocal lessons, are also not included in the program. PSEO students must register for credit; they may not audit a course.

Students must maintain at least a 2.50 grade point average in order to continue in the program. The ordinary probation and suspension rules outlined in this catalog do not apply to post-secondary students.

Students enrolled in the program receive University of St. Thomas I.D. cards and may participate in college activities and use campus facilities. They may not live in college residences, nor participate in off-campus programs (such as music ensemble tours, study abroad, varsity athletics, volunteer projects, etc.).

### College Level Examination Program (CLEP)

The College Level Examination Program (CLEP) was conceived to serve post-secondary students who have acquired certain kinds of knowledge outside the usual formal educational channels.

There are two kinds of CLEP Examinations, General Examinations and Subject Examinations.

#### General Examinations

If a student scores at the 50th percentile or above, the university will award 4 credits for each of these five General Examinations: English Composition (the essay component of this examination *must* be taken to be considered for credit); Mathematics; Natural Sciences; Social Sciences; History and Humanities.

These General Examinations should be taken before or during the first semester of college work.

Credit awarded for these examinations may be used to meet the requirements of

## Admission Information

the core curriculum with the following qualifications:

- The Natural Sciences Examination does not fulfill the laboratory science requirement, but would fulfill the third course requirement in math/science.
- The Humanities Examination does not fulfill the fine arts requirement. It would, however, be accepted as an elective course.
- The Social Sciences and History examination fulfills neither the social analysis nor the historical studies requirement.

### Subject Examinations

If a student scores at the 50th percentile or above, the university will award course credit for those Subject Examinations of CLEP that have been approved by the department in which the subject is usually taught.

Credit will not be awarded for a CLEP Examination if a student has already taken a college-level course in an equivalent subject area.

Special arrangements may be made to take the General or Subject CLEP Examinations by contacting the Office of Personal Counseling and Testing at the University of St. Thomas.

### Department Examinations

Certain departments of the College allow students to obtain credit for specific courses if they can demonstrate that they have mastered the content and method of the courses in question. Those interested in seeking credit in this fashion should contact the department chair of the appropriate department.

The examining faculty member offers no special instruction to the student except to furnish the syllabus of the course. If this is unavailable or of insufficient assistance to the student, the course should be taken as a regular semester offering or on an Individual Study basis.

A student may attempt to earn credit by examination only once for a particular course. Grades for courses taken in this way are usually given on an S/R basis unless the department has decided that a letter grade should be awarded.

Only courses for which credit is awarded will be posted on the transcript. A fee is charged for credit earned in this fashion.

The following departments offer the availability of credit by examination for selected courses. Departments not included in the list do not offer any courses under this option.

**Art History** – examinations might be given for certain courses. Each case will be considered individually by the chair of the department.

**Biology** – examinations may be given for certain courses. Each case will be con-

sidered individually by the chair of the department.

**Division of Business** – examinations may be given with the consent of the chair of the department. Listed below are the courses in the departments of the Division of Business for which credit may be obtained by examination:  
ACCT 211 Financial Accounting  
ACCT 213 Managerial Accounting  
BLAW 365 Business Law  
FINC 321 Financial Management  
MGMT 340 Fundamentals of Management  
MGMT 345 Operations Management  
MKTG 300 Principles of Marketing

### Chemistry

Examinations may be given for CHEM 111 and/or CHEM 112. Each case will be considered individually by the department chair.

**Economics** – all courses, if circumstances warrant it, with the *exception* of:

ECON 315 Empirical Methods in Economics  
ECON 494 Research

**Engineering** – all courses, if circumstances warrant it, with the *exception* of:

ENGR 480 Engineering Design I  
ENGR 481 Engineering Design II

Each case will be considered individually by the department chair.

**English** – under special circumstances, and with the consent of the department chair, credit by examination may be sought for English courses with the following *exceptions*:

ENGL 111 Critical Reading & Writing I  
ENGL 112 Critical Reading & Writing II  
ENGL 190 Critical Reading & Writing  
ENGL 200 Written English  
ENGL 300 Advanced Writing: Theory and Practice

ENGL 484 Literary Magazine Practicum  
ENGL 485 Senior Seminar

**Foreign Language** – examinations may be given for certain courses. Each case will be considered individually by the department chair.

### Geology

GEOL 111 Introductory Geology I

**History** – by consultation with the department chair, any regular course (*i.e.* excluding Topics courses, Individual Study courses, Experiential Learning courses) could be taken by examination if circumstances were to warrant it.

**Journalism & Mass Communication** – in special circumstances, credit by examination could be sought for courses in journalism with the following *exceptions*:

JOUR 230 Photojournalism  
JOUR 311 Persuasion in Writing  
JOUR 312 Critical Writing  
JOUR 410 Advanced Reporting

JOUR 450 Advanced Public Relations  
 JOUR 480 Media Ethics Seminar

**Mathematics** – a departmental examination is available for MATH 113 Calculus I with the following qualifications:

score of 0 - 59 = no credit;  
 score of 60 -79 = no credit but MATH 113 will be waived as a prerequisite;  
 score of 80 - 100 = credit for MATH 113

**Music** – no courses are available. Tests in music theory and auditions for Performance Studies are used to determine placement and do not entail the awarding of credit.

**Political Science**

POL 105 Politics and Government in Comparative Perspective

**Psychology** – in special circumstances, and with approval of the department, credit by examination may be sought for PSY 111 General Psychology

**Quantitative Methods** – under special circumstances and with the approval of the department chair, credit by examination could be sought for courses with the following *exceptions*:

QMCS 420 Systems Analysis and Design I  
 QMCS 421 Systems Analysis and Design II

**Sociology**

SOC 100 Introduction to Sociology

**Theology** – credit by examination may be sought for THEO 101 and all 200-level courses. Each request for credit requires the approval of the department chair.

**Transfer Students**

In addition to following the general application procedures, students wishing to transfer from another college should have official transcripts of their high school and college work sent to the Office of Admissions as soon as possible. Previous college work and other academic information will be reviewed in the admission decision. A minimum GPA of 2.30 (4.0 scale) is required in *transferable* previous college work to be considered for admission. *All* transferable coursework, regardless of grade, is considered when calculating the GPA used to determine admission. *Only* coursework in which the student earned a grade of C- or higher will be recognized for credit at St. Thomas.

Besides fulfilling the core curriculum requirements, transfer students must maintain a GPA of 2.00 in courses taken at St. Thomas and must successfully complete thirty-two of their last thirty-six credits at the university.

The deadline for application for the fall semester is August 1. Applications for the spring semester must be received by January 1.

In order to stay within enrollment goals, the university reserves the right to adjust published application and standing deposit deadlines when necessary.

Students interested in transferring to the university should request a copy of the brochure, *Transfer Student Guidebook*, from the Office of Admissions.

**International Students**

The university welcomes applications from prospective international students.

In addition to the Application for Admission, the Test of English as a Foreign Language (TOEFL) is required of all students for whom English is not their native language. The minimum acceptable score for this examination is 550. The TOEFL *Bulletin of Information* and registration form can be obtained through American embassies and consulates, offices of the United States Information Service (USIS) and various binational centers. Students unable to obtain the TOEFL *Bulletin* and registration form locally should write well in advance to: TOEFL Services, P.O. Box 6151, Princeton, NJ 08540-6151, U.S.A.

All international students must verify that they have sufficient funds to cover all educational costs for the first year of study and to provide evidence that funds will be available for the duration of the degree.

The University of St. Thomas has very limited funds for scholarships for international students and awards only a few partial tuition grants to incoming students. Selection is based on outstanding merit and need. To qualify for consideration for the following academic year, students must apply to the University of St. Thomas and have submitted an Application for International Financial Aid no later than April 1.

For more information, please contact the Coordinator, International Admissions, International Education Center, University of St. Thomas #44C-1, 2115 Summit Avenue, St. Paul, MN 55105-1096, or visit the university's Web site at [www.stthomas.edu](http://www.stthomas.edu), or e-mail at [iec@stthomas.edu](mailto:iec@stthomas.edu).

**Veterans**

The University of St. Thomas has been approved for the education and training of veterans. It is the responsibility of students who are veterans to familiarize themselves with the procedures and regulations concerning satisfactory standards of progress in order to insure proper and prompt payment of benefits due.

Veterans will receive credit as recommended by the American Council on Education for courses completed through USAFI and for courses from accredited colleges when the proper documents have been supplied to the university.

## Admission Information

Specific questions should be addressed to the registrar who serves as Coordinator of Veterans Affairs.

The University of St. Thomas uses *The Guide to the Evaluation of Educational Experiences in the Armed Services* when evaluating work done in these areas. The DD214 or DD295 is required to document these experiences.

### Non-Degree Students

Non-degree students attend classes without intending to complete the work required to obtain a degree. They are admitted to the institution through the Office of the Registrar. As they are not seeking a degree, they are not obliged to present their previous academic work for evaluation.

Non-degree students are not classified as freshman, sophomore, junior, or senior. Neither are they classified as part-time or full-time.

The academic status, "non-degree," is available to undergraduate students only for three semesters and for a maximum of eight credits in each semester. Exemptions to this policy may be made by appeal to the Dean of the College. This policy does not apply to PSEO students or those who have previously received a baccalaureate degree.

Should a non-degree student wish to change status and pursue a degree program, a formal application for admission must be made through the Office of Admissions of the University of St. Thomas. Only 24 credits taken as a non-degree student may be applied to a degree program.

Academic sanctions (probation, suspension, dismissal) apply to degree and non-degree students alike.

### Parents-on-Campus Program

Parents of full-time students in the undergraduate day program are eligible to take undergraduate courses on a space-available basis in fall and spring semesters without tuition charge.

The following requirements must be met:

The son or daughter is a full-time day student taking at least twelve credits. Parents of New College students are not eligible for this program.

Graduate courses, courses at ACTC schools, courses in the HECUA program, and courses taught in January term or summer sessions are not part of this program.

Parents may audit courses or take them for credit. Parents may be non-degree or degree-seeking students. If the parent chooses to become a degree-seeking student, an application must be made through the Office of Undergraduate Admissions.

Fees will be charged for books, music lessons, laboratory charges, individual study projects, and experiential learning.

Further information on the program can be obtained from the Office of the Academic Dean.

### Readmission Policies

Students who were formerly enrolled in the university, but are not currently attending, must request reinstatement by calling or writing to the Office of the Registrar at St. Thomas. The student will be reinstated if the registrar verifies that the student left St. Thomas in good academic standing, and if the student is eligible to return to the university as certified by the Dean of Student Life.

However, if the student has been enrolled at another college after initial enrollment at St. Thomas, an official transcript of work done at that institution is required. The student will then be reinstated by the registrar if the transcript indicates work of a C average or better.

A student who discontinues his/her enrollment in the university for four consecutive academic years must re-enroll under the terms of the catalog in effect at the time of re-enrollment.

## College Expenses

The cost of a college education is of vital concern to students, their parents, and the educational institutions they attend. This section identifies many sources of financial aid available to the student seeking a college education. Whenever possible, students will want to take advantage of opportunities such as the Minnesota State Grants and the Federal Pell Grants. It is important that proper application for aid be made before the deadlines.

## Financial Aid

The primary responsibility of financing an education rests with the students, their parents, and/or private sources available to them. However, the university does recognize that there are students who need financial assistance.

For this reason, St. Thomas offers scholarships, grants, loans and campus work to students with need who show promise of contributing to the welfare of the College and whose academic records indicate that they will do satisfactory college work.

## Applications

The Committee on Scholarships and Student Aid exercises full jurisdiction over all financial aid. To be considered for aid, applicants must complete their applications for admission to the College, pay application fees, and be accepted.

Students wishing to apply for financial aid should complete a financial aid needs analysis form (FAFSA). This service subscribes to the principle that the amount of financial aid granted to a student should be based upon financial need as determined by federal regulations.

This form may be obtained from a high school guidance office or from the university's Office of Student Financial Services.

## Awards and Renewals

Aid to students is for one year only, unless specified otherwise. Students must reapply each year.

All financial aid is applied to the final payment of fees or other charges for each semester. Awards will be adjusted if the student withdraws from the university before the end of the year, or if they are taking less than a normal load. Students must maintain a cumulative grade average of C (2.00) or better to be eligible for assistance.

## Satisfactory Academic Progress

All applicants must meet the conditions for Satisfactory Academic Progress for Financial Aid to remain eligible for financial aid.

1. Students are eligible to receive financial aid for a maximum of 176 *attempted* credits.

2. Students must successfully complete 75 percent of all attempted credits each year.
3. Students must maintain a cumulative GPA of 2.00 after their second year of attendance.

A detailed copy of the Financial Aid Satisfactory Academic progress policy is available from the Office of Student Financial Services.

## Scholarships

### Academic Scholarships

The University of St. Thomas is pleased to offer non-need based academic scholarships to incoming freshmen who are chosen on the basis of college examination scores, high school record and high school class rank. *Distinguished Scholarships* range from \$3,800 to \$7,250 and are renewable for four consecutive years of full-time attendance if a 3.20 grade point average (GPA) is maintained. *University Scholarships* range from \$2,500 to \$3,750 and are renewable for four consecutive years of full-time attendance if a 3.00 GPA is maintained. *Recognition Scholarships* range from \$600 to \$2,450 and are renewable for four consecutive years of full-time attendance if a 2.75 GPA is maintained. For specific information concerning qualifications, please contact the Office of Student Financial Services. All incoming freshmen accepted for admission will be considered for academic scholarships. The awards are competitively based on the applicant pool.

### Access Scholarships

Scholarships are awarded annually to 30 incoming freshman applicants who have exhibited leadership potential. Awards are not based on need, but are competitively based on the merits of the applicants. Awards range from \$500 to \$1,000 per year and may be received for four consecutive years for recipients who maintain a 2.70 GPA while attending St. Thomas. Recipients must apply for an Access Scholarship. An application may be obtained from the Office of Admissions.

### Build Your Own Recognition Scholarships

The University of St. Thomas believes that students with a desire to attend college should have reasonable access to scholarship awards. By virtue of high school academic performance, students may "build your own recognition" into a scholarship at St. Thomas. Graduating high school students who are U.S. citizens or permanent residents who are accepted for admission as regular, degree-seeking students are eligible for this program. St. Thomas academic scholarships may be received for a maximum of four consecutive years provided the student

## Student Financial Services

maintains full-time attendance and meets the necessary renewal criteria. These scholarships are based on high school rank, grade point average and highest college bound test score. "BYOR" recipients are identified as Recognition, University, or Distinguished scholarships.

### ***City of Minneapolis Scholarships***

The University of St. Thomas has a scholarship program for graduating seniors at public and private high schools in the city of Minneapolis. Eight scholarships covering tuition and fees for four years at St. Thomas are awarded annually. A scholarship is awarded to one graduating senior from each public high school, and one scholarship is awarded to one applicant from all Minneapolis private high schools. These scholarships are awarded to the student with the highest financial need from each of seven public high schools and one of three private high schools. Applications are available from the guidance counselors in the Minneapolis high schools or from the St. Thomas Office of Admissions. Recipients must apply annually for financial aid to renew this scholarship.

### ***Recognition Scholarship Program for Minnesota Community College Students***

This is a competitive scholarship that is awarded to the top students transferring from Minnesota community colleges who meet the following criteria: have earned 56 semester credits at a community college with a cumulative GPA of 3.20 or higher. Twelve \$2,000 Recognition Scholarships will be awarded to new transfer students annually. For more information, contact the community college liaison.

### ***Music Scholarships***

The University of St. Thomas offers scholarships each year on the basis of musical performance and academic achievement. Scholarships are available to incoming freshmen and transfer students who meet the criteria for acceptance into St. Thomas and intend to major in music. Scholarships may also be available for current music majors. Contact the Department of Music for application and deadline information.

Elective half-hour lesson scholarships are available to freshmen in Symphonic Band, Symphonic Wind Ensemble, Concert Choir, Liturgical Choir and Women's Choir.

### ***Science, Mathematics and Engineering Scholarships***

The St. Thomas Division of Science and Mathematics awards two full-tuition and eight \$2,000 scholarships each year. These awards are renewable and may be received for four consecutive years. Renewal criteria includes maintaining a 3.50 GPA in a science major.

Students wishing to be considered for a science, mathematics or engineering scholarship must complete the application process by December of their senior year in high school. Applicants will be tested at St. Thomas (usually in January) of their senior year. Based on the test evaluations, finalists are selected and asked to return to campus for personal interviews. Recipients of a full-tuition scholarship are not eligible for funds from the Build Your Own Recognition Scholarship program.

### ***Traditions Scholarships***

Traditions Scholarships are provided to incoming freshmen through the generosity of alumni and friends of St. Thomas who want to make it possible for all students to "continue the tradition" and experience all that St. Thomas has to offer. Awards are based on need and the merits of the applicants. Awards range from \$500 to \$1,000 per year. Traditions Scholarships may be renewed but are not guaranteed due to the potential changes in family financial circumstances. An application may be obtained from the Office of Admissions.

### ***Restricted Scholarships***

The University of St. Thomas is pleased to offer the opportunity for students to be considered for many scholarships that are the result of generous gifts by friends, alumni, corporations and foundations. The results from the FAFSA will be used to select recipients for each of these scholarships:

Alliss Educational Foundation  
Alumni Association Scholarship  
Alumni Class Scholarship  
Joseph B. Connors Scholarship  
Louella Cook Scholarship  
Dain Bosworth Scholarship  
M. and J. Cashman Scholarship  
Denis J. Dickinson Scholarship  
Amy Mertes/Dingman Memorial Scholarship  
Ecolab Scholarship  
Farmers Insurance Scholarship  
Charles W. Field Scholarship  
William F. Foss Scholarship  
First Bank System Scholarship  
Bryant Fritz Scholarship  
Collins Family Scholarship  
E.T. Foley Scholarship  
Gardner Foundation Scholarship  
Gertrude Hill Gavin Fund  
John Gearen Memorial Scholarship  
Christine Goob Scholarship  
Lelia Gross Scholarship  
Haggerty Memorial Scholarship  
Robert E. and Frances W. Hall Scholarship  
E.W. Hallet Trust Scholarship  
Reuel Harmon Scholarship  
George and Winifred Herder Scholarship  
Mrs. J.J. Hill Scholarship  
Memorial/Honors Scholarship

Hormel Foods Scholarship  
Hotchkiss Scholarship  
P.M. Johnson Minority Scholarship  
Edward Kelly Scholarship  
Dr. Thomas J. Kinsella Scholarship  
Koester Family Scholarship  
Francis Kosmerl Scholarship  
J. Patrick Lannan Scholarship  
Larkin-Harrington Scholarship  
Floyd R. Laska Scholarship  
Donald Leyden Scholarship  
Logar Memorial Scholarship  
Harry and Adelaide McNeely Scholarship  
John R. McQuillan Scholarship  
McQuillan Burse Scholarship  
Medtronic Science Scholarship  
Josephine Benz Millard Scholarship  
Minnegasco Scholarship  
Minnesota Power Scholarship  
Gerald Mullin Scholarship  
Minnesota Mutual Life Scholarship  
Major Patrick Murray Scholarship  
Dr. William Norman Scholarship  
Northern States Power Scholarship  
Msgr. O'Donnell Scholarship  
Casey Albert T. O'Neill Scholarship  
Opus Corporation Scholarship  
Thomas J. O'Rourke Scholarship  
Blanche O'Shaughnessy Scholarship  
Samuel M. Paine Navy V-12 Memorial  
Scholarship  
John Pates Scholarship  
Pentair Scholarship  
Reader's Digest Scholarship  
Hans and Helen Reiss Accounting  
Scholarship  
James and Chriss Renier Scholarship I and II  
St. Paul Foundation Scholarship  
Clarence and Georgette Sampair Scholarship  
Pete J. Schmelz Scholarship  
Joseph P. and Marjorie E. Schmit Scholarship  
Schoenecker Foundation Scholarship  
R.F. Sheehan Memorial Scholarship  
Joseph and Jane Shiely Scholarship  
Irving L. Shores Scholarship  
Herbert Slusser Scholarship  
Harold and Margarette Sneller Scholarship  
James and Janina Springer Scholarship  
William and Anne Stocks Scholarship  
Dr. John and Margaret Sudor Scholarship  
Fund  
James R. Thorpe Scholarship  
Donald and Dolores Traxler Scholarship  
UPS Foundation Scholarship  
John Vachon Scholarship  
Rev. Vashro Memorial Scholarship  
St. John Vianney Scholarship  
Wasie Family Foundation Scholarship  
James T. Williams Scholarship  
3M Scholarship - Liberal Arts

*The following St. Thomas scholarships are awarded based on recommendations by the appropriate departments or individuals:*

Air Force Association Scholarship  
Arthur Andersen Scholarship

Charles Bailly Accounting Scholarship  
Boulay Accounting Scholarship  
Cargill Accounting Scholarship  
Coopers and Lybrand Scholarship in memory  
of Jerry Paul  
Coopers and Lybrand II Scholarship  
Elaine E. Dangers Mathematics Scholarship  
Deloitte and Touche Scholarship  
Entrepreneur Scholarship  
Ernst and Young Accounting Scholarship  
John C. Gessner Scholarship  
Green Bay Diocese Scholarship  
General Mills Accounting Scholarship  
Dr. Paul Germann Scholarship  
Robert W. Hejny Memorial Scholarship  
Honeywell Accounting Scholarship  
Hoverson Scholarship  
Koch Scholarship for Catholic Studies  
KPMG Peat Marwick Scholarship  
Kuchera Scholarship  
William D. Larson Scholarship  
LAWCO Scholarship  
Sr. M.A. Maher Scholarship  
Marso Foundation Scholarship  
Minnesota Society of CPA's Scholarship  
Dennis and Barbara Murphy Scholarship  
Terrence J. Murphy Scholarship  
McGladey and Pullen Accounting  
Scholarship  
James and Kathleen O'Phelan Scholarship  
David A. Renelt Scholarship  
G.W.C. Ross Scholarship  
Peter J. Schmelz Scholarship  
Shapira Scholarship  
Sioux Falls Diocese Scholarship  
Grant Thornton CPA Scholarship  
Roxanne Zeug Scholarship  
3M Chemistry Scholarship  
Rev. James Whalen Scholarship

### **Scholarships Not Awarded by the University**

#### **Tozer Foundation Scholarships**

These scholarships are available to residents of Pine, Kanabec and Washington counties. They are based on need and academic qualifications. Apply to: Tozer Foundation, Inc., 104 N. Main Street, Stillwater, MN 55082.

#### **Anna Kuhl Scholarships**

Available to residents of St. Paul or suburbs on the basis of character, need and academic qualification. Apply to: Citizen's Scholarship Foundation of America, P.O. Box 297, St. Peter, MN 56082-9988.

#### **Air Force ROTC**

The Air Force offers four-, three- and two-year college scholarships. The purpose of the AFROTC Scholarship Program is to attract and retain students whose academic specialties and potential career areas are essential to Air Force needs. In this regard, AFROTC scholarship offers are based on merit and not on financial need. Students in any academic major may compete for these

## Student Financial Services

scholarships, but the projected needs of the Air Force influence the number and type of scholarships awarded in the various majors (traditionally, in scientific and technological areas of study).

High school juniors and seniors can obtain the College Scholarship Information Booklet eligibility requirements and application by writing the Regional Director of Admissions, University of St. Thomas, Mail #5016, 2115 Summit Ave., St. Paul, MN 55105-1096. The deadline for completed packages is Dec. 1 of the year preceding college entrance.

St. Thomas offers its student who are winners of Air Force ROTC Scholarships up to full subsidy (room and board and remaining tuition) on almost every Air Force ROTC Scholarship awarded. To receive the UST subsidy, students must complete the FAFSA each year.

### Grants

#### Federal and State Assistance

The University of St. Thomas participates in the following federal and state programs:

#### Pell Grant

The Pell Grant is a need-based federal program that currently offers up to \$3,000 per year to meet educational expenses. The application is part of the Financial Statement (FAFSA).

#### Minnesota State Grant

Minnesota residents may be eligible for up to \$6,180 per year through this need-based grant program.

### Loans

#### Federal Subsidized Stafford Loan

Subsidized Stafford loans are long-term, low-interest variable-rate loans. Currently, the federal government is responsible for the interest on the loan as long as the student is enrolled in a post-secondary institution on at least a half-time basis. Eligibility for the Stafford Loan is based on demonstrated financial need. Applications are available from the St. Thomas Office of Student Financial Services or from a local lender.

The aggregate limit for undergraduate borrowers in the Stafford Program is \$23,000. The Stafford Loan interest rate is variable and will not exceed 8.25 percent for new borrowers effective July 1, 1994. The interest rate will change each July 1 thereafter, and will be based on the 52-week T-bill rate plus 3.1 percent. The interest rate on this loan does not have an impact on students until they complete their education or drop below half-time enrollment status. Students normally begin repaying the Stafford Loan six months after they graduate or cease to be half-time students. As long as the student is enrolled in

school, no interest accrues. Repayment of the Stafford Loan normally is completed within 10 years of graduation. Note: Federal guarantee-and-origination fees are deducted from the proceeds of the Federal Stafford Loan prior to disbursement. Effective July 1, 1994, maximum fees deducted from the proceeds of the Federal Stafford Loan will be 4 percent.

#### Federal Unsubsidized Stafford Loan

The Unsubsidized Stafford Loan is available to all students regardless of demonstrated financial need. The only eligibility criteria is that the student may not borrow in excess of the loan limit for her or his grade level. Students may borrow a combination of Federal Stafford Loan and Unsubsidized Federal Stafford Loan as long as the maximums are not exceeded. For example: a first-year student is eligible for a maximum of \$2,625. If the student had been awarded a \$1,000 need-based Federal Stafford Loan, he or she would be able to borrow \$1,625 in the Unsubsidized Stafford Loan Program. If a student is not awarded need-based aid or a need-based federal Stafford Loan, he or she may borrow the full amount of eligibility for their grade level in the Unsubsidized Stafford Loan Program.

The Unsubsidized Stafford Loan has a variable interest rate which will not exceed 8.75 percent. The interest rate is based on the 52-week T-bill rate plus 3.1 percent and will be set annually on July 1. To apply for the Unsubsidized Stafford Loan, students must complete an application for Federal Student Aid.

The federal government does NOT cover any interest costs on the Unsubsidized Stafford Loan while the student is enrolled in school. The student is responsible for the interest on the loan from the date of disbursement. Students have the option of paying the interest or deferring the interest while enrolled in school. If the interest is deferred, it may be capitalized, but not more than quarterly.

#### Federal Perkins Loan Program

St. Thomas participates in the Perkins Loan Program. Responsibility for the administration of the funds rests with the university, which selects student recipients and arranges the loans. The law requires that borrowers be citizens of the United States, be enrolled or accepted for enrollment as at least half-time undergraduate students, be in need of the amount of the loan to pursue their courses of study, and be, in the opinion of the university, capable of maintaining good standing in their chosen courses of study.

Repayment of principal and interest begins nine months after graduation or termination of enrollment on at least a half-time

basis. The interest is to be paid at the rate of 5 percent per year.

### **Student Education Loan Fund**

The Student Education Loan Fund (SELF) program makes available to students variable interest rate loans from the state of Minnesota. Students do not have to demonstrate need to qualify for SELF loans, but they must exhaust all other sources of financial aid before they will receive consideration under this program.

To receive information on current interest rates, or to obtain application materials, contact the University of St. Thomas Office of Student Financial Services.

### **Federal PLUS loan for Parents**

The PLUS loan is a loan for parents of dependent students. The PLUS loan allows parents to borrow as much as is necessary to cover the expected family contribution and/or any unmet need in the financial aid package.

Currently there is no limit on how much parents may borrow in the PLUS loan program for any one academic year with one exception: total aid (from all sources including the PLUS loan proceeds) may not exceed the total cost of attendance.

The PLUS loan has a variable interest rate which is capped at 9 percent. The interest rate is based on the T-bill rate and will change annually each July 1. Applications are available at the St. Thomas Office of Student Financial Services.

Parents who are borrowing for the first time in the PLUS loan program must begin repayment within 60 days of disbursement of the PLUS loan. Payments are based on both interest and principal. The minimum monthly payment on a PLUS loan is normally \$50. Parents have a maximum of 10 years to repay the PLUS loan.

### **Student Work Program**

Through a combination of federal, state and institutional funds, St. Thomas provides its students with the opportunity to apply for campus work to help pay college expenses. Our commitment is to the need-based student first, but there are non-need student employment positions as well.

Job openings are posted in the Office of Student Financial Services. Student wages are paid every two weeks by payroll check, direct deposit to a checking account, or direct payment to the UST bill.

### **Baccalaureate Degrees**

The University of St. Thomas grants the degrees Bachelor of Arts (B.A.), Bachelor of Science (B.S.) and Bachelor of Science in Mechanical Engineering (B.S.M.E.) to individuals who successfully complete its undergraduate degree programs. These undergraduate degrees have two components: the *core curriculum* and the *major concentration*.

To complete the core curriculum, a student takes courses in literature and writing, historical studies, moral and philosophical reasoning, faith and the Catholic tradition, natural science and mathematical and quantitative reasoning, social analysis, fine arts, language and culture, human diversity, and health and fitness. Students also need to demonstrate computer competency. These courses provide the student with a broad education and with the skills needed for further work in these or other areas. Additional general requirements for graduation are listed in the section on requirements for a degree.

A candidate for a degree completes a major concentration in one of the specific academic disciplines represented in the College; or a student may construct a major concentration to meet a specific need or interest, subject to the approval of the Committee on Studies. This major concentration component of a degree provides students with the opportunity to pursue a limited subject in depth and to prepare for a career.

Should they wish, students may also complete one or more minor concentrations or an additional major concentration in an area of special interest.

### **Majors**

The following is a list of major concentrations or programs of study. Details are provided in the "Departments and Curricula" section in this catalog. The curricula that are not listed under their own heading may be found in the listing indicated by the parentheses. Curricula involving other institutions in the ACTC are indicated by [ACTC]. Unless otherwise noted, the degree is a Bachelor of Arts (B.A.).

In addition, St. Thomas students may choose a major area of concentration not offered at St. Thomas at any of the other four institutions in the Associated Colleges of the Twin Cities (ACTC), which are Augsburg College, Hamline University, Macalester College and The College of St. Catherine. The only requirements are acceptance into the major by the appropriate department chair at the school where the major is offered and presentation of the proposed program of study to the Committee on Studies at St. Thomas for its approval.

## Academic Information

Actuarial Science (B.S.)  
Art History  
Biology  
Business Administration – Accounting  
Business Administration – Communication  
Business Administration – Entrepreneurship  
Business Administration –  
Financial Management  
Business Administration –  
General Business Management  
Business Administration –  
Human Resources Management  
Business Administration –  
Marketing Management  
Business Administration –  
Operations Management  
Catholic Studies  
Chemistry  
Chemistry (B.S.)  
Classical Civilization  
Classical Languages  
(Modern & Classical Languages)  
Communication  
Community Health Education  
(Health & Human Performance)  
Criminal Justice (Sociology)  
Earth Science with a Concentration in  
Geology (Teacher Education)  
East Asian Studies [ACTC]  
Economics  
Economics (B.S.)  
Elementary Education (Teacher Education)  
English  
English – Writing  
English with Secondary Education Emphasis  
(Teacher Education)  
Environmental Studies  
French (Modern & Classical Languages)  
Geography  
Geology  
German (Modern & Classical Languages)  
Health Education K-12 (Teacher Education)  
History  
International Business (B.S.) (Business)  
International Business – French Intensive  
(Modern & Classical Languages)  
International Business – German Intensive  
(Modern & Classical Languages)  
International Business – Spanish Intensive  
(Modern & Classical Languages)  
International Studies  
Journalism & Mass Communication –  
Advertising  
Journalism & Mass Communication –  
Broadcast Journalism  
Journalism & Mass Communication –  
Media Studies  
Journalism & Mass Communication –  
Print Journalism  
Journalism & Mass Communication –  
Public Relations  
Justice & Peace Studies  
Latin (Modern & Classical Languages)  
Life Science with a Concentration in Biology  
(Teacher Education)  
Literary Studies  
Mathematics  
Mathematics with Secondary Education  
Emphasis (Teacher Education)  
Mechanical Engineering (B.S.M.E.)  
(Engineering)  
Mechanical Engineering – Manufacturing  
Engineering  
Mechanical Engineering – Mechatronics  
Music  
Music/Business (Music)  
Music Education K-12 (Music)  
Philosophy  
Physical Education – Teaching  
(Teacher Education)  
Physical Education Health Promotion (B.S.)  
(Health & Human Performance)  
Physical Education Health Promotion –  
Science (Health & Human Performance)  
Physical Science with a Concentration in  
Chemistry (Teacher Education)  
Physical Science with a Concentration in  
Physics (Teacher Education)  
Physics  
Physics (B.S.)  
Political Science  
Psychology  
Psychology – Behavioral Neuroscience  
Quantitative Methods and Computer Science  
Russian (Modern & Classical Languages)  
Russian, Central & East European Studies  
[ACTC]  
Science & Mathematics Major for Elementary  
Education  
Science Middle School Education (Teacher  
Education)  
Social Sciences  
Social Studies (Teacher Education)  
Social Work  
Sociology  
Spanish (Modern & Classical Languages)  
Theater  
Theology  
Women's Studies [ACTC]

### Minors

Students may choose to complete a minor as well as a major. The requirements for specific minors are determined by the granting departments and are outlined in the appropriate section of this catalog. More than one minor may be declared by a student.

A student may propose an individualized minor to meet a specific need or interest, subject to the approval of the Committee on Studies.

The following is a list of minor concentrations or programs of study. Details are provided in the "Departments and Curricula" section in this catalog. The curricula which are not listed under their own heading may be found in the listing indicated by the parentheses. Curricula involving other institutions in the ACTC are indicated by [ACTC].

Advertising  
(Journalism & Mass Communication)  
Aerospace Studies  
Art History  
Biology  
Biology Teaching (Teacher Education)  
Broadcast Journalism  
(Journalism & Mass Communication)  
Business Administration  
Catholic Studies  
Chemistry  
Chemistry Teaching (Teacher Education)  
Classical Languages  
(Modern & Classical Languages)  
Communication  
Criminal Justice (Sociology)  
East Asian Studies [ACTC]  
Economics  
Electronic Music Production (Music)  
Engineering  
English  
English – Writing  
English Teaching (Teacher Education)  
Environmental Studies  
Family Studies  
Film (Theater)  
French (Modern & Classical Languages)  
Geography  
Geology  
Geology Teaching (Teacher Education)  
German (Modern & Classical Languages)  
Greek (Modern & Classical Languages)  
Health Education Teaching (Teacher Education)  
History  
Japanese (Modern & Classical Languages)  
Jazz Studies (Music)  
Justice & Peace Studies  
Latin (Modern & Classical Languages)  
Legal Studies  
Mathematics  
Media Studies  
(Journalism & Mass Communication)  
Music  
Philosophy  
Physics  
Physics Teaching (Teacher Education)  
Political Science  
Print Journalism  
(Journalism & Mass Communication)  
Psychology  
Public Relations  
(Journalism & Mass Communication)  
Quantitative Methods and Computer Science  
– Business  
Quantitative Methods and Computer Science  
– Mathematics  
Quantitative Methods and Computer Science  
– Science  
Renaissance Program  
Russian (Modern & Classical Languages)  
Secondary Education (Teacher Education)  
Social Welfare (Social Work)  
Sociological Research Methods (Sociology)  
Sociology: Human Work Systems

Sociology: Lifecourse Choices  
Spanish (Modern & Classical Languages)  
Theater History/Theory-Criticism  
Theater Performance  
Theology  
Urban Studies  
Visual Communication  
(Journalism & Mass Communication)  
Women's Studies [ACTC]

### Aquinas Scholars Honors Program

The Aquinas Scholars Honors Program is the undergraduate honors program. Its purpose is to provide opportunities for motivated and curious students to deepen and enrich their undergraduate education.

Aquinas Scholars take a minimum of four honors sections of core curriculum courses. (Students admitted to the program with 45 or more credits completed take only three sections.) Limited to 20 students, the honors sections emphasize depth, not acceleration, and encourage discussion.

Aquinas Scholars are also required to complete a minimum of three interdisciplinary honors seminars (on standard grading system), which bring together instructors from two different departments and students from a variety of disciplines to approach a topic of intellectual interest. This seminar format provides students the opportunity to situate themselves within a broader intellectual community at a time when much of their other coursework is engaging them on a more focused level. Aquinas Scholars are not charged tuition for the honors seminars.

The Aquinas Scholars Honors Program also sponsors a variety of co-curricular and extracurricular activities. All St. Thomas undergraduate students are eligible to apply to the program. Continuing and transfer students should generally have at least a 3.3 grade point average, though the admissions committee reviews applications primarily for evidence of intellectual curiosity and academic motivation. Students need to apply to the program early enough to complete the course requirements.

For further information, contact the Aquinas Scholars Center, located in 163 Murray-Herrick Campus Center.

### Special Curricula

The College offers several courses of study a student may pursue in addition to a major concentration. See the Pre-Professional Programs section (unless otherwise noted) in “Departments and Curricula” for more detail. These include:

- Pre-Dentistry
- Pre-Engineering
- Pre-Law
- Pre-Medicine
- Pre-Pharmacy
- Pre-Veterinary
- Secondary Teacher Preparation  
(Department of Teacher Education)

## Academic Information

### Associated Colleges of the Twin Cities

The University of St. Thomas has joined with four other private colleges in the Twin Cities to form the Associated Colleges of the Twin Cities (ACTC), a legal entity designed to facilitate cooperative activities among the five benefiting institutions. Augsburg College in Minneapolis and Hamline University, Macalester College and The College of St. Catherine in St. Paul are the other institutions that make up this consortium with the University of St. Thomas.

These colleges possess a long history of cooperative academic activity. Presently, ACTC operates an inter-campus bus system that transports students among the colleges to take courses at schools other than their own. St. Thomas has approximately 250 students who take advantage of exchange courses each semester. In some cases, faculty members from one institution will teach a course on another campus. A comprehensive Class Schedule for the five institutions is published annually to facilitate the exchange of courses and students among the colleges.

Only full-time undergraduate students in the day division are eligible to register for exchange courses.

In addition to the course exchange, St. Thomas students may choose a major or minor area of concentration at any of the other four institutions. The only requirements are acceptance into the major by the appropriate department chair at the school where the major or minor is offered and presentation of the proposed program of study to the Committee on Studies at St. Thomas for its approval.

### The 4-1-4 Calendar

The College follows a 4-1-4 calendar. This calendar consists of a fall semester during the months of September through December, a four-week January Term, and a spring semester during the months of February through May. Each of the semesters consists of approximately 14 weeks of classes and a four-day examination period.

#### Regular Semesters

During the fall and spring semesters, a student normally enrolls for sixteen credits. A minimum of 132 credits are required for a bachelor's degree.

#### The January Term

Students may enroll for a maximum of four credits in a January Term.

#### Summer Sessions

The university offers two six-week sessions, one eight-week session and one twelve-week session during the months of June through August. A student may enroll for a maximum of eight credits in each session. The summer sessions bulletin should be consulted for full details.

### School of Continuing Studies

The School of Continuing Studies recruits, mentors and provides academic support for part-time adult and other non-traditional students. It develops on- and off-campus undergraduate academic programs to serve the educational needs of the part-time adult population. The delivery and support of undergraduate courses and programs in the School uses innovative techniques and technologies. The School cooperates with graduate programs to coordinate and support programs offered at off-campus sites. It also develops and supports non-credit programs.

## Requirements for a Degree

To receive a bachelor's degree, a student must successfully complete a minimum of 132 credits that fulfill all degree requirements.

A minimum grade point average (GPA) of 2.00 must be achieved in all of the following categories:

- all credits presented for graduation (including transfer credits)
- all credits earned at St. Thomas
- all credits in the department (in the Division of Business for business majors) of the major field (including transfer credits)
- all credits in the department (Division of Business) of the major field earned at St. Thomas.

If the student has elected to declare a minor field, all credits in the department (Division of Business) of the minor (including transfer credits) and all credits in the department of the minor field earned at St. Thomas must have a GPA of 2.00.

In addition, the student must earn a minimum of 84 credits in areas outside the major field (for majors in areas of business, these credits must be outside the Division of Business).

No more than eight credits in Experiential Learning may be counted toward the minimum 132 credits for graduation.

No more than one-eighth of the courses taken at St. Thomas presented for graduation may be graded on the S-D-R system.

No two courses may be equivalent or overlapping. (Credit is not given for a course that overlaps a course previously taken. Such courses are indicated in the course descriptions by the number of the conflicting courses in parentheses following the title.)

The same course may be used to satisfy both a requirement of the core curriculum and of the major and minor fields.

Within the core curriculum, the same course may satisfy a core or core-area requirement and simultaneously satisfy the requirement in human diversity or computer competency.

A student applying for graduation must have completed thirty-two of the final thirty-six credits at St. Thomas or one of the other four ACTC colleges.

## The Core Curriculum

All bachelor degrees awarded by the University of St. Thomas shall meet the core curriculum requirements of the College. The core curriculum is organized into nine curricular areas and two competency requirements.

Courses used to satisfy the requirement in a curricular area are of two types:

- core courses* – in which a specific course is designated as fulfilling a requirement; and
- core-area courses* – in which a selection is made from a list of courses designated as fulfilling the requirement.

## Curricular Areas

### Literature and Writing

(8 credits)

This sequence of courses develops students' critical awareness of language by helping them to recognize the relationship between their own experience and the interpretive possibilities of literature. Attention is paid to the integration of the individual's composing process and the process of reading and understanding texts. These courses foster attentive reading, careful thinking, and effective writing. There are two ways to fulfill this requirement:

a) students enroll in these two core courses:  
ENGL 111 Critical Reading and Writing I  
ENGL 112 Critical Reading and Writing II

b) students with qualifying ACT scores enroll in:

ENGL 190 Critical Reading and Writing

*plus*

one additional core-area course numbered above 200 with the exception of ENGL 305, 321, 322, 401, 484, 485.

### Historical Studies

(4 credits)

Core-area courses in historical studies aim to increase students' knowledge of the history of the modern world and its origins. Each of these courses also provides an introduction to historical methods of inquiry and analysis. A third goal is to foster awareness of the diversity within human history. Students choose one of the following core-area courses:

HIST 111 Origins of the Modern World to 1550

HIST 112 The Modern World since 1550

HIST 113 Early America in Global Perspective

HIST114 The Modern U.S. in Global Perspective

### Moral and Philosophical Reasoning

(8 credits)

What am I? How should I live? Philosophers throughout the centuries have pondered these questions which are of decisive importance for the whole of human life.

In the first course, students will study the elements of logic, the method of philosophy, and will read about the nature of the human person. In the second course, students will focus on questions of human conduct – questions about what is right and wrong, good and bad, in the lives of individual persons and human societies. These courses are not mere histories of philosophical opinion; they are substantive inquiries into the meaning of human life insofar as it can be grasped by reason alone. Thus, they complement the courses students take in theology and in other areas.

## Requirements for Degree

The two core courses are:

PHIL 115 Philosophy of the Human Person  
PHIL 214 Introductory Ethics

### Faith and the Catholic Tradition

(12 credits)

Certain questions continue to be of pervasive concern for human beings: the nature of the universe, the existence and nature of God, the nature of human beings, the proper relationship of a human being to his or her world, the source of evil and the possibility of redemption, to name but a few. This sequence of three courses aims to acquaint students with the nature and importance of these questions and will assist them in articulating for themselves responses which have been formulated in light of their knowledge of the Catholic tradition and the Christian faith.

The first, a core course, provides students with a theological framework within which individuals and groups have addressed questions of faith and human existence throughout Christian history.

The second set of core-area courses provides students with an opportunity to address these same questions of human existence in four themes: revelation, Christian anthropology, worship and cultural engagement.

The third set of core-area courses allow students both the opportunity to engage questions which relate to faith and culture and to integrate the knowledge with other disciplines.

Students select three courses as follows:

THEO 101 The Christian Theological Tradition  
THEO 200-level course  
THEO 300-level course

### Natural Science and Mathematical and Quantitative Reasoning

(12 credits)

Students are required to take a core-area course in natural science with a laboratory component, a core-area course in mathematics, and a third core-area course in natural science, mathematics, quantitative reasoning or computer science.

Core-area courses in natural science focus on the natural world and develop students' abilities to evaluate scientific arguments critically, and enhance their quantitative and analytical reasoning skills. The laboratory component of these courses is an inquiry-based approach with opportunities for students to refine their observational skills through the acquisition and organization of data, analysis and interpretation of data, and the presentation of conclusions orally or in writing.

Students select one of the following core-area natural science courses:

BIOL 101 General Biology  
BIOL 102 Conservation Biology  
BIOL 105 Human Biology  
BIOL 201 Diversity and Adaptation  
BIOL 202 Genetics and Population Biology  
CHEM 100 Chemistry in Our World  
CHEM 101 Environmental Chemistry  
CHEM 111 General Chemistry I  
CHEM 112 General Chemistry II  
GEOL 102 Origins and Methods  
GEOL 110 Geology of the National Parks  
GEOL 111 Introductory Geology I  
GEOL 112 Introductory Geology II  
GEOL 211 Mineralogy  
GEOL 252 Geomorphology  
IDSC 150 Development of the Natural World  
PHYS 101 General Physics for Liberal Arts Students  
PHYS 103 Physics of Energy  
PHYS 104 Astronomy  
PHYS 105 Musical Acoustics  
PHYS 109 General Physics I  
PHYS 110 General Physics II  
PHYS 111 Introduction to Classical Physics I  
PHYS 112 Introduction to Classical Physics II

The core-area courses in mathematical reasoning include experience in the application of relevant knowledge to solve problems, promote the recognition and classification of numerical, geometrical, and relational patterns, enhance students' abilities to develop mathematical arguments, and to understand the connections between real-world data and mathematical models.

Students select one of the following core-area mathematics courses:

MATH 100 Mathematical Sampler  
MATH 101 Finite Mathematics  
MATH 109 Calculus With Review II  
MATH 111 Calculus for Business and Social Science  
MATH 113 Calculus I  
MATH 114 Calculus II  
MATH 121 Structures of Elementary Mathematics  
MATH 128 Introduction to Discrete Mathematics

The third core-area courses allow students to broaden or deepen their exposure to natural science, mathematics, quantitative reasoning and/or computer science.

Students select a core-area course from the following list:

MATH 114 Calculus II  
MATH 121 Structures of Elementary Mathematics  
MATH 128 Introduction to Discrete Mathematics  
QMCS 120 Computers in Elementary Education and LOGO  
QMCS 130 Problem Solving in the Natural Sciences

QMCS 201 Introductory Statistics II  
 QMCS 220 Statistics I

or

a second natural science course from the first group

### Social Analysis

(4 credits)

The goal of this requirement is to ensure that all students develop basic abilities to perform social scientific analyses of patterns of social interactions. Core-area courses in social analysis provide a broad introduction to the perspectives offered by one of the traditional social sciences. Courses will consider empirical and/or normative analysis, how social science knowledge differs from other kinds of knowledge, what constitutes data, the relationship between data and theory, and major conceptual perspectives. Where appropriate, courses will provide an understanding of and sensitivity to the diversity of American and/or other societies, an international perspective, and will address issues of social concern.

To meet this requirement, students must earn the equivalent of a full course in a single department. Students may not use fractional courses from multiple departments to meet the requirement.

Students choose one of the following core-area courses:

ECON 211 Current Economic Issues  
 ECON 251 Principles of Macroeconomics  
 ECON 252 Principles of Microeconomics  
 GEOG 111 Human Geography  
 GEOG 113 World Geography  
 POL 105 Politics and Government in Comparative Perspective  
 PSY 111 General Psychology  
 SOC 100 Introduction to Sociology  
 SOC 110 Social Problems

### Fine Arts

(4 credits)

A core-area course in one of the fine arts aims to enhance students' understanding of and appreciation for one or more of the fine arts (art, music, or theater). Students gain an understanding of the role of the fine arts in expressing and maintaining, discovering and questioning a culture's dominant beliefs and ideals. The focus of these courses is broad enough to encompass different periods, cultures, and styles, but also allows an intensive scrutiny of the way in which the work of art, music, or theater is composed and created. Students have a variety of choices in fulfilling this requirement.

All students may choose one of the following core-area courses:

ARTH 151 Introduction to Art History I  
 ARTH 152 Introduction to Art History II  
 MUSC 115 Music Literature (or MUSC 118/119 in J-Terms)

MUSC 130 Introduction to World Music  
 THR 111 Introduction to the Theater  
 THR 259 Film I: Introduction to Narrative and Non-Narrative World Cinema

All students may choose to participate for four semesters in one of the following music ensembles:

MUSN 140 Women's Choir  
 MUSN 143 Liturgical Choir  
 MUSN 160 Concert Choir  
 MUSN 185 Symphonic Band  
 MUSN 186 Symphonic Wind Ensemble  
*(any combination of four semesters of 140/143 or 140/160 or 185/186 will fulfill the requirement)*

Students with junior or senior standing may choose one of the following core-area courses, in addition to those listed above:

ARTH 285 Arts of Africa and the African Diaspora  
 ARTH 286 Women's Art in Cross-Cultural Perspective  
 ARTH 305 Greek Art and Archaeology  
 ARTH 310 Roman Art and Archaeology  
 ARTH 350 19th Century: Neo-Classicism to Symbolism  
 ARTH 355 20th Century: Cubism to Installation  
 ARTH 391 Native American Art  
 ARTH 392 American Art  
 MUSC 120 Orchestral Literature  
 MUSC 216 Jazz in America  
 MUSC 217 Music of the Americas  
 MUSC 219 Music in the United States  
 MUSC 412 History & Literature of Music II  
 THR 260 History of Film: The Silent Era  
 THR 261 History of Film: Sound Era, 1926 to Present Day  
 THR 321 History of Theater I: Classical through 17th Century  
 THR 322 History of Theater II: 18th Century to Contemporary  
 THR 323 History of Theater III: American  
 THR 359 Film II: Textual Analysis  
 THR 412 Drama: Theory and Criticism

### Language and Culture

(12 credits)

A sequence of foreign language study aims to develop students' skills in using a foreign language in a variety of tasks, including conversing, reading, writing and listening with comprehension. The language is used as the essential vehicle for coming to a deeper understanding of other cultures. The courses guide students toward a realization that the study of a foreign language provides a comparative basis from which to analyze their own language and culture. Study of the language will allow students to relate course content with that of courses taught in other disciplines.

## Requirements for Degree

Students must complete the 111, 112, and 211 sequence in a particular language. All students with previous language experience must take a proficiency examination administered by the Department of Modern and Classical Languages. The student's previous work in the language will be considered. The Department of Modern and Classical Languages will make the final determination regarding the placement of students in foreign language courses.

Students whose primary language of communication is a language other than English and who have learned English as a second language are exempt from the foreign language requirement. It is the student's responsibility to present evidence to the chair of the department to support this exemption request.

### Human Diversity

(4 credits)

Courses fulfilling this requirement assist students in understanding perspectives of the peoples and cultures being studied. The goal of these courses is to foster respect for the diversity of peoples and cultures within the fundamental unity of humankind.

Where appropriate, courses acknowledge ways in which privilege and power affect the ability to understand and respect diverse peoples and cultures. It is recognized that the experiences, beliefs, and values of any particular group of people studied are not monolithic, but may vary widely within the group.

Also included are indications of how the discipline involved contributes to an understanding of the groups under study or how the perspectives of these groups might expand understanding of the discipline itself. Courses focus on racial and ethnic minorities, class, gender, culture in a global perspective, or a combination of those areas.

The course chosen to fulfill this requirement also may fulfill another requirement of the core curriculum, or a requirement for a major or minor. The list of courses will be updated annually, and will be available from the Office of the Dean and the Office of Academic Counseling and Advising.

Courses available to fulfill the requirement in 1998-99 are:

ARTH 151	Introduction to Art History I
ARTH 285	Arts of Africa and the African Diaspora
ARTH 291	Topics in Non-Western Art
ARTH 320	Art and Architecture of Colonial Mexico
ARTH 297	Introduction to Asian Art
ARTH 391	Native American Art
BLAW 369	Gender Issues and the Law
COMM 230	Intercultural Communication
COMM 340	Rhetorical Dimensions of Race, Class, and Gender

ECON 345	Economics of Development and Growth
ECON 346	The Russian Economy and the Former Republics
ECON 346	The Japanese Economy
EDUC 212	Human Relations and Multicultural Education
ENGL 340	Literature by Women: Critical History
ENGL 341	Literature by Women: Critical Questions
ENGL 395	Issues in American Literature and Culture
GEOG 111	Human Geography
GEOG 113	World Geography
HIST 210	Modern Latin America, 1800 to Present
HIST 220	Introduction to Japanese History and Culture
HIST 366	The Catholic Church in the United States
HIST 368	Women in the United States
HIST 369	African-American History
HIST 372	The United States and Vietnam
IDSC 291	The Anatomy of Violence
JOUR 305	Gender, Race and Mass Media
JPST 250	Introduction to Justice and Peace Studies
MUSC 130	Introduction to World Music
MUSC 216	Jazz in America
MUSC 217	Music of the Americas
POL 105	Politics and Government in Comparative Perspective
POL 352	Third World Politics and Government
PSY 151	Cross-Cultural Psychology
PSY 205	Psychology of Women
SOC110	Social Problems
SOC251	Race and Ethnicity
SOC255	Gender in American Society
SOC301	General Anthropology
SOWK 340	Human Behavior and the Social Environment
THEO 305	Theologies of Justice, Peace, Prosperity, and Security
THEO 331	Christianity and World Religions
THEO 332	Judaism
THEO 333	Contemporary Judaism
THEO 334	Islam
THEO 353	Women and the Old Testament
THEO 354	Women and the Christian Tradition
THEO 361	Black Religious Experience
WMST 205	Foundations in Women's Studies

### Competency Requirements

#### Computer Competency

Technology is very much a part of our world. The computer is the basic tool to much of this technology. The goals of the computer competency requirement are to:

1. Focus on the basic skills that all students, regardless of major, should have;
2. Be a building block upon which majors can add as appropriate;

3. Prepare students for the applications they are likely to encounter after graduation, in a modern technological society.

In order to accomplish 1. and 2. above, students need to demonstrate the following skills by the beginning of the sophomore year:

- basic microcomputer operation
- ability to use a word processing package
- ability to use telecommunication, at a minimum enabling use of electronic mail
- ability to access electronic information resources

Accomplishment of these competencies should be possible through specific computer competency training sessions, individual tutoring, short courses or self-instructing tutorials. If this portion of the competency requirement is not completed by mid-term of the third semester, the student will lose priority for further registration.

To accomplish 3. above, students must demonstrate competence in one further area of computer application from the following list by the time of graduation.

Some major fields may also have specific requirements. The student's completion of this final component should be done in consultation with the major field adviser.

- Spreadsheets
- Data base management packages
- Programming
- Statistical packages
- Scientific data acquisition and interfacing packages
- "Computers in the arts" applications, e.g. notation, animation, graphic design, etc.

Mathematical modeling and simulation  
Mathematical applications such as symbolic and numerical processing and matrix algebra

- Desktop publishing
- Advanced use of information retrieval systems (e.g. Lexis, Westlaw and advanced Internet and World Wide Web use)

The following sampling of courses contain computer components beyond the basic skills, and would satisfy this part of the competency.

- BIOL 210 Introduction to Laboratory Research
- BIOL 315 General Botany
- BIOL 323 Comparative Vertebrate Anatomy
- BIOL 354 Neurobiology
- BIOL 489 Physiological Ecology
- BIOL 489 Plant Physiology
- CHEM 300 Quantitative Analysis
- CHEM 331 Physical Chemistry I
- CHEM 332 Physical Chemistry II
- COMM 260 Audio Production
- COMM 270 Videography:Television Production in the Field
- COMM 370 Advanced Video Production

- ECON 311 Forecasting
- ECON 315 Empirical Methods in Economics
- EDUC 400 Curriculum and Instruction for Specific Discipline (03-Mathematics)
- ENVR 151 Humans and the Environment
- GEOG 221 Computer Skills in Geography
- GEOG 222 Geographical Analysis
- GEOG 321 Geographic Information Systems
- GEOG 421 Advanced Geographic Information Systems
- HLTH440 Health Education: PK-12 Curriculum, Assessment and Administration
- HLTH 464 Critical Issues in Health Education
- JOUR 210 Design Concepts of Communication
- JOUR 350 Public Relations Writing
- JOUR 410 Advanced Reporting
- MATH 113 Calculus I
- MATH 114 Calculus II
- MATH 200 Multi-Variable Calculus
- MATH 210 Linear Algebra and Differential Equations
- MATH 303 Statistics for the Applied Sciences
- MATH 313 Probability
- MUSC 150 MIDI Studio
- MUSC 180 Multi-track Recording
- MUSC 220 Digital Recording and Sampling
- MUSC 240 Music/Audio Post Production
- MUSC 303 Music Notation on Computer
- PHYS 105 Musical Acoustics
- PHYS 111 Introduction to Classical Physics I
- PHYS 112 Introduction to Classical Physics II
- PHYS 225 Introduction to Modern Physics I
- PHYS 226 Introduction to Modern Physics II
- PHYS 399 Advanced Physics Laboratory I
- PHYS 400 Advanced Physics Laboratory II
- POL 205 Introduction to the American Public Policy Process
- QMCS 110 Introduction to Information Processing
- QMCS 120 Computers in Elementary Education and LOGO
- QMCS 130 Problem Solving in the Natural Sciences
- QMCS 215 Spreadsheet and Database Software
- QMCS 220 Statistics I
- QMCS 237 Software Design using Scientific Programming Languages
- QMCS 238 Software Design using Business Programming Languages
- QMCS 240 Fundamentals of Computer Science
- QMCS 280 Object-oriented Design and Programming
- QMCS 342 Computers in Experimental Sciences
- QMCS 410 Operations Research I
- SOC220 Sociological Analysis
- SOWK 380 Social Research: Design and Statistical Applications

## Requirements for Degree

### Health and Fitness

(0 credit)

The course in health and fitness provides students with the knowledge, skills, attitudes, and techniques necessary to become a physically-educated person: persons who are able to design and maintain a lifestyle of fitness and wellness. As students complete this competency curriculum, they should develop a knowledge and understanding of the role of physical activity in their lives, and how it contributes to lifelong health and wellness; and they should have a better understanding of the extent to which physical activity contributes to all dimensions of an individual's life. Students who cannot demonstrate proficiency in swimming 50 yards must take beginning swimming as one of their activities.

It is strongly recommended that this requirement be completed by the end of the freshman year, or at least by the end of the third semester. If this requirement is not completed by mid-term of the fourth semester, the student will lose priority for further registration.

Veterans are excused from this requirement.

Students enroll in the following core course:

PHED 100 Foundations for Fitness

### Major Requirements

#### Regular Majors

After a student has completed 48 semester credits, the student fills out a major field card and applies to be accepted as a major in his or her chosen field.

A student must complete one of the regular major concentrations described in the section on Departments and Curricula with a grade point average of 2.00 or better in courses taken in the department of the major (or Division of Business) required for the major. (See section on Academic Programs for a list of these majors.)

A major consists of 28 to 44 credits in the area of concentration plus allied courses as specified by the department (or Division of Business) in which the major is offered. No more than 48 semester credits in the department of the major field may be counted toward the 132 credits required for a degree. In other words, at least 84 credits must be presented that are not in the department (Division of Business) of the major.

Students with transfer courses in the major must also attain a 2.00 grade point average for the courses taken in the department of the major (or Division of Business) at St. Thomas. (See section on Requirements for a Degree).

If major field requirements or courses specified in the catalog are no longer available, the chair of the appropriate department

will designate acceptable substitutes for the major program.

The department has the right to specify how many courses in the major field (and at what level) must be taken at St. Thomas. Students may earn more than one major.

#### Individualized Majors

It is possible for a student to pursue a major other than one of the regular majors described in the section on Departments and Curricula. A student who plans to pursue a special major must contact the Office of the Associate Academic Dean no later than the end of the sophomore year.

An individualized major requires the selection of a faculty adviser, a proposal explaining the rationale for the selection of courses (which should include lower- and upper-division courses), a number of credits in accordance with the guidelines for a regular major, and approval by the Committee on Studies.

#### Majors at other ACTC Institutions

A student wishing to complete a major offered at one of the ACTC schools (and not offered at St. Thomas), must file a petition with the Committee on Studies for approval. In the petition, the student should indicate his/her acceptance for the major by the chair of the department at the other institution, the list of courses that will need to be completed at that institution, and the name of a St. Thomas faculty member in a closely-related field who will act as an adviser. Core curriculum requirements for St. Thomas and any pre-requisites for courses in the major program offered at St. Thomas will be taken on the home campus.

### Minor Requirements

#### Regular Minors

A student is not required to complete a minor. A minor consists of 16 to 28 credits in the area of concentration including all pre-requisites and allied courses as determined by the department or program offering the minor.

A minimum grade point average of 2.00 is required for the courses in the minor. Transfer students must also attain a minimum grade point average of 2.00 for minor courses taken at St. Thomas.

The department has the right to specify how many courses in the minor field (and at what level) must be taken at St. Thomas.

#### Individualized Minors

Students wishing to declare an individualized minor should contact the Office of the Associate Academic Dean. A faculty adviser should be chosen for the minor. In-

dividualized minors must be approved by the Committee on Studies.

Students may earn more than one minor.

### Residency Requirement

Thirty-two of the last 36 credits that a student takes for the degree must be taken through the University of St. Thomas. (Credits earned at ACTC colleges and through Study Abroad programs sponsored by St. Thomas are considered exchange credits and count toward the residency requirement.)

A student who has been graduated from the University of St. Thomas may add an additional major by fulfilling all the remaining requirements of the major. The 32-credit senior residency requirement need not be met a second time. No more than one additional transfer course may be used to meet major and allied requirements.

A student who has been graduated from the University of St. Thomas may add a minor by fulfilling all the remaining requirements of the minor. The 32-credit senior residency requirement need not be met a second time. No more than one additional transfer course may be used to meet minor and allied requirements.

### The Undergraduate Program

All matters pertaining to the undergraduate curriculum are under the jurisdiction of the College faculty. Administration of the undergraduate programs is under the jurisdiction of the Dean of the College.

### Courses

A course is equivalent to four semester credits. If a particular course carries more than four or fewer than four credits, it is so noted in the description.

Each course is assigned a subject area code consisting of three or four letters, which designates the department or discipline, followed by a three-digit number. For example, ENGL 111 is the English course numbered 111.

Courses with numbers having either 1 or 2 as the first digit are called *lower division courses*, and those having 3 or 4 as the first digit are called *upper division courses*.

Lower division courses are designed to give students a broad general liberal arts education, preparing them for the more specialized education offered at the upper division level.

When students become juniors, they generally pursue upper division courses. Upper division courses are designed to acquaint students with the content and methodology of a particular field.

The number of class meetings for a course varies with the nature of the course. The annual *Class Schedule* indicates the days and times each class meets.

### Course Load

The normal course load is 16 credits. During the first semester at the university, a freshman is limited to 17 credits plus a physical education activity course. Students may take no more than 21 credits without special permission from the academic dean.

Freshmen may not register for courses numbered 300 or above without permission from the department chair (except for foreign language courses when they have already completed a fourth semester of the language or its equivalent).

Students on academic probation may not register for more than 16 credits.

### January Term and Summer Session Courses

Courses offered at the university during January term and summer sessions carry credit as indicated in the January term and summer session course schedules.

### Final Examinations

Each of the semesters ends with a final examination period. A two-hour session is scheduled for the final examination in each course in regular semesters.

Final examinations are not administered

## Registration Information

other than during the Final Exam week. However, if it is agreeable to students and the instructor to hold the final examination at a time other than the time scheduled, the exam may be held at another time within the Final Exam week.

Instructors will determine the final examination time for January term and summer session courses.

### Registration

A student must validly register for a course before attending, and will not receive a grade unless validly registered.

Students are required to attend the first day of class in order to secure their place in the course. The instructor has the *option* to drop a student from the class roster who has not attended on the first day of the session. To officially withdraw from the class, the student must file a *Change in Registration Form* with the Office of the Registrar.

Before the beginning of each semester, students consult with their advisers to determine the courses they should pursue. This would include any courses at the four other cooperating colleges in the ACTC: Augsburg, Hamline, Macalester and St. Catherine. Registration for exchange courses must be completed through the Office of the Registrar.

Registration for University of St. Thomas courses can be done through MURPHY, the touch-tone telephone registration system. There are two concurrent registration periods – summer sessions and fall semester in April; January term and spring semester in November. (Students should consult the *Weekly Bulletin* for dates.) Students are scheduled to register at a specific date and time, based on their number of earned credit hours and an alphabetical rotation of surnames.

Prior to each registration period, students are issued a Registration Entry Notice which contains a confidential Personal Identification Number (PIN), access codes for the proper term and a registration day and time.

Registration Entry Notices are obtained from the individual student's faculty adviser. MURPHY worksheets are distributed to all student post office boxes.

### New Student Scheduling

Registration for new freshmen and transfer students is coordinated by the Office of Academic Counseling and Advising.

Freshmen who begin their studies at the university in the fall receive a pre-registration packet containing course information and a description of the registration process which occurs during Summer Orientation.

New transfer students meet individually with an academic counselor to interpret their transfer evaluation and select appropriate

courses related to their interests.

Upper division transfer students are encouraged to declare a specific major field. Separate summer orientation programs are held for new freshmen and transfer students.

All new students are assigned faculty advisers.

### Exchange Courses

Courses taken by undergraduate day, degree-seeking St. Thomas students at Augsburg College, Hamline University, Macalester College and The College of St. Catherine are called exchange courses. These courses may be substituted for courses at the University of St. Thomas, subject to the following conditions:

1. the course is not one specified by a specific course number in the list of core curriculum requirements; and
2. the student has the written permission of the department chair of the major or minor if the course is in the major or minor concentration and taken to satisfy a particular requirement for that major or minor; and
3. the student consults the registrar of the university before registering for more than one course at Augsburg, Hamline, Macalester or The College of St. Catherine during one semester. This one course limit does not apply to students pursuing a major or minor at these schools.

Additional restrictions may apply. See the *ACTC Class Schedule* for additional restrictions.

For exchange courses in the fall and spring semesters, St. Thomas students register at St. Thomas. Grades for these courses are automatically recorded on the St. Thomas transcript.

For exchange courses during the summer sessions, students register at the college offering the courses and have a transcript of the completed work sent to St. Thomas.

Exchange courses do not violate the senior residency requirement.

Grades for exchange courses are included in the computation of the St. Thomas GPA.

Courses taken at Augsburg, Hamline, Macalester and St. Catherine by a student before he or she matriculates at St. Thomas or while the student is not an active student at St. Thomas are treated as transfer courses.

### Transfer Courses

Courses taken at regionally accredited institutions of higher learning other than the University of St. Thomas and accepted for credit by St. Thomas are called transfer courses. Exchange courses, as described above, are not transfer courses.

In order to have transfer courses count toward a degree from the University of

St. Thomas, a student must have an official transcript sent from the other institution directly to the university.

Students who have not yet been admitted to the University of St. Thomas must have transcripts of all previous college work sent to the Office of Admissions.

Those who are already St. Thomas students must have the transcript sent to the Office of the Registrar.

The senior residency policy requires that 32 of the last 36 credits toward the degree be taken at St. Thomas or one of the ACTC colleges.

### **Individual Study**

See the beginning of the *Departments and Curricula* section of this catalog for a description of Individual Study courses.

### **Experiential Learning**

See the beginning of the *Departments and Curricula* section of this catalog for a description of Experiential Learning courses.

### **Credit by Examination**

See the "Admission Credits" section of this catalog for a description of Credit by Examination.

### **First-day Attendance**

Students are expected to attend the first class meeting of a course for which they are registered.

Thereafter, regular attendance at classes is expected. Attendance regulations for specific courses are made by the instructor for that course. Students who are absent for a prolonged period of time due to illness should contact the Office of Academic Counseling and Advising.

Students not attending class on the first day of a session may be dropped from the class roster at the discretion of the instructor. *However, the student will not be officially withdrawn from the course until a Change in Registration Form has been filed with the Office of the Registrar.*

### **Audit**

A student may choose to audit a course rather than take it for credit. If attendance is satisfactory, the course number, title and the audit designation will appear on the transcript. If attendance is not satisfactory, the course will not appear on the transcript. In no case may a student receive credit for a course that was audited unless the course is retaken for credit.

### **Changes in Registration**

Students who have received their official schedule of classes may change that schedule by observing the following procedures:

Changes in registration can be made using MURPHY, the touch-tone registration

system, up to one week before the beginning of each semester. After that time, all changes are made by using the *Change in Registration Form* which is available at the Office of the Registrar. Students should consult the *Weekly Bulletin* or the calendar in this catalog for the specific deadlines for making these changes.

To add a course, the *Change in Registration Form* must be presented at the Office of the Registrar. Courses may not be added after the tenth class day in any semester. (Students should consult the appropriate course schedule for January term and summer session deadlines.) Freshmen and sophomores must have this form signed by both their adviser and the instructor of the course being added. Juniors and seniors need only the signature of the instructor of the course being added.

To drop a course, the *Change in Registration Form* must be presented at the Office of the Registrar. Freshmen and sophomores must have this form signed by their adviser. Juniors and seniors need no signature; however, they are encouraged to consult their adviser before dropping a course.

Full refund of tuition and fees is made for courses dropped through the tenth class day of fall and spring semesters. Refunds for courses dropped after this period are described in the brochure *Summary of Financial Procedures* for the current academic year. Students should consult the appropriate schedule of classes for refund deadlines for January term and summer sessions.

Courses may be officially dropped, but without refund, up to one week after mid-semester grades are available. The grade of F (or R) is recorded for any course dropped after this time. *The grade of F (or R) is likewise recorded when a student ceases to attend a course but does not officially withdraw from it.* For courses dropped between the tenth class day and the last day to withdraw a class without a grade of F or R, the student will receive a grade of W for that course. A grade of W is an official grade and is posted on the permanent record, with no credit value.

### **Withdrawal from a Course**

The mark of W is assigned to a course from which a student withdraws after the tenth day of classes but before the deadline for withdrawing. This deadline occurs shortly after students receive their mid-semester grades and is announced on the academic calendars. A student withdrawing after this deadline receives a grade of F or R as prescribed above.

### **Retaking of Courses**

A student may repeat a course if her or his grade or mark is F, D+, D, D-, R or W with

## Registration Information

only the higher grade used to compute the GPA. Credit will not be given more than once for the same course. Both notations, however, will remain on the transcript.

A student may repeat a University of St. Thomas course only at St. Thomas. A student who transfers to the University of St. Thomas and wishes to repeat a course taken elsewhere must receive permission from the Registrar to do so.

### Withdrawal from the University

Students begin withdrawal from the university by completing the *Official Interruption Form* available at the Office of the Registrar. Students who withdraw must return identification cards, keys, and other items that belong to the university. Resident students must check out with the floor resident assistant.

Refunds are determined by the date on which the student completes the withdrawal process at the Office of the Registrar.

## Grades

At the end of each semester or term, each student who is registered for a course receives either a grade or a mark in that course. In each case, the grade or mark is one of the following letters: A, B, C, D, F, I, R, S or W. At the discretion of the instructor, the grade A may be followed by a minus, as A-, and the grades B, C, D may be followed either by a plus, +, or a minus, -.

### Regular Grades

The grades A, B, C, D, either alone or followed by a plus or minus, and the grade F are called regular grades. With each of these grades there is associated a grade point value.

A	4.0	B-	2.7	D+	1.3
A-	3.7	C+	2.3	D	1.0
B+	3.3	C	2.0	D-	0.7
B	3.0	C-	1.7	F	0.0

Regular grades have the following characterization:

A	Excellent work.
B	Very good work.
C	Satisfactory work.
D	Poor but passing work.
F	Failing work.

The use of plus and minus indicates performance levels between those suggested by these characteristics.

### S-D-R Grading

To encourage a wider choice of courses by lessening the student's concern for the grade point average (GPA), selected courses may be taken using the S-D-R grading option, where "S" represents a satisfactory grade (the student would have received a letter grade of A, B, or C); "D" is the same as the letter grade of D; "R" represents unsatisfactory (failing) performance. The following rules

apply to courses taken on this basis:

1. The S-D-R grading option is not available for courses taken to fulfill a requirement in the core curriculum.
2. No more than one-eighth of the credits taken through the College may be taken on the S-D-R grading option.
3. A student must fill out a form at the Office of the Registrar for any course to be taken on this basis. The exact deadline date is posted at the beginning of each term. If the course is part of the major or minor program, the form must be signed by the department chair, as it is generally not advisable to take a major or minor field course or an allied requirement S-D-R.
4. If a student receives a letter grade of C- or above, the mark of S (satisfactory) and credit will be given. If the grade of D, D+, or D- is received, the student has the option of: (1) accepting a mark of R with no effect on the GPA and no credit earned, or (2) earning the credit with the grade of D, D+, or D- being recorded and used in computing the GPA.

### S-R Grades

1. All Experiential Learning courses are marked with S for satisfactory work and R for unsatisfactory work.
2. For Individual Study or Research courses, the mark of S is given for satisfactory work and the mark of R for unsatisfactory work. If a student wishes to be graded according to the regular system (A, B, C, D, F), this choice must be approved by the appropriate faculty supervisor and the department chair. In addition, this choice must be indicated on the form used to outline the individual study project.
3. Several other courses in various departments are routinely marked with S for satisfactory and R for unsatisfactory work. Examples of these courses are PHED 100 and ENGR 150. The grading system for these courses is indicated as part of the regular course description.
4. Courses which are routinely graded on the S-R system are not counted among the one-eighth of a student's courses for which the S-D-R grading system may be selected.

### Assignment and Removal of Incomplete (I) Marks

The mark of I is used if the student has not completed the work of the course, has good reason for delay, and has made arrangements with the instructor before the date grades for the course are due to be submitted. Ordinarily, good reason will involve matters not wholly within the control of the student, such as illness. *The mark of I is not to be used to allow a student to improve a*

*grade by additional work over and above that ordinarily expected for the course or by repetition of work already submitted to the instructor.* The mark of I should not be used without prior arrangement between instructor and student.

An instructor reporting a mark of I will complete and submit with the course grades a Special Report form giving the reasons for the delay, describing the work which remains to be done by the student, and stating the deadline for completion of work. This deadline may not be later than May 1 for courses taught during the previous fall semester and January term or December 1 for courses taught during the previous spring semester and summer sessions.

The student must complete the designated work and submit it to the instructor by the deadline stated. Generally, earlier deadlines which minimize additional work to be done by the student in subsequent semesters or terms will be in the student's best interest.

The instructor may grant extensions beyond the May 1 and December 1 deadlines.

In the absence of a final grade report or other intervention by the instructor by May 15 or December 15, respectively, the mark of I will be changed to grades of F or R.

### **Change of Grade**

An instructor may change a grade if there has been an error in the computation, transcription, or reporting of the grade. *Changes may not be made on the basis of additional work completed by a student unless all members of the class had the option to submit additional work.* These changes of grade must be reported to and approved by the Dean of the College. The instructor must submit the changes to the dean using the *Change of Grade form*.

### **Grade Reports**

A final grade report is issued at the end of each semester or term. Final grades can be accessed by MURPHY, the touch-tone telephone registration and grade-reporting system, for a limited time after the end of each semester.

### **Grade Point Total and Grade Point Average**

Grade points are assigned as indicated above. Note that marks of W, R, and S have no grade point value.

The grade point total is the sum of grade points (multiply each grade point value by the number of credits for the course) for all courses with grade point value.

The grade point average (GPA) is determined by dividing the grade point total by the number of credits with grade point value.

For example, using a standard four-credit course as a basis, if a student received two A's (32 points), one B- (10.8 points), and one C+ (9.2 points) divided by 16 (the number of credits), the GPA would be 3.25. If the student received a grade of F (0 points) in a course, the grade point total would still be divided by 16 credits, but the GPA obviously would be lower.

## **Progress toward a degree**

### **Student Classification**

A degree student is one who takes classes for credit toward a degree at the university.

A student who takes courses for credit but without expectation of a degree is called a non-degree student. An auditor is a student who takes courses without expectation of credit.

A degree student who takes 12 or more credits during a semester is called a full-time student. A degree student who takes fewer than 12 credits for credit is called a part-time student.

A degree student who has completed fewer than 28 credits is called a freshman.

A student becomes a sophomore upon successful completion of 28 credits as a degree-seeking student.

A student who has successfully completed 60 credits is called a junior. A student who has successfully completed 92 credits is called a senior.

### **Date of Graduation**

A student who completes all requirements for a degree between February 1 and June 30 will receive a diploma dated May.

A student who completes all requirements for a degree between July 1 and August 31 will receive a diploma dated July.

A student who completes all requirements for a degree between September 1 and January 31 will receive a diploma dated December.

To be considered completed, the record of work must be submitted to the Office of the Registrar.

A student must reapply for graduation if for any reason the student does not graduate on the date originally selected.

### **Transcripts**

A transcript of a student's academic record will be issued only upon receipt of a written request from the student. Requests should be directed to the registrar. Transcripts will not be issued to students whose accounts are delinquent.

A \$3.00 processing fee is charged for an official transcript.

### **Academic Probation**

A student who has attempted twelve credits or more at the University of St. Thomas and has not achieved a cumulative grade point

## Registration Information

average of 2.00 or better is put on academic probation.

Each student who is placed on probation will receive a letter from the registrar informing that student of her or his probationary status and identifying both the implications of probation and the conditions under which probation will be lifted.

The student will be required to discuss her or his situation with an academic counselor or faculty adviser.

### Academic Suspension

A student is suspended from the university for one semester (not a January term or summer session) if he or she is on academic probation and one or both of the following occurs:

1. the student has not achieved a University of St. Thomas semester grade point average of at least 1.75 for courses taken during a fall or spring probationary semester.
2. the student has twice not achieved a University of St. Thomas semester grade point average of at least 2.00 for courses taken during a fall or spring probationary semester.

Each student suspended will receive a letter from the registrar identifying the nature of the suspension and the events leading up to it. A student may re-enroll following a semester of suspension.

### Academic Dismissal

A student is dismissed from the College if one or both of the following occurs:

1. the student has not achieved a University of St. Thomas semester grade point average of at least 1.75 for courses taken during a fall or spring probationary semester following Academic Suspension.
2. the student has twice not achieved a University of St. Thomas semester grade point average of at least 2.00 for courses taken during a fall or spring probationary semester following Academic Suspension.

Each student dismissed will receive a letter from the registrar identifying the nature of the dismissal and the events leading up to it.

Students who are dismissed may petition the Committee on Studies for readmission. A dismissed student may not register for summer school, or any other term.

### Readmission after Suspension or Academic Dismissal

Academic suspension applies only to fall and spring semesters. After the semester of suspension, the student is free to register for the following term, upon consultation with an academic adviser in the Office of Academic Counseling and Advising. This semester becomes a probationary semester and is subject to the conditions listed above under

Academic Dismissal.

If a student is readmitted to the university by the Committee on Studies after Academic Dismissal, the conditions of readmission will be stated by the Committee.

### Committee on Studies

The Committee on Studies is charged with interpreting the general academic requirements of the undergraduate College and has the authority to grant exceptions and waivers when warranted. It is composed of four faculty members, two students and the assistant academic dean who serves as chair of the committee.

Requests should be made in letter form and presented to the chair. The student should also fill out a request form provided by the office of the associate academic dean. Details regarding the petition process and the signatures required for various types of petitions are contained on the form.

Requests concerning major or minor field requirements should be addressed to the appropriate department chair.

### Aquinas Scholars

The Aquinas Scholars Program is the honors program of the College. It is designed to assist students in developing their intellectual talents, character and interests while pursuing an education of considerable depth and breadth. See Academic Information above for a description of the Aquinas Scholars program.

### Dean's Honor List

A student who attains a grade point average of 3.50 or more at the end of a semester in which he or she has taken at least three courses for regular grades (A, B, C) will be placed on the Dean's Honor List if there are no grades of D or F or marks of I or R. The list is made public and the student receives a letter of commendation.

### Delta Epsilon Sigma

Delta Epsilon Sigma, a national honor society for students enrolled in Catholic colleges and universities, was established at St. Thomas in 1941. Students become eligible for membership in their junior year. St. Thomas students are accepted into the national organization of Delta Epsilon Sigma after they have been accepted into the University of St. Thomas Alpha Sigma chapter and are nominated for membership in the national organization.

Senior candidates must have earned a cumulative grade point average of 3.50, while junior candidates must have a cumulative 3.75 grade point average. Graduate students are eligible for membership upon completion of one-half of their master's degree requirements. Alumni are eligible if they have been graduated with honors or have received a graduate degree.

Student members receive the *Delta Epsilon Sigma Journal* published by the national society three times each year. In addition, student members may submit articles for publication to the *Journal*, and apply for senior year and graduate school scholarships. Induction ceremonies are held at the beginning of fall and spring semesters each year.

Members enjoy the following privileges: no restriction on class loads; no tuition charges for courses above the normal 16-credit semester load; attendance as guests of the university at special academic functions; and, at the instructor's option, exemption from final examinations for St. Thomas courses at the end of the semester or term in which the student graduates.

### Department Honor Societies

A number of departments offer membership in an honor society for the particular discipline. Each of these is explained in more detail in the description of the department's

offerings in the *Departments and Curricula* section of this catalog.

### Biology Honor Society

Beta Beta Beta, the national biology honor society, chartered the Gamma Tau chapter at St. Thomas in 1990.

### Communication Honor Society

Lambda Pi Eta, the National Communication Honor Society, chartered the St. Thomas Beta Chi chapter in 1994.

### Drama Honor Society

Pi Epsilon Delta was chartered in 1942.

### Economics Honor Society

Omicron Delta Epsilon, the international fraternity in economics, was organized at St. Thomas in 1967.

### English Honor Society

Sigma Tau Delta, the national English honor society, formed a chapter at St. Thomas in 1988.

### National Collegiate Foreign Language Honor Society

Alpha Mu Gamma, the National Collegiate Foreign Language Honor Society, was organized at St. Thomas in 1980.

### Geography Honor Society

A St. Thomas chapter of the national geography honor society, Gamma Theta Upsilon, was established in 1995.

### History Honor Society

A campus chapter of Phi Alpha Theta, the national honor society in history, was established at St. Thomas in 1950.

### Philosophy Honor Society

Phi Sigma Tau is a society whose objectives are to serve as a means of awarding distinction to students having high scholarship and personal interest in philosophy.

### National Honor Society for Religious Studies and Theology

Theta Alpha Kappa seeks to bring together, both intellectually and socially, students, teachers, and writers on topics related to Religious Studies and Theology.

### Social Work Honor Society

Beta Epsilon, the campus chapter of Alpha Delta Mu National Social Work Honor Society, was established at the University of St. Thomas and The College of St. Catherine in 1980.

### Sociology Honor Society

The Iota Chapter of Minnesota of Alpha Kappa Delta, the international sociology

## Academic Honors

honor society, was chartered at the University of St. Thomas in 1991.

### Latin Honors

Three types of academic honors are conferred upon graduates of the undergraduate College. The following criteria will apply to students graduating with Latin honors from May 2000 forward.

All students considered for graduation with Latin honors will have a minimum of 52 credits taken for letter grade (A, B, C, D) at the University of St. Thomas.

All students eligible for Latin honors who have applied for graduation will be informed by the Academic Dean's Office before mid-term of their final semester that they are eligible for this honor.

#### ***Cum Laude***

A student whose overall cumulative grade point average and St. Thomas grade point average are both between 3.500 and 3.699 receives the baccalaureate degree *cum laude*.

#### ***Magna Cum Laude***

A student whose overall cumulative grade point average and St. Thomas grade point average are both between 3.700 and 3.899 receives the baccalaureate degree *magna cum laude*.

#### ***Summa Cum Laude***

A student whose overall cumulative grade point average and St. Thomas grade point average are both 3.900 or higher and who is judged to be outstanding by members of an Honors Oral Examination Committee receives the baccalaureate degree *summa cum laude*.

The student has the responsibility to arrange a *summa* examination, in consultation with the chair of the major department.

The chair, in consultation with the student, shall then appoint an oral examination committee of at least three faculty members, one of whom shall be from the student's major department. The examiners shall represent at least three departments and at least two academic divisions of the College.

The faculty member from the student's major department shall act as chair of the examination committee. A student will multiple majors shall designate one of the majors as the major department for purposes of this examination.

The examination should have a central theme so that continuity can be maintained throughout the questioning. The student, in consultation with the chair of the committee, should take the initiative in determining this theme, and conveying it to the other examiners.

Further details concerning the examination will be sent to eligible students and the

chairs of their departments by the Office of the Dean.

If a student's performance is judged not outstanding by the examination committee, the chair of the committee shall, with the concurrence of the student, reconvene the examination committee at a later time for the purpose of re-examination. The examination committee for the re-examination will consist of the original committee. Should the candidate's performance be judged not outstanding at this second examination, or should the student choose not to be re-examined, the student will graduate *magna cum laude*.

If the candidate for *summa cum laude* is also a candidate for departmental honors that involve an oral defense of an honors thesis, this defense may be substituted for the *summa* honors examination, provided that the examination committee represents at least three departments and two academic divisions of the undergraduate College and that the student's performance is judged to be outstanding by the members of the committee following the same guidelines as set forth for the *summa* honors oral examination.

### International Education

To meet the challenge of preparing liberally educated students for an interdependent world, the University of St. Thomas is committed to teaching with a global perspective and to providing its students with global literacy.

Therefore, the undergraduate College has undertaken to strengthen international academic programs and to develop new programs and learning opportunities with international dimensions.

These programs are designed to enhance the traditional liberal arts education, to prepare students for careers with international responsibilities, and to provide an educated citizenry with international understanding.

See Study Abroad Programs in the "Departments and Curricula" section of this catalog.

### Renaissance Program

The Renaissance Program is one way the University of St. Thomas responds to the challenge of offering students a liberal arts education as well as career preparation.

See Renaissance Program in the "Departments and Curricula" section of this catalog.

### Higher Education Consortium for Urban Affairs (HECUA)

The University of St. Thomas is a charter member of HECUA, a consortium of upper midwest colleges and universities.

HECUA was established to offer students the opportunity to gain alternative perspectives on the urban community, both in the United States and in other cultures. Students can earn up to 16 credits in one of these semester-long programs.

See Higher Education Consortium for Urban Affairs (HECUA) in the "Department and Curricula" section of this catalog.

### Washington Semester

The University of St. Thomas is affiliated with the American University's Washington Semester Program, Washington, D.C.

See Washington Semester in the "Departments and Curricula" section of this catalog.

### Preparation for the Roman Catholic Priesthood

Students considering a commitment to the Roman Catholic priesthood may major in a variety of fields. However, they must complete certain prerequisites in philosophy, theology and classical languages.

In addition to the usual major field and graduation requirements for the University of St. Thomas that provide in large measure the balance needed for the study of theology, St.

John Vianney students will be expected to complete the following academic requirements as part of their pre-ministry preparation. In compliance with the Program of Priestly Formation:

Twenty-four credits of philosophy (see Minor for St. John Vianney students in the Department of Philosophy).

Sixteen credits of theology from the following areas:

Introduction to Old and New Testaments

Introductory Theology Christian Morality Language Requirements:

Twelve credits in Latin and eight credits in Greek or their equivalent as determined by one's diocese.

Preparation for entering a postgraduate seminary takes place best in a college level seminary. St. John Vianney college seminary, located on the University of St. Thomas campus, provides an integrated program of spiritual and apostolic formation, along with the academic course work available through the college. Interested students should contact the rector at St. John Vianney Seminary.

### Parents-on-Campus Program

Parents of full-time students in the undergraduate day program are eligible to take undergraduate courses on a space-available basis in fall and spring semesters without tuition charge. The following requirements must be met:

The daughter/son is a full-time day student taking at least twelve credits. Parents of New College students are not eligible for this program.

Graduate courses, courses at ACTC schools, courses taught in January term or summer sessions, and courses in the HECUA program are not part of this program.

Parents may audit courses or take them for credit. Parents may be non-degree or degree-seeking students. If the parent chooses to become a degree-seeking student, an application must be made through the Office of Undergraduate Admissions.

Fees will be charged for books, music lessons, laboratory charges, individual studies, and experiential learning.

Further information on the program can be obtained from the Office of the Academic Dean.

## Academic Support Programs

### Academic Counseling

Academic counselors register all new undergraduate students and counsel students with special registration problems.

Counselors also work with students who are experiencing academic difficulties including test anxiety and other academically related problems.

The staff assists the students with their educational goals, helps students evaluate their achievement, and offers encouragement and support.

The Office of Academic Counseling serves as a resource for faculty advisers and their advisees.

### Faculty Advisers

Full-time faculty members serve as advisers to all students. During their freshman and sophomore years at St. Thomas, faculty advisers assist students in their academic orientation and in planning their class schedules each semester.

Major field advisers guide their advisees' progress toward a degree by reviewing grade reports and degree audits, and helping students solve academic problems.

### Academic Development Program

The Academic Development Program (ADP) is a team-taught combination of courses designed to help incoming freshmen develop proficiency in reading, writing, library and learning skills necessary for college success.

Students are invited to participate in this program if high school records and entrance exams (such as the ACT) indicate weakness in the areas of reading and writing.

Participants in the program register for 12 credits in fall semester: ENGL 110 Intensive Writing; a companion course covering one of the core curriculum requirements; and one additional course of the student's choice.

ADP students may, dependent upon their scores on various placement examinations, also be required to take courses in reading improvement and study skill development.

### Academic Preparation Program

The Academic Preparation Program (APP) is a mandatory two-semester support system. The St. Thomas office of Admissions identifies students for the APP based on their potential, desire, and motivation to complete a baccalaureate degree.

After being contacted by the office of Admissions, students may apply to this program by submitting a letter of application accompanied by two letters of recommendation, at least one which must come from a high school teacher. Applicants are also interviewed by program faculty and administrators.

Upon admission to the APP, students register for twelve credits during the fall semes-

ter: ENGL 110 Intensive Writing; a companion course which fulfills one of the university's core curriculum requirements; and one additional course chosen by the student in consultation with an academic adviser. Program participants are also required to attend a specially designed non-credit reading and study skills seminar and a non-credit mathematics laboratory.

During spring semester, students normally register for ENGL 111 Critical Reading and Writing, and two or three other courses selected in consultation with the student's academic adviser.

At the successful completion of this program, the student will be officially admitted to the university by the dean of the College.

Questions about the Academic Preparation Program should be addressed to the director of admissions or the associate dean for academic advising.

### Mathematics Resource Center

The Mathematics Resource Center (MaRC) provides a variety of resources, most at no cost to students of mathematics. These resources include a tutoring staff, placement testing, independent study/review programs, math videos, and general mathematics advising. Also available from the MaRC is a list of private tutors, whose rates are subject to individual negotiations.

Students must satisfy all prerequisites in order to enroll in a math course. Most entry-level math courses require an appropriate Math Placement Code (MPC) derived from an ACT math score or from a UST Math Placement Exam, which may be taken in the MaRC during regular hours. Students whose MPC is NONE can prepare for Math 100 or Math 101 by taking the Basic Math Skills review course (Math 005) during the January term or summer session. The course has a nominal registration fee.

Visit the MaRC Web site at [http://www.stthomas.edu/www/marc\\_http/marc.htm](http://www.stthomas.edu/www/marc_http/marc.htm) for more information and for the link to practice problems for the Math Placement Examination.

### Reading and Study Skills Center

The Reading and Study Skills Center (RSSC) provides academic support through tutoring and referral services, individual assistance in study skills improvement, test taking preparation, college reading techniques, college survival skills, and campus seminars and workshops.

The RSSC is located in Room LL14, in the tunnel between the O'Shaughnessy-Frey Library Center and Albertus Magnus Hall.

All services are confidential and free of charge.

### Enhancement Program – Services for Students with Learning Disabilities

The University of St. Thomas offers services for students with learning disabilities based on the philosophical premise that qualified students with learning disabilities can succeed academically if given appropriate programming and adequate support. These specialized services offer all accommodations and auxiliary aids or services through the Enhancement Program.

Qualified students with disabilities are responsible for identifying themselves and making all requests for accommodations and aids or services to the staff of the Enhancement Program.

Support services are provided to enrolled students and based on assessed needs. These services also include screening interviews and referral services, accommodation and academic assistance service, interagency coordination and advocacy services.

For more information, students with learning disabilities or those who have question regarding these specialized services, should contact the Enhancement Program office.

### Specialized Services – Services for Students with Physical Disabilities

The office of specialized services provides reasonable and appropriate accommodations to qualified students with physical disabilities. To be eligible for these services, documentation from a licensed professional is required. The documentation should state the nature of the disability and the types of accommodations recommended by the licensed professional.

Support services are provided to enrolled students and based on assessed needs. These services include counseling services, identification and referral services, accommodation and academic assistance service, interagency coordination and advocacy services.

Students with physical disabilities should contact the coordinator of specialized services.

Access the Specialized Services Web site at [www.stthomas.edu/www/spserv\\_http/index.html](http://www.stthomas.edu/www/spserv_http/index.html) for further information.

### Writing Center

Undergraduate and graduate students at all levels of experience and expertise across the university use the Writing Center. In intensive one-on-one hourly sessions, students typically work on issues such as developing ideas, creating a focus, organizing materials, and clarifying sentences. Most students work on course assignments, but may work on graduate school and job applications.

The Center is staffed by peer writing consultants who are selected through a rigorous application and interview process con-

ducted each spring semester. The staff does not offer an editing service, but instead provides the much more valuable service of working collaboratively with students to help them best express what they want to say in their writing.

Services are free. Computers are available to work on during a session with most software for IBMs available.

### Major Field Advisers

After a student has completed 48 semester credits, the student fills out a major field card and applies to be accepted as a major in his or her chosen field.

When the student has been accepted as a major in a particular department the guidance of her or his program is then transferred from the freshman/sophomore faculty adviser to a departmental major field adviser.

### Instructional Support Services

To meet the requirements of faculty and students for use of instructional technology, the university provides materials, equipment and professional support through Instructional Support Services (ISS). From the main office located in Room 14 of O'Shaughnessy Educational Center, ISS provides a variety of support services.

*Classroom Services:* university-owned audio visual equipment including projectors, recorders, cameras and other equipment is available from ISS for use on campus by faculty, staff, and student organizations. Also available are over 2000 instructional films and videotapes from the university's collection, which is located in Room 13 OEC. These can be researched through the printed catalog and the DISCOVER online catalog. Students can view programs of their choice in the Learning Center. Materials are also available from area CLIC colleges, and from film/video rental libraries nationwide. When a student organization makes a request, the faculty adviser must authorize use of these resources by phoning or writing ISS. Costs associated with materials acquisition (rental fees or shipping charges) will be billed directly to the student organization.

Requests for equipment by all users should be made at least 24 hours in advance, and the kind of equipment, and the date, time and location of use must be specified. Requests for films and videotapes not owned by the university should be accomplished as early as possible, but not less than 10 working days before the event.

*Graphic and Photographic Services:* ISS can provide services for the production of print materials (signs and posters) for faculty, staff and student organizations. Services rendered for student organizations must be

## Academic Support Programs

authorized directly to ISS by the responsible faculty member or adviser. When ISS provides such services or materials, or students use the hands-on graphics area, a charge for labor and materials is made directly to the student organization or to ACC.

Certain kinds of printed materials can be produced within the department. Students can obtain up to six black-and-white transparencies per class at no charge to them. However, students must pay cash for both color transparencies and color paper copies. For those jobs too extensive for production within ISS, consultation on design and layout is available. A computerized graphic production system is available to produce a limited variety of text and/or graphic slides. Photographic services for publicity of events relating to the larger university community are also available. Requests for photographic services should be made as far in advance as possible.

*Learning Center:* Located in the lower level of the O'Shaughnessy Educational Center, the Learning Center is equipped with more than 100 computer terminals and a wide variety of audio visual display and production equipment. The Learning Center provides an environment where a student can view programs, work on various assignments which require instructional technology or produce their own audio and/or visual materials. During the fall and spring semesters, the Learning Center is open more than 90 hours per week. Support and assistance with all the resources available in the Learning Center are available during most of those hours.

*Audio – Video Production Services:* This division of ISS focuses primarily on the production of audio and video materials and the support of audio and video production classes. In addition to providing production support to faculty, facilities are made available to students to produce and edit their own audio and video materials for course related projects. Scheduling and use of equipment must be requested by the responsible faculty member or adviser. Students should plan as far in advance as possible in the scheduling of facilities, equipment and support personnel. Students usually must have taken appropriate production courses to have access to these areas. Assistance is available in all facets of media production.

## Computing and Communications Services Center

Computing and Communication Services provides computing and telecommunications (telephone) services to students, faculty and staff. All computing facilities are available to students for classroom, tutorial and research applications free of charge. Long distance telephone services and voice mail are available to on-campus students for a nominal fee.

There are more than 300 microcomputers for student use on the St. Paul, Minneapolis, Chaska and Owatonna campuses. These include both IBM personal computers and Apple Macintosh computers. Each microcomputer has word processing, spreadsheet, computer-assisted instruction and database software installed. In addition, there are other software applications installed in selected labs for class related work.

The central computing resources include a Digital Equipment Corporation Alpha cluster accessible from on-campus microcomputers and terminals and from off campus via dial-in modems. On campus students can rent a communications box for their dormitory room allowing direct access to the Alpha systems. In addition to providing software for class-related projects, the Alpha systems have electronic mail capability for on-campus communication as well as for international communication via Internet. A campus-wide information system called DISCOVER is also available on the Alpha. This system provides information on class schedules, events on campus, current enrollment in classes, menus for on-campus dining, and a wealth of information for students and faculty.

## Student Life

Students will find that there are many cultural events to attend, many activities in which they may participate and many organizations that will welcome their active involvement on the St. Thomas campus. Students are invited to participate fully, according to their interests, for a spirited college experience.

## All College Council

The All College Council (ACC) is the student government of the college. All student organizations and clubs fall directly under the Council. STAR (St. Thomas Activities and Recreation) and the ACC operations are financed by an activity fee assessed each full- and part-time student each semester.

Membership in the All College Council consists of five executive officers, two Off-Campus Council representatives, two Residence Hall Association representatives, two representatives from each of the four classes, one International Student representative, one HANA student representative, one New College representative, one Resident Assistant representative, one STAR representative, one St. John Vianney representative, one club presidents' representative, and an adviser, who is the director for Student Leadership and Activities.

The ACC functions in an advisory capacity to administrative and faculty decision making.

## Participation in College and Faculty Committees

Students of the College work cooperatively with the faculty and administration on six committees: the College Life Committee, the Grievance Committee, the Committee on Discipline, the Educational Policy Committee, the Committee on Studies, and the Budget Advisory Committee.

## Student Organizations and Clubs

There are a number of clubs organized on campus for a variety of purposes including social, athletic and academic. All student organizations are governed by the student government (the All College Council). Some of these clubs are organized around the career objectives of their members or according to their major field of interest; others are organized according to common interests. Some professional, service and social fraternities have chapters on campus.

The *Activities Directory*, a handbook describing all the clubs, organizations and other types of involvement on campus, is available to all students at the Center for Student Leadership and Activities. An "Activities Fair" is held at the beginning of each semester to allow interested students to learn more about the clubs.

## Intercollegiate Athletics

The intercollegiate athletic program includes twenty-one varsity sports and several junior varsity programs.

Men's varsity sports are soccer, cross country, football, hockey, basketball, swimming, wrestling, baseball, golf, tennis and track. Junior varsity schedules are played in cross country, football, basketball, tennis, soccer and baseball.

Women's varsity sports are volleyball, hockey, cross country, basketball, swimming, soccer, softball, tennis, golf and track. Junior varsity programs exist in cross country, volleyball, basketball, soccer and tennis.

## Student Publications

The *Aquin* is the student-edited newspaper at St. Thomas. Its primary purpose is to serve as a voice of the St. Thomas community. Opinions, ideas and information are welcomed from students, faculty, administrators and staff. The paper is published every week during the fall and spring semesters.

The *Aquinas* is the university yearbook, and its student editors capture the school year's events in words and pictures. The yearbook is distributed at no cost to all full-time undergraduate students at the end of each year.

Each publication has a faculty adviser, but the university delegates editorial freedom and responsibility to the editors, giving them latitude to carry out editorial responsibilities. The university is the official publisher of all student publications which, in turn, are governed by the Board of Student Media.

The photo staff consists of student photographers who work throughout the year taking pictures for student publications. The staff is supervised by student editors and publication advisers.

All interested students are encouraged to apply for positions on the news and photographic staffs of the publications. Photographers' applications and newspaper and yearbook editors' applications are made to the Department of Journalism and Mass Communication.

The *Summit Avenue Express* is the student literary and visual arts magazine of St. Thomas. Designed and edited by students, the magazine publishes student poetry, fiction, photography, drawings, and other visual art. Work on the magazine begins in early fall, with a submissions deadline in December and a mid-April publication date.

## Student Life

### Musical Organizations

Student musical ensembles appear regularly in concerts on campus, in the Twin Cities area, and tour nationally and internationally.

Instrumentalists and vocalists with diverse interests can choose from a selection of large and small ensembles—bands, orchestra, choirs, jazz ensembles (both vocal and instrumental), ensembles for pianos, guitars, woodwinds, brasses, strings, percussion, and music theater productions. Membership in most of these organizations is by audition. For details consult the *Handbook for Music Students* available from the Department of Music.

### Theater and Film Forum

The combined St. Thomas/St. Catherine Department of Theater presents a number of productions throughout the year. The productions range from the classics to the latest Broadway musicals. All students are eligible to take part regardless of major. Casting is by open audition.

Performances are given at O'Shaughnessy Auditorium and Frey Theater at St. Catherine and in Foley Theater at St. Thomas. Admission to plays is free of charge for students.

The Film Forum is co-sponsored by the Department of Theater and the CSC and UST Centers for Women. Films being screened locally in the Twin Cities are selected monthly for discussion. Special interest films on a variety of topics are screened as well at the Women's Centers. Upcoming films are advertised through posters, bulletins, and e-mail. The Forum is open to everyone.

### Dean of Student Life Office

The Dean of Student Life Office is committed to helping students resolve problems.

By performing the role of ombudsman for students, the Dean of Student Life Office maintains an open-door policy to aid students in dealing with various student issues and problems. These include, but are not limited to, residence life, student health and on-campus activities.

The office oversees the verification of student directory information, produces the *Student Handbook* and Dial-a-Tommie, the campus student directory.

The office also coordinates orientation for all students and mediates violations of the Rules of Conduct as stated in the *Student Handbook*.

### The Student Handbook

The *Student Handbook* is published and distributed to the students at the beginning of each academic year. This handbook, designed as a daily planner, contains general regulations, behavioral expectations, a statement on student rights and responsibilities, a list of campus organizations, a calendar of special events, important dates, and academic deadlines. Students are held accountable for the information contained in the handbook.

### Committees of the University

The College Life Committee, the Grievance Committee, and the Committee on Discipline are committees of the university. As such, they include students, faculty and administrators in their membership. The function and authority of these committees may be found in the *Student Handbook*.

## Campus Ministry

Campus Ministry believes that the depth of our faith powerfully affects the way we live and what we become. Christ affects us by giving our lives meaning and purpose. But faith can be especially challenged in college. It is in response to this challenge that Campus Ministry invites students, faculty and staff to explore their faith more fully through worship, service and personal growth.

In addition to eight full-time professionals, Campus Ministry employs a team of residence hall chaplains, a deacon, a secretary, and 17 student ministers. The staff coordinates the religious life of the campus and offers a variety of programs.

In the area of worship, there are daily and special community masses, penance services, evening prayer, and ecumenical services. Students can participate in worship through the Liturgical Ministers Program, Chapel Singers and the Liturgical Choir.

In the service area, Campus Ministry sponsors the Volunteers in Action program, VISION J-term and spring break volunteer service trips, and the Student Coalition for Social Justice.

To inspire personal growth, Campus Ministry has a number of programs, including Bible study, prayer groups, retreats, pastoral counseling and referral, marriage preparation, crisis intervention, special groups for support (e.g., gay/lesbian group, grief group, vocation inquiry) and special seminars on different aspects of Christian life.

Campus Ministry also offers a yearlong program, the Rite of Christian Initiation for Adults (RCIA) to those who are preparing for baptism, confirmation or initiation into the Catholic Church.

The Campus Ministry Center is located in Murray-Herrick Center.

## Personal Counseling and Testing

Personal Counseling is available to help students deal with a wide variety of concerns from the problems of daily living to problems of a more serious nature. In addition to the professional counselors and psychologists employed by the university, outside referral sources are also available. Personal Counseling also provides groups, workshops, seminars and consulting services on a variety of topics. Walk-in hours are available every day and are listed in the *Bulletin*. Complete confidentiality is maintained in accordance with legal requirements and the professional code of ethics.

## Testing Services

Personal Counseling Office offers a full range of services including personality assessment and career testing.

## Career Services

The staff in Career Services help students to identify viable career options and goals and to explore the impact of those goals on their total personal development and future lifestyle. The Center helps students with the procedures involved in gaining employment or seeking admission to graduate or professional schools. A description of the services available to assist students with their career development follows.

### Career Resource Center

The Center offers students access to written and video materials to assist them as they explore personal occupational and graduate or professional school interests. The Center also offers literature on employing organizations, a computerized career exploration system, and the St. Thomas Career Information Network (CIN). Career Assistants are available to assist students and to direct them to other resources on and off campus.

### Internships

Internships are opportunities for students to acquire work experience related to their academic major field or career interests.

Students may intern in a variety of settings in the private and the public sectors. Many choose part-time internships while attending classes.

Participation serves to extend the learning of the classroom, as theory is applied in the work place. Students also acquire an understanding of the professional demands and requirements of a particular career and prepare for the transition from the academic atmosphere to the world of work.

### Job Search Assistance

Graduating seniors and alumni are assisted with job-seeking skills and the development of strategies for their job search. On-campus interviews with employers are available to seniors. The Career Hotline And Resources Listing Internships and Employment (CHARLIE), allows students 24-hour access to full-time internships and jobs. Students also have access to two state-wide Job Fairs sponsored by Career Services.

### Career Counseling

Confidential, individual appointments and workshop presentations are used to assist students with skill building and career planning. Students explore their interests, values and abilities to determine possible career options.

## Student Services

### Multicultural Student Services

Multicultural Student Services provides a variety of services for Latino/Chicano/a, African American, Native American and Asian Pacific Islander students functioning as a means of networking and advocacy. Initiatives addressing academic support, mentoring support, student programs and leadership development are designed to complement university services.

HANA, the multicultural student organization comprises four ethnic peer associations that provide peer support, leadership opportunities and service to the campus and Twin Cities communities.

In addition to others available through the university, Multicultural Student Services offers several scholarships for American students of color. Information about these and other funding opportunities can be obtained from Student Financial Services.

### International Student Services

The Office of International Student Services counsels and advises international students and exchange visitors in the area of immigration matters, financial concerns, housing information, and personal problems.

In order to assist the international students in adjusting to the university and local community, the office sends pre-arrival information to newly accepted students and conducts a comprehensive orientation program.

Special programs and activities, designed to promote international understanding and cultural exchange, both on and off campus, are planned and coordinated by the office. Valuable information about the university and the community is provided through a bi-monthly newsletter, the *Orientation Handbook*, and the *Prospectus for International Students and Scholars*. The office also advises an active International Student Association.

The office acts as a liaison between international students and the various administrative and departmental offices of the university, agencies of the federal government and private organizations.

All international students must participate in the mandatory health and accident insurance program at the university. Payment for this coverage is required at the time the student registers. This coverage is effective world-wide and throughout the year.

### Housing

The University of St. Thomas has accommodations for approximately 1,840 students in its residence halls, apartments, and other university-owned housing.

The residence halls (Brady, Cretin, Dowling, Grace, Ireland, John Paul II, Murray) and apartment residence are managed by professional staff and undergraduate resident advisers. St. John Vianney is the college seminary residence hall.

The residence halls have computer rooms, laundry rooms, study lounges and recreation rooms. Some sports equipment, tools, cleaning equipment and games are available for student use.

Upon admission to the College, each student will receive an *Application for On Campus Student Housing*. New students desiring space in the residence halls must complete the application and return it to the Office of Admissions with a \$100 room deposit which is credited to the student's room and board charges during the first semester of residence. These applications are considered on the basis of date received.

Students currently living in university housing must complete the *Application for On Campus Student Housing* by the date established by the Office of Residence Life for the coming academic year.

For specific financial information, each student should refer to the *Residence and Food Service Agreement*, and the *Summary of Financial Procedures* for the current year. Both are available from the Office of Residence Life, Koch Commons. With the exception of the Grand Avenue apartment residents, and juniors and seniors in the apartment residence, all students living on campus must purchase one of the available options for a meal contract.

Students who will be residents should bring their own sheets, pillows, blankets, towels and washcloths. They also should bring their own desk accessories. Laundry rooms with automatic washers and dryers are available for student use.

Each student is provided with a bed, dresser, closet space, desks, desk chair, and lounge chair. Rooms in John Paul II and Murray Hall are provided with lamps and tables. John Paul II, Murray, and Grace Halls are also carpeted and have private bathrooms. The apartment residence includes furnished living rooms, bedrooms, full bathrooms and kitchenettes.

Each student room has telephone service at no cost except for long distance charges, and voice mail. An Internet and cable TV connection is available in each room.

Additional information regarding residence hall life is contained in the *Resident Student Handbook*.

## Dining Facilities

All food locations accept Flex or Express dollars and cash.

### Main campus

Murray-Herrick Center houses a number of dining areas designed to meet the needs of various segments of the student population.

The Food Court is on the second floor, along with several areas used for special dining. The Food Court dining area is used for students on the board plan, although anyone may eat in the facilities.

The Grill is located on the main floor. Besides its main function of serving food – breakfast through dinner – the Grill provides a central gathering place for students.

Scooter's, located on the lower level, is a casual cuisine and entertainment center. It has a dance floor, a stage for live entertainment, a large screen TV and a special sound system.

Koch Commons is located between Brady and Dowling Residences. It provides deli and various snack items.

### South campus

Binz Refectory is located on the south campus. Students who have a food service contract may dine in the west dining room. The *Binz Cafe* is located in the same building for those who wish to select refreshments, grill items and snacks.

### Minneapolis campus

Food for Thought restaurant is located on the second floor of the Minneapolis Campus, offering a variety of food selections and snack items.

## Health Service

A modern health center, located in Brady Hall, handles the medical needs of both resident and day students. The center is equipped to handle most minor illnesses and accidents. A physician holds regular office hours Monday through Friday. Please call for appointment times. Appointments are encouraged, but walk-ins will also be seen. A nurse practitioner staffs the health service from 8 a.m. to 4:30 p.m. and is able to handle concerns of the young adult.

All services of the center, except for prescription drugs and immunizations, are provided free of charge. In cases of a serious illness, students will be transferred to one of the area hospitals where they will be treated at their own expense.

In conjunction with a national insurance company, the university offers a plan of health and medical care insurance to U.S. citizens on an optional basis. Foreign students are required to participate. The policy is designed to be a low-cost health plan for students. Information on these policies is

sent to returning students and incoming freshmen every year.

All students must submit a physical and health record attested to by their primary care physician, if they are going to participate in sports, study abroad, or use the health service as their primary care clinic during their college career.

All students born after 1956 who are enrolled in a Minnesota public or private college or university are required by Minnesota law to be immunized against diphtheria, tetanus, measles, mumps, and rubella. These immunizations must have been done within a certain time frame. Questions about this requirement and exemptions allowed for by the law should be addressed to the Health Service. A *Record of Immunization* form is available from the Office of Admissions or the Health Service.

## Wellness Center

Through educational programs, services, and resources, the Wellness Center seeks to improve UST as a "well" organization, and empower students, staff, and faculty to live healthier lives. Programs have included aerobic classes, stress management, massage, relaxation, diet analysis, walking/running, sexual health, quit smoking, alcohol education, yoga, and healthy relationships. Pamphlets, books, audio and video tapes are available on a variety of topics.

The Wellness Center is located in Koch Commons.

## Public Safety and Parking Services

The Department of Public Safety and Parking Services is located on the first floor of the apartment residence and is open 24 hours a day, 7 days a week for the community's convenience. Public Safety officers are always on duty to answer questions or assist in whatever way possible.

### Escort Service

The UST escort program provides a welcome and worthwhile service to people who want to be walked to their cars, night classes or locations within a six-block radius of the St. Paul campus, or a one-block radius of the Minneapolis campus.

### Parking

All parking lots on University of St. Thomas property are open to vehicles with a valid UST parking permit. Faculty, staff, students and visitors must have a permit to park on campus. Guests may park at a meter without a permit as long as the meter is paid.

Permits may be purchased at the Department of Public Safety and Parking Services, or at designated locations throughout campus during the first week of the fall semester.

## Facilities

### Chapels

#### **St. Thomas Aquinas Chapel**

The present Chapel of St. Thomas Aquinas was built in 1917. E.L. Masqueray, who also designed the St. Paul Cathedral and the Basilica of St. Mary, Minneapolis, was the architect. The university's chapel is an excellent example of the classicized mode of design that emanated from the Ecole des Beaux Arts during the early years of the twentieth century.

The luminous stained glass, designed by Chester Leighton of Minneapolis, and the paintings containing sacred and secular details by Joseph Capocchi and Carl Olson, were installed in the 1940s. The chapel was renovated in 1987.

In 1987, a three-manual 56-rank mechanical action pipe organ, designed and built by Gabriel Kney of London, Ontario (Canada), was installed.

#### **St. Mary's Chapel**

St. Mary's Chapel was built for The Saint Paul Seminary in 1901. Designed by Clarence H. Johnston in basilica style, it blends Romanesque and Byzantine architecture. The stained glass and murals were created by Bancel LaFarge in the 1930s.

The chapel was renovated in 1973, and again in 1988, at which time a new sanctuary area was created in the north end of the chapel allowing the apse area to become the environment for the baptismal font and new access to the chapel.

In the spring of 2000 a two-manual, 20-stop mechanical action pipe organ designed by Noack Organ Company of Georgetown, Massachusetts, will be installed.

#### **St. John Vianney Chapel**

The college seminary chapel was redesigned in 1998 by the Reverend Peter Christiansen, the current rector. The theme of the chapel is "The Tree of Life." The chapel, an adjoining Eucharistic chapel, and an adjacent prayer room, replicating a medieval monastic cloister, are open for anyone wishing to use them.

#### **Florance Chapel**

The Florance Chapel is the lower chapel in the St. Thomas Aquinas Chapel. An award-winning design in its renovation, it incorporates modern furnishings in the prairie school style of Frank Lloyd Wright along with some of the oldest sacred sculptural artwork owned by the university.

## University Libraries

The University of St. Thomas libraries contain more than 458,000 book volumes, 2,295 periodical subscriptions and numerous electronic databases.

### O'Shaughnessy-Frey Library

The O'Shaughnessy-Frey Library Center is the principal library on the main campus, housing (in addition to the general and reference collections) the university Archives and Special Collections Department. The latter contains the Celtic Collection, one of the most outstanding collections of its type in this country, and a notable collection of Hilaire Belloc and G.K. Chesterton.

### Archbishop Ireland Memorial Library

The Archbishop Ireland Memorial Library, located on the south campus, is the graduate theological library which primarily serves the School of Divinity.

### Minneapolis Campus

The library at the downtown Minneapolis campus supports students, faculty and staff involved in the courses offered at that location.

Cooperating Libraries in Consortium (CLIC) allows students to obtain books and periodical articles from other CLIC libraries. CLICnet, the computerized public access catalog, serves Augsburg College, Bethel College, Concordia College, Hamline University, Hamline Law School, Macalester College, The College of St. Catherine, and the University of St. Thomas. Interlibrary loans for materials not owned by the university are available within the CLIC institutions.

Another cooperative venture, MINITEX (The Minnesota Interlibrary Telecommunications Exchange) links the university with more than 200 libraries throughout Minnesota, Wisconsin, and North and South Dakota. Periodical holdings for all MINITEX member libraries are listed in the Minnesota Union List of Serials (MULS) and are available at the reference desk, as well as the necessary request forms.

National interlibrary requests are available and further information about this can be obtained from the ILL Office.

The library staff offers a wide range of services to support coursework and research. Reference librarians provide individual help as well as classroom instruction in the use of library materials. Searches of on-line databases can be arranged by calling the reference librarians. A copy center is located on the Lower Level of the O'Shaughnessy-Frey Library. Group study rooms are available throughout the library, and a limited number of individual study carrels are assigned for a semester at a time. Reserve materials can be found adjacent to the Circulation Desk.

## Computer Labs

The Learning Center, on the lower level of O'Shaughnessy Educational Center, is the central computer lab and media facility at the university. IBM, Macintosh, and Alpha networks are available, plus audio and video playback and editing systems.

Computer labs are available in the Christ Child Building, McNeely Hall, and the Frey Science and Engineering Center. Some departments also have labs for use by their students.

The Department of Mathematics and Center for Applied Math have two computer labs which are open to all students enrolled in mathematics courses.

## The Luann Dummer Center for Women

The Luann Dummer Center for Women was established in 1993 by a special bequest from the estate of Dr. Luann Dummer, longtime member of the Department of English and founding director of the Women's Studies Program at the university.

The center aims to foster the intellectual, spiritual and personal development of women. The center serves as a meeting place for women to share their expertise and experience and provides opportunities for students to interact with women role models. Although the center is dedicated especially to women, it is committed to the service of the entire campus community within the context of its mission.

The center sponsors two grants, and beginning in 1996, one research fellowship. The grants are awarded to undergraduate students at the University of St. Thomas to support participation in programs that will enhance their leadership skills, especially in programs which are directed toward public service. The Luann Dummer Undergraduate Fellowship for research about women offers a stipend to an undergraduate scholar pursuing a line of inquiry in any major field.

## Science Facilities

The Frey Science and Engineering Center, comprising the O'Shaughnessy Science Hall and the Owens Science Hall, houses the classrooms, instructional and research labs, and faculty/staff offices for the departments of biology, chemistry, engineering, geology, mathematics, Center for Applied Mathematics, physics, and quantitative methods and computer science. It also houses special support facilities such as an attached greenhouse and one-third of the university's computer terminals.

## Facilities

### Theater and Auditoriums

Theatrical productions by campus groups are presented in Foley Theater.

The O'Shaughnessy Educational Center (OEC) auditorium hosts a number of guest lectures, teleconferences and student assemblies.

The Baumgaertner Auditorium in Brady Educational Center (BEC) is used for musical performances and community events.

The 3M Auditorium, located in the Frey Science and Engineering Center, is technologically advanced and hosts a number of course lectures, teleconferences and community events.

The Thornton Auditorium, located at the Minneapolis campus, serves as the site for a number of lectures and presentations.

### Athletic Facilities

The athletic facilities at the university provide for student participation in a variety of varsity, intramural and recreational sports.

The 30,000-square-foot Coughlan Field House contains a running track, five volleyball courts, one collegiate-size and four intramural-size basketball courts, four tennis courts and six racquetball courts.

The adjacent Schoenecker Arena accommodates varsity basketball and volleyball and various recreational sports.

Weight-training facilities are housed in O'Shaughnessy Hall, in addition to a pool, squash courts, wrestling facility, two more racquetball courts, a multi-purpose gymnasium and a fully-equipped training room.

Outdoor facilities include a 5,000-seat stadium for football, soccer, and track. The track is an eight-lane poured polyurethane facility completed in 1987.

A 200-seat baseball diamond is located on the north field as well as other facilities for touch football, softball, and intramural soccer.

Additional recreational facilities are located on the south campus. McCarthy Gymnasium has a gymnasium, pool, and four racquetball courts. Six tennis courts, soccer and softball fields provide additional outdoor facilities.

A telephone hotline is provided to keep students informed of the availability of recreational facilities on a day-to-day basis.

### University Bookstores

The St. Paul campus Bookstore is located in Murray-Herrick Campus Center. The store sells new and used textbooks, tradebooks, school and office supplies, computers and computer supplies, insignia clothing and gifts, candy, jewelry, tapes and CDs, cards, gifts and magazines.

The Minneapolis campus Bookstore sells textbooks for classes taught at that facility. It also carries many of the same items mentioned above.

## Departments and Curricula

### Course Offerings

The courses listed in this section of the catalog are arranged by subject area in alphabetical order. Each listing includes a brief description of the course, and an indication of any prerequisites. Numbers which appear in parentheses next to a specific course title refer to courses whose content overlaps with the course next to which they are placed. Students may not receive credit for both of the courses in such cases.

### Course Unit

The basic unit of instruction is a four-credit course. The ordinary academic load for a student during one semester is sixteen credits. Courses that carry more or fewer credits than four are noted in the listing.

### Generic Courses

Some courses are offered under the same numbers in all or most academic departments. Since the particular subject matter changes, these course numbers may be taken more than once in a given department. Departments may choose to place limitations on these courses, or may have additional requirements. Additional information will be found in the departmental listings. These courses include Topics, Experiential Learning, Seminars, Research, and Individual Study.

### Topics Courses

The subject matter of the course, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses.

**295 Topics** **2 credits**

This number is assigned if the course also fulfills a requirement in the core curriculum.

**296 Topics** **2 credits**

This number is assigned for courses within the department which do not fulfill a requirement in the core curriculum.

**297 Topics** **4 credits**

This number is assigned if the course also fulfills a requirement in the core curriculum.

**298 Topics** **4 credits**

This number is assigned for courses within the department which do not fulfill a requirement in the core curriculum.

**487 Topics** **2 credits**

This number is assigned if the course also fulfills a requirement in the core curriculum.

**488 Topics** **2 credits**

This number is assigned for courses within the department which do not fulfill a requirement in the core curriculum.

**489 Topics** **4 credits**

This number is assigned if the course also fulfills a requirement in the core curriculum.

**490 Topics** **4 credits**

This number is assigned for courses within the department which do not fulfill a requirement in the core curriculum.

### Experiential Learning

The College will grant credit for experience to a registered student if the student's proposal for the work (to include the method of evaluation of the learning that occurs) receives prior approval of the department involved, and the student successfully completes the experience agreed upon. The most common type of experiential learning is an internship.

Credit granted in this way is graded on an S/R basis. A maximum of eight credits of Experiential Learning may be counted toward the 132 credits required for graduation. The regular tuition for the number of credits will be charged.

Prior to the occurrence of the experience for which credit is being sought, a student makes a formal request for four credits or two credits. This request includes:

- a detailed description of the experience for which credit is sought and a statement of its academic significance and validity in the student's program;
- an indication of any supplementary academic requirements to be fulfilled: papers, reports, etc.;
- the name of the person at the University of St. Thomas who will approve the proposal, maintain periodic contact with the off-campus supervisor and student and corroborate the evaluation of the experience;
- an outline of the evaluation procedures to be used.

## Departments and Curricula

Students requesting credit for Experiential Learning usually will have attained junior or senior status. The request must be approved by the chair of the department in which credit will be awarded.

The minimum number of hours of on-site work (usually 100 hours for two credits; 200 hours for four credits), meetings with St. Thomas faculty, meetings with the on-site supervisor, and evaluation of the project will be determined by the department.

Forms for requesting credit for Experiential Learning are available from the chair of the department involved. These must be completed, obtaining signatures from the faculty member, the chair of the department, and the dean. The form is then presented to the registrar at the time of registration.

When, in the view of the department, supervision and evaluation of the experience are provided chiefly by a person at the University of St. Thomas, the student should seek credit by means of Individual Study.

### **475 Experiential Learning 2 credits**

This number is assigned if the course also fulfills a requirement in the core curriculum.

### **476 Experiential Learning 2 credits**

This number is assigned for courses within the department which do not fulfill a requirement in the core curriculum.

### **477 Experiential Learning 4 credits**

This number is assigned if the course also fulfills a requirement in the core curriculum.

### **478 Experiential Learning 4 credits**

This number is assigned for courses within the department which do not fulfill a requirement in the core curriculum.

### **Seminars**

Seminars are offered in a number of departments. With the exception of Honors Seminars in the Aquinas Scholars program, regular tuition is charged.

### **483 Seminar 2 credits**

This number is assigned if the course also fulfills a requirement in the core curriculum.

### **484 Seminar 2 credits**

This number is assigned for courses within the department which do not fulfill a requirement in the core curriculum.

### **485 Seminar 4 credits**

This number is assigned if the course also fulfills a requirement in the core curriculum.

### **486 Seminar 4 credits**

This number is assigned for courses within the department which do not fulfill a requirement in the core curriculum.

### **Research**

Some departments offer the opportunity to do research in the discipline. Research involving human subjects may not begin prior to review and approval by the Institutional Review Board (IRB) for the Protection of Human Research Subjects. Student researchers are advised to consult with a faculty adviser and secure the needed forms and other information from the IRB Web site (<http://www.stthomas.edu/irb>) early in the research planning process.

Grading is on an S/R basis.

### **491 Research 2 credits**

This number is assigned if the course also fulfills a requirement in the core curriculum.

### **492 Research 2 credits**

This number is assigned for courses within the department which do not fulfill a requirement in the core curriculum.

### **493 Research 4 credits**

This number is assigned if the course also fulfills a requirement in the core curriculum.

### **494 Research 4 credits**

This number is assigned for courses within the department which do not fulfill a requirement in the core curriculum.

### **Individual Study**

Individual Study refers to a type of learning contract in which a registered student and/or professor have the responsibility for defining, organizing and evaluating a special project of limited scope (limited in content and in the time designated for its completion). Individual Study provides an opportunity for students (usually at junior or senior status) to receive one-to-one instruction and guidance,

while pursuing a subject of special interest. It also allows instructors to share their continuing personal study and to foster the abilities manifested by their students. This work is completed independently under the instructor's personal direction.

Students interested in pursuing Individual Study should discuss their plans with the appropriate faculty member. When the project has been determined, the faculty member will provide the Individual Study contract forms. These must be completed prior to registration. The Individual Study contract must be approved by the supervising faculty member, the chair of the department, and the dean of the College.

The grading for Individual Study may be standard (A,B,C, etc.) or Pass/Fail (S/R). This selection and a statement of explanation justifying the choice must be indicated on the Individual Study contract when it is presented to the registrar. (If the course is in the major field, grading must be on the standard system.)

Individual Study may be pursued for either two or four credits. Determination of the amount of credit awarded is at the discretion of the department, but should reflect an academic rigor commensurate with a regularly-offered course for the same amount of credit.

Regular tuition is charged.

- 495 Individual Study** **2 credits**  
This number is assigned if the course also fulfills a requirement in the core curriculum.
- 496 Individual Study** **2 credits**  
This number is assigned for courses within the department which do not fulfill a requirement in the core curriculum.
- 497 Individual Study** **4 credits**  
This number is assigned if the course also fulfills a requirement in the core curriculum.
- 498 Individual Study** **4 credits**  
This number is assigned for courses within the department which do not fulfill a requirement in the core curriculum.

**Accounting**

*See Division of Business.*

**Actuarial Science (ACSC)**

Youn (MATH), director, Herman (MATH)

The Bachelor of Science in Actuarial Science is an interdisciplinary degree program offered through the Department of Mathematics. (See also the Department of Mathematics in this catalog.)

Actuarial science education equips students with strong mathematical problem-solving skills that can be applied to business careers. The major requirements consist of courses in mathematics, actuarial science, computer science, business, economics and a course in communication. Coupled with a firm foundation in the liberal arts, this major provides a sound grounding in analytical problem-solving and communication skills.

This program prepares students for a variety of careers with insurance companies, consulting firms, financial institutions, industrial corporations or government agencies. It also provides a good preparation for non-actuarial careers in banking, finance or insurance. In addition, the statistical background developed by an actuarial student is valuable in a variety of other fields.

To be certified as a Fellow or an Associate by either the Society of Actuaries or the Casualty Actuarial Society, one must pass a series of rigorous examinations. The earlier examinations are focused on mathematics and statistics and can be taken while a student. The later examinations cover aspects of business, economics, and regulatory climate.

A careful selection of courses from a variety of departments helps a student to prepare for many excellent professional opportunities in this field. Students should see the director of the Actuarial Program for advice in selecting courses for a particular purpose.

Within the Department of Mathematics, the Center for Applied Mathematics provides opportunities for actuarial science students to work on significant mathematical problems of current interest to business, industry, and government.

**Major in Actuarial Science (B.S.)**

- ACCT 211 Financial Accounting
- ACSC 264 Theory of Interest
- ACSC 351 Foundations of Actuarial Mathematics
- ACSC 352 Actuarial Contingencies
- BUS 200 Business Ethics (2 credits)
- ECON 252 Principles of Microeconomics

## Aerospace Studies

FINC	321	Financial Management
MATH	113	Calculus I
MATH	114	Calculus II
MATH	200	Multi-Variable Calculus
MATH	210	Linear Algebra and Differential Equations
MATH	313	Probability
MATH	314	Mathematical Statistics
MGMT	340	Management I (2 credits)

A course in risk management and insurance approved by the program director

*Plus one of:*

MATH	333	Applied Statistical Methods: Regression, Time Series, Forecasting
MATH	385	Mathematical Methods of Numerical Analysis

*Allied Requirements:*

*One of:*

QMCS	130	Problem Solving in the Natural Sciences
QMCS	237	Software Design using Scientific Languages

*Plus one of:*

COMM	103	Public Speaking
COMM	104	Communication in the Workplace
ENGL		200 or above
JOUR	215	Journalistic Writing in the Workplace
JOUR	311	Persuasion in Writing

*Suggested Electives:*

BLAW	365	Business Law
ECON	251	Principles of Macroeconomics
FINC	324	Advanced Financial Management
FINC		400-level Investment Courses
MBIS	701	Insurance Seminar
MKTG	300	Principles of Marketing
QMCS	280	Object-Oriented Design and Programming
QMCS	450	Database Design

### **264 Theory of Interest (MATH 264)**

A survey of topics in the mathematical analysis of financial transactions which involve payments made over time. Specific areas of concentration will include the time value of money; the analysis of annuities; amortization and sinking funds; and the pricing and rates of return on investments. Both continuous time and discrete time problems will be considered.

Prerequisite: MATH 114.

### **351 Foundations of Actuarial Mathematics**

The course covers the theory and applications of contingency mathematics in the area of life and health insurance, annuities and pensions from both the probabilistic and deterministic approaches. Topics will include: survival distributions, actuarial notation, life insurance and life annuities, net premiums and reserves.

Prerequisite: 264 and MATH 313.

### **352 Actuarial Contingencies**

Extension of the analysis of 351 to multiple life functions and multiple decrement theory. Topics will include: multiple life functions and multiple decrement models, valuation of pensions, insurance models including expenses, nonforfeiture benefits and dividends.

Prerequisite: 351

## **Advertising**

*See Department of Journalism and Mass Communication.*

## **Aerospace Studies (AERO)**

Furs (chair), Kadrlík

Aerospace Studies is the official designation of the Air Force Reserve Officer Training Corps (AFROTC) program of instruction. Aerospace Studies is a dynamic college discipline designed to give female and male students an opportunity to concurrently complete ROTC coursework with degree coursework so that participants qualify for commissions in the United States Air Force as they

complete their bachelor's degree requirements. Cadets are commissioned as second lieutenants upon graduation. Coursework offers students the occasion to widen their perspective; sharpen their sense of responsibility; develop their ability to organize, motivate, and lead others; and acquire a maturity of judgment that can be a source of strength and self-confidence throughout their careers.

The Aerospace Studies program does not require a student to major in any certain field, but rather, complements the academic major of choice. It is possible to minor in Aerospace Studies and use Aerospace Studies courses as elective credits. These courses are offered at St. Thomas, but students at any of the five Associated Colleges of the Twin Cities (ACTC) consortium – St. Thomas, St. Catherine, Augsburg, Hamline, and Macalester – may take the courses. Through crosstown agreements, students at Bethel, Concordia, North Central Bible, Northwestern, William Mitchell, Anoka-Ramsey, Inver Hills, Century, Normandale, North Hennepin, and the University of Wisconsin-Stout may also take aerospace studies courses.

The aerospace studies curriculum is divided into two phases: the General Military Course (GMC) in the freshman and/or sophomore years, and the Professional Officer Course (POC) in the junior and senior years. Cadets in the GMC have no service commitment whatsoever, unless they receive an Air Force ROTC scholarship. Students must voluntarily apply for the POC. All POC cadets are obligated to serve as an officer for four years on active duty after graduation (Active duty commitments are currently six years for navigators and eight years for pilots after completing flight training.) Additionally, the cadet must temporarily serve in a reserve component, if the active duty time does not fulfill the contractual service commitment.

An integral part of all aerospace studies classes is Leadership Laboratory. Instruction is conducted within the framework of an organized cadet corps with a progression of experiences designed to develop leadership potential. Leadership Laboratory involves a study of Air Force customs and courtesies, drill and ceremonies, career opportunities in the Air Force, and the life and work of an Air Force junior officer. Leadership potential is developed in a practical, supervised laboratory.

The Air Force offers four-, three- and two-year college scholarships. See "Scholarships not awarded by the university" in the Financial Services section of this catalog.

Most students complete Air Force ROTC via the four-year program, during which both the GMC and the POC are completed. If a student does not enroll in the freshman year, both the freshman and sophomore classes can be taken during the sophomore year. This is followed by a four-week field training session at an active-duty Air Force base, normally between the sophomore and junior years. Students in the program receive a salary and room and board while at field training.

In the summers between the freshman and sophomore, and the junior and senior years, the student may opt to go on an internship in a chosen career field at an active Air Force base. All advanced training is paid by the Air Force.

If the student does not enroll in Air Force ROTC until spring semester of the sophomore year, a commission can be earned through the two-year program. However, the student will attend a six-week field training session instead of the four-week session. The extra two weeks provide the academic training that would have been received in the GMC. Upon successful completion of the six-week field training session, the cadet may enter the POC to complete the remaining two years. The student is still eligible for the internships and advanced training the following year, and can compete for a scholarship. To apply for the two-year program, the Department of Aerospace Studies must receive a completed application package no later than February 1 of the sophomore year. Note: The application process usually takes five weeks.

St. Thomas offers its students who are winners of Air Force ROTC scholarships up to full subsidy (room and board and remaining tuition) on almost every Air Force ROTC scholarship awarded. For information call the AFROTC Unit Admissions Officer at (651) 962-6329.

The Minor in Aerospace Studies is open to all undergraduate students at the University of St. Thomas. Students need not also enroll in Air Force ROTC. If they choose to take AERO classes without also enrolling in Air Force ROTC, they are not eligible to take the second option listed below. Also, these students are excused from the accompanying Leadership Laboratories. However, a student who enrolls in AERO courses without also enrolling in Air Force ROTC may participate in Leadership Laboratory if s/he would otherwise be eligible for Air Force ROTC, with approval from the department chair. Further, if a student did not complete the Leadership Laboratories and later wished to enroll in AFROTC, s/he must make up the missed Leadership Laboratories.

While the courses are intended to be taken sequentially, students may complete the minor by taking more than one AERO class per term, with the permission of the department chair.

All of the coursework generally contributes to and enhances the human diversity objectives of the university. Additionally, AERO 321, 322, 421, and 422 also enhance the university's computer competency goals, particularly in their requirement for submission of written papers and verbal presentations requiring visual aids (computer generated, for the most part).

### Minor in Aerospace Studies

Student must complete twenty credits. This requirement must be accomplished by completing one of the following sequences:

- 111 Air Force Today I (1 credit)
- 112 Air Force Today II (1 credit)
- 211 Development of Air Power I (1 credit)
- 212 Development of Air Power II (1 credit)

*or*

- 250 Six-Week Field Training\*

\*Open only to students enrolled in Air Force ROTC

*Plus:*

- 321 Leadership and Management I
- 322 Leadership and Management II
- 421 National Security Forces in Contemporary American Society I
- 422 National Security Forces in Contemporary American Society II

**111 Air Force Today I** **1 credit**  
This course focuses on the basic characteristics of air doctrine, U.S. Air Force mission and organizations, customs and courtesies, officer opportunities and benefits, professionalism and officership, and an assessment of written and oral communicative skills. One class-hour per week, plus a weekly one-hour Leadership Laboratory consisting of Air Force customs and courtesies, Air Force environment, and drill and ceremonies.

**112 Air Force Today II** **1 credit**  
Continuation of 111  
Prerequisite: 111

**211 Development of Air Power I** **1 credit**  
This course focuses on factors contributing to change in the nature of military conflict, the development of air power from its earliest beginnings through two world wars, the evolution of air power concepts and doctrine, the role of technology in the growth of air power, a history of air power employment in military and nonmilitary operations in support of national objectives, ethics and values, introduction to leadership and development of written and oral communicative skills. One class-hour per week, plus one additional hour each week of Leadership Laboratory consisting of Air Force customs and courtesies, Air Force environment, drill and ceremonies and field training orientation.  
Prerequisite: 112 or permission of instructor

**212 Development of Air Power II** **1 credit**  
Continuation of 211  
Prerequisite: 211

**250 Six-Week Field Training (111, 112, 211, 212)**  
Training and evaluation on an Air Force base during the summer. Training is designed 1) to fulfill the course goals of the General Military Course (GMC) normally taken during the regular school year; 2) the experience is designed to develop military leadership and discipline, provide AF officership training, orientation and motivation, and determine officer potential. These objectives are provided to conform to the standards of a structured military environment as well as teach the participant how an Air Force base operates. The syllabus provides a minimum of 385 hours of scheduled activities – 185.5 hours of total core curriculum hours consisting of Air Force orientation, leadership training, and officership training. Additional hours are required for Flight Training Officer Time (FTOT) and cadet meetings, etc. Required for all two- and one-year program cadets prior to entry into 321.

**321 Leadership and Management I**  
An integrated leadership and management course emphasizing the concepts and skills required by the successful officer. The curriculum, providing the foundation for the development of the junior officer's professional skills, includes individual motivational and behavioral processes, communication and group dynamics, and the art and science of leadership. Course material on the fundamentals emphasizes decision making and the use of analytical aids in planning, organizing and controlling in a changing environment as necessary professional concepts. Organizational and personal ethics, management of change, organizational power and politics, and managerial strategy and tactics are discussed. Actual Air Force case studies are used throughout the course to enhance the learning and communicative processes as a means of demonstrating and exercising practical application of the concepts being studied. Within this structure, continued emphasis is given to the refinement of communicative skills. Specifically, one of the course goals is for each student to effectively apply listening, speaking, and writing skills in Air Force-peculiar formats and situations with accu-

racy, clarity, and appropriate style. Another aligned goal is to comprehend selected concepts, principles, and theories of Quality Air Force leadership and management (Total Quality Management). Three class-hours per week. A one-hour weekly Leadership Laboratory complements the academic course by providing advanced experience in officer-type activities, giving the cadets the opportunity to apply the leadership and managerial principles of this course.  
Prerequisite: 212 or 250

**322 Leadership and Management II**

Continuation of 321.  
Prerequisite: 321

**421 National Security Forces in Contemporary American Society I**

This course provides future Air Force officers with a background in national security policy and issues while stressing responsibilities of the military officer and civilian-military relationships. They include: an examination of the needs for national security, an analysis of the evolution and formulation of American defense policy and strategy, aerospace doctrine, an examination of the methods for managing conflict, an extensive study of alliances and regional security to preserve American interests around the world, an analysis of arms control and the threat of war and terrorism. Special topics focus on the military as a profession, officership, the military justice system, and transition from civilian to military life. Within this structure, continued emphasis is given to the refinement of communicative skills. Three class-hours per week, plus an additional one-hour weekly Leadership Laboratory, consisting of advanced leadership experiences in officer-type activities.  
Prerequisite: 322

**422 National Security Forces in Contemporary American Society II**

Continuation of 421.  
Prerequisite: 421

The following courses allow students to gain credit for certain non-classroom experiences. Permission of department chair is required. A maximum of three credits may be applied, two of which must be from 450, Four-Week Field Training (FT), except for cadets participating in 451, Cadet Training Assistant (CTA), who are able to accrue a maximum of five credits of experiential learning toward the 132 credits required for graduation. Graded on S-R basis.

**450 Four-Week Field Training**

**2 credits**

Training and evaluation on an Air Force base during the summer. The experience is designed to develop military leadership and discipline, provide AF officership training, orientation and motivation, and determine officer potential. These objectives are provided to conform to the standards of a structured military environment as well as teach the participant how an Air Force base operates. The syllabus provides for a minimum of 270 hours of scheduled activities—157 hours of total core curriculum hours consisting of Air Force orientation, leadership training, and officership training. Additional hours are required for Flight Training Officer Time (FTOT) and cadet meetings, etc.  
Prerequisite: 212

**451 Cadet Training Assistant (CTA)**

**2 credits**

A cadet who previously completed Field Training and who successfully competes to be assigned as a staff member in a 4- or 6-week field Training. Discharges staff responsibilities to meet the objectives described in AERO 450.

**452 Professional Development Training (PDT)**

**1 credit**

The objective of PDT is to provide opportunities to cadets to gain knowledge and appreciation for the human relations and leadership challenge encountered by junior Air Force officers. Further, the program is designed to motivate cadets in their pursuit of an Air Force career. Normally open to junior and senior contracted cadets who have completed Field Training. However, selected AERO 100 cadets may participate in some of the PDT programs.

**Art History (ARTH)**

Stansbury-O'Donnell (chair), D'Alleva, Swanson, Webster, Nordtorp-Madson\*, Welch\*

The visual arts constitute the physical legacy of past as well as present civilizations. Whether in the form of painting, sculpture, architecture, pottery, textiles, photography, or other media, they express the myths, beliefs, and structures of society, allowing us to glimpse the vision of the individuals and culture who created the works. Understanding the art and artifacts of earlier times and of other cultures gives us greater insight into our own culture and its legacy.

The Art History program offers a comprehensive, chronological and geographical exploration of the arts and architecture of the Western and non-Western worlds. Courses include an emphasis upon the critical evaluation and analysis of works of art, and exploration of the cultural, social, polit-

## Art History

ical, and religious contexts behind the arts, and an examination of the broader relationships between different arts and cultures.

With its interdisciplinary approach, an undergraduate art history major is an important part of liberal arts studies. It includes a wide-ranging knowledge of mythological and religious beliefs and draws parallels to historical, literary, theological, and technological developments of a period. It also develops analytical thinking and writing skills through research papers and projects.

The liberal arts and interdisciplinary nature of the major can be combined with other majors such as Theology, History, Philosophy, or English, or with other programs emphasizing professional skills, including Journalism, Communication, or Elementary Education.

With careful planning of one's program of studies along with an internship in one of the metropolitan area museums, galleries, or corporate collections, this major can lead to entry level employment related to the visual arts. It can also prepare students for graduate study of art history, which in turn can lead to academic or professional museum positions.

### Major in Art History

151 Introduction to Art History I

152 Introduction to Art History II

211 Methods, Approaches, and Problems in Art History

480 Senior Presentation and Paper

*Plus four credits from each of the following areas:*

Ancient Art (300, 305, 310, or equivalent)

Medieval Art (330, 335, or equivalent)

Renaissance & Baroque Art (320, 340, 342, 345, 347, or equivalent)

Modern Art (350, 355, 392, or equivalent)

Non-Western Art (285, 286, 291, 320, 391, or equivalent)

Media Studies (architecture and media other than painting and sculpture – 280, 285, 286, 391, or equivalent)

A single course may fall into more than one area, but may only be applied to a single area.

Students taking courses abroad may also substitute one course taken abroad for one of the advanced studies course areas (with the exception of Non-Western Art) with prior approval of the chair of the department.

*Plus four credits meeting one of the following criteria:*

- a second course in one of the above six areas
- an internship or other form of experiential learning, including research and preparation of exhibits
- an art history course taken abroad
- a studio art course

*Allied requirements:*

*Eight credits, chosen from the following four options:*

A second course in History or a fourth course in one foreign language

Four credits total in Music or Theater

COMM 160 Electronic Media Production

JOUR 220 Design Concepts of Communication

### Minor in Art History

151 Introduction to Art History I

*or*

152 Introduction to Art History II

*Plus:*

Sixteen credits chosen with the approval of the department chair or a department adviser.

#### **151 Introduction to Art History I (formerly 111)**

An introduction to the development of architecture, sculpture, and painting from prehistoric times to about 1400. Includes ancient and medieval European, Near Eastern, Chinese, Japanese, South Asian and pre-Columbian art. Particularly recommended for non-art majors. This course fulfills the Human Diversity requirement in the core curriculum.

#### **152 Introduction to Art History II (formerly 111)**

An introduction to the development of architecture, sculpture, and painting from about 1400. Includes Renaissance, Baroque, and Modern European art, as well as Chinese, Japanese, African and Native American art and considers the role of women in art. Particularly recommended for non-art majors to fulfill the fine arts requirement.

**211 Methods, Approaches, and Problems in Art History**

An introduction to the methods and problems of art history, including the theoretical approaches to art and its history, the examination and analysis of the work and its medium, the role of the museum and gallery in the study of art, and bibliographic tools of the different disciplines of the field. Prerequisite: 151 or 152.

**280 Sacred Architecture and Space**

Throughout history, humans have set aside spaces for religious purposes. Frequently these are the most visible remains or representatives of a culture and are keys to understanding the place of humans within the world and universe. This course examines sacred architecture and spaces from a variety of perspectives, including materials and structure, ritual function and liturgy, decoration, symbolism, physical context, and social/religious context. The course will examine not only Christian churches, but will also examine non-Christian and non-western traditions of religion and architecture.

**285 Arts of Africa and the African Diaspora**

The continent of Africa presents a world of contrasts: from the powerful trading empires of the Sahel to the small scale, nomadic societies of the Kalahari. This course will survey the arts and cultures of Africa, drawing on recent breakthroughs in archaeology, anthropology, and art history to explore the diversity and creativity of past and present African artists. In addition, the course will address the expansion of African culture to the New World, a process that began tragically in the Middle Passage, but emerged triumphantly in the artistic traditions of the Diaspora peoples. This course fulfills the Human Diversity requirement in the core curriculum.

**286 Women's Art in Cross-cultural Perspective**

What is "women's art"? Is the definition of women's art consistent across cultures? What are the conditions of women's artistic practice, and how do women address vital social, spiritual, and political issues through their art? These are the questions to be addressed in this course, an interdisciplinary study of women's art that focuses on case studies in Africa, the Americas, the Pacific, and Asia.

**291 Topics in Non-Western Art**

This course number covers a range of offerings in the art and architecture of Asia, Africa, Oceania and Latin America. Offerings will vary from year to year, but will usually provide a comprehensive survey of the arts of a wide region such as Asia or Africa or of a major religion such as Buddhism or Islam. A more detailed examination of a single country such as China or Mexico may also be included among offerings. This course fulfills the Human Diversity requirement in the core curriculum.

**295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**300 The Ancient Near East and Egypt**

A survey of the arts of the Stone and Bronze Ages, including the civilizations of Mesopotamia, the Indus Valley, Egypt, the Near East, and the Aegean Sea. The use and problems of archaeology in the understanding of ancient cultures will be discussed.

**305 Greek Art and Archaeology**

A survey of the art and architecture of ancient Greece from the fall of the Bronze Age civilizations to the end of the Hellenistic period. Particular attention will be given to sculpture, vase painting, and the relationship of art to the broader culture, to the art of the ancient Near East and Egypt, and to gender relations in ancient Greece.

**310 Roman Art and Archaeology**

A survey of the art of the Roman Republic and Empire to the emperor Constantine in the early fourth century C.E. Issues include the use of art and architecture as an expression of imperial political programs, the creation of urban architecture and the everyday environment of the Romans, and Rome's relationship to Greece and the Near East.

**320 Art and Culture of Colonial Mexico**

In 1521, the Spaniard Hernando Cortés and his army conquered the Aztec city of Tenochtitlan and assumed control of a land that later came to be known as Mexico, initiating a period of transformation, innovation, and synthesis called the Colonial era (1524 to ca. 1810). The art and architecture created during this time reflects the processes of conflict, resistance, and adaptation that ensued as a result of the collision of two cultures. This course surveys the historical context in which the painting, sculpture, and architecture of Mexico were created, from the conquest to the rise of the independent Mexican nation. A knowledge of major works and monuments will be stressed; however, the emphasis of this course is placed on an understanding of the general concepts and issues that affected art and culture in the Colonial era. Both Spanish and pre-Columbian art and culture

will be investigated in order to understand the unique context and characteristics of the visual culture of Mexico during this formative period. This course fulfills the Human Diversity requirement in the core curriculum.

### **330 Churches and Mosques in the First Millennium**

This course examines the formation and development of the first Christian and Islamic art and architecture during the first millennium C.E. of Europe and the Mediterranean. The class will examine the development of religious structures for these new religions, the role of visual images in both religious and secular contexts, and the influences that these cultures exerted on each other. Areas to be covered include: the Early Christian period; the Germanic, Celtic, Anglo-Saxon, Scandinavian cultures of the sixth to eighth centuries; the Carolingian and Ottonian periods; Byzantine art and architecture; Islamic art and architecture.

### **335 Cathedrals, Monasteries, and Caliphates**

A survey of the arts in Europe during the Romanesque and Gothic periods, c. 1000-1400. Emphasis will also be given to contemporaneous currents in Byzantine and Islamic art and their influence on the art of the West.

### **340 Southern Renaissance Art and Society**

A survey of the art and architecture of Italy, Spain and Portugal from the fourteenth through the sixteenth centuries. The course will focus on issues of style, patronage and iconography.

### **342 Renaissance and Reformation in Northern Europe**

A survey of the art and architecture of northern Europe from the fourteenth through the sixteenth centuries. This course will examine the impact of the Protestant Reformation on the art of this era, and examine issues of style, patronage and iconography.

### **345 Baroque and Rococo Art**

A survey of the art and architecture of western Europe in the seventeenth and eighteenth centuries. Emphasis will be given to issues of iconography, patronage, and style.

### **347 Golden Age of Spain**

The sixteenth and seventeenth centuries were an age of great triumph for the kingdom of Spain. For a brief but glorious era, the Spanish empire was the most powerful force in the western world. Suffused in gold and riches from its colonies in the New World, Spanish culture prospered and flourished. It was during this intoxicating "Golden Age" that Spain's greatest artistic masterpieces were produced. This course explores the historical development of Spanish painting, sculpture, and architecture, focusing on the social, political, and religious issues that affected artistic production. Particular emphasis is placed on the key figures in the history of Spanish art: El Greco, Zubarán, Ribera, Velázquez, Murillo, Martínez Montañes, and Pedro Roldán. The art of Spain's New World colonies is also examined.

### **350 Nineteenth Century: Neoclassicism to Symbolism**

A survey of the art of the nineteenth century in Europe, beginning with the study of the Neoclassical movement. The course will examine issues of patronage as well as stylistic and thematic aspects of and economic, political and sociological influences on the successive movements of Romanticism, Realism, Impressionism, Symbolism and Post-Impressionism.

### **355 Twentieth Century: Cubism to Installation**

Twentieth Century art will examine the stylistic, thematic and iconographic aspects of the modern movements in Europe, beginning with Fauvism and other manifestations of European Expressionism, Cubism, Orphism, Futurism, De Stijl, Dada, Surrealism, Art Informal and Tachisme, Optical and Pop Art, Photo-Realism, Conceptual Art, and Neo-Expressionism.

### **391 Native American Art**

An examination of the art of the Native Americans from the prehistoric period to the present within the context of distinct geographical regions: Woodlands, Plains, Plateau, Northwest, and Arctic. This course fulfills the Human Diversity requirement of the core curriculum.

### **392 American Art**

A survey of the painting, sculpture and household objects in the United States from the colonial period to the present time. Relationships to European and indigenous movements will be traced.

### **475, 476, 477, 478 Experiential Learning**

These courses allow students to gain credit for certain non-classroom experiences. (These do not include studio art courses.) Normally open to junior and senior students. Permission of the department chair is required. Credit for experience is normally sought prior to its occurrence. See the complete description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

Prerequisite: previous course or courses in art history

**480 Senior Presentation and Paper (formerly 494)****0 credit**

During the senior year or earlier, art history majors are expected to write a major research paper with an abstract and to describe the results of their research in a short oral presentation. The purpose of this paper and presentation is to allow the student to demonstrate competency in art historical methodology and to gain some experience from presenting the results to a group of peers.

Normally, this requirement is done in lieu of the regular paper assignment for one of the upper-level courses. The topic should be chosen in consultation with the instructor of the course by the end of the second week of the semester and should be completed no later than six weeks prior to graduation. In addition, students will present a short oral report on their research to a departmental symposium to be held prior to graduation. Registration for 494 should be made during the semester that the student anticipates writing the paper. A mark of pass or fail will be assigned upon completion.

**483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**491, 492, 493, 494 Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

Prerequisite: permission of the instructor or supervisor and previous work in art history

**Athletic Coaching****Athletic Training Certification**

*See Department of Health and Human Performance.*

**Behavioral Neuroscience**

*See Department of Psychology.*

**Biology (BIOL)**

Chaplin (chair), Cruise, DeJong, Emms, Evarts, Hartung, Manske, Nelson, Sherer, Sullivan

The Department of Biology encourages and supports diverse interests by offering both basic and specialized courses that reflect the variety of activities biologists undertake and that prepare students for challenging careers in biology.

Courses emphasize the process of science (the importance of asking the right questions, developing methods to answer these questions and critically evaluating the results of these investigations) in addition to the descriptive aspects of biology. The purpose of this approach is to prepare students who are able to understand and develop with a science that is actively changing.

Courses numbered 101-199 are intended for specialized groups of non-majors and cannot be used to fulfill either the major or minor requirements in biology.

The biology major curriculum is divided into three tiers of courses offering increasing levels of challenge with increased reliance on use of the primary literature and involving more independent work. All students who elect to major in biology are required to take the introductory series of four courses in the first of these tiers (BIOL 201, 202, 204 and 206). These core courses cover the fundamental concepts of modern biological thought across the spectrum of sub-disciplines within the field.

The second-tier courses (301-399) introduce additional areas of biology and further develop concepts and topics from the first-tier courses. Some second-tier courses may be taken by students prior to completion of BIOL 206. Each of the courses in the third and final tier (401-498) requires the completion of specific second-tier courses. This provides an opportunity for advanced investigations emphasizing use of the primary literature and independent research projects. In addition, research and individual study courses (BIOL 491-498) are offered to students who wish to pursue in-depth studies in the laboratory or in a particular subject area of their choosing. These courses may be used to fulfill the 400-level requirement for the major.

## Biology

Students planning to continue studies in biology after graduating from St. Thomas should carefully examine the entrance requirements for the graduate or professional programs they expect to pursue. To help students customize their program of study, the department allows some flexibility in its allied course requirements in physics, mathematics, statistics and computer science. Students are encouraged to draw on the experience of the biology faculty and to plan their program in consultation with their biology adviser.

### Biology Honor Society

Beta Beta Beta, the national biology honor society, chartered the Gamma Tau chapter at St. Thomas in 1990. The purpose of this organization is to recognize and encourage excellence in the study of biology, and to sponsor events and services of interest to biology students. The organization has a particular interest in promoting and recognizing student research, and encouraging students to consider vocations in the field of biology. Beta Beta Beta provides opportunities for presenting and publishing student work on a regional and national level.

Students are eligible for regular membership who have completed three courses in the department, with at least one course above the introductory major's level, and have a grade point average of 3.0 or better in biology. Associate membership in the chapter is available to all interested students.

### Biology Honors Program

Candidates for graduation with honors in biology must complete one full course or two half-courses in 400-level Research (BIOL 491-494), present and defend a thesis based on their work; achieve grade point averages of at least 3.50 in the major, 3.25 in departmental and allied courses and 3.00 overall; and present their research at a scientific meeting beyond the St. Thomas community.

### Biology-Related Professions

Students interested in a career in the health professions should consult the university's pre-health professions adviser. For information concerning health professions-related internships as well as further information regarding the health professions, see Pre-Professional Programs in this catalog.

For information on the teaching Licensure Program in Life Science, see Science Licensure Programs in this catalog. Students interested in specializing in biology at the elementary-school level should strongly consider the integrated major in Science and Mathematics Major for Elementary Education (SMEE) described elsewhere in this catalog.

Students interested in an ecology-oriented career should see listings for environmental studies, geology, and geography majors described elsewhere in this catalog and should consult with a departmental adviser to choose appropriate courses.

### Major in Biology

- 201 Diversity and Adaptation
- 202 Genetics and Population biology
- 204 Cellular and Molecular Biology
- 206 Global Ecology (2 credits)

*Plus twenty-two credits, at least four of which must be in courses numbered 400-498, from:*

- 210 Introduction to Laboratory Research (2 credits)
- 211 Introduction to Field Research (2 credits)
- 295-298 Topics
- 315 General Botany
- 330 Animal Behavior
- 333 Ecology
- 349 Comparative Anatomy and Physiology I
- 350 Comparative Anatomy and Physiology II
- 353 Microscopic Anatomy
- 354 Neurobiology
- 356 Microbiology
- 360 Genetics
- 371 Cell Biology
- 391, 392 Research (2 credits)\*
- 430 Behavioral Ecology
- 434 Field Biology
- 435 Aquatic Biology
- 462 Molecular Biology
- 463 Immunology
- 465 Developmental Biology
- 471 Evolution
- 483-486 Seminar
- 487-490 Topics
- 491, 492 Research (2 credits)\*
- 493, 494 Research\*

495, 496 Individual Study (2 credits)\*

497, 498 Individual Study\*

CHEM 440 Biochemistry I\*\*

\*A maximum of four credits in Research and/or Individual Study will be credited toward the requirements of the major.

\*\*CHEM 440 may be counted toward the major as a 300-level elective course.

*Allied requirements:*

CHEM 111 General Chemistry I

CHEM 112 General Chemistry II

CHEM 201 Organic Chemistry I

The normal expectation is that students will complete 111-112 during the freshman year and 201 during the sophomore year.

*Plus at least three of the following selected in consultation with the departmental adviser:*

CHEM 202 Organic Chemistry II

*or one of:*

MATH 109 Calculus with Review II

MATH 113 Calculus I

*or one of:*

MATH 303 Statistics for the Applied Sciences

QMCS 220 Statistics I

*or one of:*

PHYS 109 General Physics I

PHYS 111 Introduction to Classical Physics I

Alternative course combinations to satisfy elective allied requirements may be proposed by majors subject to prior approval by the departmental curriculum committee.

Courses taken at other colleges by students already matriculated at St. Thomas may be credited toward the requirements of the major only with prior and explicit written approval of the department transcript evaluator. Approval will be granted only to reconcile schedule conflicts which otherwise would be unavoidable, to provide opportunities to enroll in appropriate courses that are not available in the St. Thomas curriculum, or to rectify problems arising from other special circumstances. These limitations apply to all requirements of the major, including courses in the allied requirements.

Transfer students desiring credit toward the major for work completed prior to matriculation at St. Thomas should contact the transcript evaluator in the Office of the Registrar before seeking departmental approval.

All biology coursework to be credited toward the requirements of the major must be evaluated using the standard grading system.

### **Minor in Biology**

201 Diversity and Adaptation

202 Genetics and Population Biology

*Plus:*

Twelve additional credits in biology courses numbered 200 or above, selected in consultation with a biology faculty member.

### **101 General Biology**

Emphasizing biology as a creative, investigative process and its relevance in today's world, this course provides an overview of cell biology, genetics, physiology, and human impact on the environment. Two laboratory hours per week. Not open to biology majors, pre-professional students, or students who have completed BIOL 105.

### **102 Conservation Biology**

An introduction to the basic concepts of conservation biology, including the history of conservation, the value of biological diversity, threats to biodiversity, conservation at the population, species, and community levels, and applications to human activities. Laboratories will emphasize data collection and analysis, and the practical application of conservation practices. This course is designed to meet the needs of the Environmental Studies major for a core course in environmental biology. Two laboratory hours per week.

### **103 Nature and Society**

Exploring the natural systems and laws that led to the development of life on earth and are essential for the continuing support of that life; how human activities and social structures may alter this natural support system; basic principles underlying the use of natural resources that can explain the presence or absence of ecological problems. Two laboratory hours per week.

### **105 Human Biology**

An introduction to cells, genetics, development and the human body, and the impact of humans on the environment. Laboratories will emphasize investigative scientific problem solving and creative thinking. Does not fulfill entrance requirements for some health professions programs. Pre-health professional students should consult the Health Professions Adviser. This course is designed to meet the need of social work and psychology majors. Two laboratory hours per week. Not open to biology majors, or students who have completed BIOL 101.

### **201 Diversity and Adaptation**

A survey of living organisms with emphasis on their origins, relationships, and adaptation to their environment. An examination of structural and functional bases of adaptation. Laboratory work will emphasize hypothesis testing, experimental design, data collection and analysis. Three laboratory hours per week.

Prerequisite: Concurrent registration in CHEM 111 strongly recommended.

### **202 Genetics and Population Biology**

A consideration of the mechanisms of heredity, evolution, and population ecology, using a problem-solving approach. Topics include: Mendelian genetics, genetic mapping, population genetics, selection theory, speciation, and the growth and regulation of populations. Laboratory work will emphasize techniques for data analysis. Computer simulation will be employed. Three laboratory hours per week.

Prerequisite: 201; concurrent registration in CHEM 112 strongly recommended.

### **204 Cellular and Molecular Biology**

An examination of structure and function emphasizing unifying principles and regulatory mechanisms in cells. Coverage includes biologically important molecules and macromolecules, organelles and organellar systems, growth, metabolism, gene expression, and cellular differentiation. Laboratory work emphasizes experimental methods and data-based reasoning. Four laboratory hours per week.

Prerequisites: 202, CHEM 112, and concurrent registration in CHEM 201

### **206 Global Ecology**

**2 credits**

An exploration of ecological processes that operate at a global level and human influences on these processes: physical causes of climate variation, effect of climate on the distribution of organisms and biological communities, energy flow and nutrient cycles within communities and within the entire biosphere, effect of human activity on extinction rates and on the health of natural ecosystems. Case studies will integrate cellular, organismal, and ecological approaches to several of these processes.

Prerequisites: 201 and 202; 204 and CHEM 101 or 111 strongly recommended

### **210 Introduction to Laboratory Research**

**2 credits**

An introductory experience in the pursuit of laboratory based research problems in biology. Students work in teams to perform experiments designed to answer questions in a specified area of biology, maintain a journal of these experiments and their observations, and study and discuss pertinent literature. Emphasis on the application of the scientific method to biological problem solving, the role of research teams in science and the communication of findings to others as the end product of science. Area of investigation varies with the research interests of the instructor(s) for the course. Offered only in January term.

Prerequisite: Open to biology majors or prospective majors; BIOL 201. Preference given to students in their first year of study in the discipline.

### **211 Introduction to Field Research**

**2 credits**

An introductory experience in the pursuit of field-based research problems in biology. See BIOL 210 for other details concerning this course.

### **215 Regions Hospital Volunteer Program**

**0 credit**

Students volunteer for four hours a week at Regions Hospital in St. Paul serving in various patient care areas. Included in this year-long program, the student will have experience with the emergency room, the burn center, physical and occupational therapy, nursing stations specializing in orthopedics, pediatrics, surgery, medicine and obstetrics. This service gives the students the opportunity to test their interest in health care, obtain knowledge, gain experience, and provide service to the community.

### **216 Nursing Assistant Training Program**

**0 credit**

Volunteers who have completed 215 are eligible for the Nursing Assistant Training Program offered at Regions Hospital in St. Paul. Topics include hospital organization, patient care techniques, CPR, sterile techniques, medical ethics and patient communication. Students will also become eligible to apply for paid positions as patient-care assistants at the hospital. Offered in January Term.

Prerequisite: 215

**217 Students and Physicians Program****0 credit**

The Students and Physicians Program at St. Joseph's Hospital provides students who are nursing assistants with the opportunity to accompany a physician during his/her duties at the hospital. This one-on-one experience allows students the opportunity to observe the daily work of physicians and to discuss with them the nature of a medical career. Available in January Term.

Prerequisite: 216

**218 Pre-dental Internship Program****0 credit**

The Pre-dental Internship Program, a cooperative program between the university, the School of Dentistry at the University of Minnesota, and the American College of Dentists, provides students with the opportunity to learn about the dental profession through observation at a variety of dental practices. The program also includes seminar sessions at which students learn about the business and management sides of dentistry, admissions procedures for dental school, trends in the dental profession, different models for establishing a dental practice, etc.

**291, 292 Topics without laboratory****295, 296, 297, 298 Topics**

Courses in this category may be credited toward the requirements of the major depending on appropriateness of content, and with prior and explicit written approval of the instructor and the department chair. The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

Prerequisite: Permission of the instructor

**302 Animal Diversity**

This course emphasizes the variety of morphological and physiological solutions that have evolved to satisfy the requirements of life as an animal in water and on land. Primary focus is on invertebrates. Students have access to marine and freshwater aquaria and to natural habitats for class study and individual projects. Three laboratory hours per week.

Prerequisite: 202; CHEM 111

**315 General Botany**

A broad consideration of plant diversity, ecology, levels of organization, reproduction, growth and development, and function. Laboratories explore plant geography, taxonomy and diversity, morphology, anatomy, and physiology. Three laboratory hours per week. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: 202; completion of or concurrent registration in CHEM 111, or permission of instructor

**330 Animal Behavior**

The study of animal behavior from an evolutionary perspective. The adaptive value of behaviors such as display, habitat selection, foraging pattern, and mating system is examined. Theoretical analyses of sexual selection and the evolution of cooperation and altruism are considered. Laboratory work emphasizes the measurement and analysis of animal behavior under natural conditions. Four laboratory hours per week.

Prerequisite: 202; 206 recommended

**333 Ecology**

An exploration of the major concepts in modern ecology, including ecophysiology and adaptation, population growth and regulation, community and ecosystem ecology, and biodiversity and conservation biology. Laboratory and field work will complement these topics and will emphasize careful experimental design and statistical analysis of data. Four laboratory hours per week.

Prerequisite: 206; QMCS 220 recommended

**349 Comparative Anatomy and Physiology I (formerly 323)**

Examination of the functional morphology of the vertebrate skeletal, muscular, nervous, endocrine and reproductive systems. Emphasis will be placed upon the evolution, development and function of these systems as well as the control and integration of all organ systems in vertebrates. This course may be taken as part of a two-semester sequence with BIOL 350 but may also be taken alone. Four laboratory hours per week.

Prerequisite: 204 or permission of instructor

**350 Comparative Anatomy and Physiology II (formerly 342)**

An examination of the functional morphology of the vertebrate cardiovascular, respiratory, renal, and digestive systems, including control and integration of organ systems, adaptation to environment, and evolutionary development in vertebrates. Laboratory work will emphasize functional comparisons of vertebrate organ systems and an experimental approach to physiological problems. Four laboratory hours per week.

Prerequisites: 204; QMCS 220 strongly recommended

### 353 Microscopic Anatomy

Microscopic anatomy of the basic tissue types and selected organ systems of vertebrates, stressing relationships between structure and function. Emphasis is on humans and other mammals. Laboratory work includes preparation of fresh tissues for microscopic study. Four laboratory hours per week.

Prerequisite: 204

### 354 Neurobiology

An integrative approach will be used to study neural processes from the cellular, systems, and behavioral perspectives. Topics will include how information is carried by neural tissues, the ionic basis for neuronal potentials, neurotransmitters and synaptic transmission, transduction and processing of sensory information, motor systems, and the neurobiology of learning, memory and behavior. Psychology and behavioral neuroscience students not meeting the prerequisites are encouraged to discuss enrollment with the instructor. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisites: 204 and CHEM 202 or permission of instructor

### 356 Microbiology

An in-depth study of the biology of microorganisms directed at gaining an understanding of the mechanisms that underlie the functions of bacteria and viruses. The importance of microorganisms as they relate to human disease, industry and the environment will be explored through lectures, readings from the literature and discussions. Laboratory includes an independent research project done in collaboration with the professor and peers. Four laboratory hours per week.

Prerequisite: 204; completion of or concurrent registration in CHEM 202

### 360 Genetics

Detailed consideration of specific topics in transmission, molecular, and population genetics. Eukaryotic and prokaryotic systems discussed. Genetic reasoning and analysis will be emphasized. Three laboratory hours per week.

Prerequisite: 204; CHEM 202

### 371 Cell Biology

An advanced investigation of topics in cell structure and the regulation of cellular activities, including signal transduction, protein transport, cell-cycle regulation, and cellular movement, emphasizing molecular mechanisms, current concepts and their experimental basis. Includes significant use of the primary literature. Four laboratory hours per week.

Prerequisite: 204; CHEM 202

### 391, 392 Research

**2 credits**

Original laboratory, field, library or other analytical investigation under the direction of a member of the biology faculty, culminating in either a written research paper or an oral presentation. Upper-class standing not required.

Prerequisite: 210 or 211 or permission of instructor.

### 430 Behavioral Ecology

The influence of natural selection on behavior in relation to ecological conditions. Emphasis is on integration of theoretical and experimental methods. Includes critical reading of papers from the primary literature and completion of a significant independent research project. Four laboratory hours per week.

Prerequisite: 206, 330

### 434 Field Biology

Principles of ecology applied to the study of plant and animal communities. Use of recent primary literature to learn and evaluate field techniques, data collection and data analyses. The laboratory includes a class research project as well as a significant individual research project. Four laboratory hours per week.

Prerequisite: 333

### 435 Aquatic Biology

Characteristics of lakes, streams and other aquatic habitats. Plant and animal communities, water chemistry and productivity of selected ecosystems. Both individual and class research projects focus on aquatic systems. Three laboratory hours per week.

Prerequisite: 333

### 462 Molecular Biology

An investigation of current concepts in molecular biology including gene expression and its regulation, the organization of genetic information, recombinant DNA techniques, oncogenes and genetic engineering. The laboratory consists of a collaborative research project. Four laboratory hours per week.

Prerequisite: 360 or 371

**463 Immunology**

A study of the mammalian immune system emphasizing the genetic and cellular basis of the immune response. Basic immunological concepts will be used to explore the mechanisms of transplantation rejection, autoimmunity, AIDS and other topics of interest. Laboratory will consist of an independent research project done in collaboration with the professor and peers. Four laboratory hours per week. Prerequisite: 360 or 371

**465 Developmental Biology**

Examination of the mechanisms which underlie the structural and functional development of animal embryos, including nucleocytoplasmic interaction, tissue interaction, and differential gene expression. Laboratory work emphasizes an experimental approach to the study of living organisms. Four laboratory hours per week.

Prerequisite: 360 or 371

**471 Evolution**

An advanced exploration of the major concepts in modern evolutionary biology, including adaptation and natural selection, evolutionary genetics and microevolution, paleontology and macroevolution, and molecular evolution. No formal laboratories, but students will be expected to attend bi-weekly tutorials and complete six substantial essays based on library research.

Prerequisites: 204; 330 or 333 or 360; QMCS 220 recommended

**475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**483, 484, 485, 486 Seminar**

Investigation of selected problems in biology at an advanced level, involving student presentations based on the primary literature. Subject will vary and will be announced annually in the class schedule. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

Prerequisite: Upper-class standing and permission of the instructor

**487, 488, 489, 490 Topics**

Courses in this category may be credited toward the requirements of the major depending on appropriateness of content, and with prior and explicit written approval of the instructor and the department chair. The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

Prerequisite: Permission of the instructor

**492 Research****2 credits**

Same as for 494, except that written research paper is not a thesis.

**494 Research**

Original laboratory, field, library, or other analytical investigation under the direction of a member of the faculty, culminating in the writing of a formal thesis in standard scientific format, including a literature review. Oral presentation of the work at a research symposium required.

Prerequisite: Upper-class standing and permission of the instructor and the department chair

**495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**Business****Division of Business**

W. Raffield, director; Fisher, director of student services

The Program in Business Administration offers the opportunity to acquire a general understanding of decision making within a business context. Students begin by building a foundation of basic knowledge and skills with courses in economics, statistics, computer concepts, and communications. They then take a series of business courses that span the functional areas of business. These functional areas are: accounting, marketing, finance, operations management, business law, and principles of management. These courses form a core from which the student may go in several directions.

The emphasis is on combining thorough academic preparation with realistic practical experience. A significant proportion of the students participate in consulting assignments developed through the Small Business Institute. Many also take advantage of the opportunities for internships and cooperative programs with businesses.

The business faculty can enhance the practical experience since a majority of the members of

the department have had significant business experiences.

It is not necessary to concentrate in one of the functional specialties just enumerated. Some students prefer to combine the core (general business) curriculum with study in such other areas as economics, foreign languages, music, or quantitative methods and computer science.

All students who major in business administration must take a minimum of 24 credits in division courses at the University of St. Thomas; a minimum of 12 credits must be in the department of the student's major concentration.

Credits for division courses taken more than eight years ago (five years for credits in department major) will be accepted but will not fulfill current course requirements.

Each major may be adapted to provide preparation for aerospace management. For details, consult the chair of the Department of Aerospace Studies.

### **Major in Business Administration**

One of the business concentrations

*Plus allied requirements for all concentrations (unless otherwise noted):*

*One of:*

MATH	101	Finite Mathematics
MATH	109	Calculus with Review II
MATH	111	Calculus for Business and Social Science
MATH	113	Calculus I

Finance majors are required to take MATH 109 or 111 or 113. The math requirement for all division majors must be completed by the end of the sophomore year.

*Plus:*

ECON	251	Principles of Macro-Economics
ECON	252	Principles of Micro-Economics
QMCS	110	Introduction to Information Processing
QMCS	220	Statistics I

QMCS courses must be completed by the end of the sophomore year. Transfer students who have not had similar courses must complete these courses by the end of their first semester, junior year.

*Plus one of:*

COMM	100	Public Speaking
COMM	105	Communication in the Workplace
COMM	230	Intercultural Communication
ENGL		(200 or above)
JOUR	215	Journalistic Writing in the Workplace
JOUR	311	Persuasion in Writing

### **Concentration in General Business Management**

Students who elect the general business curriculum have the maximum flexibility to freely select courses to meet their specific interests. On the other hand, students may choose to specialize further in one functional area of business. Those choices for further specialization are: accounting, financial management, marketing management, human resources management, operations management, business communications, or entrepreneurship.

ACCT	211	Financial Accounting
ACCT	213	Managerial Accounting
BUS	200	Community Service (0 credit)
BUS	300	Business Ethics (2 credits)
FINC	321	Financial Management
MGMT	340	Management I: Fundamental Business and Organizational Concepts (2 credits)
MGMT	342	Management II: Design of Business and Organizational Process
MGMT	480	Management III: Integrative Issues of Business and Organizations
MKTG	300	Principles of Marketing

*Plus one of:*

ECON	335	Money, Financial Markets and the Economy
ECON	348	International Economics

*Plus one of:*

BLAW	365	Business Law
BLAW	366	Legal Environment of Business
BLAW	367	International Business Law

*Plus allied requirements (see above)*

### Concentration in International Business

The Bachelor of Science in International Business is an interdisciplinary major dedicated to gaining an understanding of how and on what rules the international business community is based. To gain such an understanding requires study in courses taken in five different areas of study such as communication, economics, geography, history, political science and foreign language as well as business and its allied disciplines. An underlying assumption is that the student must first develop an understanding of the domestic business core before knowledge of the international sector is developed.

Not only will an understanding of the language of the region of study be required. The student is expected to spend at least one year gaining an understanding of the culture and living conditions of the area by spending a minimum of one semester abroad, and possibly an entire year through academic and/or business internships. All work abroad must be concluded in the language of the country of choice. If the student decides to concentrate her/his work on an English-speaking country, a language other than English is also required. Work conducted in an English-speaking country must focus on the country of second language choice.

Because of the extensive number of required courses in this program it is important that the student plan carefully. This may result in an extra load in one or two semesters, summer courses and possibly extra time beyond the traditional four years.

In addition, a senior paper is required, the topic of which must be developed early in the student's program under the tutelage of a faculty adviser. The paper must be delivered at a symposium of international business majors, faculty, and executives from the international business community.

Specific courses taken in a foreign university may substitute for St. Thomas requirements. See the director of the International Business program or the director of Student Services to discuss those possibilities.

### Degree in International Business (B.S.)

ACCT	211	Financial Accounting
ACCT	213	Managerial Accounting
BUS	200	Community Service (0 credit)
BUS	300	Business Ethics (2 credits)
FINC	321	Financial Management
IBUS	400	International Accounting/Finance
IBUS	410	International Marketing
IBUS	420	International Management
IBUS	430	International Business Law
IBUS	450	Transnational Business Issues in Management, Marketing, or Business Law*
IBUS	460	Transnational Business Issues in Finance or Accounting*
IBUS	470	Transnational Issues in International Business**
IBUS	480	Transnational Business Seminar
MGMT	340	Management I: Fundamental Business and Organizational Concepts (2 credits)
MGMT	342	Management II: Design of Business and Organizational Process
MKTG	300	Principles of Marketing

\*courses taken abroad

\*\*taken abroad, 470 may be either academic coursework or a business internship

A senior paper

#### Allied requirements:

##### One of:

ECON	346	Country and Area Studies in Economics
POL	105	Politics and Government in Comparative Perspective
GEOG		Country-specific course

##### Plus:

COMM	230	Intercultural Communication
ECON	251	Principles of Macroeconomics
ECON	252	Principles of microeconomics
ECON	348	International economics
LANG		Three semesters beyond 211*
QMCS	110	Introduction to Information Processing
QMCS	220	Statistics I

\*Students for whom English is a second language will take three semesters beyond ENGL 200.

## Business

While abroad, students will take one of three models with the consent of their International Business adviser:

*1) Year abroad academic/internship (16 credits)*

Must be approved by the Department of Modern & Classical Languages for students studying in non-English-speaking countries, plus one semester business internship in a foreign country. (Language credit is possible if approved by the Department of Modern & Classical Languages.)

*2) Mixed Program*

One semester abroad plus an eight-month domestic internship in an international area of business.

*3) Year abroad/fully academic*

One year abroad, totally immersed in academic setting.

There is an option for foreign students who wish to study International Business at St. Thomas

*4) Domestic program for foreign students (International Business Language Intensive)*

English as a foreign language plus an internship in a U.S. company or a foreign company operating in the U.S.

### **Other Options for International Business**

*Double major, Business and Foreign Language*

The student may complete the requirements for both a major in business administration and a foreign language.

*Foreign Study*

Students majoring in one of the business concentrations may study at a foreign college or university for one semester or during the January term. Business majors and minors may also participate in the London Business Semester offered in fall semester.

### **International Business-Foreign Language Intensive**

See Department of Modern and Classical Languages.

### **Concentration in Business Communication**

ACCT	211	Financial Accounting
ACCT	213	Managerial Accounting
BUS	200	Community Service (0 credit)
BUS	300	Business Ethics (2 credits)
FINC	321	Financial Management
MGMT	340	Management I: Fundamental Business and Organizational Concepts (2 credits)
MGMT	342	Management II: Design of Business and Organizational Process
MGMT	480	Management III: Integrative Issues of Business and Organizations
MKTG	300	Principles of Marketing

*Plus one of:*

BLAW	365	Business Law
BLAW	366	Legal Environment of Business
BLAW	367	International Business Law

*Plus one of:*

COMM	100	Public Speaking
COMM	105	Communication in the Workplace

*Plus one of:*

COMM	220	Small Group Communication
COMM	320	Organizational Communication

*Plus:*

Eight additional credits in Communication courses at 200-level or higher, selected in consultation with the chair of the Department of Communication.

*Allied requirements:*

ECON	251	Principles of Macro-Economics
ECON	252	Principles of Micro-Economics
QMCS	110	Introduction to Information Processing and Programming
QMCS	220	Statistics I

The math and QMCS courses must be completed by the end of the sophomore year. Transfer students who have not had QMCS courses must complete these courses by the end of their first semester, junior year.

*Plus one of:*

MATH	101	Finite Mathematics
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MATH	109	Calculus with Review II
MATH	111	Calculus for Business and Social Science
MATH	113	Calculus I

### Other Business-Oriented Majors

There are several options described in more detail in other portions of this catalog that involve business administration courses. Furthermore, the student may elect to complete the requirements of both departments for a double major. Those other options are:

- Economics/Business Administration (see Economics)
- Music/Business Administration (see Music)
- Foreign Language/Business Administration (see Modern and Classical Languages)
- Quantitative Methods/Business (see Quantitative Methods and Computer Science)

### Minor in Business Administration

Students must complete 26 credits with a minimum of 12 credits in Business Administration beyond MGMT 150 completed at St. Thomas. Coursework transferred to St. Thomas must be equivalent to St. Thomas coursework.

BUS	200	Community Service (0 credit)
BUS	300	Business Ethics (2 credits)
MGMT	150	Introduction to Business

*Plus one of:*

ECON	251	Macroeconomics
ECON	252	Microeconomics

*Plus:*

Sixteen credits selected from the Division of Business with approval of the Business Minor adviser. Approval must be on file before the minor is official.

(NOTE: All prerequisites for courses selected for the minor must be satisfied.)

## Business (BUS)

### 200 Community Service

0 credit

This co-curricular experience is required of all Division of Business majors. The course follows the Statement of Purpose of the university to "develop morally responsible individuals who combine career competency...while fostering in the student a tradition of service to the public welfare." Students will develop an awareness of the challenges and responsibilities in meeting the diverse, changing needs of the community while experiencing personal growth and awareness. Students will choose from a variety of volunteer direct-service activities that follow the mission of the university. BUS 200 sections are:

- Economically disadvantaged
- Physical/developmentally disabled
- Environmental issues
- Children and youth
- Service to the elderly
- Student-designed program

This course is graded S/R; it is suggested that this experience be completed by the end of the student's first semester, junior year.

### 295, 296, 297, 298 Topics

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 300 Business Ethics

2 credits

This required half-course introduces the business major to basic themes in business ethics with applications to accounting, finance, law, marketing, and general management.

Prerequisite: Junior standing

### 470 Small Business Institute Project

2 credits

A Small Business Institute project course not associated with any specific discipline, which will provide an opportunity for undergraduate students of any major to transfer their classroom knowledge to a "real world" situation through the use of a professional consulting activity as outlined by SBA rules and procedures.

Prerequisites: Senior standing

### 475, 476, 477, 478 Experiential Learning

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## **Business – International Business**

### **483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### **487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### **491, 492, 493, 494 Research**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### **495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

## **International Business (IBUS)**

### **400 International Accounting/Finance**

This course is primarily aimed at presenting the international implications of the disciplines of accounting and finance in a global environment. The prime thrust of the course is to acquaint the student with the unique considerations which are necessary for decision making for multinational companies.

Prerequisite: FINC 321

### **410 International Marketing (MKTG 330)**

This course surveys basic concepts, principles and theories of international marketing, as well as the essential and complex problems encountered in the international marketplace. Emphasis is on problem solving and decision making within the international marketing environment.

Prerequisite: MKTG 300. Recommended: concurrent registration with IBUS 420

### **420 International Management**

This course will build upon the material presented in IBUS 410. It will ask the question: given the marketing strategy, what might be the requirements of operating systems for delivering the product or service, and what might be some of the implications for the management system? Specific topics will include facilities location, foreign sourcing, direct foreign investment, joint ventures, impact of culture on operations.

Prerequisite: MGMT 342, MKTG 300. Recommended: concurrent registration with IBUS 410

### **430 International Business Law (BLAW 367)**

An exploration of the international legal environment and some of the legal issues and problems that confront businesses as they cross international boundaries. Topics include international trade, foreign investment, transfer of technology, international dispute resolution, and the role of multinational enterprises.

Prerequisite: Junior standing

### **450 Transnational Business Issues in Management, Marketing, or Business Law**

This course is to be taken abroad. It is strongly suggested that this course be taken in the language of the country. Final determination as to the specific course and language will be decided before the course is taken in consultation with the international business adviser.

Prerequisite: Approval of international business adviser

### **460 Transnational Business Issues in Finance or Accounting**

This course is to be taken in the country of choice. International accounting and finance practices are significantly different from those in the U.S. Therefore, the student should be extremely careful in choosing the course. Selection will be made only in consultation with the international business adviser.

Prerequisite: Approval of international business adviser

### **470 Transnational Issues in International Business**

This elective course is to be taken abroad and may include an internship. Students incorporating an internship experience in this course must have prior approval by the international business adviser. If the student is working for an American company, s/he must work in a section of the company where the student's second language is required.

Prerequisite: Approval of international business adviser

### **480 Transnational Business Seminar**

In this course the student will integrate the entire business curriculum. The objective is to investigate the different areas of international business. Included will be a field project with a company involved in international business. The conclusion of this course and the program will be noted by

the completion of a senior paper. The paper will be presented before a conference (held in the summer) including the student's peers, international business faculty, and business executives involved in international business.

Prerequisites: Completion of all IBUS courses

### **Accounting (ACCT)**

Coglitore (chair), Callander, Hartman, J. Mason, McGowan, Minars, Polejewski, J. Raffield, Sathe, Stoffel, Wilson

This program meets the educational provisions set by the Minnesota Board of Accountancy for licensure in Minnesota. Curricular alternatives are available to meet the provisions of other state's boards of accountancy.

#### **Concentration in Accounting**

ACCT	211	Financial Accounting
ACCT	311	Intermediate Accounting I
ACCT	312	Intermediate Accounting II
ACCT	315	Individual Income Tax
ACCT	317	Cost Accounting
ACCT	410	Advanced Accounting
ACCT	416	Auditing
BLAW	365	Business Law
BUS	200	Community Service (0 credit)
BUS	300	Business Ethics (2 credits)
MGMT	340	Management I: Fundamental Business and Organizational Concepts (2 credits)
MGMT	342	Management II: Design of Business and Organizational Process
MKTG	300	Principles of Marketing

*Plus one of:*

ECON	335	Money, Financial Markets and the Economy
ECON	348	International Economics

*Plus allied requirements (see above)*

*Recommended:*

ACCT	417	Advanced Accounting Theory
ACCT	418	Controllership
ACCT	419	Advanced Income Tax
BLAW	466	Advanced Business Law

#### **211 Financial Accounting**

An introduction to accounting enabling the student to achieve a basic working knowledge of accounting and its uses. Emphasis is placed on the need to understand both the conceptual and procedural framework of accounting. An effort is made to integrate "accounting theory" and uses of "accounting information" with practical application. The basic financial statements are explored in some depth.

Prerequisite: Sophomore standing

#### **213 Managerial Accounting**

A study of the uses of accounting data as a basis for decision making and for planning and control. Topics include management uses of financial accounting data and cost-volume and profit analysis, budgeting and introduction to cost accounting.

Prerequisites: ACCT 211, sophomore standing

#### **311 Intermediate Accounting I**

The theory of accounting is studied as it relates to the external financial reporting requirements of profit-oriented businesses. Major subjects include review of the basic financial statements, time value of money concepts and valuation of most assets.

Prerequisite: ACCT 211

#### **312 Intermediate Accounting II**

A continuation of 311. A study is made of the remaining balance sheet accounts with special emphasis on the capital structure of corporations. In addition complex accounting matters such as tax allocation, pension applications, lease capitalization and current value accounting concepts are reviewed.

Prerequisites: ACCT 311, QMCS 110

#### **313 Intermediate Accounting for Finance Majors (311 and 312)**

A presentation of major intermediate accounting topics as they relate to finance managers. Emphasis

## Business – Entrepreneurship and Business Law

on understanding accounting concepts applied in developing financial statements as a basis for analyzing annual reports.

Prerequisite: ACCT 211

### 315 Individual Income Tax

A study of the fundamentals of federal income tax law as it applies to individuals. Topics include: filing status, dependents, gross income, itemized deductions, tax credits, cost recovery, property transactions, and the alternative minimum tax.

Prerequisite: Junior standing

### 317 Cost Accounting

A rigorous study is made of the elements of product costs, including job, process, standard, and variable costing systems and procedures. A managerial emphasis is added through inclusion of cost-volume-profit relationships, budgeting techniques, and other selected topics.

Prerequisites: ACCT 211, QMCS 110

### 410 Advanced Accounting

The special accounting considerations of nonprofit organizations, the formation and operations of a partnership, home and branch office reporting systems and the preparation of consolidated financial statements.

Prerequisite: ACCT 312, Senior standing or permission of department chair

### 416 Auditing

Studies the basis for the auditor's report. Emphasis is on risk analysis, internal control review, audit evidence and procedures, and sampling. Case analysis is used to develop analytic and judgment skills and to enhance communication skills.

Prerequisite: ACCT 312

### 417 Advanced Accounting Theory

**2 credits**

Considers the relevant aspects of the accounting environment and the history of the development of the conceptual framework of accounting with heavy emphasis on current accounting pronouncements.

Prerequisite: ACCT 312 or permission of instructor

### 418 Controllership

**2 credits**

An examination of the controller function. This course will examine, through case study, how a controller assembles financial and other information for operating managers. Topics might include product line analysis, variance analysis, use of accounting data for planning, supervision of budgeting process, and analysis of internal statements.

Prerequisite: ACCT 213 or ACCT 317

### 419 Advanced Income Tax

**2 credits**

A study of the basic principles of business taxation using a code section approach. This course deals primarily with the federal tax law as it relates to corporations and partnerships. The study of S corporations is included in this course.

Prerequisite: ACCT 315

## Entrepreneurship and Business Law

Erstling (chair), Carlock, Carter, Cornwall, Kunkel, Malone

The concentration in entrepreneurship is designed for students who are considering owning their own business at some point in their career. Emphasis is on the development of creative interpersonal and communication skills, leadership and self-esteem, the process of entrepreneurship, and the development and expansion of an individual business.

### Concentration in Entrepreneurship

ACCT	211	Financial Accounting
ACCT	213	Managerial Accounting
BUS	200	Community Service (0 credit)
BUS	300	Business Ethics (2 credits)
ENTR	449	New Venture Strategies
ENTR	450	Entrepreneurship
FINC	321	Financial Management
MGMT	340	Management I: Fundamental Business and Organizational Concepts (2 credits)
MGMT	342	Management II: Design of Business and Organizational Process
MKTG	300	Principles of Marketing

*Plus one of:*

BLAW	365	Business Law
BLAW	366	Legal Environment of Business
BLAW	367	International Business Law

*Plus one of:*

- ECON 335 Money, Financial Markets and the Economy  
ECON 348 International Economics

*Plus one of:*

- ENTR 250 Entrepreneurial Creative Thinking and Problem Solving  
ENTR 352 Change-Agent Skills

*Plus one of:*

- ENTR 348 Franchising Management  
ENTR 349 Family Business Management  
ENTR 350 New Venture Management

*Plus allied requirements (see above)*

### **Business Law (BLAW)**

#### **365 Business Law**

An examination of the common-law rules and principles governing the law of contracts (from contract formation to remedies for contract breach) and torts (negligence and product liability). In addition, the course will analyze the Uniform Commercial Code and its impact upon contracts and sales, as well as general notions of legal reasoning and legal process. This course particularly fits the needs of students concentrating in accounting.

Prerequisite: Junior standing

#### **366 Legal Environment of Business**

A study of the function and process of governmental regulation of business and of the statutory and administrative law framework in which that regulation takes place. Subjects include the nature of law and legal process, business and the Constitution (with emphasis on the regulation of interstate commerce and the pre-emption doctrine), and a limited number of selected regulatory topics such as antitrust, consumer and environmental protection, labor law, employment discrimination, securities regulation and bankruptcy.

Prerequisite: Junior standing

#### **367 International Business Law**

An exploration of the international legal environments and of some of the legal issues and problems that confront businesses as they cross international boundaries. Topics include international trade, foreign investment, transfer of technology, international dispute resolution, and the role of multinational enterprises.

Prerequisite: Junior standing

#### **368 Environmental Law**

Environmental law will survey relevant federal and state statutes and case law to examine how well they serve to maintain and improve the quality of the air, water, soil and life, and strike an appropriate balance between the present consumption of resources and their maintenance for future generations. The course also will explore emerging environmental trends and the formulation of environmental policy.

Prerequisite: Junior standing

#### **369 Gender Issues and the Law**

This course will explore the principle that men and women stand as equals before the law. It will examine the ways in which courts and legislatures have interpreted the principle of equal opportunity to resolve gender issues in the workplace, as well as in other aspects of society that affect access to the workplace, including education, marriage, and the family. It also will provide an historical overview of the law of equal opportunity and will touch upon modern notions of feminist legal theory. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: Junior standing

#### **466 Advanced Business Law**

**2 credits**

A study of Uniform Commercial Code and common law topics, including negotiable instruments, secured transactions, agency and other areas. This course builds upon the legal reasoning skills and subject content of BLAW 365.

Prerequisite: BLAW 365

### **Entrepreneurship (ENTR)**

#### **250 Entrepreneurial Creative Thinking and Problem Solving**

This course will acquaint students with theories and strategies for exercising and understanding their creative potential for imaginative ideas and innovative action; emphasis will be on direct involvement in application of techniques for increasing creative-thinking skills.

**252 Creating the 21st Century**

The exploration and investigation of processes of higher order thinking as they relate to changes and trends that signal the transition to a global society. Students will engage in learning experiences that integrate perceptions of the future of business with issues of change in the social, technological, environmental, economic and political arenas.

Prerequisite: Sophomore standing

**348 Franchising Management**

This course examines several of the most important aspects of starting and managing a franchise business. Specific attention is placed on the following: the characteristics of the franchiser and franchisee; evaluation of franchising opportunities; legal concerns of franchising; the development of appropriate franchising strategies; and the successful planning, implementation, and launching of a new business.

Prerequisite: Junior standing

**349 Family Business Management**

This course will explore the challenges and opportunities facing individuals and families involved in business relationships. Topics addressed will include family-business culture, entrepreneurial influences, key issues and conflicts, career planning, succession and strategic planning, counseling and consulting, professional support relationships and survival skills as a son or daughter in the family business. Parents or other significant family members are invited to audit this course with their son or daughter.

Prerequisite: Junior standing

**350 New Venture Management**

This course focuses on the functional skills and knowledge that are necessary in the smaller business growth and development. It also will help the student develop an understanding and awareness of the way the critical areas of law, management, finance, accounting and marketing need to be integrated and applied for successful small business management.

**352 Change-Agent Skills**

Understanding the process of change in our society and the ways in which this process can be influenced through persuasive skill development is important for anyone wanting to lead effectively. It is a particularly crucial skill for entrepreneurs who strive to introduce new ideas into our business community.

**449 New Venture Strategies**

This course will develop an awareness of the process of new venture creation. It will stress qualitative rather than quantitative analysis and will deal with self-assessment to help students better understand their own interests. It will assist in developing a perspective for assessing new venture opportunities.

Prerequisites: FINC 321, MKTG 300 or 331, MGMT 341 or 340 and 342

**450 Entrepreneurship**

This is the capstone course in entrepreneurship. It will include guest speakers from the entrepreneurial business world, extensive case analysis of entrepreneurial ventures and intensive personal business plan development.

Prerequisite: ENTR 449. Note: This course substitutes for MGMT 480.

**Finance (FINC)**

Palmer (chair), Beckmann, Daugherty, Jaiswal, Jithendranathan, Vang, Williams

Students who concentrate in finance receive preparation for the financial service industries or for financial departments of non-financial corporations. Financial service industries would include banks, insurance companies, and investment firms. In addition to meeting needs for specific preparation, the study of finance is really applied microeconomics.

**Concentration in Financial Management**

ACCT	211	Financial Accounting
ACCT	313	Intermediate Accounting for Finance Majors
BUS	200	Community Service (0 credit)
BUS	300	Business Ethics (2 credits)
FINC	321	Financial Management
FINC	324	Advanced Financial Management
MGMT	340	Management I: Fundamental Business and Organizational Concepts (2 credits)
MGMT	342	Management II: Design of Business and Organizational Process
MGMT	480	Management III: Integrative Issues of Business and Organizations
MKTG	300	Principles of Marketing

*Plus one of:*

BLAW	365	Business Law
BLAW	366	Legal Environment of Business
BLAW	367	International Business Law

*Plus one of:*

ECON	335	Money, Financial Markets and the Economy
ECON	348	International Economics

*Plus two of:*

FINC	410	Derivatives
FINC	430	Financial Intermediaries
FINC	440	Investments and Capital Financing
FINC	450	International Financial Management
FINC	480	The Chief Financial Officer

*Plus allied requirements (see above)*

### **300 Finance for Non-Business Majors**

Introduction to the concepts of finance in analyzing decisions. Topics include how to determine the economic value of a company's investment projects, the value of financial securities, the cost of funds used to purchase assets, and the overall management of the firm's assets and liabilities. This course may not be used to meet any requirement for a business major.

Prerequisite: Junior standing

### **321 Financial Management**

An examination of the elements of the finance function of the organization as well as the financial analysis of decisions. Topics include working capital management, acquisition of capital, capital budgeting, cost of capital, theories of valuation, and present value.

Prerequisites: ACCT 213 for non-finance majors; ACCT 313 for finance majors; QMCS 110 and 220 or 200 (205/206); ECON 251, 252

### **324 Advanced Financial Management**

Scope and objectives of financial management in the corporate setting at an advanced level. The course will explore working capital management, risk, valuation, capital structure theory, capital budgeting and other current topics in finance. It will utilize computer-based financial modeling and forecasting.

Prerequisites: ACCT 313, FINC 321, MATH 109 or 111 or 113

### **410 Derivatives**

Introduction to the theory of derivative contracts such as futures and options. Issues of valuation, arbitrage pricing, trading strategies and hedging strategies will be covered. Among the applications to be explored are uncertainty in commodity prices, stock prices, exchange rates and interest rates.

Prerequisite: FINC 324

### **430 Financial Intermediaries**

Concepts, practices and organization for financial management of various financial intermediaries. Asset-liabilities management, duration, swaps, hedges and other concepts will be covered. Banks will be the primary area for study, but the course also will look at other institutions including insurance, funds and thrifts. The course will be based on text, lectures, guest speakers, computer modeling, a bank simulation and examination.

Prerequisite: FINC 324

### **440 Investments and Capital Financing**

The focus of this course is to provide an overview of investment concepts and an exposure to a broad range of investment alternatives. The principle concern of the course is to develop skills necessary to make prudent investment decisions.

Prerequisite: FINC 324

### **450 International Financial Management**

The management of foreign and multinational financial operations. On the basis of international finance theory, students will learn foreign exchange risk management, foreign investment analysis, the financing of foreign operations, comparative accounting, international banking and international tax management.

Prerequisite: FINC 324

### **480 The Chief Financial Officer**

Case studies on the control and treasury functions, and an examination of the information gathering, analytical and decision-making process required of the CFO. Students prepare case briefs for class discussions and formal presentations. Case assignments require students to write extensively

## Business – Management

and challenge their analytical ability. It is recommended that finance majors take this course in their final semester.

Prerequisite: FINC 324

### Management (MGMT)

Anderson, (chair), Elm, Goodpaster, Gorski, Hedberg, R. Kennedy, Knauff, A.T. Mason, McNamara, Militello, Nyquist, Owens, W. Raffield, Shepeck, Trostel

#### Concentration in Human Resources Management

Human Resources Management emphasizes the behavioral aspects of management in preparing students for careers in managing. It attracts students whose interests gravitate toward personnel activities. Those activities would include recruiting; wage and salary administration, training and development, labor relations, and collective bargaining.

ACCT	211	Financial Accounting
ACCT	213	Managerial Accounting
BUS	200	Community Service (0 credit)
BUS	300	Business Ethics (2 credits)
FINC	321	Financial Management
MGMT	340	Management I: Fundamental Business and Organizational Concepts (2 credits)
MGMT	342	Management II: Design of Business and Organizational Process
MGMT	380	Management-Organization Behavior
MGMT	444	Human Resources Management
MGMT	460	Current Issues in Human Resources Management
MGMT	480	Management III: Integrative Issues of Business and Organizations
MKTG	300	Principles of Marketing

*Plus one of:*

BLAW	365	Business Law
BLAW	366	Legal Environment of Business
BLAW	367	International Business Law

*Plus two of:*

CATH	340	Disputed Questions: Christianity and the Management Profession
COMM	320	Organizational Communication
PSY	111	General Psychology
SOC	100	Introduction to Sociology
SOC	251	Race and Ethnicity
SOC	384	Small Groups
THEO	306	Christian Faith and the Management of Wealth

*Plus allied requirements (see above)*

*Recommended:*

MGMT	489, 490	Special Topics: Labor Relations and Collective Bargaining; Compensation and Benefits; Organization Development and Change; Recruiting and Staffing; Training and Development
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#### Concentration in Operations Management

The operations management concentration is concerned with the management of people, material, equipment, information, and other resources used in the production of goods and services by an organization. This concentration includes both behavioral and quantitative aspects of management. Emphasis in this area prepares students for analytical and supervisory positions in areas such as purchasing, materials management, transportation, inventory control, operations scheduling, operations cost control, quality control, and systems and methods analysis.

ACCT	211	Financial Accounting
ACCT	213	Managerial Accounting
BUS	200	Community Service (0 credit)
BUS	300	Business Ethics (2 credits)
FINC	321	Financial Management
MGMT	340	Management I: Fundamental Business and Organizational Concepts (2 credits)
MGMT	342	Management II: Design of Business and Organizational Process
MGMT	345	Operations Management
MGMT	445	Advanced Operations Management
MGMT	480	Management III: Integrative Issues of Business and Organizations
MKTG	300	Principles of Marketing

*Plus one of:*

ECON 335 Money, Financial Markets and the Economy  
 ECON 348 International Economics

*Plus one of:*

BLAW 365 Business Law  
 BLAW 366 Legal Environment of Business  
 BLAW 367 International Business Law

*Plus one of:*

MGMT 346 Materials Management  
 MKTG 350 Marketing Channels and Distribution Systems

*Plus allied requirements (see above)*

*Recommended:*

MGMT 489/490 Special Topics: Use of Simulation in Operational Systems, Project Management, Service Operations, New Paradigms in Operational Systems, Comparative Operations, Total Quality Management, Work Flow and Process Design; Scheduling and Sequencing, Program Management

### **150 Introduction to Business**

This course is designed to serve those students who do not intend to major in business administration but who would like to become familiar with the language and reasoning which takes place in the everyday world of business. Students will be introduced to the various functional areas of business and will examine the social and ethical responsibilities of business. NOTE: 150 will not substitute for a required BA course in any of the BA majors; no required BA course will be waived because a student has taken 150.

### **300 Management for Non-Business Majors**

This course presents a theory of management. Starting with the functions of management (planning, organizing, staffing, directing, and controlling), it examines the nature of structure, authority, accountability, responsibility, motivation and the concept of leadership, and the role of the professional manager.

Prerequisite: Junior standing.

### **340 Management I: Fundamental Business and Organizational Concepts 2 credits**

An introduction to the managerial view of organizational activities, both current and historical. Explores the functions, tasks and responsibilities of management. Through case studies students encounter what real organizations are like, what managers do in them, and why those activities are important to the success of the organization. Course develops business writing and group work skills.

Prerequisite: Junior standing

### **342 Management II: Design of Business and Organizational Process**

The objectives of this course are to expand upon the introduction established in MGMT 340, and to develop specific analytical concepts, skills, perspectives and techniques useful for managing organizations. The course provides students the opportunity to practice and develop skills in the following: formal group written and oral reports, group process skills, project management, and the analysis of an actual organization. This course includes lectures, group work done outside class and a strong fieldwork component. A significant amount of preparation and work is expected to be done outside of class.

Prerequisites: BUS 300, MGMT 340, QMCS 201 or 220

### **344 Labor Relations and Collective Bargaining**

Examines the relationship between management and organized groups of employees, including labor unions and professional associations. Analysis and evaluation of collective bargaining issues, factors contributing to industrial conflict, methods of dispute settlement.

### **345 Operations Management**

An examination of the concepts and techniques utilized in the management of manufacturing and service operations. The focus is on the tactical tools of operations management systems. Topics covered include the management of process, technology, production, quality, inventory, workforce and facilities in operating systems. Offered in fall semester.

Prerequisite: MGMT 342

### **346 Materials Management**

The conceptual and analytical framework of materials management problems. It focuses on the development and implementation of the materials portion of operations systems. It includes topics in purchasing, inventory management, capacity planning, process design, layout, scheduling, and manufacturing planning and control systems. Offered in fall semester.

Prerequisite: MGMT 342

### **380 Management-Organizational Behavior**

This course deals with the study of behavioral science theories and research regarding behavior in organizations. The focus is on the development of skills in the analysis of individual, small group, intergroup and total organization behavior. In addition, the course deals with the development of action decisions from a management perspective regarding organizational behavior.

Prerequisites: MGMT 340 and junior standing

### **444 Human Resources Management**

This course deals with concepts involved in human resources administration in various types of organizations. Key topics include human resource planning, staffing, performance appraisal, compensation and benefits, training, employee/labor relations and career development.

Prerequisite: MGMT 342 and junior standing; MGMT 380 (may take concurrently). (Sociology majors may substitute SOC 386 for MGMT 380.)

### **445 Advanced Operations Management**

This course deals with both the strategic and tactical needs of operations management. It includes recent theories and developments aimed at increasing competitiveness and long/short term productivity. In addition, it stresses the practical application of operations management concepts and the development of problem solving, self-managed team, project management, and presentation skills. This endeavor is facilitated through strong participation in the SBI program. Offered spring semester.

Prerequisites: MGMT 345 and senior standing

### **460 Current Issues in Human Resources Management**

This course provides the student with an understanding of important current issues regarding the utilization of people in organizations and how the human resources function operates in various types of organizations. Students will engage in discussions with senior human resources managers and complete a field project. This course serves as the capstone for the Human Resources concentration and contains the Small Business Institute field project. Offered spring semester.

Prerequisites: MGMT 380, MGMT 444 and senior standing

### **480 Management III: Integrative Issues of Business and Organizations (449)**

This course examines organizational issues from an integrative perspective. It draws on concepts from the entire business curriculum to view the organization as a whole and examine the process of competing.

Prerequisites: Senior standing, MGMT 342, FINC 321, MKTG 300

## **Marketing (MKTG)**

Rexeisen (chair), Abdelaal, Brennan, E. Kennedy, Lawton, Liu, Lundsten, Sauter, Spriggs, R. Sullivan

Students electing the marketing concentration prepare themselves for selling and marketing careers. Marketing specialists also pursue careers in advertising, public relations, marketing research, distribution, and retailing.

### **Concentration in Marketing Management**

ACCT	211	Financial Accounting
ACCT	213	Managerial Accounting
BUS	200	Community Service (0 credit)
BUS	300	Business Ethics (2 credits)
FINC	321	Financial Management
MGMT	340	Management I: Fundamental Business and Organizational Concepts (2 credits)
MGMT	342	Management II: Design of Business and Organizational Process
MGMT	480	Management III: Integrative Issues of Business and Organizations
MKTG	300	Principles of Marketing
MKTG	430	Marketing Management

#### *Plus one of:*

BLAW	365	Business Law
BLAW	366	Legal Environment of Business
BLAW	367	International Business Law

#### *Plus two of:*

MKTG	310	Professional Selling
MKTG	320	Promotion Management
MKTG	330	International Marketing
MKTG	340	Marketing Research
MKTG	350	Marketing Channels and Distribution Systems
MKTG	360	Retailing and Retailing Services
MKTG	370	Buyer Behavior

*Plus two of:*

ECON	335	Money, Financial Markets and the Economy
ECON	348	International Economics
PSY	111	General Psychology
SOC	100	Introduction to Sociology

*Plus allied requirements (see above)*

### **300 Principles of Marketing**

Concepts involved in marketing as a discipline approached from a managerial point of view. Attention is devoted to developing marketing strategies that focus on the needs and desires of customers. The various environmental forces affecting marketing such as the organizational, social, competitive, technological, economic, behavioral, and legal environments are discussed.

Prerequisites: ACCT 211 and ECON 252; or MGMT 150; junior standing

### **310 Professional Selling**

This course teaches an in-depth understanding of how individuals interact with other individuals in a competitive environment. Content of the course includes one-on-one selling techniques, persuasive communication, oral and verbal presentation skills for individuals to groups, and groups to groups. The end result will be that the student is capable of professional selling in both the industrial and consumer areas.

Prerequisites: MKTG 300 or 331; PSY 111 and/or SOC 100 is desirable.

### **320 Promotion Management**

Promotion Management is designed to develop an appreciation for the promotion mix (personal selling, advertising, public relations, sales promotion) by exploring how and why these elements are used by organizations to reach their goals and objectives. Concept fundamentals are explored then integrated into case analysis.

Prerequisite: MKTG 300 or 331

### **330 International Marketing**

International Marketing surveys the basic concepts, principles and theories of international marketing, as well as the essential and complex problems encountered in the international marketplace. Emphasis is focused on problem solving and decision making within the international marketing environment.

Prerequisite: MKTG 300 or 331

### **340 Marketing Research**

This course deals with different types of management tools used in the investigation of marketing problems. Topics include analytical techniques, data sources, research planning and costs. If the student is planning to take this course, it is strongly recommended that it be taken *before* MKTG 430.

Prerequisites: MKTG 300 or 331; QMCS 220

### **350 Marketing Channels and Distribution Systems**

This course is designed to provide relevant theories, concepts, and practices related to the flow of goods and services in and between organizations. Relevant material will be presented about the total distribution system, that is, information about the marketing and the logistics channels. The purpose is to provide an atmosphere where business students can think about and learn to create and integrate marketing and logistics strategy.

Prerequisites: MKTG 300 or 331; QMCS 110 and 220

### **360 Retailing and Retailing Services**

Principles and practices of retailing, non-store retailing services and direct marketing from a management perspective. Topics include: role in channel, demographics, consumer behavior, trends, strategy formulation in image and concept, ownership and formats, trade area and location, buying and sourcing, store design and visual merchandising, operations management promotion, service delivery, controls, non-store retailing, human resource and organization, database management, international.

Prerequisite: MKTG 300.

### **370 Buyer Behavior**

This course is designed to examine both consumer and organizational buying behavior. Major theoretical contributions and empirical research findings from marketing and the behavioral sciences will be reviewed with particular attention given to applying this information to practical business and marketing situations.

Prerequisites: MKTG 300, PSY 111 and/or SOC 100 is desirable

### **430 Marketing Management**

Managerial aspects of marketing, emphasizing modern marketing organizational structure, product

## Catholic Studies

planning, pricing policies, sales management and channel policies. Small Business Institute (SBI) cases are used.

Prerequisites: Senior standing; one of MKTG 310, 320, 330, 340, 350, 360, 370 (340 is desirable.)

### Catholic Studies (CATH)

Briel (THEO), director

The interdisciplinary program in Catholic Studies is designed to allow students to encounter the broad and diverse expressions of Catholic culture. While grounded in Catholic philosophy and theology, the program engages students with the imaginative and sacramental expressions of Catholic life in literature, the arts, social systems and personal experience. The program's interdisciplinary dimension gives students insight into the Church's dynamic interaction with and interpenetration of cultures, traditions, and intellectual life throughout history. By examining the role the church has played in various cultures, students are challenged to take seriously Catholicism's transforming power in every aspect of intellectual, spiritual, and social life.

Faculty who teach in the program are drawn from across the university and are united by a profound respect for Catholicism. They are committed to a high degree of interaction among themselves as well as with students. Students who choose to participate in the program thus enter into a community at once faithful and intellectual.

The program will appeal to students of any faith tradition who seek to deepen their knowledge of Catholicism's rich and living heritage. Its interpersonal approach and opportunities for sustained reflection on important issues invite students to a more profound and mature experience of faith.

The major consists of 32 credits: 20 credits in core courses and 12 credits in electives (two electives for double majors). The minor consists of 16 credits: 12 credits in core courses and four elective credits. Many courses are cross-listed with another department. Students majoring or minoring in other disciplines are invited to take an occasional course in the program at any time.

#### Major in Catholic Studies

- 301 The Catholic Vision
- 304 Literature from a Catholic Perspective
- 307 Faith and Doubt
- 310 Catholic Social Tradition
- 340 Disputed Questions

*Plus:*

Twelve credits in electives chosen from three of the following four categories:

THEO 310 Christian Worship

CATH 305 The Catholic Literary Tradition: Medieval to Modern

An historically based course from the interdisciplinary program in Catholic Studies or a course approved by the director.

An aesthetics course from the interdisciplinary program in Catholic Studies or a course approved by the director

#### Minor in Catholic Studies

- 301 The Catholic Vision
- 304 Literature from a Catholic Perspective
- 307 Faith and Doubt

*Plus:*

Four credits chosen from the following five categories:

CATH 305 The Catholic Literary Tradition: Medieval to Modern

CATH 310 Catholic Social Tradition

THEO 310 Christian Worship

An historically based course from the interdisciplinary program in Catholic Studies or a course approved by the director

An aesthetics course from the interdisciplinary program in Catholic Studies or a course approved by the director

#### 301 The Catholic Vision

At the center of the Catholic vision are the two great works of divine love: creation and salvation. This course considers the implications of these divine works for a radical reconsideration of the world and the human person. Readings are drawn from sacred Scripture, councils, and theologians throughout the tradition with specific attention given to the intellectual and spiritual consequences of Catholic doctrine. Possible authors studied include Augustine, Basil, Francis, Ignatius, Teresa of Avila, Pascal, Newman, Maritain and de Lubac. In addition, the visual arts and works of literature by such figures as Dante, Hopkins, O'Connor and Percy will provide important illustrative examples.

Prerequisite: THEO 101

**304 Literature from a Catholic Perspective (ENGL 334)**

Taking seriously T.S. Eliot's enjoinder that "literary criticism should be completed by criticism from a definite ethical and theological standpoint," this course examines methods of reading and literary texts from a sacramental perspective. The general question informing the course will be, "how does the intellectually serious Christian read works of imaginative literature?" The course explores this issue using works of criticism representing a variety of Christian/Catholic viewpoints. These works of criticism are then applied to literary texts that are explicitly Christian in theme as well as those which invite, or are enriched by, a Christian/Catholic perspective. Ultimately the course's goal is to appreciate how the contributions of the Catholic intellectual tradition, in particular, can enhance our understanding and enjoyment of literature. Works of criticism studied may include those by TeSelle, Scott, Maritain, Lynch, O'Connor and Steiner.

Prerequisites: ENGL 111 and 112; or ENGL 190

**305 The Catholic Literary Tradition: Medieval to Modern (ENGL 335)**

This course surveys literary works with theological or spiritual themes that have contributed to the vitality of Catholic culture. The purpose of the course is to help students realize that Catholic culture has fostered a variety of literary expressions and has produced works which speak compellingly of human experience and sacramental life. Possible readings include selections from *The Divine Comedy*, medieval drama, Sir Thomas More, the Catholic baroque poets, Hopkins, Eliot and Jones as well as novels by writers such as Bernanos, Mauriac, Greene, Waugh, Endo, Spark, O'Connor and Percy. Brief excerpts from great spiritual writers such as Augustine, Ignatius, Teresa of Avila, Newman and Merton will provide an interdisciplinary context for the course.

Prerequisites: ENGL 111 and 112; or ENGL 190

**307 Faith and Doubt**

This course inquires into arguments for and against the credibility of religious claims. Emphasis will be on philosophical questions relating to Catholicism, but readings and discussions will be wide-ranging and determined in part by students' interests. Every question about God and revelation will be related to one issue: the rationality of religious belief, particularly Catholic belief. Possible topics to be explored include the existence of God; the problem of evil; the compatibility of science and religion; tests of alleged revelations and miracles; the role of reason and faith in religious commitment; and personal decision making in a state of doubt about evidence. Texts such as those by the following will constitute required readings: Martin Luther, Simone Weil, Ludwig Wittgenstein, John Henry Newman, Anselm, Thomas Aquinas, Alvin Plantinga and Antony Flew.

Prerequisites: PHIL 115 and THEO 101

**310 Catholic Social Traditions (THEO 325)**

The fundamental belief of the Catholic social tradition is that the human person has a social nature. Because of this nature, the fulfillment of the person is rooted in his or her relationship with society. The church understands society in a broad manner which includes its familial, economic, religious, political and cultural dimensions. Understood thus broadly, Catholic social tradition has generated a tremendous amount of writing from the hierarchy of the church as well as commentaries and insights from theologians, social scientists, philosophers and the laity. This course considers these writings, with attention given to those of the 19th and 20th centuries. Discussions will also focus on the contemporary understanding and application of this rich tradition to United States' society. Possible texts include Vatican II documents such as "Gaudium et Spes" and "Lumen Gentium"; "Rerum Novarum"; and the U.S. Catholic Bishops' "Justice for All".

Prerequisites: THEO 101

**340 Disputed Questions**

This course examines in detail a small, focused set of questions arising from one or more areas of the interdisciplinary program in Catholic studies. Topics will vary from year to year. The topic selected in any given semester will depend on the interests of the students and instructors and on the availability of community resources (for example, guest lecturers). Some examples of possible topics include: Is Christian tragedy possible? Does Catholic belief conflict with the findings of modern science? What is the relationship of Catholicism to various economic systems?

**Chemistry (CHEM)**

Hartshorn (chair), Boyd, Brom, Glorvigen, Ippoliti, Longley, Mabbott, Ojala, Olson, Ovechka, Roberts, Lane\*

The Department of Chemistry offers two degree programs in the field of chemistry: a Bachelor of Science (B.S.) degree and a Bachelor of Arts (B.A.) degree. The department is on the list of schools approved by the American Chemical Society (ACS) for the professional training of chemists, and the B.S. degree is certified by the American Chemical Society. The B.S. has either a chemistry or a bio-chemistry concentration option. This degree is recommended for students who plan to pursue graduate study in chemistry in preparation for college teaching, or advanced research in academic, industrial or government laboratories.

## Chemistry

The B.A. degree requires fewer chemistry courses and offers the possibility of completing a double major if students have a strong interest in another field. Both degrees offer some latitude in the selection of upper level courses, thus allowing the student some flexibility to pursue an interest in a particular area of chemistry. Students graduating with either the B.S. or the B.A. may also qualify for departmental honors.

Chemistry is an excellent major for students interested in biochemistry, food science, forensic science, medicine, medicinal chemistry, dentistry, pharmaceutical chemistry, pharmacology, patent law, polymer science, chemical engineering, environmental science, materials science and other interdisciplinary fields. The major is also suited to students with a complementary interest in other sciences, or in computers, education, economics or business.

There is also a special major for students interested in chemistry and in education. The major for teaching physical science with a concentration in chemistry is outlined in the Department of Teacher Education in this catalog.

### Graduation with Honors in Chemistry

Students graduating with a B.A. or B.S. degree in chemistry may also qualify for departmental honors. Students interested in this designation must consult with the department chair one year (or more) prior to their graduation date. Requirements include:

- 1) a minimum cumulative GPA of 3.25 and a major field GPA of 3.50;
- 2) completion of CHEM 493 or four credits (CHEM 491-492) in research; (participation in one summer of research in chemistry at St. Thomas may be applied in place of two credits; research must be completed at least one semester before graduation);
- 3) preparation of a written thesis in the format of the primary literature;
- 4) successful defense of the thesis before a panel composed of:
  - thesis director (chair of committee)
  - two additional UST chemistry faculty
  - one UST faculty member outside the chemistry department
  - one faculty member from another institution selected in consultation with the thesis adviser (while off-campus examiners are typically chemists, committee members from other disciplines such as biochemistry and physics may be employed when appropriate).
- 5) presentation of research at an off-campus meeting such as the Minnesota Section Undergraduate Research Symposium, Minnesota Academy of Sciences, NCUR, regional ACS meeting, or national ACS meeting.
- 6) All requirements must be completed by April 20 for spring commencement, or similarly early enough to allow for notification of the registrar and academic dean.

All graduating senior majors are required to take an achievement test for purposes of assessment of the major and College accreditation.

In order to receive a degree in chemistry from the University of St. Thomas, transfer students must complete a minimum of sixteen credits in chemistry at the university in addition to the seminar sequence.

### Major in Chemistry (B.S.) (ACS-certified)

- 111 General Chemistry I
- 112 General Chemistry II
- 201 Organic Chemistry I
- 202 Organic Chemistry II
- 300 Quantitative Analysis
- 320 Instrumental Analysis
- 331 Physical Chemistry I
- 332 Physical Chemistry II
- 340 Organic Spectroscopy (2 credits)
- 400 Advanced Inorganic Chemistry
- 481-484 Seminar Sequence (2 credits)
- 491 Research (2 credits) (or a summer research project sponsored by the department)

*Plus eight credits from:*

- 295 Topics (2-credit course offered in J-term)
- 420 Bioanalytical and Forensic Chemistry (2 credits)
- 430 Advanced Organic Chemistry (2 credits)
- 440 Biochemistry I\*
- 442 Biochemistry II\*
- 487 Topics (2-credit course offered in J-term)
- 493 Research

\*required for a B.S. in chemistry with an emphasis in biochemistry, plus a research project in biochemistry

*Allied requirements:*

MATH	113	Calculus I
MATH	114	Calculus II
PHYS	111	Introduction to Classical Physics I
PHYS	112	Introduction to Classical Physics II

*Strongly recommended:*

MATH		an additional course numbered 200 or above
QMCS	130	Problem Solving in the Natural Sciences

**Course Sequence**

All chemistry majors are advised to take 111-112 and MATH 113-114 (Calculus) during the freshman year if at all possible. Then 201-202 and PHYS 111-112 (Introductory Physics) should be taken during the sophomore year. (Note that PHYS 109-110 is not acceptable for the chemistry major). Other sequences of math and physics are much less desirable. If necessary, MATH 113 can be started in the second semester of freshman year; then MATH 114 can be taken concurrently with PHYS 111 during first semester sophomore year.

**Major in Chemistry (B.A.)**

The minimum requirement for a major is 38 credits as specified below; 30 credits (including seminar) comprise the core.

111	General Chemistry I
112	General Chemistry II
201	Organic Chemistry I
202	Organic Chemistry II
300	Quantitative Analysis
320	Instrumental Methods
331	Physical Chemistry I
481-484	Seminar (2 credits total)

*Plus: at least eight credits in courses chosen from the following list:*

Prior to registration for the second semester courses of junior year, each chemistry major should schedule a conference with the department chair in order to plan and discuss course selection for the final three semesters of college. Discussion of post-college plans and goals will be an important factor in course selection.

332	Physical Chemistry II (strongly recommended)
340	Organic Spectroscopy (2 credits)
400	Advanced Inorganic Chemistry*
420	Advanced Analytical Chemistry (2 credits)
430	Bioanalytical and Forensic Chemistry (2 credits)
440	Biochemistry I
442	Biochemistry II
491	Research **
492	Research **
493	Research **
494	Research **

\*Students should note that 332 is a prerequisite.

\*\*Many options are available to students interested in pursuing research. A full unit of research may be taken in one semester as 493 (a second full unit would be 494). A full unit also could be taken in two separate semesters as 491 followed by 492. It is even possible for a student to take one half-course of research through two one-quarter courses (391 followed by 392).

*Plus:*

MATH	113-114	Calculus I and II*
PHYS	111-112	Introductory Physics I-II

\*Students not placing into MATH 113 must take MATH 108, 109 and 114 in order to satisfy the overall calculus requirement.

Math and physics requirements are as specified above plus MATH 200 and/or 201 are highly recommended. The ACS also requires familiarity with computer programming; although many chemistry courses make use of computers, the interested student is well-advised to take an additional course in quantitative methods and computer science.

**Major in Physical Science with a Concentration in Chemistry**

*See Department of Teacher Education*

Students interested in specializing in chemistry at the elementary school level should strongly con-

## Chemistry

sider the integrated Science and Mathematics Major for Elementary Education (SMEE) described under that title in this catalog.

### Minor in Chemistry

A minor in chemistry shall consist of 24 credits in courses as specified below.

111-112 General Chemistry I-II

201-202 Organic Chemistry I-II

*Plus eight credits from the following:*

300 Quantitative Analysis

320 Instrumental Methods\*

331 Physical Chemistry I\*

332 Physical Chemistry II\*

340 Organic Spectroscopy (2 credits)

420 Bioanalytical and Forensic Chemistry (2 credits)\*

431 Advanced Organic Chemistry (2 credits)

440 Biochemistry I

442 Biochemistry II

491 Research (2 credits)\*\*

492 Research \*\*

493 Research\*\*

\*These courses have prerequisites beyond the 16-credit core.

\*\*A student may take one full unit of research for the minor with the approval of the department chair. No special approval is needed for 491 (2 credits) alone.

### Teaching Minor in Chemistry

*See Department of Teacher Education*

### 100 Chemistry in Our World (111)

An introduction to chemistry and its applications to modern society and personal life. The course is intended for non-majors and satisfies a general requirement for one semester of a laboratory science course. The chemistry studied includes the structure of matter, elements and compounds, chemical bonding, reactions, energy changes and an introduction to organic chemistry. The emphasis in the course is the relevance of chemistry in everyday life, and the applications studied will include various topics such as environmental problems, energy resources, chemistry and health, and consumer chemistry. Lecture plus three laboratory hours per week.

### 101 Environmental Chemistry

An introduction to chemistry with particular emphasis on environmental science. Basic chemistry topics covered include the structure of matter, elements, compounds, reactions, energy and energy changes. These topics lead to studies of topical environmental problems and their proposed solutions, including the depletion of ozone in the stratosphere, the Greenhouse Effect and global warming, acid rain, smog, waste disposal, water pollution and the search for non-polluting energy resources. Lectures and laboratory. This course satisfies the lab science requirement for non-majors.

### 111 General Chemistry I (100)

This course and its sequence 112 provide a two-semester introduction to chemistry. Topics include atomic structure, molecular structure, chemical bonding, the periodic table, states of matter, reactions (types, energy changes, equilibrium and rates), properties of the common elements and their ions in aqueous solution, electrochemistry and nuclear chemistry. Lecture plus four laboratory hours per week.

### 112 General Chemistry II

This course continues the study of chemistry begun in 111. See 111 for topics. Lecture plus four laboratory hours per week.

Prerequisite: A minimum grade of C- in 111

### 201 Organic Chemistry I

Study of the various families of organic compounds. Emphasis is placed on structure determination, reaction mechanisms, stereochemistry and spectroscopy in addition to a survey of various reaction types. An introduction to biochemical topics is included. Lecture plus four laboratory hours per week. Prerequisite: A minimum grade of C- in 112

### 202 Organic Chemistry II

Continuation of 201.

Prerequisite: A minimum grade of C- in 201

### 295, 296, 297, 298 Topics

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to

year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 300 Quantitative Analysis

An introduction to quantitative chemical analysis. Topics include sample treatment, the statistical handling of data, equilibria governing acid/base relationships, complexation and redox reactions and the fundamentals underlying titrimetry, spectrophotometry, luminescence and potentiometric methods of analysis. Lecture plus four laboratory hours per week. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: A minimum grade of C- in 112

### 320 Instrumental Analysis

Principles and techniques of operation of modern chemical instrumentation. Topics include the capabilities, limitations and data interpretation of HPLC, GC, capillary electrophoresis, voltammetry, and mass spectrometry. Fundamentals of signal processing, basic circuitry and optical components is also included. The laboratory consists of both structured exercises and a student designed project and report based on an analysis problem of interest to the student. Lecture plus four hours of lab each week.

Prerequisite: 202, 300

### 331 Physical Chemistry I

Introduction to the fundamentals of kinetic-molecular theory, classical thermodynamics, and statistical thermodynamics. Emphasis on the study of chemical reaction equilibria and phase equilibria in gaseous, liquid, and solid systems. Laboratory work involves physicochemical measurements related to thermodynamics and an introduction to the computer as an investigative tool for the physical chemist. Lecture plus six laboratory hours per week. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisites: 202, PHYS 112 and MATH 114

### 332 Physical Chemistry II

Study of chemical systems from the point of view of molecular theory. Introduction to the fundamentals of chemical dynamics and quantum chemistry. Laboratory work involves measurements and computer studies related to chemical reaction kinetics, molecular quantum mechanics and atomic/molecular spectroscopy. Lecture plus six laboratory hours per week. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: 331 or permission of the instructor

### 340 Organic Spectroscopy

2 credits

A more detailed study of various spectroscopic methods, especially as they are employed to determine structures of organic molecules. Coverage includes H-1, F-19, and C-13 NMR, mass spectrometry, ultraviolet and visible and infrared spectroscopies.

Prerequisite: A minimum grade of C- in 202

### 391 Research

1 credit

Work on a problem under the direction of the staff. Primarily literature work.

Prerequisite: Permission of the department chair

### 392 Research

1 credit

Work on a problem under the direction of the staff. Primarily laboratory work.

Prerequisite: 391

### 400 Advanced Inorganic Chemistry

A study of the preparation, structure, bonding and reactions of inorganic compounds. Selected topics include group theory, periodicity, catalysis, bonding theories; main group, coordination, solid state and organometallic chemistry. Lecture plus four laboratory hours per week.

Prerequisite: 202 and 332 or permission of the instructor

### 420 Bioanalytical and Forensic Chemistry

2 credits

The chemistry behind criminal investigations as well as some developments in analysis of biologically important molecules. Topics to be covered include enzyme and DNA analysis, the detection and identification of explosives and fire accelerants, methods of connecting the suspect to the scene of a crime (analysis of fingerprints, fibers glass fragments, soil and gunshot residue), the analysis of drugs and poisons, and the detection of forgeries using ink, paint and materials analysis. The course is designed to have a lab component that uses both instrumental and "wet chemical" methods of analysis. The culminating examination is a mystery that the students will work in teams to solve. It requires some lab work as well as a written report that interprets the information for the "district attorney's office." Offered in January term in even years.

Prerequisite: 300 or permission of instructor

### 430 Advanced Organic Chemistry (formerly 431)

2 credits

Physical organic chemistry. A study of modern topics related to the investigation of organic reaction

## Classical Civilization

mechanisms including isotope effects and solvent effects and the quantitative correlation of structure to reactivity including substituent effects. Other advanced topics of the instructor's choice, such as orbital symmetry and pericyclic reactions, also may be included.

Prerequisite: 202

### 440 Biochemistry I

The chemistry of biological molecules. Emphasis on the structure, energetics, kinetics and mechanisms of biologically important molecules. Topics include: protein structure; enzyme kinetics, mechanisms and regulation; anabolic and catabolic pathways; structure, organization and regulation of nucleic acids; bioenergetics; protein synthesis; and student-chosen special topics. Laboratory integrated with lecture topics: protein isolation; enzyme kinetics and mechanisms; DNA isolation, plasmid mapping, sequencing, protein synthesis and sequencing; lipids and vesicles; student chosen special projects. Lecture plus four laboratory hours per week.

Prerequisite: 202

### 442 Biochemistry II

Continuation of Biochemistry I (440). Lecture plus four laboratory hours per week.

Prerequisite: 440

### 475, 476, 477, 478 Experiential Learning

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 481, 482, 483, 484 Student Seminar

This sequence of courses is begun first semester of the junior year and progresses for a total of four semesters. The first (481) and last (484) courses are each one credit and are graded on the usual letter grade scale. The interior two courses (482, 483) are no credit and are graded on a pass-fail basis (S/R). Throughout all four courses meetings are held with seminars given by guest speakers. UST faculty also present seminars on their own research. In 481, juniors are introduced to the chemical literature and search techniques including use of computer databases and write a short paper based on literature research. In 483, seniors meet in small groups with faculty and discuss articles from the chemical literature. In 484, seniors research a topic from the chemical literature and present it in both written and oral formats. Required of all chemistry majors.

### 487, 488, 489, 490 Topics

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 491, 492, 493, 494 Research

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 495, 496, 497, 498 Individual Study

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## Classical Civilization (CLAS)

Director to be announced

The study of Classical civilization – the cultures of ancient Greece and Rome and their relationship to the societies of the Mediterranean and the Near East – is the origin and foundation of the modern university. To this day, it continues to be a model of an interdisciplinary approach to the study of culture, combining fields of literature and language, history, archaeology and art history, religious studies, and philosophy.

The Classical Civilization major at St. Thomas provides an opportunity for students to integrate various disciplines in the study of a subject. It also provides an awareness of the origins of modern culture and religion and the influence of other ancient cultures of the Near East and Egypt upon its formation. This interdisciplinary program includes an introductory foundation course, a series of courses from a variety of supporting disciplines, and a capstone senior paper requirement.

### Major in Classical Civilization

CLAS	245	Classical Mythology
CLAS	397	Topics
CLAS	480	Senior Paper
ENGL	330	The Classical Tradition
HIST		300-level ancient history course approved by director
PHIL	200	Introduction to Classical Philosophy

Plus one of:

GRK	212	Intermediate Greek II (prerequisites may be necessary)
LAT	212	Intermediate Latin II (prerequisites may be necessary)
GRK or LAT		Four credits numbered above 212

Plus one of:

ARTH	305	Greek Art and Archaeology
ARTH	310	Roman Art and Archaeology

Plus two of the following courses not already taken above:

ARTH	305	Greek Art and Archaeology
ARTH	310	Roman Art and Archaeology
COMM	440	Classical Rhetoric
GRK		additional course
HIST	302	Classical and Early Hellenistic Greece
HIST	304	The Roman Republic and the Early Principate
HIST	306	The World of Late Antiquity: A.D. 284-641
HIST	307	The Church in the Roman Empire to A.D. 395
LAT		additional course
PHIL	230	Greek Philosophers on the Foundations of Knowledge
PHIL	320	Aristotelian Logic
THEO	210	New Testament
THEO	220	Early Christian Theology
THEO	319	Creeds, Councils, and Controversies of the Early Church
THEO	342	Greek Reading and Exegesis: John

Allied requirements:

HIST	111	Origins of the Modern World to 1550
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#### 245 Classical Mythology

Mythology is the embodiment and encoding of the beliefs, principles, and aspirations of ancient cultures. This course provides an interdisciplinary introduction to mythology as an introduction and foundation to Classical civilization. Myths will be examined from a variety of perspectives, including the study of literature in translation, art historical, religion, and history.

#### 397 Topics

The subject matter of the course, announced in the annual *Class Schedule*, will vary but will not duplicate existing courses.

#### 480 Senior Paper

0 credit

During the senior year or earlier majors are expected to write a major research paper with an abstract and to describe the results of their research in a short oral presentation to a panel of faculty. Normally this requirement is accomplished by rewriting and submitting a paper from one of the major field courses. The topic should be chosen in consultation with the program director and should be completed no later than 6 weeks prior to graduation. Papers will be presented to students and faculty at least annually at a symposium.

#### 475, 476, 477, 478 Experiential Learning

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

#### 483, 484, 485, 486 Seminar

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

#### 487, 488, 489, 490 Topics

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

#### 491, 492, 493, 494 Research

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

#### 495, 496, 497, 498 Individual Study

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## Communication

### Communication (COMM)

Endres (chair), Armada, Friedline, Mazloff, Petersen, K. Sauter, Scully

The Department of Communication fosters in students an understanding of the nature of human communication by examining the processes by which people create, send, receive and are affected by messages.

This is done by exploring and analyzing verbal and nonverbal communication in a number of settings including political campaigns, small groups, work and volunteer organizations, personal and family relationships and intercultural situations. Students analyze communication through the study of rhetorical theory and social science methodology, both developing their skills as communicators, and understanding ways to investigate how the communication process works. The department also emphasizes the production of electronically mediated communication, looking at how to communicate effectively using mediated communication, as well as the ways in which mediated communication expands our communication options and influences our lives. Students have the opportunity to study the art of audio and video production, and acquaint themselves with new electronic media technologies. They also study the television, radio, and corporate industries that have developed to support and distribute those messages. In keeping with the UST emphasis on diversity, the department seeks to integrate the issues of gender, race, and class into all communication studies. The study of communication is at the forefront of a liberal education, preparing students to analyze carefully, to think creatively, critically, and ethically, and to develop skills that can be applied to a variety of careers.

#### Communication Honor Society

Lambda Pi Eta, the National Communication Honor Society, chartered the St. Thomas Beta Chi chapter in 1994. The society recognizes communication majors who have demonstrated a commitment to the discipline. To be eligible, students must have completed 60 semester hours, 12 of those in communication; have an overall 3.00 GPA, with a 3.25 GPA within the major; and be a full-time student in good standing.

#### Major in Communication

This is a 36-credit major. No more than 20 credits may be at the 100-level.

A minimum of 18 credits must be completed at the University of St. Thomas.

- 100 Public Speaking
- 120 Communication Theories and Methods
- 140 Argumentation and Advocacy
- 160 Electronic Media Production

Two of the above four courses must be completed before taking additional courses within the major.

- 480 Capstone Course in Communication

Thirty-two credits in the major must be completed prior to enrolling in 480. With 28 credits completed, one concurrent registration is allowed.

*Plus two of:*

- 220 Small Group Communication
- 222 Interpersonal Communication
- 230 Intercultural Communication
- 240 Persuasion
- 260 Audio Production
- 264 Electronic Media and Society
- 270 Videography: Television Production in the Field
- 320 Organizational Communication
- 330 Research Methods in Communication Studies
- 340 Rhetorical Dimensions of Race, Class, and Gender
- 350 Modern American Rhetoric
- 360 Television Criticism
- 370 Advanced Video Production
- 440 Classical Rhetoric

*Plus:*

Eight additional credits which may be in courses from the list above, or any other departmental offering, including individual study, internships, or topics courses. (105 is not an option for majors.)

**Minor in Communication***Three of:*

- 100 Public Speaking
- 120 Communication Theories and Methods
- 140 Argumentation and Advocacy
- 160 Electronic Media Production

*Plus:*

Eight additional credits in courses at the 200-level or higher, but not including 480.

**Teacher Licensure**

Students who wish to be licensed to teach communication in secondary schools are required to take a series of courses from the department, which differs from the major above. Students seeking secondary licensure should consult the department chair and an adviser in the Department of Education.

**100 Public Speaking**

Preparation, presentation, and evaluation of original speeches by each student throughout the semester; special emphasis given to selecting and researching topics, organizing evidence, analyzing audiences, sharpening style and tone, communicating ethically and listening critically.

**105 Communication in the Workplace**

Introduction to basic communication theories and skills as they pertain to the business setting. Text, lecture, class discussion and exercises, and individual and group presentations will better prepare students to become more effective communicators at work. The course will focus on presentation skills, dyadic communication and interviewing, and group communication. This class is not open to Speech Communication majors or minors.

**120 Communication Theories and Methods**

This course will focus on the differing methods used by communication scholars to ask and answer questions about the nature of human interaction. Emphasis will be on the process of symbolic message exchange as it intersects all communication contexts. Various approaches to conceptualizing and measuring communication acts will be addressed in topic areas such as: perceptions and attributions; creating shared meaning; linguistic and nonverbal message systems; persuasive and ethical dimensions of communication; and the nature of inquiry. While lecture oriented, the class also may participate in discussions, experiential exercises, and group projects.

**140 Argumentation and Advocacy**

This course provides an introduction to practical reasoning in public controversy. Students will apply argumentation theories and methods to the analysis of public controversy and the development of their own oral advocacy skills. Topics include: Tests of evidence, invention, reasoning, oral presentation or arguments. Activities may include: Lecture, discussion, examinations, analysis papers, speaking assignments, small group discussion and presentation.

**160 Electronic Media Production**

Students will learn the process of producing electronically mediated messages in the studio and in the field. Students produce projects designed to develop their skills in the planning and execution of a variety of media genres. Students will operate studio and field equipment, act as talent, and do final editing of individual and team-produced work. Analysis and criticism of student produced programs is integral to the course.

**215 Oral Interpretation (THR 204)**

Sense and sound of literature; analysis of selected works and projection of their meaning to an audience. Includes public performance and attention to Reader's Theater.

Prerequisite: 100 or sophomore standing

**217 Survey of Communication Disorders (formerly 115)**

A survey of diagnosis and current treatment of communication disorders such as delayed language development, stuttering, hearing loss, etc. Appropriate course for future teachers, especially those in elementary education, and majors in occupational therapy, nursing and psychology.

**220 Small Group Communication**

This course covers the theory and principles of communication in task-oriented small groups, including role emergence and functions, leadership development, stages of decision-making, and development and effects of group culture. Students apply theory through participation in small group class projects.

Prerequisite: 120 or sophomore standing

**222 Interpersonal Communication (formerly 130)**

Theory and practice of interpersonal communication, including how self-concept, language, non-

## Communication

verbal communication, and relationships effect and are affected by communication. Common problems in interpersonal communication, options for managing these problems, and ethical issues in interpersonal communication are examined. Students apply theory and concepts through class exercises, simulations and individual projects.

### **230 Intercultural Communication**

Study of the influence of cultural values on social behavior; examination of theories of intercultural communication; emphasis on effective intercultural interaction. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 120 or sophomore standing

### **240 Persuasion**

Study of the various strategies used to influence choice in modern society, including sources, content (such as evidence and argumentation) and audience factors (such as beliefs, attitudes, and values) which influence the persuasive process. Current research about attitude change is examined. Students apply theory through analysis of contemporary discourse and preparation of original projects.

Prerequisite: 140 or sophomore standing

### **260 Audio Production**

An introduction to radio production. Students produce projects designed to acquaint them with the genres, styles and production techniques of audio in various media, with particular attention to the radio industry. Pre-production planning, scripting, use of sound effects, field production, multi-track recording, mixing and editing are covered. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: 160 or sophomore standing

### **264 Electronic Media and Society (formerly 170)**

A survey of the electronic media industry, including examination of the history of broadcasting, the physics of television, programming strategies, advertising and rating systems. The economics, politics, regulation, and impact of television, radio, and new technologies also will be considered. A foundation in media criticism, ethics, and research will be developed in this course.

### **270 Videography: Television Production in the Field**

This course will examine the aesthetic and technical components associated with producing video projects outside of the television studio. Students will examine current theory and practice of field production and will engage in the conceptualization, execution and analysis of field-produced video. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: 160 or permission of instructor

### **295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **315 Media Communication Skills**

The components and requirements of effective media performance are addressed. Development of critical assessment skills is emphasized via the evaluation of news, commercial and informational broadcasts in both the audio and video mediums. Particular attention is given to the student's development of performance techniques. Application and evaluation of performance choices are achieved through the production of video and audio projects.

Prerequisite: 100 or junior standing

### **320 Organizational Communication**

This course will examine organizational structures and the dynamics of the communication process. Major components of this class include the analysis of organizational communication including culture, socialization, roles, leadership, formal and informal communication structures, and issues of cultural diversity. Students will be involved in activities such as applying theories, examining case studies, and analyzing communication in real-life organizations.

Prerequisite: 120 or junior standing

### **325 Nonverbal Communication**

Exploration of the types, purposes and significance of nonverbal behavior in human communication. Topics include use of voice, face, eyes, gestures, posture, physical appearance, use of space, architecture, decor, and time. Emphasis on various research methods for observing and understanding nonverbal communication.

Prerequisite: 120 or junior standing

**330 Research Methods in Communication Studies**

This course is designed to familiarize students with various methods of research utilized in the communication field. This includes: Developing an understanding of the purpose of research, research designs, and various forms of data collection and basic statistical concepts. Students examine quantitative and qualitative methods and the process of determining appropriate strategies for specific research problems. Methods introduced will include survey research and experimental research, with emphasis on the skills required to design and successfully conduct research projects, how to develop and test hypotheses, and how to interpret and evaluate communication research using criteria including ethics in social research.

Prerequisites: 120 or junior standing

**340 Rhetorical Dimensions of Race, Class, and Gender**

Study of research and theories about the correlation between gender, race, class, and rhetorical practice, including the influence of historical and contemporary gender stereotypes and roles on rhetorical practice. Topics include the influence of gender stereotypes and roles on: credibility, legitimization, authority, “voice” in U.S. culture, and verbal and nonverbal behavior. Students are encouraged to analyze and evaluate their own rhetorical style in light of issues of race, class, and gender. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 140, junior standing, or permission of instructor

**350 Modern American Rhetoric**

This course focuses on the creation and use of rhetoric in public persuasion settings, including social movements and political campaigns. The diversity of rhetorical acts examined may include campaign ads, speeches, films, advertisements and nonverbal strategies. Topics of study include: The process by which rhetorical acts are created, ethical issues surrounding the creation and use of rhetorical acts, using rhetorical theory to inform rhetorical practice, and conducting rhetorical criticism to illuminate, analyze, interpret and evaluate a diversity of rhetorical acts.

Prerequisite: 140 or junior standing

**360 Television Criticism**

This course will provide students with the opportunity to understand television as a text situation in a cultural context. It will examine television from a critical perspective, review a wide variety of program genres and incorporate several theoretical orientations to the qualitative analysis of TV. Students, along with reading about and discussion of critical perspective, also may watch programs such as comedies, dramas, news, advertisements, miniseries, etc., and write several critical analyses of the programs.

Prerequisite: 160 or junior standing

**365 The Documentary in American Television**

A critical examination of the presence and prominence of the documentary as made for TV, from infancy of networks through the documentary renaissance of the 1970s and 1980s. This course will discuss and analyze the content, structure, style and journalistic integrity of video documentaries as well as the technological innovations which gave birth to an array of provocative, independent video documentaries. Emphasis on in-class viewing, critical discussion, guest lectures and demonstrations which highlight the actual production of video documentaries.

Prerequisite: 160 or junior standing

**370 Advanced Video Production**

This course offers students familiar with basic video production a chance to further develop their skills and to acquire a greater understanding of the video communication process. Students will plan, script, produce and edit pieces of extended length that combine studio and field production techniques. This course is for majors who have sufficient interest and prior experience in video production. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisites: 160 and 270, or permission of instructor

**425 Family Communication**

Examination of communication dynamics within the family system. Patterns of interaction, message exchange, developmental stages, and satisfaction and stability will be explored in light of today’s ever-changing family structure. Focus will include traditional (nuclear) and non-traditional family types.

Prerequisite: 120 or junior standing

**440 Classical Rhetoric**

In a seminar format the class studies the development of rhetorical theories and practice in ancient Greece and Rome, includes works by Plato, Aristotle, Cicero, Quintilian, St. Augustine, and modern commentators on classical ideals, emphasis on sharing oral and written presentations.

Prerequisite 140 or junior standing

### **455 Political Communication and Television**

Political communication and TV is a survey of how political candidates have used and continue to use television to communicate in the elections from 1952 to the present. This course looks at a particular communication setting which is important to us all. Class activities may include lecture, screening of sample ads, student oral presentation on newspaper editorials in national and local newspapers, and class discussion.

Prerequisite: 140 or junior standing

### **465 Current Issues in Electronic Media**

A survey of recent developments in the field of electronic media. Some possible subject areas include: Regulation, programming, distribution systems, reception technologies, economic considerations and social implications.

Prerequisite: 160 and 170, or permission of instructor

### **475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **480 Capstone Course in Communication**

The purpose of this course is to allow students to integrate what they have learned throughout their major and to provide them an appreciation of the work of other students in communication. The course will review foundational methods and perspectives of the field, and will focus on the development of a senior project by each student which will be shared with and discussed by the class. Other activities may include group discussions, mock interviews, and public presentations.

Prerequisite: Open to majors only who have taken the four 100-level core courses and at least three other communication courses.

### **483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **491, 492, 493, 494 Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## **Criminal Justice**

*See Department of Sociology.*

## **Earth Science with a Concentration in Geology**

*See Department of Teacher Education.*

## **East Asian Studies**

Foy (ENGL), adviser

This major and minor is offered by the Associated Colleges of the Twin Cities (ACTC). The purpose of this program is to enable students to acquire both a broad interdisciplinary understanding of East or Southeast Asia, which includes knowledge of an East or Southeast Asian language, and specialization in upper-division courses.

### **Major in East Asian Studies**

A major in East Asian studies consists of 36 credits which must include:

- sixteen credits in an East or Southeast Asian language
- sixteen credits in East or Southeast Asian studies (with a minimum of eight credits in upper-division courses)
- one East Asian studies seminar

Courses that satisfy these requirements are published annually in an ACTC brochure called East Asian Studies. Each student should develop a plan of studies with the faculty adviser.

**Minor in East Asian Studies**

Requirements for a minor are:

eight credits in East or Southeast Asian language courses

*plus:*

twelve credits in East or Southeast Asian studies courses from the annual list of courses that satisfy the requirement

See the faculty adviser.

**Economics (ECON)**

Kreitzer (chair), Alexander, Blumenthal, Fairchild, Garhart, Gray, Jones, Langan, Marcott, Papagapitos, Riley, Selim, Supel, Vincent, Walsh

The economics program develops a logical, consistent and rigorous method of thinking about the world and its problems. The economic way of thinking can be applied to a wide variety of topics including inflation, unemployment, international trade, poverty, income inequality, currency depreciation, monopoly power, bank failures, budget deficits and health-care costs.

The Department of Economics offers two majors and a minor in economics. All three programs are designed to provide excellent career-entry skills and those skills providing preparation for possible career shifts.

Whether a major or minor in economics is pursued, students are strongly encouraged to complement their studies with work in other fields. In recent years, for example, graduates have done complementary coursework in such fields as mathematics, foreign languages, business, environmental studies, computer sciences, international studies and English.

The choice of major and of a complementary field depends upon the path the student wishes to pursue. For example, students pursuing a liberal arts major, wishing to double major, or who are interested in continuing studies in professions other than economics would likely find the Bachelor of Arts (B.A.) best suited to their needs. Students wishing to engage the discipline at a much broader and deeper level would find the Bachelor of Science (B.S.) a better alternative.

The core for each degree consists of five economics courses and two allied requirements. The B.A. requires three additional elective of the student's choosing. The B.S. has three possible paths. Each path requires three specified electives, two additional electives of the student's choosing, and additional allied requirements.

Students wishing to pursue graduate study in economics should consider the path in Mathematical Economics. Students interested in international affairs should consider the path in International Economics. Students seeking an economics degree supplemented with additional technical skills and an introduction to the business field or who are looking towards an eventual MBA degree should consider the Business Economics path.

Majors must complete a minimum of twenty credits in economics at St. Thomas. Minors must complete a minimum of twelve credits in economics at St. Thomas.

**Economics Honor Society**

Omicron Delta Epsilon, the international fraternity in economics, was organized at St. Thomas in 1967. Candidates must have completed at least sixteen credits in economics and have an average of 3.00 or better in both economics and their overall work.

**Economics Honors Program**

Candidates for honors in economics must complete a research paper and an additional four credits in economics chosen in consultation with the department chair. The research papers of honors candidates are to be read by a committee of three faculty, appointed by the department chair. Each will determine if the paper is suitable for the honors requirement, with a majority rule determining honors designation. Candidates must achieve a grade-point average of 3.25 or higher in the major and 3.0 or higher overall.

**Major in Economics (B.A.)**

251 Principles of Macroeconomics

252 Principles of Microeconomics

315 Empirical Methods in Economics

351 Macroeconomic Theory

352 Microeconomic Theory

*Plus:*

Twelve credits in courses numbered 300 and above.

Students are strongly encouraged to take 315, 351 and 352 in their junior year.

*Allied requirements:*

*One of:*

MATH 109 Calculus with Review II

## Economics

MATH 111 Calculus for Business and Social Science  
MATH 113 Calculus I

*Plus either:*

QMCS 220 Statistics I  
*or*

MATH 303 Statistics for the Applied Sciences  
*or*

MATH 313 Probability  
*and*

MATH 314 Mathematical Statistics

### Major in Economics (B.S.)

251 Principles of Macroeconomics  
252 Principles of Microeconomics  
315 Empirical Methods in Economics  
351 Macroeconomic Theory  
352 Microeconomic Theory

Students are strongly encouraged to take 315, 351 and 352 in their junior year.

*Plus:*

A set of courses in one of the three paths below.

*Allied requirements:*

*One of:*

MATH 109 Calculus with Review II  
MATH 111 Calculus for Business and Social Science  
MATH 113 Calculus I

*Plus either:*

QMCS 220 Statistics I  
*or*

MATH 303 Statistics for the Applied Sciences  
*or*

MATH 313 Probability  
*and*

MATH 314 Mathematical Statistics

### Business Economics

A path which emphasizes additional tools for analyzing business situations as well as incorporating a basic foundation in the field of business.

311 Forecasting  
332 Industrial Organization  
401 Managerial Decision Making

*Plus:*

Eight credits in elective economics courses numbered 300 or above  
ACCT 211 Financial Accounting

*Plus either:*

ACCT 213 Managerial Accounting  
*or*

ACCT 313 Intermediate Accounting for Finance Majors

*Plus either:*

FINC 300 Finance for Non-Business Majors  
*or*

FINC 321 Financial Management

### International Economics

A path which prepares students for careers in which an understanding of the complexities of cultural differences and international economic relationships is crucial.

345 Economics of Development and Growth  
346 Country and Area Studies in Economics  
348 International Economics

*Plus:*

Eight credits in elective economics courses numbered 300 or above (ECON 346 can only be included one time in fulfillment of the path requirement, and not as one of the additional electives)

Minor in a foreign language or significant study abroad experience approved by the department chair

### **Mathematical Economics**

A path which prepares students for the core competencies necessary for graduate study in economics.

301 History of Economic Thought  
418 Mathematical Economics

*Plus one of:*

337 Economics of the Public Sector  
339 Labor Economics  
348 International Economics

*Plus:*

Eight credits in elective economics courses numbered 300 or above

MATH 114 Calculus II  
MATH 200 Multi-Variable Calculus  
MATH 210 Linear Algebra and Differential Equations

(Note: MATH 333 Applied Statistical Methods may be substituted for ECON 315)

### **Minor in Economics**

251 Principles of Macroeconomics  
252 Principles of Microeconomics

*Plus one of:*

351 Macroeconomic Theory  
352 Microeconomic Theory

*Plus:*

Twelve credits in elective economics courses numbered 300 and above.

### **101 The American Economy (251)**

The organization and functioning of the American economy; the course is designed to provide general education in economics for the average citizen. Each semester, topics of current interest will be analyzed using the tools and viewpoint of economic theory and policies. Designed for non-economics and non-business students.

### **211 Current Economic Issues**

Poverty, health care, tax reform, international trade, crime, income inequality, inflation, and business mergers are some of the contemporary topics that raise interesting questions for public policy and economic analysis. This course will focus on a series of these macroeconomic and microeconomic topics. The goal is to develop economic concepts and analytical tools within a context of direct application to economic issues. Consideration of equity or fairness will be included in discussions of public policy. Student preferences will be considered in selecting many of the issues.

### **251 Principles of Macroeconomics**

An introduction to macroeconomics: national income analysis, unemployment, price stability, and growth; monetary and fiscal policies; international trade and finance; application of economic theory to current problems. Students who enroll in this course are expected to be able to use high-school algebra.

### **252 Principles of Microeconomics**

An introduction to microeconomics: theory of household (consumer) behavior, theory of the firm, market structures, market failures, economic efficiency, factor markets, and income distribution. Students who enroll in this course are expected to be able to use high-school algebra.

### **295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **301 History of Economic Thought**

A survey of the content and method of economics and an analysis of the theories of the great economists from the ancient Greeks to the present; mercantilism, physiocracy, the classical school and its critics, particularly Marx; the marginalist school; Alfred Marshall and Keynes, recent developments in economic thought.

Prerequisites: 251 and 252

### **311 Forecasting**

An introduction to techniques used in forecasting with emphasis on analyzing economic and business data. The emphasis is on time-series data, although cross-sectional analysis is also covered. Techniques presented include variants of moving averages, variants of exponential smoothing, regression and ARIMA processes. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisites: 251, 252 and QMCS 220

### **315 Empirical Methods in Economics (formerly 415)**

An introduction to the application of statistical models and methods to economic problems; simple and multiple linear regression models; generalized least-squares; model building and related topics. Emphasis is on use of econometric software to analyze data and to test hypotheses. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: 251 and 252, QMCS 220 or MATH 303

### **321 Law and Economics**

The relationship between legal and economic aspects of selected issues: property rights, liability laws, product-safety legislation, discrimination, crime control, and related topics.

Prerequisites: 251, 252 or permission of instructor

### **326 Industry Studies**

This course provides an analysis of a particular industry or sector of the U.S. economy.

Among the topics included in the analysis will be: identification and description of the industry in question, past and present performance of the industry, the importance of the industry within the national and global economy, the level of competition present in the industry, and the role of government in this industry. Among the anticipated course offerings are Agricultural Economics, Economics of the Arts, Economics of Sports, Economics of Health Care, and Transportation Economics.

Prerequisites: 251 and 252

### **332 Industrial Organization**

Relationship between market structure, behavior and performance of business enterprises; government intervention and regulation; antitrust and other public-policy issues.

Prerequisites: 251, 252

### **333 Regional and Urban Economics**

Principles underlying the location of economic activity; land-use patterns; transfer cost; location and structure of urban areas; growth of cities and regions; urban and regional problems and policies.

Prerequisite: 252

### **335 Money, Financial Markets, and the Economy**

The nature, evolution, and functions of money; the role of depository financial institutions; structure of financial markets; principles of central banking; monetary theory and monetary policy; introduction to international banking and finance.

Prerequisites: 251, 252

### **337 Economics of the Public Sector**

This course examines the role of government in a modern economy. It develops a set of concepts that will allow students to evaluate policy alternatives. The following are among the particular topics likely to be addressed: externalities and environmental protection, education, the redistribution of income, health care, social insurance, taxation and tax reform, cost-benefit analysis, fiscal federalism, and state and local government finance. In each case, the focus is on whether intervention by government is appropriate, what the most effective form of any such intervention is, and how alternative policy interventions affect the private decisions made by citizens and business firms.

Prerequisite: 252

### **339 Labor Economics**

Labor supply and demand; determinants of the wage structure; education and training decisions; the role of labor unions; mobility and migration, discrimination; public policies in labor markets.

Prerequisite: 252

### **345 Economics of Development and Growth**

Nature and measures of economic growth and development; theories of growth; developed and less-developed nations; economic planning; selection and financing of projects for economic growth and human development; environment, resources, and limits to growth. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisites: 251, 252

### **346 Country and Area Studies in Economics**

An analysis of the economic system(s) of a particular country or region of the world. Among the topics included in the analysis will be: functioning of key sectors of the system; the role of govern-

ment in the economy; the resource base; the income distribution; trade and financial relations with other countries; contemporary economic issues and policies; past and present economic performance. Course offerings are anticipated for Japan, Russia, European Union, Latin America and Australia. Students may take this course more than once provided the specific country/region is not duplicated. This course fulfills the Human Diversity requirement in the core curriculum.  
Prerequisites: 251, 252

### **348 International Economics**

Analysis of trade between nations and regions of the world; trade and trade policy; economic integration; foreign-exchange markets; global financial system and world payments; cross-border movement of resources; economic interdependency of nations and regions; the economic system in a global framework.  
Prerequisites: 251, 252

### **349 Comparative Economic Systems**

Analysis of the tools used to evaluate alternative economic systems; study of the structure and performance of laissez faire, centralized planning, democratic socialism and market socialism; historical evolution of economic systems; consideration of efficiency, growth, and social welfare; case studies: United States., CIS, China, the new market economies of Central Europe, others.  
Prerequisites: 251, 252

### **351 Macroeconomic Theory**

Theories of money, interest, income and expenditure, employment, and inflation; monetary and fiscal policies; introduction to the theory of growth.  
Prerequisites: 251, 252

### **352 Microeconomic Theory**

Analysis of consumer behavior and demand theory; theory of production and costs; analysis of the firm and industry under various market structures; factor pricing; general equilibrium. Selected additional topics such as market failure, economics of information, welfare economics, income distribution.  
Prerequisites: 251, 252 and MATH 109 or 111 or 113 or equivalent.

### **360 Experimental Economics**

Experimental economics refers to the practice of testing economic hypotheses by conducting controlled experiments rather than relying on more traditional econometric testing. This course provides a survey of experiments conducted by economists in a variety of areas. Discussion will focus on the basics of the theory being tested, the methodology employed, and the results for each experiment. In addition, attempts will be made to replicate some results by conducting these same experiments in the classroom. Topics may include experiments conducted in the theory of competitive markets, oligopoly markets, auctions, decision-making under risk and uncertainty, public good and search theory.

Prerequisite: 251, 252, and one additional ECON course numbered 300 or higher

### **370 Environmental and Natural Resource Economics**

This course employs economic principles to analyze the problems of environmental pollution and natural-resource depletion. Economic systems, such as the private-market mechanism, are evaluated with respect to their effectiveness in the management of natural resources and the environment. Domestic and international environmental policies are examined and critiqued.

Prerequisite: 252

### **401 Managerial Decision Making**

Microeconomic theory applied to business decision making. Emphasis on quantitative techniques applied to business decision making under uncertainty, demand and cost estimation, linear production models, pricing decisions, capital budgeting, inventory problems, and group decision making. Quantitative tools include linear regression, statistical decision analysis and linear programming.  
Prerequisites: 352, and QMCS 220 or MATH 333 or permission of the instructor

### **418 Mathematical Economics**

Introduction to a mathematical treatment of models of economic behavior; economic content includes consumer theory, theory of the firm and selected topics in macroeconomics.  
Prerequisites: 351, 352, and MATH 200 or MATH 114 with permission of instructor

### **470 Research in Economics**

The Research in Economics course deals with data collection and statistical analysis of economic hypotheses. It culminates in writing a research paper on a topic of the student's choosing.  
Prerequisite: senior standing and 315, or permission of the instructor

### **475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## Engineering

### 483, 484, 485, 486 Seminar

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 487, 488, 489, 490 Topics

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 491, 492, 493, 494 Research

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 495, 496, 497, 498 Individual Study

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## Engineering (ENGR)

Bennett (chair), Jalkio, Kumar, Zimmerman

Faculty from other departments and adjunct faculty from industry teach specialized courses.

The University of St. Thomas offers two tracks in engineering:

- A program in mechanical engineering
- A pre-engineering program.

### Engineering

The bachelor of science in mechanical engineering (B.S.M.E.) is an applied engineering program, blending theory and research with practical engineering fundamentals. The program is academically rigorous, following Accreditation Board for Engineering and Technology (ABET) guidelines and complemented with a full liberal arts curriculum.

The mechanical engineering curriculum combines the study of basic sciences, general engineering, design engineering and mechanical engineering with the study of the liberal arts. Emphasis is placed on applied engineering.

The curriculum provides for a foundation in: theoretical and applied mechanics, materials, electrical-electronic fundamentals, computer-aided design and manufacturing, automation systems, thermodynamics heat transfer/fluid flow, manufacturing processes and practical design.

It is designed to develop a student's teamwork and communication skills while also providing comprehensive understanding of the design/manufacturing system.

Graduates will be prepared for direct entry into an engineering position in industry or for advanced study in an engineering graduate school.

### Pre-Engineering

*See Pre-Professional Programs*

### Major in Mechanical Engineering (B.S.M.E.)

- 150 Introduction to Engineering I (0 credit)
- 151 Introduction to Engineering II (0 credit)
- 171 Engineering Graphics
- 220 Engineering Mechanics I
- 221 Engineering Mechanics II
- 350 Electrical Engineering Principles
- 360 Manufacturing Processes
- 370 Engineering Materials
- 381 Thermodynamics
- 382 Heat Transfer and Fluid Flow
- 410 Control Systems and Automation
- 480 Engineering Design Clinic I
- 481 Engineering Design Clinic II

*Plus three of:*

- 351 Electronic Instrumentation and Control Laboratory
- 390 Packaging Fundamentals
- 420 Rapid Product Realization
- 430 Applications of Thermodynamics
- 440 Design with Plastics
- 450 Vibration and Control Theory

- 460 Engineering Economics and Project Management
- 470 Mechatronics I
- 497 Directed Studies in Engineering
- 498 Directed Studies in Engineering

*Allied Requirements:*

- CHEM 111 General Chemistry I
- MATH 113 Calculus I
- MATH 114 Calculus II
- MATH 200 Multi-Variable Calculus
- MATH 210 Linear Algebra and Differential Equations
- MATH 303 Statistics for the Applied Sciences
- PHYS 111 Introduction to Classical Physics I
- PHYS 112 Introduction to Classical Physics II
- QMCS 130 Problem Solving in the Natural Sciences

**Concentration in Manufacturing**

- 150 Introduction to Engineering I (0 credit)
- 151 Introduction to Engineering II (0 credit)
- 171 Engineering Graphics
- 220 Engineering Mechanics I
- 221 Engineering Mechanics II
- 300 Manufacturing Management Systems I
- 350 Electrical Engineering Principles
- 360 Manufacturing Processes
- 370 Engineering Materials
- 381 Thermodynamics
- 382 Heat Transfer and Fluid Flow
- 410 Control Systems and Automation
- 480 Engineering Design Clinic I
- 481 Engineering Design Clinic II

*Plus two of:*

- 310 Manufacturing Management Systems II
- 351 Electronic Instrumentation and Control Laboratory
- 390 Packaging Fundamentals
- 420 Rapid Product Realization
- 497 Directed Studies in Engineering
- 498 Directed Studies in Engineering

*Allied requirements:*

- CHEM 111 General Chemistry I
- MATH 113 Calculus I
- MATH 114 Calculus II
- MATH 200 Multi-Variable Calculus
- MATH 210 Linear Algebra and Differential Equations
- MATH 303 Statistics for the Applied Sciences
- PHYS 111 Introduction to Classical Physics I
- PHYS 112 Introduction to Classical Physics II
- QMCS 130 Problem Solving in the Natural Sciences

**Concentration in Mechatronics**

- 150 Introduction to Engineering I (0 credit)
- 151 Introduction to Engineering II (0 credit)
- 171 Engineering Graphics
- 220 Engineering Mechanics I
- 221 Engineering Mechanics II
- 350 Electrical Engineering Principles
- 360 Manufacturing Processes
- 370 Engineering Materials
- 381 Thermodynamics
- 382 Heat Transfer and Fluid Flow
- 410 Control Systems and Automation
- 460 Engineering Economics and Project Management
- 470 Mechatronics I
- 480 Engineering Design Clinic I
- 481 Engineering Design Clinic II

## Engineering

*Plus one of:*

- 430 Applications of Thermodynamics
- 450 Vibration and Control Theory
- 497 Directed Studies in Engineering
- 498 Directed Studies in Engineering

*Allied requirements:*

- CHEM 111 General Chemistry I
- MATH 113 Calculus I
- MATH 114 Calculus II
- MATH 200 Multi-Variable Calculus
- MATH 210 Linear Algebra and Differential Equations
- MATH 303 Statistics for the Applied Sciences
- PHYS 111 Introduction to Classical Physics I
- PHYS 112 Introduction to Classical Physics II
- QMCS 130 Problem Solving in the Natural Sciences

### Minor in Engineering

- 150 Introduction to Engineering I (0 credit)
- 151 Introduction to Engineering II (0 credit)
- 171 Engineering Graphics
- 360 Manufacturing Processes

*Plus two of the following:*

- 220 Engineering Mechanics I
- 221 Engineering Mechanics II
- 300 Manufacturing Management Systems
- 350 Electrical Engineering Principles
- 370 Engineering Materials
- 381 Thermodynamics
- 382 Heat Transfer and Fluid Flow
- 410 Control Systems and Automation

### 150 Introduction to Engineering I

**0 credit**

This course introduces students to engineering fields, practicing engineers and hands-on engineering work. As they become acquainted with engineering occupations and experience their potential for creativity and fun, students will understand the value and applications of the required curriculum and be motivated and stimulated to pursue further engineering studies. Offered in fall semester.

### 151 Introduction to Engineering II

**0 credit**

Continuation of 150. Offered in spring semester.

### 171 Engineering Graphics

Students will learn to read blueprints and working drawings and become familiar with computer-aided design (CAD) terminology and technology. Topics include the elements of drafting, including: the use of CAD software; principles of projection; and introductory methods of representation and constructive geometry, working drawings, conventions and standards.

### 220 Engineering Mechanics I

This fundamental course addresses the essential engineering principles of statics, dynamics and deformable body mechanics. Offered in fall semester.

Prerequisite: MATH 114 and PHYS 111 (or concurrent registration in PHYS 111)

### 221 Engineering Mechanics II

Continuation of 220. Offered in spring semester.

Prerequisite: 220

### 295, 296, 297, 298 Topics

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 300 Manufacturing Management Systems I

Introduces engineering students to the basic management and economic concepts useful to practicing engineers working in manufacturing settings. This course covers basic principles of management, work design, work measurement, incentive plans, managing for quality, statistical quality control, manufacturing cost concepts and engineering economics. Offered in fall semester.

Prerequisite: MATH 303 or permission of instructor

**310 Manufacturing Management Systems II**

Introduces engineering students to manufacturing strategy and its relationship to the design of facilities, production systems and systems of management, planning and control. This course covers manufacturing strategy, basic types of production systems (such as job shop and assembly line), facility location, facility layout, materials handling systems, material management, inventory control, production planning and control, material requirements planning, the Just-In-Time philosophy, capacity planning and project management.

Prerequisite: 300 or consent of instructor

**350 Electrical Engineering Principles**

Provides students with the ability to work with electronics-based measurement and control systems used in modern manufacturing. Fundamental topics include linear DC and AC circuit concepts and theorems, analog circuits based on operational amplifiers and digital logic circuits based on Boolean elements. Students will gain an understanding of electronics-based measurement systems. Offered in fall semester.

Prerequisite: PHYS 112

**351 Electronic Instrumentation and Control Laboratory**

Provides an understanding of the fundamentals of electrical engineering. The course covers principles and applications of transducers, instrumentation systems, amplifiers and signal conditioners, impedance matching, frequency, time response and elementary feedback systems.

Prerequisite: 350

**360 Manufacturing Processes**

Provides an understanding of the fundamental technologies of manufacturing processes. This course covers such basic principles of manufacturing processes as casting, heat treating, metal cutting, plastic molding and continuous processes. Offered in spring semester.

**370 Engineering Materials**

An introduction to materials and their properties. This course introduces the spectrum of materials in manufacturing and relates their properties to atomic structure. Topics include properties and applications of metals, polymers, ceramics and composite materials. The course emphasizes characteristics of materials in manufacturing operations and service. Offered in spring semester.

Prerequisites: CHEM 111, PHYS 111

**381 Thermodynamics**

A study of thermal and mechanical energy and their applications to technology. First law of thermodynamics (energy conservation); second law of thermodynamics (restrictions on energy transformations). Thermophysical properties of substances. Power producing devices and heat pumping devices. Humidity, dew point and other characteristics of non-reacting mixtures. Reacting mixtures (combustion of fuels).

Prerequisites: PHYS 112, MATH 114

**382 Heat Transfer and Fluid Flow**

Modes of heat transfer: convection, conduction, and radiation. Coupling of convective heat transfer with fluid flow. Fundamentals of fluid flow: statics, boundary layers, pipe flows, pressure drop, and friction factor. Convective heat transfer at external surfaces and internal surfaces. Fluid-to-fluid heat exchangers and their design. Conduction in solids of various shapes; use of heat-conducting fins to improve the performance of heat exchangers. Radiation heat transfer between surfaces.

Prerequisite: 381

**390 Packaging Fundamentals**

Provides the student with firsthand knowledge of packaging principles and processes as they apply to the manufacturing operation. The course covers the functions of packaging, major materials used in packaging and their properties and package-forming processes. Students will do hands-on work in package assembly and produce a computer-designed package as part of their lab work.

Prerequisite: Junior standing or consent of instructor

**410 Control Systems and Automation**

An introduction to the scope of control systems in manufacturing and their implementation. The course focuses on analog and binary control loop theory, the use of transforms (Laplace and Z) to describe and solve analog control systems, and the use of Boolean algebra to describe and solve binary control systems. Simulation is emphasized as an important tool for plant design, layout and optimizing manufacturing methods.

Prerequisite: 350, MATH 210

**420 Rapid Product Realization**

Provides a basic understanding of computer-aided design and manufacturing (CAD/CAM) systems in modern manufacturing operations. Topics covered include solid modeling, computer simulation, and implementation of CAD/CAM systems.

Prerequisite: 171 and junior standing

### **430 Applications of Thermodynamics**

Introduction to principle industrial applications of thermodynamics. The course will cover theory of operation and design considerations of these systems as well as examples of thermodynamic engineering design. Topics include heating, ventilation, and air conditioning systems (HVAC), engines, and turbomachinery.

Prerequisite: 382

### **440 Design with Plastics**

The student will learn about the most common plastic compositions in industry along with their respective applications; understand the difference between injection and vacuum molding and what to look for using either; be able to match plastics with molding technology; learn about environmental and recycling issues surrounding the plastics industry.

Prerequisite: 171, 370

### **450 Vibration and Control Theory**

This course offers fundamentals in the theory of vibrations and control of mechanical systems. The topics related to vibration include undamped and damped free vibration, forced vibration or continuous systems. The topics related to control theory include modeling of dynamic systems (mechanical, electrical, hydraulic, pneumatic and thermal), analysis of continuous time and discrete time systems, feedback control systems, and graphical design methods.

Prerequisite: 410

### **460 Engineering Economics and Project Management**

A practical look at the daily activities (including cost analysis and scheduling) and challenges of project managers in an engineering setting. Significant time will be devoted to personnel related topics such as conflict resolution, time management and leadership.

### **470 Fundamentals of Mechatronic Engineering I**

Introduction to basic electronic devices and microprocessor systems for measurements and control; electronic circuits; amplifiers; filters; logic gates and sequential logic applications: A/D and D/A conversion and interfacing; transducers; controllers; motors and actuators; microprocessor fundamentals and programming; data acquisition and feedback control.

Prerequisite: 410

### **475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **480 Engineering Design Clinic I**

Serves as the first capstone course. Student design teams, under the direction of a faculty coordinator, will develop engineering solutions to practical, open-ended design projects conceived to demonstrate the value of prior basic science and engineering courses. Ethical, social, economic and safety issues in engineering practice will be considered as well.

Prerequisite: senior standing and permission of instructor

### **481 Engineering Design Clinic II**

The final capstone course for the application of previously learned engineering principles to the solution of real problems in an actual industrial setting. Student design teams will work under the direction of faculty advisers and industry liaisons. Opportunity will be provided for objective formulation, analysis, synthesis and evaluation of alternative solutions.

Prerequisite: 480

### **483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **491, 492, 493, 494 Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**English (ENGL)**

Mikolajczak (chair), An, Babcock, Bellamy, Callaway, Chowdhury, Craft-Fairchild, Erdrich, Foy, Jordan, Larson, May, L. Miller, R. Miller, Olson, O'Reilly, Otto, Piorkowski, Powell, Redshaw, Reichardt, Reidy, Ringnalda, Scheiber, Scheurer, Steinberg, Wellisch

The aims of the department are:

- to help the entering student gain mature skills in thinking, reading and writing;
- to extend to all interested students, regardless of their major, the opportunity for self-enrichment which a study of language and literature affords;
- to provide the student with a solid foundation for graduate study in English and other professional fields such as the law, for teaching English in the secondary schools, and for careers that place heavy emphasis on communicative and analytic skills.

To attain these goals, the major and minor programs outlined below focus on the different methodologies and approaches to the study of language and literature while allowing students to pursue areas of particular interest.

The Department of English offers three areas of emphasis in both the major and the minor:

1. Major and minor in English, providing the flexibility to focus on a wide variety of literary areas or to combine the study of literature with the study of writing;
2. English major and minor with secondary education emphasis, leading to licensure in secondary education;
3. English major and minor with writing emphasis, enabling students to strengthen their skills as writers in a variety of genres.

**English Honor Society**

Sigma Tau Delta, the national English honor society, formed a chapter at St. Thomas in 1988. The honor society brings together students and faculty with a love of literature, language and writing; it sponsors a variety of scholarships, holds regional and national conventions, and provides a forum for both creative and critical writing. Students who have a grade point average of at least 3.0 in English courses, rank at least in the highest 35 percent of their class in general scholarship, and who have completed at least three semesters of college are eligible to apply for membership.

All transfer students who major in English must take a minimum of sixteen credits in English courses at the 200-level or above at the University of St. Thomas.

All transfer students who minor in English must take a minimum of eight credits in English courses at the 200-level or above at the University of St. Thomas.

**Major in English**

111 Critical Reading and Writing I

112 Critical Reading and Writing II

Qualified students may substitute 190 for 111 and 112.

*Plus:*

211 British Authors I

212 British Authors II

214 American Authors to 1914

485 or 486 Senior Seminar

*Plus one theory course:*

300 Advanced Writing: Theory and Practice

305 Linguistics: The English Language

310 Strategies of Language

311 Criticism of Literature

*Plus:*

Sixteen additional credits

**Major in English with Secondary Education Emphasis**

*See Department of Teacher Education*

**Major in English with Writing Emphasis**

111 Critical Reading and Writing I

112 Critical Reading and Writing II

Qualified students may substitute 190 for 111 and 112.

*Plus:*

211 British Authors I

212 British Authors II

214 American Authors to 1914

485 Senior Seminar

## English

### *Plus four of:*

- 252 Writing Nonfiction Prose
- 253 Writing Poetry and Fiction
- 300 Advanced Writing: Theory and Practice
- 321 Writing Poetry
- 322 Writing Fiction
- 401 Advanced Poetry or Fiction Writing
- 402 Writing Literary Nonfiction
- 403 Analytical and Persuasive Writing
- 484 Literary Magazine Practicum

### *Plus:*

One additional English course at the 300 level or higher, other than those listed above.

### **Literary Studies**

A literary studies major is described under that title in this catalog.

### **Minor in English**

- 111 Critical Reading and Writing I
  - 112 Critical Reading and Writing II
- Qualified students may substitute 190 for 111 and 112.

### *Plus one of:*

- 211 British Authors I
- 212 British Authors II
- 214 American Authors to 1914

### *Plus:*

Twelve additional credits in English courses numbered 211 or above, two of which must be at the 300 level or above.

### **Minor in English with Secondary Education Emphasis**

*See Department of Teacher Education*

### **Minor in English with Writing Emphasis**

- 111 Critical Reading and Writing I
  - 112 Critical Reading and Writing II
- Qualified students may substitute 190 for 111 and 112.

### *Plus one of:*

- 211 British Authors I
- 212 British Authors II
- 214 American Authors to 1914

### *Plus three of:*

- 252 Writing Nonfiction Prose
- 253 Writing Poetry and Fiction
- 300 Advanced Writing: Theory and Practice
- 321 Writing Poetry
- 322 Writing Fiction
- 401 Advanced Poetry or Fiction Writing
- 402 Writing Literary Nonfiction
- 403 Analytical and Persuasive Writing
- 484 Literary Magazine Practicum

### **110 Intensive Writing**

The course will provide students with intensive practice in writing, enabling them to adapt to the demands of differing rhetorical contexts. Emphasis on understanding writing processes and learning to respond thoughtfully to writing at various stages. Critical reading will be practiced as an integral part of the writing process.

Prerequisite: participation in the Academic Development Program or the Academic Preparation Program

### ***Critical Reading and Writing***

These courses develop students' awareness of language by helping them to recognize the relationship between their own experience and the interpretive possibilities of literature. Attention will be paid to the integration of the individual's composing process and the process of reading and understanding texts. These courses foster attentive reading, critical thinking and effective writing.

**111 Critical Reading and Writing I**

Emphasis on reading and writing to explore ideas and to inform readers, with special attention to the writing process and to basic rhetorical concerns such as audience and purpose. Writing assignments will be linked to reading consisting primarily of prose fiction and nonfiction.

**112 Critical Reading and Writing II**

Emphasis on interpreting literary texts and writing about them persuasively, with special attention to close reading and to the use of textual evidence. Writing assignments will be linked to readings consisting primarily of drama and poetry.

Prerequisite: 111 or permission of department chair

**190 Critical Reading and Writing**

This course for specially qualified students combines the study of composition with the study of literary readings drawn from fiction, drama, poetry and nonfiction prose. The course emphasizes responsive engagement with literature and provides instruction in writing ranging from the exploratory to the persuasive and analytical modes.

**200 Written English**

Analysis and practice of the principles of effective writing. Emphasis on the needs and aims of the individual student.

Prerequisite: 111 and 112 or 190

**211 Major British Authors I**

An introduction to literary studies. The analysis of works by major British authors prior to 1800. Special emphasis on historical and cultural influences, particularly classical mythology.

Prerequisite: 111 and 112 or 190

**212 Major British Authors II**

An introduction to literary studies. The analysis of works by major British authors from 1800 to the present. Special attention to literary movements, the social implications of literature, and a variety of critical approaches to literary texts.

Prerequisite: 111 and 112 or 190

**214 American Authors to 1900**

The study of significant American authors from the beginnings of American literature to the turn of the twentieth century. This survey course will consider the diverse literary, cultural, and historical contexts from which the American literary tradition has arisen. Possible authors studied include Hawthorne, Douglass, Jacobs, Fuller, Dickinson, Clemens, Jewett, Cooper, Wheatley, Whitman, and Native American voices.

Prerequisite: 111 and 112 or 190

**215 American Authors of the 20th Century**

An introduction to literary studies. The study of significant American authors from the turn of the century to the present. This survey course will consider the diverse literary, cultural, and historical contexts from which the American literary tradition has been formed. Possible authors studied include Hemingway, Faulkner, Hurston, Wright, Morrison, Cather, Wharton, Rich, and O'Neill.

Prerequisite: 111 and 112 or 190

**252 Writing Nonfiction Prose**

An intermediate writing course that will aim to develop fluency, voice and style in a range of rhetorical situations. Special attention to understanding the importance of structure and mastering the conventions of edited American English. Intended to prepare students for advanced and pre-professional writing courses.

Prerequisite: 111 and 112 or 190

**253 Writing Poetry and Fiction**

This course introduces students to the basic skills necessary for imaginative writing of poetry and fiction. It includes readings that model basic techniques of imaginative writing, exercises that encourage exploration of craft, workshop sessions to develop students' critical skills, and individual guidance. Open to students who do not yet have a portfolio of creative writing.

Prerequisite: 111 and 112 or 190

**270 Literature in Perspective**

This course, whose subject will change from year to year, will reflect particular interests in a given theme, genre, author, or period. Subjects will be announced in the annual *Class Schedule* and will not duplicate existing courses. The course is designed for nonmajors, and credit may be earned more than once under this number for different emphases. Possible courses are: Madness in Literature, American Short Stories, Virginia Woolf, Holocaust Literature. Open to non-English majors only.

Prerequisite: 111 and 112 or 190

**295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

Prerequisite: 111 and 112 or 190

**300 Advanced Writing: Theory and Practice**

Working from a base of contemporary rhetorical theory, advanced writing students will write essays in a variety of forms. They will be encouraged to develop a vocabulary for talking about writing, as well as the ability to critique their own and others' work. Directed reading in contemporary writing pedagogy for the elementary and secondary composition teacher. Required for secondary licensure in English/language arts.

Prerequisite: 111 and 112 or 190; advanced writing skills

**305 Linguistics: English Language**

The study of the historical, structural, and semantic features of the English language; systems of English grammar.

Prerequisite: 111 and 112 or 190

**310 Strategies of Language**

The study of the symbolic uses of language in society. The techniques of audience manipulation in personal relations, advertising, political and religious propaganda, and literary usage. An evaluation of the relationship of language to all the other academic disciplines.

Prerequisite: 111 and 112 or 190

**311 Criticism of Literature**

Study in theoretical and applied literary criticism. Particular authors and works are closely examined in relation to various critical systems.

Prerequisite: 111 and 112 or 190

**321 Writing Poetry**

This intermediate course offers exploration of traditional and experimental patterns of poetry writing. Emphasis on experimentation with a variety of techniques and development of individual voice, critique sessions, readings to broaden sense of possibilities, and individual instruction. Open to students with some previous experience in writing poetry.

Prerequisite: 253 or permission of instructor

**322 Writing Fiction**

This intermediate course offers exploration of traditional and experimental patterns of fiction writing. Emphasis on experimentation with a variety of techniques and development of individual voice, critique sessions, readings to broaden sense of possibilities and individual instruction. Open to students with some previous experience in writing fiction.

Prerequisite: 253 or permission of instructor

**324 Genre Studies**

This course will examine genre as an ordering principle in the study of literature. The particular genres to be studied will vary from year to year, namely, prose fiction, nonfiction prose, drama, and poetry. Credit may be earned more than once under this number for different emphases.

Prerequisite: 111 and 112 or 190

**325 Studies in Special Genres**

This course will examine particular genres as they appear during limited literary periods. Offerings, which will vary from year to year, will include the American novel, the English novel, modern poetry and modern drama. Credit may be earned more than once under this number for different emphases.

Prerequisite: 111 and 112 or 190

**330 The Classical Tradition**

Reading of representative masterpieces of Western literature in translation, from the Classical period through the Middle Ages. Authors will include Homer, Aeschylus, Sophocles, Virgil, Ovid and Dante.

Prerequisite: 111 and 112 or 190

**331 The Modern Tradition**

Reading, in translation, of representative masterpieces in the European tradition from the Renaissance through the 20th century, including such writers as Cervantes, Racine, Goethe, Flaubert, Dostoevsky, Kafka and Mann. Areas of inquiry also will include the mutual interactions of the European tradition with modern African, Latin American or Eastern literatures.

Prerequisite: 111 and 112 or 190

**334 Literature from a Christian Perspective (CATH 304)**

Taking seriously T.S. Eliot's enjoinder that "literary criticism should be completed by criticism from a definite ethical and theological standpoint," this course examines methods of reading and literary

texts from a sacramental perspective. The general question informing the course will be, "How does the intellectually serious Christian read works of imaginative literature?" The course explores this issue using works of criticism representing a variety of Christian/Catholic viewpoints. These works of criticism are then applied to literary texts that are explicitly Christian in theme as well as those which invite, or are enriched by, a Christian/Catholic perspective. Ultimately the course's goal is to appreciate how the contributions of the Catholic intellectual tradition in particular can enhance our understanding and enjoyment of literature. Works of criticism studied may include those by TeSelle, Scott, Maritain, Lynch, O'Connor and Steiner.

Prerequisite: 111 and 112 or 190

### **335 The Catholic Literary Tradition: Medieval to Modern (CATH 305)**

This course surveys literary works with theological or spiritual themes that have contributed to the vitality of Catholic culture. The purpose of the course is to help students realize that Catholic culture has fostered a variety of literary expressions and has produced works that speak compellingly of human experience and sacramental life. Possible readings include selections from *The Divine Comedy*, medieval drama, Sir Thomas More, the Catholic baroque poets, Hopkins, Eliot and Jones as well as novels by such writers as Bernanos, Mauriac, Greene, Waugh, Endo, Spark, O'Connor and Percy. Brief excerpts from great spiritual writers such as Augustine, Ignatius, Teresa of Avila, Newman and Merton will provide an interdisciplinary context for the course.

Prerequisite: 111 and 112 or 190

### **340 Literature by Women: Critical History**

This course will focus on the history of literature by women. It will concentrate on the traditions in Britain and America, but also will include some attention to non-Western women writers. It will address issues of canon formation, as well as the role of gender in the composition and reading of literary texts. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 111 and 112 or 190

### **341 Literature by Women: Critical Questions**

This course will offer an in-depth study of selected women's writing, organized by period, genre or theme. In any particular semester, the course might focus, for example, on 18th century women writers, contemporary women poets or marriage in women's literature. The texts will be approached with regard to questions of canon formation, women's history and cultural constructions of gender. Credit may be earned more than once under this number for different emphases. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 111 and 112 or 190

### **350 Shakespeare**

Close reading and discussion of a significant number of plays in the full canon. Attention to theatrical and literary traditions, to Shakespeare's development in language and dramatic techniques, and to critical scholarship.

Prerequisite: 111 and 112 or 190

### **360 The Age of Chaucer**

English literature from 1340 to 1450. The Pearl poet, selections from medieval drama, Malory, and *The Canterbury Tales*.

Prerequisite: 111 and 112 or 190

### **361 The English Renaissance**

English literature of the 16th and early 17th centuries, in relationship to the major themes and developments of the Continental Renaissance.

Prerequisite: 111 and 112 or 190

### **362 Seventeenth Century British Literature**

This course will consider the relationship between literature and culture in the 17th century. Individual works will be studied in light of the scientific, political, and religious issues of the age.

Prerequisite: 111 and 112 or 190

### **363 Milton**

A study of the minor poems, *Paradise Lost*, *Paradise Regained*, *Samson Agonistes*, and selected prose works.

Prerequisite: 111 and 112 or 190

### **364 Eighteenth Century British Literature**

This course will consider the relationship between literature and culture in the 18th century. Individual works will be studied in light of the political, religious, and social developments of the age.

Prerequisite: 111 and 112 or 190

**365 The Romantic Age in Britain**

A study of the works of Blake, Wordsworth, Coleridge, Byron, Shelley and Keats, with some attention to the principal essayists of the period.

Prerequisite: 111 and 112 or 190

**366 The Victorian Age in Britain**

Emphasis on a critical study of the major poets – Tennyson, Browning, Arnold and Hopkins. Non-fiction prose of authors whose works embody important literary, social, and intellectual concerns of the age.

Prerequisite: 111 and 112 or 190

**367 Twentieth Century British Literature**

The chief writers of fiction, drama, and poetry, from W.B. Yeats to the present.

Prerequisite: 111 and 112 or 190

**370 Colonial and Early-American Literature**

A study of the formative years of the American literary tradition from its beginnings to approximately 1820. Attention will be given to the diverse literary, cultural, and historical contexts from which American literature arose. Possible authors studied include Bradstreet, Franklin, Cooper, Equiano, Wheatley, Sedgwick, Irving, and Native American voices.

Prerequisite: 111 and 112 or 190

**371 Nineteenth Century American Literature**

A study of the American literary tradition from the early Romantic movement (approximately 1820) to the turn of the century. Attention will be given to the diverse literary, cultural, and historical contexts that inform the writing of this period. Possible authors studied include Emerson, Fuller, Melville, Douglass, Clemens, Dickinson, Brent and Bonnin.

Prerequisite: 111 and 112 or 190

**372 Modern American Literature**

A study of the American literary tradition of the first half of the 20th century, from approximately 1900 to 1945. Attention will be given to the diverse literary, cultural, and historical contexts that inform the writing of this period. Possible authors studied include Hemingway, Faulkner, Hurston, Stein, Toomer, Parker, Fitzgerald, Wharton, H.D., Hellman, and O'Neill.

Prerequisite: 111 and 112 or 190.

**373 Contemporary American Literature**

A study of the American literary tradition from approximately 1945 to the present. Attention will be given to the diverse literary, cultural, and historical contexts that inform the writing of this period. Possible authors studied include Erdrich, Morrison, Ellison, Silko, O'Connor, Malamud, Bellow, Miller, Ginsburg, Williams and Rich.

Prerequisite: 111 and 112 or 190

**390 Major Literary Figures**

This course will study a significant body of work by a major writer or pair of writers. Typical offerings: Jane Austen, Charles Dickens, Hawthorne and Melville, T.S. Eliot. Credit may be earned more than once under this number for different emphases.

Prerequisite: 111 and 112 or 190

**395 Issues in American Literature and Culture**

The content of this course will vary from semester to semester. The course explores one or more abiding issues in American literature or culture. Topics might include the frontier, Native American literature(s), slavery and its aftermath, and the immigrant experience. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 111 and 112 or 190

**397 Non-Western Literature**

**2 credits**

Readings (in translation when necessary) from the literature of Third World and non-Western countries. Selections will vary from year to year. This course is taught during January Term.

Prerequisite: 111 and 112 or 190

**401 Advanced Poetry or Fiction Writing**

This advanced course focuses on the student's development of a polished body of work in poetry and/or fiction. Students will review, revise and select writing they have done previously, as well as produce new work. Readings will include theoretical and creative texts.

Prerequisite: 321 or 322, or permission of instructor based on examination of portfolio

**402 Writing Literary Nonfiction**

This advanced course will focus on the theory and practice of literary nonfiction, that is, the writing of prose drawn from personal experience, reflection, observation and analysis. Essays by such writers as E.B. White, Anne Dillard and Lewis Thomas will be considered as examples of the genre.

For self-motivated writers who wish to develop voice, fluency and precision.

Prerequisite: 252 or 253 or 300 or consent of the instructor based on examination of portfolio

**403 Analytical and Persuasive Writing**

Intended for the experienced writer, this course will emphasize the theory and practice of writing in analytical, persuasive and research-based rhetorical modes as preparation for advanced or professional writing in a variety of disciplines.

Prerequisite: 252 or 300 or 402 or consent of instructor based on examination of portfolio.

**480 Literary Magazine Practicum (formerly 484)**

Participants in this course will study the history and character of literary magazines and apply their knowledge to editing the College's literary and visual-arts magazine. Responsibilities include gathering and selection of material, design, copyediting, layout, proofreading, and communication with typesetters, printers, and other editors.

Prerequisite: permission of the instructor and the department chair (arrange in early fall for course credit in spring semester)

**475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**483, 484, Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**485, 486 Senior Seminar**

A seminar focused on the study of an issue or problem of literary significance. Through discussion and intensive reading, the seminar will consider common texts pertinent to an English major's whole curriculum. Each student will execute and present a substantial critical or interpretive essay.

Prerequisite: completion of five English courses beyond the freshman level; or, for nonmajors, permission of the instructor and the department chair.

**487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

Prerequisites: 111 and 112 or 190

**491, 492, 493, 494 Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

Prerequisites: 111 and 112 or 190

**Entrepreneurship**

See *Division of Business*.

**Environmental Studies (ENVR)**

Hoffman (POL), director; Governance Committee: Brownstein (GEOL), Degnan (PHIL), Evarts (BIOL), Longley (CHEM), Lorah (GEOG), Neuzil (JOMC), Sathe (ACCT), Smith-Cunniën (SOC), Vincent (ECON), Werner (GEOG)

Environmental problems are at once particular and complex. Global warming, desertification and deforestation are problems that require not only an understanding of the natural sciences but also the ability to address questions ranging from ethics to economics to politics and geography.

The Environmental Studies program provides students with a broad interdisciplinary background as well as a basis for career specialization and practical application and problem solving. The program is predicated upon an investigation both of the Earth's environment and the wide variety of human interactions with that environment. The program has three basic objectives:

- 1) to transmit an understanding of environmental problems and their complexities,
- 2) to motivate productive responses to those problems, both vocational and avocational, based on that understanding, and
- 3) to foster the development of critical, inquiring minds.

All students majoring in environmental studies are required to take 36 credits in core courses, another 24 credits in concentration-area courses, and four credits in an allied course. The core courses

## Environmental Studies

are designed to provide the student with a foundation in the physical, social and ethical dimensions of environmental issues.

The concentration area consists of a minimum of an additional 24 credits beyond the core. These courses are meant to deepen the student's understanding of the origin and complexity of environmental issues while focusing attention on one particular area of study.

The student may

- (a) choose to specialize in an existing area of study or
- (b) may propose an individually designed concentration program.

In either case, students are required to submit a Concentration Area Proposal to the Governance Committee for approval. The proposal will identify the prospective concentration area, a set of learning objectives, and the concentration area's relationship to the student's environmental interests.

Students are strongly encouraged to discuss the formation of their concentration area with the director of the program or another member of the Governance Committee. Committee members can assist students in constructing successful concentration area proposals.

Students are required to identify their concentration area by the end of their sophomore year or the first semester of their junior year.

Students are encouraged, but not required, to take additional courses in writing and computer applications, and should consult the chair of the Environmental Studies Committee for recommendations.

### Major in Environmental Studies: Concentration Area in the Natural Sciences

ENVR	151	Humans and the Environment
ENVR	212	Social Dynamics and the Environment
ENVR	301	Environmental Ethics
ENVR	351	Environmental Policy Formation
ENVR	401	Field Seminar
GEOL	111	Introductory Geology

*Plus one of:*

BIOL	102	Conservation Biology
BIOL	201	Diversity and Adaptation

*Plus either:*

CHEM	101	Environmental Chemistry
	<i>or</i>	
CHEM	111	General Chemistry I
	<i>and</i>	
CHEM	112	General Chemistry II

*Plus one of:*

BLAW	368	Environmental Law
ECON	252	Principles of Microeconomics
POL	205	Introduction to the American Public Policy Process

*Plus one of:*

MATH	303	Statistics for the Applied Sciences
QMCS	220	Statistics I

*Plus:*

Concentration area in one of the natural sciences

### Major in Environmental Studies: Concentration Area in Social Science, Business, or Humanities

ENVR	151	Humans and the Environment
ENVR	212	Social Dynamics and the Environment
ENVR	301	Environmental Ethics
ENVR	351	Environmental Policy Formation
ENVR	401	Field Seminar

*Plus one of the three sequences below:*

BIOL	102	Conservation Biology
CHEM	101	Environmental Chemistry
GEOL	111	Introductory Geology I
GEOL	112	Introductory Geology II
	<i>or</i>	
BIOL	201	Diversity and Adaptation
BIOL	202	Genetics and Population Biology
CHEM	101	Environmental Chemistry

GEOG	111	Introductory Geology I
	<i>or</i>	
BIOL	102	Conservation Biology
CHEM	111	General Chemistry I
CHEM	112	General Chemistry II
GEOG	111	Introductory Geology I

*Plus one of:*

MATH	303	Statistics for the Applied Sciences
QMCS	220	Statistics I

*Plus:*

Concentration area in one of the social sciences, business, or humanities

### **Minor in Environmental Studies**

- 151 Humans and the Environment
- 212 Social Dynamics of the Environment
- 301 Environmental Ethics
- 351 Environmental Policy Formation

*Plus:*

Four credits to be chosen from a list of approved courses, available from the director of the program.

### **151 Humans and the Environment**

A study of the interaction of humans and the environment over time and space; a broad introduction that integrates a variety of social-science perspectives into an understanding of the environment and the relations between humans and nature. Specific topics include ecology, population, economic development, resources and sustainable development. This course fulfills the second-level Computer Competency requirement in the core curriculum.

### **212 Social Dynamics and the Environment**

An emphasis on the ways in which people have created, and attempted to solve, environmental problems in different cultural and historical contexts. Examines the roles of the entire spectrum of actors and human communities, including individuals, families, groups and formal organizations, neighborhoods, cities and nations. Students examine how individual dynamics (such as altruism and economic self-interest) and collective dynamics (such as competition, cohesion, social definitional processes and global interdependence) direct humans in their interactions with the environment.

Prerequisite: 151

### **295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **301 Environmental Ethics (PHIL 358)**

Consideration of the ethical issues arising from human interaction with the environment, including population pressure, pollution, conservation and preservation. Focus on the grounds of our obligation to resolve such issues; the question of what persons and things are worthy of moral consideration; and the respective roles of individuals, organizations and government in addressing environmental problems. Case studies will be used to trace the implications of various ethical and political theories.

Prerequisite: 151 and PHIL 214

### **351 Environmental Policy Formation**

An examination of environmental policy outcomes generated by institutions and organizations, including legislation, court decisions and administrative decisions. Additional focus on decision-making processes commonly used to assess environment-related legislation, including those rooted in economics and policy analysis.

Prerequisite: 212

### **401 Field Seminar**

A capstone course that combines field experience with classroom seminar. Student teams will conduct collaborative, broadly interdisciplinary analyses of selected environmental problems. Field-based projects are chosen by the students in consultation with course instructor. Classroom seminars are used for exchange of information between teams and for discussion of readings pertinent to individual research projects or, more broadly, to the interdisciplinary character of environmental problem-solving. Each team produces a major paper that examines ethical and natural- and social-science aspects of the selected problems.

Prerequisite: 301, 312 and 351 or permission of the instructor

## Family Studies

### **475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **491, 492, 493, 494 Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## Family Studies (FAST)

Grochowski (H&HP), director

Family Studies is an interdisciplinary field of study in which the family is the primary unit of analysis. The purpose of this minor is to enable students to critically examine the family using a variety of theories and methods. Family Studies scholars can develop understanding of business and communication dynamics, health and social concerns, and psychological and theological matters affecting families and their members. A family studies minor is flexible and multidisciplinary, providing for both broad exposure and disciplinary integration. This minor provides preparation for advanced study in family studies and the allied fields, as well as professional work in organizations focusing on families.

No more than eight credits may be taken from a single major field. Students interested in a minor in Family Studies should meet with the director.

### **Minor in Family Studies**

400 Family Studies Seminar

*Plus one of:*

PSY 288 Psychology of Marriage and the Family  
SOC 321 Marriage and the Family

*Plus three of:*

COMM 425 Family Communication  
ENTR 349 Family Business Management  
FAST 495, 496 Individual Study (2 credits)  
FAST 497, 498 Individual Study  
HLTH 462 Human Sexuality Education  
PSY 204 The Psychology of Adulthood and Aging  
PSY 288 Psychology of Marriage and the Family  
SOWK 210 Relationship, Intimacy, and Sexuality  
SOC 303 Aging and the Lifecourse  
SOC 321 Marriage and the Family  
THEO 307 Human Sexuality: A Christian Perspective  
THEO 315 Christian Marriage

### **295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **400 Seminar in Family Studies**

This advanced capstone course for the Family Studies minor is a multidisciplinary seminar taken after the learner has completed at least four courses in the Family Studies minor. The course will incorporate a variety of methods, theories, and pedagogies drawn from the family studies paradigm. A substantial portion of the course will be devoted to student research and presentations that incorporate family studies scholarship.

Prerequisite: PSY 288 or SOC 321 and three other courses from the list of approved courses for the minor.

**495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**Film**

*See Department of Theater.*

**Financial Management**

*See Division of Business.*

**French**

*See Department of Modern and Classical Languages.*

**Geography (GEOG)**

Werner (chair), Lorah, Filloon\*, Loesch\*, Lynn\*

Geography is an interdisciplinary study that offers a rich body of knowledge about the character of diverse places in the world, their cultures and environments. Geography ranges from a broad and comprehensive understanding of the world to the specifics of computer-generated maps and geo-demographic analysis. Geographers make extensive use of computer skills to analyze a wide range of problems, from regional studies to urban structure and habitats.

With training in both the natural and social sciences, geographers have a wide range of careers in government, the private sector, and education. Geographers create digital maps, work with census data, help locate retail and service stores, work in local, state, and federal parks, analyze land use and urban planning, teach, and hold a wide variety of other jobs.

**Geography Honor Society**

The honor society in geography at St. Thomas is Mu Alpha Pi. The purpose of the society is to further the professional development of geographers through research and academic experiences outside the classroom and laboratory. Students are eligible for membership when they have taken three courses in geography with at least a B average and rank in the upper 35 percent of their class.

**Major in Geography**

- 111 Human Geography
- 112 Physical Geography
- 113 World Geography
- 480 Seminar in Geography

*Plus eight credits in methods courses:*

- 221 Computer Skills in Geography
- 222 Geographical Analysis
- 321 Geographic Information Systems
- 421 Advanced Geographic Information Systems

*Plus four credits in a topical course:*

- ECON 333 Urban and Regional Economics
- GEOG 330 Geography for Business and Planning
- GEOG 430 North American City
- GEOL 252 Geomorphology

*Plus four credits in a regional course:*

- 240 Geography of East and Southeast Asia
- 340 Geography of the U.S. and Canada
- 384 Field Study in Geography

*Plus:*

Eight elective geography credits

**Minor in Geography**

- Eight credits in core courses
- Eight credits in methods courses
- Eight elective geography credits

### **111 Human Geography**

This course explores the effects of social, economic, environmental, political, and demographic change from a geographic perspective. It introduces students to a broad range of topics, including the effects of population growth, human impact on the environment, economic development, and globalization. Usually offered every semester. This course fulfills the Human Diversity requirement in the core curriculum.

### **112 Physical Geography**

This course asks why the natural environment is the way it is and addresses the interrelationships between weather, soils, water, plants, animals and landforms. Because the “natural” environment includes people, the course looks at the role of humans in altering the environment. Usually offered spring semester.

### **113 World Geography**

A country-by-country study of the world. The goal of this course is to emphasize whatever best explains the character of each country. This may be population, economics, resources, or any aspect of nature or humanity that gives an insightful understanding of each country. Usually offered every semester. This course fulfills the Human Diversity requirement in the core curriculum.

### **221 Computer Skills in Geography**

A course with an emphasis on useful computing, especially computer-generated maps. Topics include the basic operation of a computer, operating systems, spreadsheets, graphic representation of data, map projections and coordinate systems, thematic maps, and map design. An applications-oriented course using ArcView. This course fulfills the second-level Computer Competency requirement in the core curriculum. Usually offered fall semester.

### **222 Geographical Analysis (202)**

This course uses quantitative methods to explore questions of geographic concern. It focuses on collecting, organizing, analyzing and presenting spatial data. Statistical methods are applied in a real-world context - in the spheres of population, production, pollution, and climate change. This course fulfills the second-level Computer Competency requirement in the core curriculum. Usually offered alternate years.

### **240 Geography of East and Southeast Asia (302)**

A regional study of East and Southeast Asian countries with special emphasis on China and Japan. The course examines the resources and physical geography but emphasizes the population, culture and economy in this dynamic region of the world. Usually offered alternate years.

### **295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### **321 Geographic Information Systems**

A sequel to 221, the theme of this course is how to perform data analysis using vector-based geographic information systems. Specific topics include spatial database operations, buffers, map overlay and address matching. The course illustrates the principles of Geographic Information Systems using PCARC/INFO and a variety of real-world applications from demography to environmental studies. This course fulfills the second-level Computer Competency requirement in the core curriculum. Usually offered spring semester.

Prerequisite: 221

### **330 Geography for Business and Planning**

Geographic techniques for business and planning applications include demographic analysis of customer characteristics, consumer’s geographic behavior, trade areas, patterns of retailing, store location problems, site appraisals and using census data.

### **340 Geography of the U.S. and Canada**

What does the notion of “America” mean? How is this different from other global regions? This course examines the historical creation and expansion of North America from European, African and Asian influences. It then explores the contemporary geography of the continent: different cultural regions, economic characteristics, political variations, and places both special and commonplace that help define the North American experience. Usually offered alternate years.

Prerequisite: 111 or 113 or consent of instructor

### **384 Field Study in Geography**

A geographic analysis through field experience. Includes study-abroad courses.

Prerequisite: consent of instructor

### **421 Advanced Geographic Information Systems**

A sequel to 321, this course uses ARC/INFO to illustrate advanced uses of computers in raster-based

spatial analysis. Principles of geographic information systems will be implemented in a wide variety of applications using Spatial Analyst. This course fulfills the second-level Computer Competency requirement in the core curriculum. Usually offered fall semester.

Prerequisite: 321

#### **430 North American City**

This course will focus on themes in the development of contemporary cities with special attention to patterns and trends within the Twin Cities metropolitan area. Usually offered alternate years.

Prerequisite: 111 or 113 or consent of instructor

#### **475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

#### **480 Seminar in Geography**

In this seminar, we will explore the nature of geography as a discipline. The areas to be covered: history of geographic thought, the position of geography relative to the arts and sciences, different ways of interpreting geographical phenomena, and geography as a vocational and academic career. Research projects will cover these themes and be tailored to the student's interests. Usually offered alternate years.

Prerequisite: four geography courses, including one methods course

#### **481 Advanced Field Study in Geography (formerly 484)**

A geographic analysis through field experience. Designed for advanced students in geography. Includes study-abroad courses.

Prerequisite: consent of instructor

#### **483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

#### **487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

#### **491, 492, 493, 494 Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

#### **495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## **Geology (GEOL)**

Farnham (chair), Brownstein

Geology is the science of the earth, and, like other disciplines, it is subdivided into specific studies. The department offers a variety of courses basic to an undergraduate geology curriculum in order to provide the student with a sound foundation.

Those majoring in geology are required to take courses in the allied sciences (biology, chemistry and physics) and in mathematics because of their importance to the study of earth science.

The aims of the Department of Geology are to provide a major program for students who will continue their study of geology in graduate school; to prepare students to do geological work in industry and government; to offer a program that prepares students to teach earth science at the secondary-school level; and to permit interested students to broaden their liberal arts education.

### **Major in Geology**

111 Introductory Geology I

112 Introductory Geology II

211 Mineralogy

252 Geomorphology

311 Petrology

322 Structural Geology

421 Geophysics

*Plus:*

MATH 113 Calculus I

MATH 114 Calculus II

## Geology

*Plus two of the sequences:*

BIOL	201	Ecology, Adaptation and Diversity <i>and</i>
BIOL	202	Genetics and Evolution <i>or</i>
CHEM	111	General Chemistry I <i>and</i>
CHEM	112	General Chemistry II <i>or</i>
PHYS	111	Introduction to Classical Physics I <i>and</i>
PHYS	112	Introduction to Classical Physics II

The department recommends that students planning to do graduate work take additional courses in the allied sciences and in mathematics. The department also recommends that students take a summer field course at a recognized geology field camp, preferably between the junior and senior years.

### **Earth Science with a Concentration in Geology**

*See Department of Teacher Education.*

#### **Minor in Geology**

- 111 Introductory Geology I
- 112 Introductory Geology II
- 252 Geomorphology
- 322 Structural Geology\*

\*Prerequisite of 311 is waived for students minoring in geology.

*Plus one of:*

- 211 Mineralogy
- 311 Petrology\*
- 421 Geophysics

\*Prerequisite of 211 is waived for students minoring in geology.

#### **Teaching Minor in Geology**

*See Department of Teacher Education.*

#### **102 Origins and Methods (111)**

A study of the basic concepts of geology that were first developed by James Hutton in the late 18th century and their application today. This is an introductory science course specifically designed to reduce the mystique that often is associated with the scientific method. Following Hutton's example, the study will focus on the materials which make up the earth and on the geologic processes that operate on these materials. This course includes a four-hour-per-week laboratory component. Offered in January Term.

#### **110 Geology of the National Parks**

The course begins with an examination of the national park system. A review of the conflicts associated with the use of public lands, including environment-influencing geological factors, follows. The next segment involves an overview of geologic concepts, processes and materials utilizing examples from the national parks. This course closes with a study of the specific geologic materials, natural processes, landforms and sequence of events responsible for the outstanding scenery in selected U.S. national parks. Laboratories will be integrated with lecture and will include study of the rocks common to the national parks; analysis of geomorphic, topographic and geologic maps of the national parks; environment-related geologic exercise and field studies of local sites. Lecture and two laboratory hours per week.

#### **111 Introductory Geology I (102)**

A study of the Earth's properties; the formation and classification of minerals, rocks, ore deposits, and fuels; and the nature and origin of the Earth's surface and interior. Emphasis will be placed upon a changing Earth, the constructive and destructive forces, and the geologic processes operating at the surface and in the interior. Lecture and two laboratory hours per week.

#### **112 Introductory Geology II**

The application of geologic principles to an interpretation of the physical and biological changes that have occurred on and within the earth. Lecture and two laboratory hours per week.

Prerequisite: 111

#### **211 Mineralogy**

A systematic approach to mineral study involving crystallography, analysis of physical and chemical

properties, mineral formation, and methods of identification and classification. Lecture and three laboratory hours per week.

Prerequisite: 111

**252 Geomorphology**

The study of landforms, the geologic processes that produce them, their evolution, and their distribution over the Earth's surface. Aerial photographs introduced for purposes of geomorphic analysis. Lecture and three laboratory hours per week.

Prerequisite: 111

**295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**311 Petrology**

A study of the physical and chemical factors that relate to the environment of formation for igneous, sedimentary and metamorphic rocks. A systematic approach to rock analysis, identification and classification. The petrographic microscope introduced in the laboratory. Lecture and three laboratory hours per week.

Prerequisite: 211

**322 Structural Geology**

An analysis of the structures within the Earth's crust, their origin and classification, the principles of rock deformation, and an introductory study of the Earth's mantle and core. Lecture and three laboratory hours per week.

Prerequisite: 311

**421 Geophysics**

Fundamental principles of geophysical methods commonly used for subsurface exploration, including: gravity, magnetic, seismic and electrical measurements. Emphasis on field procedures and interpretation techniques used for geologic investigations. Lecture and three laboratory hours per week.

Prerequisite: 311

**475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**491, 492, 493, 494 Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**German**

**Greek**

See *Department of Modern and Classical Languages*.

**Health and Human Performance**

Parsley (chair), Carey, Duoos, Grochowski, Andregg\*, Casey\*, Hodgson\*, Mathre\*, Ofstead\*, Skrypek\*, Stenzel\*, Sweeney\*

The Department of Health and Human Performance offers the following undergraduate professional programs of study including a basic instructional program:

1. A major in physical education which leads to licensure at both the elementary and secondary levels;
2. A major in health education, which leads to licensure at the elementary, middle, and secondary school level;

## Health and Human Performance

3. A major in community health education, which prepares the student for work in community health;
4. A major in health promotion which prepares the student for work as a fitness specialist outside the school setting;
5. A concentration in athletic coaching;
6. A concentration in Athletic Training Internship Program which prepares the student for taking the NATA exam;
7. A non-teaching major in physical education for students who have career objectives other than teaching.
8. Individual programs that may be developed in consultation with the department chair.

The basic instructional program provides an opportunity to develop a knowledge and understanding of the value and methods of obtaining and maintaining an appropriate level of physical fitness throughout one's lifetime.

### Teaching Major in Physical Education

The teaching major in physical education received accreditation from the National College Association for Teacher Education (NCATE) and the learned society of the discipline, National Association for Sport and Physical Education (NASPE) in 1994.

*See Department of Teacher Education*

### Health Education K-12

The teaching major in elementary health education received accreditation by the National College Association for Teacher Education (NCATE) and the learned society of the discipline, American Alliance of Health Education (AAHE) in 1995.

*See Department of Teacher Education*

### Community Health Education

HLTH 345	Nutrition
HLTH 350	Personal Health and Wellness
HLTH 353	Consumer, Community and Environmental Health
HLTH 375	Lifelong Stress Management (2 credits)
HLTH 441	Community Health Education: Curriculum, Assessments, and Administration
HLTH 451	Community Health Education: Methods, Resources, and Partnerships
HLTH 462	Human Sexuality
HLTH 464	Critical Issues in Health

*Plus one of:*

HLTH 470	Health Internship
HLTH 471	Health Internship extended (6 credits)

*Allied requirements:*

BIOL 101	General Biology
BIOL	A course in Epidemiology or Microbiology
PHED 410	Human Anatomy and Physiology
PSY 111	General Psychology
SOC 100	Introduction to Sociology
SOWK 290	Death, Dying and Bereavement

*Plus one of:*

CHEM 100	Chemistry in our World
CHEM 101	Environmental Chemistry

*Plus one of:*

COMM 100	Public Speaking
COMM 105	Communication in the Workplace

*Recommended:*

*One of:*

PSY 200	Psychology of Infancy and Childhood
PSY 203	Psychology of Adolescence
PSY 204	Psychology of Adulthood and Aging

### Teaching Minor in Health Education

*See Department of Teacher Education*

### Physical Education Health Promotion (B.S.)

PHED 100	Foundations for Fitness (0 credit)
PHED 113	Introduction to Health Promotion (2 credits)

PHED	205	Principles of Strength Training (2 credits)
PHED	206	Principles of Aerobics (2 credits)
PHED	250	Emergency Care
PHED	410	Human Anatomy and Physiology
PHED	420	Kinesiology
PHED	421	Athletic Training (2 credits)
PHED	426	Biomechanics
PHED	430	Measurement and Evaluation (2 credits)
PHED	431	Exercise Physiology (2 credits)
PHED	432	Advanced Exercise Physiology
PHED	433	Exercise for Special Populations (2 credits)
PHED	449	Health Promotion Seminar (2 credits)

*Plus one of:*

PHED	450	Health Promotion Internship
PHED	451	Health Promotion Internship extended (6 credits)

*Allied requirements*

BIOL	101	General Biology
CHEM	100	Chemistry in our World
COMM	105	Communication in the Workplace
ENGL	200	Written English
HLTH	345	Nutrition for Health and Wellness
HLTH	350	Personal Health and Wellness
HLTH	375	Stress Management (2 credits)
MGMT	150	Introduction to Business
MKTG	300	Principles of Marketing

Eighty-four credits are required outside the areas of PHED and HLTH.

#### **Physical Education Health Promotion – Science Emphasis**

This program is a dual-degree program in cooperation with The College of St. Catherine. Students accepted in this program will be able to apply to St. Catherine's Master of Physical Therapy Program during their third year. If accepted, the student will receive a baccalaureate degree from the University of St. Thomas and a MPT degree from St. Catherine upon completion of the coursework as outlined by the two institutions. Students not accepted by St. Catherine must complete their fourth year at the University of St. Thomas to receive their baccalaureate degree. It is recommended that students interested in this major consult the department chair at the time of their initial registration.

#### **Admission Requirements for The College of St. Catherine MPT Program**

BIOL	201	Ecology, Adaptation, and Diversity
BIOL	202	Genetics and Evolution
BIOL	323	Comp Vertebrate Anatomy
CHEM	111	General Chemistry I
CHEM	112	General Chemistry II
HLTH	345	Nutrition
HLTH	350	Personal Health and Wellness
MATH	113	Calculus I
PHED	111	Foundation and Skills for Majors II
PHED	250	Emergency Care
PHED	410	Human Anatomy and Physiology
PHED	431	Exercise Physiology
PHED	432	Advanced Exercise Physiology
PHED	450	Internship I
PHYS	109	General Physics I
PHYS	110	General Physics II
PSY	111	General Psychology
PSY	301	Psychopathology
QMCS	220	Statistics I

*Plus:*

Core curriculum courses in literature and writing, historical studies, moral and philosophical reasoning, faith and the Catholic tradition, fine arts, language and culture, and human diversity.

*Plus:*

One course in medical terminology (see department chair for assistance).

*Clinical Experience*

A minimum of 160 hours of physical therapy or other health care clinical experience during the three

## Health and Human Performance

years prior to applying to the MPT program. Registration in PHED 450 or PHED 451 at the conclusion of the student's sophomore year will satisfy this requirement.

### *Application Procedure for St. Catherine's MPT Program*

A minimum cumulative grade-point average of 3.00 for undergraduate course work is required. Students may apply to the MPT program during their third year, provided that they will have completed the above list of prerequisite courses prior to enrollment in the MPT program. Completed applications for admission are due to St. Catherine no later than March 1. Deadline for special petitions is February 1.

To request an application, please contact:

Office of Admissions  
The College of St. Catherine  
2004 Randolph  
St. Paul, MN 55105  
(612) 690-6505

Applicants are informed of their status no later than June 1.

Students not admitted to The College of St. Catherine Physical Therapy Program must complete the following courses at the University of St. Thomas to receive their baccalaureate degree.

PHED	111	Foundations and Skills: Majors
PHED	351	Teaching the Special-Needs Students
PHED	420	Kinesiology
PHED	421	Athletic Training (2 credits)
PHED	430	Measurement and Evaluation (2 credits)
PHED	433	Exercise for Special Populations (2 credits)

### **Athletic Coaching Concentration**

PHED	402	Principles of Athletic Coaching (requires a 40-hour practicum under the supervision of a certified coach)
PHED	403	To meet the requirements for coaching certification, students must select at least one of the sections of PHED 403 listed below. Students should choose a sport in which they have the least familiarity.
	01	Football
	02	Soccer
	03	Basketball
	04	Hockey
	05	Baseball
	06	Volleyball
	07	Track
	08	Softball
PHED	410	Human Anatomy and Physiology
PHED	420	Kinesiology
PHED	421	Athletic Training Techniques

### **Athletic Training Certification**

The student must have:

1. A high school diploma to begin accumulating directly supervised clinical hours that are to be used to meet requirements for the National Athletic Trainer Association Board of Certification (NATABOC) certification.
2. Proof of graduation (an official transcript) at the baccalaureate level from an accredited college or university located in the United States. Foreign-degreed applicants who wish to credit this degree toward a bachelor's degree requirement will be evaluated at the candidate's expense by an independent consultant selected by the NATABOC.
3. Proof of current American National Red Cross Standard CPR and First Aid Certification. Emergency medical technician equivalency will be accepted.
4. At the time of application all candidates for certification must verify that at least 25 percent of their athletic training experience hours credited in fulfilling the certification requirements were attained in actual practice or game coverage with one or more of the following sports: football, soccer, hockey, wrestling, basketball, gymnastics, lacrosse, volleyball and rugby.
5. Endorsement of certification application by an NATA certified athletic trainer.
6. Subsequent passing of the certification examination (written, oral practical, and written simulation sections).

### **Internship Section:**

Each intern candidate must attain 1,500 hours of athletic training experience under direct supervision of an NATA certified athletic trainer. These hours must have been attained over a minimum of

two calendar years and not more than five years. Of these 1,500 hours, at least 1,000 hours must be attained in a traditional athletic training setting within the confines of the University of St. Thomas training room, practice or game fields.

BIOL	101	General Biology
HLTH	345	Nutrition for Health and Fitness
HLTH	350	Personal Health and Wellness or other health course approved by the department chair.
PHED	250	Emergency Care
PHED	410	Human Anatomy and Physiology
PHED	420	Kinesiology
PHED	421	Athletic Training Techniques
PHED	422	Physical Examination of the Lower Extremity
PHED	423	Physical Examination of the Upper Extremity
PHED	424	Advanced Athletic Training
PHED	425	Therapeutic Modalities and Rehabilitation
PHED	431	Exercise Physiology
PHED	432	Advanced Exercise Physiology
PHED	433	Cardiac Rehabilitation
PSY	111	General Psychology

Students who wish to pursue certification as an athletic trainer must consult the program coordinator about the specific requirements of the National Athletic Trainer Association, Inc.

**Physical Education Courses (PHED)**

**100 Foundations for Fitness 0 credit**

This course is required of all St. Thomas students as a part of the College liberal arts program. The course seeks to improve the student's knowledge and understanding of the role of physical activity and how it contributes to one's lifelong health and wellness; and to develop personal fitness and sports-activity skills that will enable the student to effectively integrate physical activity into her or his lifestyle. The course includes lecture and discussion sessions, a battery of physical assessments, a wide choice of sports-skill activities (e.g. archery, racquetball, tennis) and a selection of higher-intensity fitness activities (e.g. aerobic dance, strength training, jogging, and swimming). Students choose from among the various sports skills and physical-fitness activity offerings with guidance from physical education staff. Included in the course is a Fitness Unit which emphasizes discussion topics such as stress, nutrition, components of fitness, and drug and alcohol abuse.

The primary purpose of this course is to provide the student with the knowledge, skills, and techniques necessary to become a physically educated person; that is, a person who is able to design and maintain a lifestyle of fitness and wellness. Implied is the philosophy that students will learn to perform physical skills that contribute to personal participation in social and recreational activities – not the skills learned in competitive sports. St. Thomas graduates should not only be able to communicate the components of health-related fitness and wellness, but have the ability to assess, design, implement and maintain their personal fitness and wellness program. Ultimately, St. Thomas graduates should become advocates for the benefits of a healthy and active lifestyle.

**110 Foundations and Skills for Majors 2 credits**

Orientation to the physical education profession: the nature of the profession, professional opportunities, certification requirements, including current trends and research in elementary physical education. Skills include accelerated units of elementary physical education activities and the different methods of presenting lessons. Students learn to perform and teach activities at each of the three developmental levels of elementary school children. (Open only to prospective health and physical education majors). Fulfills the university physical education requirement. Offered during the fall semester in odd-numbered years.

**111 Foundations and Skills for Majors 2 credits**

Similar to PHED 100 but emphasis is on the development of basic skills common to secondary school curricula and corporate-fitness programs. Open only to prospective health and physical education majors.

**113 Introduction to Health Promotion 2 credits**

This course offers the learner opportunities to explore the field of Health Promotion. The learner will study the philosophies, theories, and current practices of Health Promotion as a means to gain a better understanding of the field.

**200 Activities and Techniques**

An introduction to the techniques of teaching activities common to the physical education curriculum at the elementary and secondary school levels. This course will consider the elements of effective instruction, methods of organizing for effective instruction, classroom management strategies,

peer teaching – including self-evaluation, methods of creating a positive learning environment, and the teacher-induction process. Lecture and laboratory.

Prerequisites: PHED 110 and PHED 111

### **205 Principles of Strength Training** **2 credits**

This course provides an overview of the principles of strength training, strength acquisition and program design for diverse populations. Students will be provided with the opportunity to gain practical, hands-on experience in assessing, designing, implementing and evaluating strength training programs for a variety of clients. Additional topics to be discussed include equipment selection and maintenance, facility design, management and safety.

Prerequisite: PHED 113

### **206 Principles of Aerobic Training** **2 credits**

This course provides an overview of the principles of aerobic conditioning and the various methods used to train diverse populations, i.e., children, adults, elderly, athletes, and non-athletes. Students will be provided with the opportunity to gain practical, hands-on experience in assessing, designing, implementing and evaluating cardiovascular training programs for a variety of clients.

Prerequisite: PHED 113

### **210 Outdoor Education I** **2 credits**

Students will participate in and learn the following skills: climbing and rappelling, initiative tasks, outdoor cooking, and use of outdoor equipment. Students will study the natural environment in which these activities occur. The class will include a three-day camping trip (required) with emphasis on rock climbing. Emphasis of the course is group dynamics and personal awareness.

### **211 Outdoor Education II** **2 credits**

Students will participate in and learn the following skills: initiative tasks, canoeing, camp cooking, and map and compass. Students will study the natural environment in which these activities occur. The class will include a three-day camping trip (required) with emphasis on group dynamics, camping, cooking skills, and canoeing. Emphasis of the course is group dynamics and personal awareness.

### **212 Outdoor Education III** **2 credits**

Students will participate in and learn the following skills: initiative tasks, utensil-less cooking, map and compass, winter survival skills, snowshoeing, cross-country skiing and downhill skiing. Students will study the natural environment in which these activities occur. The class will include a three-day camping trip (required) with emphasis on skiing. Group dynamics and personal awareness will also be emphasized.

### **215 Rhythms and Dance** **2 credits**

This course is designed to introduce future elementary and secondary physical education teachers to rhythms and dance education. Students will participate in and learn how to instruct rhythm activities, folk dance, square dance, creative dance, aerobic dance, and popular dance.

### **250 Emergency Care**

This course is designed to develop the emergency-care skills and understanding currently considered to be within the scope of a first responder. Consists of classroom, laboratory and internship experience. Upon satisfactory completion of this course, students will be first responder certified.

Prerequisite: physical education and criminal justice majors, or approval of the department chair

### **295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **310 History, Principles and Philosophy of Physical Education** **2 credits**

This course consists of two main areas of study: the historical background of physical education in the United States and throughout the world; and the philosophical basis for physical education programs throughout history.

### **311 Motor Development** **2 credits**

This course provides an overview of the principles of human growth and motor development and studies in depth the physical and psychological principles involved in the learning and performance of motor skills.

### **340 Physical Education at the Elementary Level**

Curriculum analysis and supervised teaching in physical education at the elementary school level.

Prerequisite: PHED 200

### **351 Teaching of the Special-Needs Student** **2 credits**

Education of special-needs students with particular reference to a legal basis, analysis of functional

and organic disabilities, assessment procedures, class-activity modification, and mainstreaming principles as related to the role of school health and physical education programs.

**356 First Aid and Safety****2 credits**

American Red Cross standard first aid and CPR. School and community safety with emphasis on accident prevention. Students will receive American Red Cross certification in standard first aid and CPR upon successful completion of the course.

**360 Curriculum Organization and Administration**

A study of the skills necessary for future teachers to plan, write, teach, evaluate teacher and student behaviors, conduct self-evaluations for the improvement of instruction, and evaluate and revise curriculum to enhance the learning experience of children in the discipline of physical education.

Prerequisite: PHED 200

**402 Principles, Theory and Techniques of Athletic Coaching****2 credits**

Analysis of the role of the head coach including interpersonal relationships with athletes, parents, faculty, school administration, coaching staff, news media, the State High School League and community groups. Special attention is given to motivation, ethics, scheduling, budgeting, legal implications and related administrative functions. Students complete a 40-hour supervised field experience in coaching a sport.

**403 Theory and Techniques of Coaching****2 credits**

Theory and techniques of coaching a specific sport. Students must select at least one of the sections listed below. It is strongly recommended that students choose a sport with which they have the least familiarity.

- 01 Football  
Offered in fall semester in odd-numbered years.
- 02 Soccer  
Offered in fall semester in odd-numbered years.
- 03 Basketball  
Offered every fall semester.
- 04 Hockey  
Offered in spring semester in even-numbered years.
- 05 Baseball  
Offered in spring semester in even-numbered years.
- 06 Volleyball  
Offered in fall semester in even-numbered years.
- 07 Track  
Offered in spring semester in odd-numbered years.
- 08 Softball  
Offered in spring semester in odd-numbered years.

**410 Human Anatomy and Physiology**

A course of study designed to meet the needs of the student requiring fundamental knowledge of the structure and function of the body and its tissues and fluids. Special consideration is given to the physiological aspects of exercise and sports conditioning.

**420 Kinesiology**

Study of human motion, including anatomical foundations of the skeletal and muscular systems, mechanics and principles of human motion with application to motor skills and physical education activities.

Prerequisites: PHED 410 or BIOL 122

**421 Athletic Training Techniques****2 credits**

Prevention and therapeutic procedures in athletic training including conditioning of athletes, fitting of protective equipment, the sports-medicine team, strapping and bandaging, first aid and recognition of the more common injuries and illness sustained by the competitive athlete.

**422 Physical Examination of the Lower Extremity****2 credits**

The study of the commonly accepted techniques and procedures for clinical evaluation and recognition of common athletic injuries and illnesses including history, inspection, palpation, functional testing (range of motion ligamentous and capsular stress testing, annual muscle testing, sensory and motor neurological testing, etc.), and special evaluation techniques.

Prerequisites: PHED 410, 421

**423 Physical Examination of the Upper Extremity****2 credits**

The study of the commonly accepted techniques and procedures for clinical evaluation and recognition of common athletic injuries and illnesses including history, inspection, palpation, functional testing (range of motion ligamentous and capsular stress testing, annual muscle testing, sensory and motor neurological testing, etc.), and special evaluation techniques.

Prerequisites: PHED 410, 421

### **424 Advanced Athletic Training**

**2 credits**

Application of the principles needed in planning, coordinating, and supervising all administrative components of an athletic training program for a high school, college and professional athletic organization including those pertaining to health-care services, financial management and public relations. Interpretation of the role of the certified athletic trainer as a health care provider, adviser and counselor on matters pertaining to the physical, psychological and emotional health of the student-athlete.

Prerequisite: PHED 421

### **425 Therapeutic Modalities and Rehabilitation**

Discussion of the primary components of a comprehensive rehabilitation program including determination of therapeutic goals and objectives, selection of therapeutic modalities and exercise, methods of evaluation and recording rehabilitation progress, development of criteria for progression and return to competition, and specific physiological effects and therapeutic indications and contraindications associated with the use of current therapeutic modalities. Role and function of commonly used pharmacological agents used in the medical treatment of athletic injuries and illnesses.

Prerequisites: PHED 410, 421

### **426 Biomechanics**

Study of mechanics applied to the moving body. Principles of human movement, interaction with a sporting implement, observing and analyzing performance are stressed. Torque, angular momentum, projectiles, fluid forces, aerodynamics, hydrodynamics, body rotation, throwlike and pushlike movement patterns, data gathering, analyzation and research in the field of sports biomechanics are introduced.

Prerequisite: PHED 420

### **430 Measurement and Evaluation**

**2 credits**

This course introduces basics of research, including issues of research and test validity and reliability. The course also includes basic statistical methods, test construction and evaluation, grading procedures, classroom and laboratory work in measurement of physical fitness, sports skills, motor ability and related functions.

### **431 Exercise Physiology**

**2 credits**

Application of the principles of anatomy and physiology to the study of metabolic, respiratory, circulatory and nervous adjustments of the body resulting from physical activity.

Prerequisite: PHED 410

### **432 Advanced Exercise Physiology**

This course is designed to prepare the student for certification by the American College of Sports Medicine. Students will apply knowledge and skills of exercise physiology to the practical setting, including fitness assessment, body composition, flexibility, blood pressure measurement, EKG testing, and exercise prescription.

Prerequisite: PHED 410 and 431

### **433 Exercise in Special Populations**

**2 credits**

This course is designed to prepare students to evaluate fitness, assess risk factors, and write exercise prescriptions for special populations, including obesity, hypertension, coronary artery disease, and arthritis. Students completing this course will have the knowledge, skills and abilities to pass the American College of Sports Medicine Exercise Test Technologist Certification Examination.

Prerequisite: PHED 431

### **449 Health Promotion Seminar**

**2 credits**

This seminar course provides Health Promotion majors with opportunities to enhance their expertise in teaching, demonstration, assessment, prescription, program development and program evaluation as related to Health Promotion. Learners will be required to demonstrate the understandings and skills necessary to effectively work with diverse populations including children, youth, adults, and elders in the field of Health Promotion.

Prerequisite: Junior standing and PHED 432 and 433 or concurrent enrollment

### **450 Health Promotion Internship**

The health promotion intern will obtain practical experience at the clinical, exercise, corporate health promotion, or community health promotion level. The internship will be under the supervision of an experienced exercise fitness specialist. Students will assist in the marketing and management of health promotion programs including the administration of a variety of assessments as prescribed by the exercise fitness specialist. Individual research project(s) will be assigned. A minimum of 250 hours of clinical experience will be required in at least one or more of the following areas: 1) clinical exercise and fitness; 2) corporate health promotion; 3) health promotion and education. Grading will be on an S/R basis.

Prerequisites: Current CPR and first aid cards and permission of the instructor (6 months prior to registration)

**451 Health Promotion Internship – extended 6 credits**

The health promotion intern will obtain practical experience at the clinical, exercise corporate health promotion, or community health promotion level. The internship will be under the supervision of an experienced exercise fitness specialist. Students will assist in the marketing and management of health promotion programs including the administration of a variety of assessments as prescribed by the exercise fitness specialist. Individual research project(s) will be assigned. A minimum of 400 hours of clinical experience will be required in at least one or more of the following areas: 1) clinical exercise and fitness; 2) corporate health promotion; 3) health promotion and education. Grading will be on an S/R basis.

Prerequisites: Current CPR and first aid cards and permission of the instructor (6 months prior to registration)

**475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**491, 492, 493, 494 Research**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**Health Courses (HLTH)****345 Nutrition for Health and Fitness**

An examination of essential nutrients, energy balancing and metabolism, nutritional deficiencies and over-consumption, diet fads and fallacies, healthful eating patterns and nutritional needs throughout the life cycle. Individual nutritional analysis and prescription will be included.

**350 Personal Health and Wellness**

This will entail an examination of the components of a healthful lifestyle. The interrelationship of physical, intellectual, spiritual and emotional health will be the focal point. Specific areas such as mental health, stress and coping, human sexuality, disease prevention, aging, grief and loss will be addressed.

**353 Consumer, Community and Environmental Health**

Health education as it relates to the consumer, the community, and the environment. Units of study include: consumerism, quackery, control and prevention of infectious and non-infectious diseases, community health services and resources, and current environmental issues.

**375 Lifelong Stress Management****2 credits**

This course is open to individuals from all fields. The focus is on exploration of effective, healthful strategies of stress management. This course is an opportunity to expand one's understanding of how to redirect stress responses into positive sources of energy.

**440 Health Education: PK-12 Curriculum, Assessment and Administration**

Learners will explore effective strategies for development and evaluation of PK-12 curriculum with emphasis on comprehensive school health education concepts. This exploration will include growth and developmental concerns, innovative learning theories, client-centered and proactive learning, dynamic partnerships with families and communities (including medical, business, and health agencies), interactive and interdisciplinary learning paradigms, global networking, appreciation for diversity, and current mind-body-spirit approaches to health care. There will be opportunities for learners to actively engage in review and development of authentic assessment strategies. Learners also will evaluate real-world health programs in the field and demonstrate effective in-service strategies and networking. Within this course, learners will engage in leadership approaches in enhancement of total quality health education programs for families, schools, and communities. This course fulfills the second-level Computer Competency requirement in the core curriculum.

### **441 Community Health Education: Curriculum, Assessment and Administration**

Learners will explore effective strategies for development and evaluation of Community Health Education curriculum with emphasis on comprehensive health education concepts. This exploration will include growth and developmental concerns, innovative learning theories, client-centered and proactive learning, and dynamic partnerships with clients, work sites, and communities (including medical, business, and health agencies). There is an emphasis on interactive and interdisciplinary learning paradigms, global networking, appreciation for diversity, and current mind-body approaches to health care. There will be opportunities for learners to actively engage in review and development of authentic assessment strategies with emphasis on knowledge over information. Learners will also evaluate health delivery programs in the field and demonstrate effective in-service strategies and networking. Included in this course are opportunities to explore and assess various resources from medical, insurance, health agency, business and private organizations that could effectively be used in community health settings. Within this course, learners will engage in virtual administration and leadership approaches in the enhancement of total quality community health education programs. Off-campus observations and presenting of health issues in community settings are required.

### **450 Health Education: K-12 Methods, Resources and Partnerships**

Learners will identify and practice effective methods of facilitating K-12 health education. Off-campus observations and teaching of health lessons in elementary, middle and secondary school settings are included in the requirements. An off-campus tutorial experience with elementary or middle school aged learners is required. Learners will also explore and assess various educational resources from medical, insurance, health agency, business and private organizations that effectively could be used with K-12 learners. This will include development of a professional telecommunications network. Learners will learn strategies for effectively using and evaluating telecommunications and interactive multimedia for K-12 health education. Learners will also investigate and design active partnerships with parents/guardians and communities.

### **451 Community Health Education: Methods, Resources and Partnerships**

Learners will identify and practice effective methods for facilitating community health education. Off-campus observations and presentations of health issues in community settings are required. Learners will explore and assess various resources from medical, insurance, health agency, business and private organizations that could effectively be used in community health settings. This will include development of a professional telecommunications network. Learners will learn strategies for effectively using and evaluating telecommunications and interactive multimedia in community health programs. In addition, learners will investigate and design active partnerships with clients, representatives of the medical field, health insurance agencies and business communities.

### **462 Human Sexuality Education**

The examination of the strategies and techniques for the development of human sexuality education for personal and professional needs. The course also addresses the needs of K-12 students and concerns of the community. The nature of sexual functioning, sexual development, ethics and attitudes will be addressed with the cooperation of the nursing, theology and health education disciplines. Effective and appropriate teaching strategies reflecting approved educational guidelines will be examined and practiced.

### **464 Critical Issues in Health Education**

An in-depth examination of relevant, critical health issues. Techniques for identifying and researching the issues plus appropriate teaching strategies will be addressed along with effective health and wellness promotional strategies. Examples of health issues include stress management, death education, HIV/AIDS, teen pregnancy, etc. Advanced helping skills will be included. Emphasis on mastery of telecommunication including: web page internet, grant writing, and computer presentations. This course fulfills the second-level Computer Competency requirement in the core curriculum. Prerequisites: HLTH 440 or 441; HLTH 450 or 451 or permission of instructor

### **470 Health Internship**

The community health education intern will obtain health education experience at a medical clinic, community center, or public health center. The internship is under the supervision of an experienced health education specialist and the course professor. Interns will engage in the development and delivery of health education programs. Each intern will complete an individual research project relevant to the clinic or center's clientele. The intern will complete a minimum of 250 internship hours. Prerequisite: HLTH 441, 451, 462, 464 and permission of instructor

### **471 Health Internship – extended**

**6 credits**

The community health education intern will obtain health education experience at a medical clinic, community center, or public health center. The internship is under the supervision of an experienced health education specialist and the course professor. Interns will engage in the development and delivery of health education programs. Each intern will complete an individual research project rel-

evant to the clinic or center's clientele. The intern will complete a minimum of 400 internship hours. Prerequisite: HLTH 441, 451, 462, 464 and permission of instructor

**475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**487, 488, 489, 490 Topics**

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**491, 492, 493, 494 Research**

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**495, 496, 497, 498 Individual Study**

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**Higher Education Consortium for Urban Affairs (HECUA)**

Brady (THEO), adviser; A. Hubbard (International Education Center) co-adviser

The Higher Education Consortium for Urban Affairs (HECUA) was established to offer students the opportunity to gain alternative perspectives on the urban community, both in the United States and in other cultures. Students earn four courses (16 semester credits) in each of these semester-long programs. Open to all majors.

**City Arts**

City Arts explores the relationship between the arts, culture and social change. Field study and internship provide direct access to the arts community of the Twin Cities.

IDSC 466 City Arts: Reading Seminar

IDSC 467 City Arts: Field Seminar

IDSC 468 City Arts: Internship

IDSC 469 City Arts: Internship Seminar

**Metro Urban Studies Term (MUST)**

Through a combination of seminars, field study and a professional internship in the Twin Cities, students explore the realities of social inequalities in urban America and strategies for bringing about change.

IDSC 471 MUST Seminar: Research on Urban Issues

IDSC 472 MUST Seminar: Field Studies in the Twin Cities

IDSC 473 MUST: Urban Studies Internship

IDSC 474 MUST: Urban Studies Internship Seminar

**Scandinavian Urban Studies Term (SUST)**

SUST, offered in affiliation with the University of Oslo, provides a broad survey of contemporary Scandinavian societies, issues of the modern welfare state and social democracy. The city of Oslo is the primary field-study site, supplemented by travel in other parts of Scandinavia and the Baltic states.

**South American Urban Semester (SAUS)**

SAUS is an interdisciplinary, field-learning program that examines the relationship between development issues and the consequences of urbanization in Latin America. The program is based in Bogota, Colombia, where students live with local families. Students gain a comparative perspective through study-travel in Ecuador and Guatemala.

**Culture and Society in Latin America (CASLA)**

CASLA examines the relationships among literature, the arts, ideology and current social realities. Latin American faculty and guest resource persons guide this unique approach to learning about Latin America. Based in Bogota, Colombia, students live with local families, have field study and travel in Central America and the Caribbean.

**Community Internships in Latin America (CILA)**

CILA combines an internship, independent study and seminars on community participation and

## History

development in the Latin American urban setting. Based in Bogota, Colombia, students live with local families and are involved in field projects in outlying areas.

### Human Resource Management

*See Department of Management in the Division of Business.*

### History (HIST)

Mega (chair), Chrislock, Delehanty, Fitzharris, Howe, Hwa, Klejment, Wright

The Department of History offers courses dealing with the principal periods and topics of American, European and ancient classical history, as well as in selected non-European/non-U.S. fields (such as Japan, Latin America, etc.). In these classes an effort is made not only to impart information but also to develop the habits of mind needed for the critical investigation and appreciation of the past.

The history major provides a concentration of courses useful as preparation for teaching, for further professional studies or for a variety of careers in business and government. Major requirements are designed to allow the history student the freedom to develop a substantial foundation in another field through elective courses.

#### History Honor Society

A campus chapter of Phi Alpha Theta, the national honor society in history, was established at St. Thomas in 1950. Candidates must have completed three courses in history and meet high qualitative standards for membership.

#### Major in History

Forty-four credits in major, of which at least four must be from each of four areas:

- The Ancient and Medieval World
- Modern Europe since 1450
- The United States or its Colonial Antecedents
- The non-Western World

*One of:*

- 111 Origins of the Modern World to 1550
- or*
- 112 The History of the Modern World since 1550

*Plus one of:*

- 113 Early America in Global Perspective
- or*
- 114 The Modern U.S. in Global Perspective  
(no more than one additional 100-level course may be applied to major)

*Plus one thematic course from:*

- 345 Family and Women in Chinese History
- 360 Early American Thought and Culture
- 361 American Thought and Culture Since the Civil War
- 363 Business in American Life
- 365 U.S. Constitutional History
- 366 The Catholic Church in the United States
- 368 Women in the United States
- 369 African-American History
- 371 History of U.S. Foreign Policy
- 382 Careers in History
- 384 Uses of History: Decision-Making
- 391 Development of Industrial Economies

*Plus one limited period course from:*

- 314 Europe since 1945
- 328 The French Revolution and Napoleonic Era
- 333 Eastern Europe, 1914 to the Present
- 347 The Modernization of Taiwan, Hong Kong, and China
- 353 History of the American Revolution
- 355 The Civil War Era
- 358 Twentieth-Century United States
- 372 The United States and Vietnam

*Plus one:*

- 485, 486 Senior Seminar

*Plus:*

Twenty-four credits in history chosen in consultation with student's major adviser

### **Social Studies-History**

*See Social Studies in Department of Teacher Education*

### **Minor in History**

Twenty credits in history, no more than eight of which may be at the 100-level and four of which must be a 400-level seminar (HIST 463, 464, 465 or 466). Selection of the specific courses to fulfill the requirements should be done in consultation with a member of the department faculty.

#### **111 Origins of the Modern World to 1550**

Ancient origins of Eurasian traditions. The rise of Europe. Traditional societies in Europe and Asia. Foundations of modernization in Renaissance Europe. Africa and America before Europe's expansion. Europe and the wider world.

#### **112 The History of the Modern World since 1550**

The Modern World Since 1550 surveys the sixteenth century European foundation and expansion throughout the world down to the end of the twentieth century. The course examines the resulting breakthroughs in communication and cultural exchanges between Western civilization and the Middle East, Asia, Africa, and Latin America. Emphasis is placed on the emergence of an interdependent global civilization.

#### **113 Early America in Global Perspective**

Social, political, cultural, and economic history of the peoples of North America from the European-American encounter through the aftermath of the U.S. Civil War. Special emphasis is given to the relation of minority groups (American Indians, African Americans, Hispanic peoples, European immigrants, etc.) to the dominant culture. Major themes include: colonization, slavery, revolution, nation building, territorial expansion, industrialization, reform movements, nativism, sectionalism, and the Civil War.

#### **114 The Modern U.S. in Global Perspective**

Social, political, cultural, and economic history of the peoples of the United States from the Reconstruction period following the Civil War to the present. Special emphasis is given to the relation of minority groups (American Indians, African Americans, Hispanic peoples, Asian and European immigrants, etc.) to the dominant culture, and to the changing role of the U.S. within its larger global context. Major themes include: Reconstruction, domestic and overseas expansion, industrialization, racism and nativism, world wars, cold war, movements of liberation and reform, and other contemporary issues.

#### **210 Modern Latin America, 1800 to the Present**

A survey of the historical and cultural developments of Latin America from the movement for Latin American independence to the present. Selected topics include: the struggle for social justice, political instability, economic dependence, race relations, revolution, rural societies, militarism and the relationship between the United States and Latin American countries. This course fulfills the Human Diversity requirement in the core curriculum.

#### **220 Introduction to Japanese History and Culture**

An overview of Japanese history and culture from the beginning to the present day with particular emphasis on the period following initial contact with the West at the end of the 16th century. Topics of special emphasis will include: formative aspects of Japanese culture; the early history of Western influence and Christianity; the Tokugawa Period and centralized feudalism; the Meiji Era and renewed contact with the West; late 19th and early 20th-century development; the World War II and postwar occupation; and a look at contemporary Japan. This course fulfills the Human Diversity requirement in the core curriculum.

#### **230 Canadian History**

A survey of Canadian history from New France to the present. Emphasis will be on the history of English-speaking Canada since 1763. Topics will include: Canadian beginnings; Canada at the time of the American Revolution; 19th century political development and Confederation; western expansion; and Canada in the 20th century. Special emphasis will be given to the significant parallels and contrasts with the historical and political development of the U.S.

#### **295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **302 Classical and Early Hellenistic Greece**

The political vicissitudes of the Peloponnesian and Athenian Leagues in the fifth and in the earlier fourth century before Christ and the emergent dominance of Macedon in the later fourth century. The final topic is the new cosmopolitan order presided over by the immediate successors of Alexander. Attention is paid to the concurrent cultural developments.

### **304 The Roman Republic and the Early Principate**

The rise of Rome from Etruscan tutelage to dominance over the Mediterranean world and over Western Europe, with special attention to the internal development of the Roman government from aristocratic collective rule to the new monarchic order of the Julio-Claudian dynasty. Concurrent cultural developments are noted.

### **306 The World of Late Antiquity: A.D. 284-641**

An examination of the Roman Empire in its final centuries, in its prolonged "Indian Summer." Reorganization of the Empire after 50 years of chaos. Accelerating Christianization of the empire beginning with the reign of Constantine. Heretical dissent and political compulsion. The Golden Age of the Fathers. Recurrent danger from the Goths: invasions in the East and in the West. Fall of the Latin West to the barbarians. The Age of Justinian. The first flowering of Byzantine art. Passing of the old order in the Greek East with the Muslim conquest of Syria and Egypt.

### **307 The Church in the Roman Empire to A.D. 395**

Internal development of the church from the beginnings to the reign of Theodosius I; interaction of the ideology and organization of the church with the political and cultural forces dominant in the Roman world.

### **310 The Making of Europe: Middle Ages to 1215**

Origins of the middle ages: the late Roman Empire; Germanic migrations and settlements; the Christian church. Separation of western and eastern Mediterranean areas. Carolingian revival and decline. Economies and societies of rural Europe. Twelfth century Europe: economic and urban expansion; church reform and the papacy; schools and learning; the Crusades; kingdoms and their governance.

### **311 The Dawn of a New Era: Europe from 1215 to 1450**

Medieval Christendom in the 13th century: papacy; mendicant orders; universities; heresy; Inquisition. Growth of secular culture. The western monarchies. Political and economic crises of the 14th century. Ecclesiastical crises of the late middle ages. Recovery and renaissance in the 15th century. Europe's medieval expansion.

### **312 Early Modern Europe: 1450-1750**

Europe from the 15th century to the 18th century studied with particular reference to the background, development and results of religious reformations.

### **313 Europe 1750 to 1945**

An examination of the 18th century legacies of competition for empire, the Enlightenment, and the French and Industrial Revolutions with emphasis on the emerging ideologies of the 19th century including nationalism. A study of imperialism leads to the origins and outbreak of World War I. Major themes of the 20th century include the Russian Revolution and the Soviet State, the rise of Fascism, politics of the inter-war period, and the origins, outbreak, and Holocaust associated with the Second World War.

### **314 Modern Europe since 1945**

The Cold War; post-war reconstruction; the end of colonialism; West European prosperity and reform; the German Question; de Gaulle; Thatcherism; social movements; collapse of the Soviet Empire; European integration.

### **322 Tudor and Stuart Britain**

England from the accession of the Tudor dynasty down to the Glorious Revolution. Modernization of English society and government. The English Reformation. Anglicanism. The Elizabethan period. Puritanism. Crown and Parliament in Tudor and Early Stuart times. Civil War, Revolution and Restoration. The Revolution of 1688.

### **324 England, Scotland and Ireland Since 1688**

An examination of the British economy, society, politics and culture since 1688. The course surveys the rise of modern Britain through such developments as the Industrial Revolution, democratic government, the empire, the two world wars and post-1945 contemporary issues.

### **326 English Law and Government Before the American Revolution**

Anglo-Saxon foundations of kingship and law. Norman and Angevin kingship. Origins of the Common Law. Limitation of monarchy. Maturing of the Common Law. Rise of the legal profession. Crown and Parliament in Tudor times. Seventeenth-century conflicts. The Revolution Settlement.

**328 The French Revolution and Napoleonic Era**

A background in the *ancien regime* and the Enlightenment. An examination of the origins and outbreak of the Revolution of 1789 and the collapse of the absolute monarchy. An emphasis on the Second French Revolution, the Terror in theory and practice, and the Thermidorian Reaction with a survey of the Directory and Napoleonic France and Europe.

**331 Eastern Europe, 1699-1914**

Internal developments and external pressures on Eastern Europe from the Treaty of Karlowitz to the outbreak of World War I. Decline of the Ottoman Empire; the Eastern Question; rivalries of the great powers; national revivals; cultural and political nationalism; emergence of East European states; diplomatic crises.

**333 Eastern Europe, 1914 to the Present**

International developments and external pressures on Eastern Europe from World War I to the present. World War I; 20 years of independence; World War II; sovietization; Stalinism; Titoism; national communism; collapse of communism; recent cultural developments. Emphasis may shift slightly from year to year.

**340 Foundations of Chinese Civilization**

This course introduces students to the formation and evolution of fundamental elements of Chinese civilization to about 1800. Topics include: major Chinese thought, Confucianism, Taoism and Legalism with special emphasis on how Confucianism became a prevailing influence on Chinese government, family and society; the development of the Chinese imperial government including the Civil Service Examination; the flourishing of Buddhism in a Confucian China; Chinese written characters, calligraphy and poetry; the cosmopolitan T'ang dynasty; the T'ang-Sung commercial transformation; the Mongol rule in China; and the state and society before encountering Western expansion.

**341 The History of Modern China**

This course studies the impact of Imperialism on Chinese state and society and China's subsequent transformation from about 1800 to the 1980s. Topics include: early Chinese and Western contacts; the Canton System; the Opium War and unequal treaties; China's reforms and domestic tensions – the Taiping Rebellion, the Boxer Uprising and the 1911 Revolution; the May Fourth cultural iconoclasm; Chiang Kai-shek and the Nationalist government; the Sino-Japanese War; the nature of Mao Zedong's Communism; the Great Proletarian Cultural Revolution; Deng Xiaoping, revisionism and the democratic crackdown.

**345 Family and Women in Chinese History**

This course examines Chinese family and women prior to the early twentieth century. It studies the nature of the traditional Chinese family, the role of different women in the Confucian patriarchal family and how Confucian values affect their lives. Topics include Confucian ritual text concerning family and women; Confucian female educational text; women's marriage, life and work in the family; famous women in Chinese history; constraints on women's body and mind such as footbinding, widow chastity and concubinage; the social environment and women's own perceptions of themselves. The course is both topically and chronologically arranged to reflect changing perceptions and practices.

**347 The Modernization of Taiwan, Hong Kong, and China**

This course examines the unconventional patterns of economic modernization and political transformation of the Greater China Zone – Taiwan, Hong Kong and China. It studies Taiwan's transformation from a poor and embattled island in 1949 to a prosperous and democratic state. It traces Hong Kong's growth from a colonial port to a "special entity" within China, and it studies China's paradoxical development of both market economy and Socialism. It also examines the intricate political and economic relationships among Taiwan, Hong Kong and China, the issue of Taiwan independence or its unification with China and the concern over stability and balance of power in the Pacific region.

**352 American Colonial History**

An examination of several aspects of colonial history including the European background to colonization, and the political, economic and social development of British North American colonies to the end of the Seven Years War.

**353 History of the American Revolution**

A study of the American Revolutionary Period from the end of the Seven Years' War through the Constitutional Convention of 1787. Emphasis will be placed on the changes wrought by the Revolution in American society, politics and constitutional arrangements.

**355 The Civil War Era**

The American Civil War was a pivotal event, followed by incomplete efforts at changing the shape of the nation through Reconstruction. The causes of the war, its conduct on both sides, and the consequences of this "War of Rebellion," including Reconstruction, form the three parts of this course.

### **358 Twentieth-Century United States**

An intensive study of 20th-century United States domestic history, with emphasis on homefront issues during World War I, World War II, the Cold War and the Vietnam War. Issues of social, political and intellectual history are considered.

### **360 Early American Thought and Culture**

An examination of early American culture using examples drawn from the literature, music, art and political thought of the colonies and early national experience to 1865. Major topics dealt with will include: 17th-century Puritan and Quaker thought; the impact of the Enlightenment (Franklin and Jefferson); the Romantic movement and reform; the beginnings of American literature; and the development of an American folk tradition.

### **361 American Thought and Culture Since the Civil War**

An examination of American culture from the Civil War to the present. A major theme will be the adjustment to an urban-industrial culture as reflected in literature, music, art and social thought. Specific topics examined will include: the impact of the theory of evolution, pragmatism, the Progressive Era, the Lost Generation, and the counterculture of the 1960s.

### **363 Business in American Life**

This course examines the many relations between business and the larger American society since the first explorations of North America. Major topics include business structure and change, the great leaders of business, the interplay between business and the government and the people, and the global context and operations of American business firms and foreign firms doing business in America. A particular emphasis will be placed on using history in business.

### **365 U.S. Constitutional History**

The origins and evolution of the American constitutional system from the colonial period to the present. Students explore the constitutional system created by Americans, and the way in which this system and its corresponding institutions have articulated Americans' constantly changing perception of the proper relationship between the people and their government.

### **366 The Catholic Church in the United States**

An overview of the role of the Catholic Church from the early republic to modern times, with emphasis on the period from 1880 to the present. Topics include church and state, anti-Catholicism and nativism, the mission church, the immigrant church, the national church, the public role of Catholicism and Catholics, social issues, renewal, the charismatic movement and traditionalism. This course fulfills the Human Diversity requirement in the core curriculum.

### **368 Women in the United States**

An overview of the changing social, cultural and political roles of women from the 17th century to the present. Topics include: family economy, industrialization of home and workplace, servitude and slavery, voluntary associations, women's rights, the development of women's professions, and an evaluation of various approaches to equalizing opportunity for women. This course fulfills the Human Diversity requirement in the core curriculum.

### **369 African-American History**

A survey of the African-American experience from the beginnings of the trans-Atlantic slave trade to the present. Topics will include: African backgrounds and the origins of the slave trade; the history and development of slavery in the U.S.; the failure of post-Civil War Reconstruction and the rise of Jim Crow; the civil rights movement of the 1950s and 1960s; and contemporary issues in race relations and civil rights. Particular emphasis will be placed upon African-American contributions to American history and culture. This course fulfills the Human Diversity requirement in the core curriculum.

### **371 History of U.S. Foreign Policy**

Historical analysis of principles and conduct of U.S. foreign policy; emergence of the United States as a world power; isolationism; interventionism; development of the cold war. Emphasis may vary from year to year.

### **372 The United States and Vietnam**

The causes, events, personalities and consequences of U.S. involvement in the controversial Vietnam War. Background on Vietnamese culture, nationalism, colonial status under French and Japanese rule, and development of two distinct governments and societies. Role of culture, politics and military strategy in defining the U.S. commitment in Vietnam. Issues of controversy and role of media and public opinion in policy formulation. Historical models used in explaining the nature of the war. The aftermath of the war. Extensive use of documentary films and printed primary sources. This course fulfills the Human Diversity requirement in the core curriculum.

### **376 Minnesota History**

Minnesota from the French explorations of the 17th century to the present, with an examination of

political, social and economic development and with intensive research in selected topics of local history.

### **377 The History of the Twin Cities**

This course explores the development of the Twin Cities metropolitan region from pre-European contact to the present. Emphasis is on the impact that increasing urbanization of the seven-county region has had on those who have lived, worked and played here.

### **382 Careers in History**

This course is an introduction to the field of public history. It examines the various technical skills employed by public historians including collections management, preservation and conservation of historical resources, exhibiting purposes and techniques, archival management, and research and writing in the field of public history. Students in the course also examine career opportunities in public history, ranging from historical agency management to corporate historian and professional consulting.

### **384 Uses of History: Decision-Making**

This course examines the uses of history. Government, business and the military all can and often do use the past in evaluating the present and planning for the future. Selected case studies will be used to investigate some of these possible uses and users of history.

### **391 Development of Industrial Economies**

This course examines the development of the industrialized economies of Europe, the Americas, Russia and Japan from the mid-18th century. Several selected topics will be examined in depth, such as technological change or the agricultural revolution.

### **398 History Internships**

Students in this course will be placed in apprenticeships in private businesses, public agencies or nonprofit historical agencies and museums. The apprenticeship will require 10 hours per week on site and a weekly seminar session.

Prerequisite: one history course or consent of the instructor.

### **463, 464 Seminar in European History**

### **465, 466 Seminar in U.S. History**

History seminars involve students (primarily, though not exclusively, majors and minors) with the methodological and historiographical dimensions of research in the seminar's topic. Some topics may be drawn from existing 300-level courses; when this occurs students are able to earn credit for both courses. Students in the seminar will complete and present to other members of the class a significant research project. Majors normally will offer one of their seminar papers as their senior paper.

### **475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **491, 492, 493, 494 Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## Interdisciplinary Studies

### Interdisciplinary Studies (IDSC)

Carrocci (dean), director

Interdisciplinary studies at the University of St. Thomas include a wide range of courses and programs.

*Interdisciplinary majors are available in:*

Catholic Studies  
East Asian Studies (ACTC)  
Environmental Studies  
Justice and Peace Studies  
Russian, Central and East European Studies (ACTC)  
Science and Mathematics for Elementary Education  
Social Sciences  
Women's Studies (ACTC)

*Interdisciplinary minors are available in:*

Catholic Studies  
East Asian Studies (ACTC)  
Environmental Studies  
Justice and Peace Studies  
Legal Studies  
Renaissance Program  
Urban Studies  
Women's Studies (ACTC)

Descriptions of each of these majors and minors will be found in the Departments and Curricula section of the catalog.

Other interdisciplinary courses are listed below.

#### **150 Development of the Natural World**

This is an interdisciplinary course which examines our universe and integrates the sciences of biology, chemistry, physics, geology and astronomy. The nature of the cosmos and the Big Bang theory are first introduced, followed by a study of the basic principles of gravity, energy, thermodynamics, electromagnetic radiation, and the structure of matter, including chemical bonding and the Periodic Table. The nature and formation of the stars and planets is followed by a focus on the earth, including plate tectonics and geologic cycles. An introduction to biochemical systems includes a look at cells, biochemical molecules, genetics and evolution. An integrated unit on ecosystems ties together much of the previous work. The scientific method is emphasized throughout the course. The course consists of lecture, discussion and laboratory activities. This course fulfills the laboratory science requirement.

#### **180 English as a Second Language I**

Special and individual attention to speaking, writing, reading, listening and study skills. For students whose native language is not English. Offered in fall semester.

#### **181 English as a Second Language II**

Continuation of 180. Offered in spring semester.  
Prerequisite: 180

#### **281 Topics in American Culture**

An interdisciplinary approach to a particular period in American life (the 1920s, the 1950s, etc.). Course will seek to isolate the basic themes that characterized the cultural life of the period and examine their manifestations in the art, music, literature and popular culture of the era. Particular emphasis will be given to the interdisciplinary perspective in approaching the topic.

#### **284 Introduction to Teach Religion**

**2 credits**

The course includes a six-hour seminar including at least three basic skills related to the act of teaching as well as a year of teaching in a local parish religious education program once a week. The teaching placement is done through consultation with each student and cooperating teachers who have a sound understanding of the life and ministry of teacher education in the church. Specific seminar content will enable students to do the following: define the term "concept" and explain how key concepts are developed by learners; explain the relationship of objectives to overall goals of religious education; define the term "strategy" and develop workable plans for teaching within a typical church/school setting.

Prerequisite: Acceptance into St. John Vianney Seminary

**291 The Anatomy of Violence**

The purpose of this course is to increase the knowledge and understanding of cultural, racial and interpersonal violence and develop a commitment to promoting a violence-free society. Emphasis is on exploration of the extent, causes and effects of violence and strategies for intervention on the micro and macro levels. Specific areas of study include domestic/partner abuse, child abuse/neglect, peer/date violence, elder abuse, sexual assault/sexual harassment, cultural violence, racism and other systemic oppression.

**295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**310 Washington Semester**

The University of St. Thomas is affiliated with the American University's Washington Semester Program, Washington, D.C. Students selected to participate in the program have the option of studying one of several subjects, such as: American national government and politics, U.S. foreign policy, economic policy; justice, peace and conflict resolution. The Washington Semester involves seminars, research and internships drawing on governmental and private organization resources in the Washington, D.C., area. Nominations to participate are made by the university, with final acceptance decided by American University.

**330 Renaissance Program Internship****0 credit**

Participants in the Renaissance Program complete one internship in a career-related field. Students are encouraged to be creative and to search for inventive ways of implementing a plan of practical work experience. A variety of options and opportunities is available through the Career Center.

**333 Renaissance Program Studies**

In accord with the Renaissance Program's commitment to foster the integration of theoretical and practical learning, the design of this course is to promote the investigation of some theme or problem having a particularly interdisciplinary focus. This course will rely upon concepts and models stemming from both theoretical and practical sources in an attempt to further integrate aspects of these distinct branches of higher learning. Among the types of issues or topics that could fall within the scope of this course are: the meaning and value of work; the nature and place of technology; the relationship of individual to community; views of self – as worker and theoretician; models and parameters of authority.

**340 Criminal Law and the Social Order**

Sources of criminal law and traditions and values of society; characteristics of criminal law and an analysis of these characteristics; criminal responsibility and criminal intent; due process; the law at local, state and federal levels, with an emphasis on Minnesota statutes; public opinion regarding the law and its enforcement.

**395 Introduction to Pastoral Ministry****2 credits**

This is a semester-long pastoral education program that provides for personal involvement and the practical exercise of pastoral ministry. Designed to implement the church's documents and the U.S. Bishops' Program for Priestly Formation, emphasis is placed on the future pastoral ministry of the student. Each student is placed in one of three broad areas of ministry: family counseling; chemical dependency counseling; and death, dying and grief arenas. Training and on-going supervision by qualified professionals is provided.

Prerequisite: Acceptance into St. John Vianney Seminary

**466 City Arts: Reading Seminar (HECUA)**

An investigation of contemporary studies of intelligence, creativity and thinking processes that uses academic literature and discussions with artists and other resource persons. Special workshops on topics such as writing and thinking, visual studies and communication, and photography encourage students to try new ways of working and different approaches to learning.

**467 City Arts: Field Seminar (HECUA)**

Field study of art worlds and their role in the Twin Cities. Topics include: the social organization of the arts, doing business in the arts, arts and the urban landscape, making a living as an artist, funding for nonprofit arts organizations, artists and audience, the dispersing city and problem of audience.

**468 City Arts: Internship (HECUA) (formerly 471)**

The internship is one of the four courses in the City Arts semester. A range of placements is available, from arts organizations and artistic groups to public and community organizations that use the arts in their programs and services.

## Interdisciplinary Studies

### **469 City Arts: Internship Seminar (HECUA) (formerly 472)**

The structured reflection on the internship with other City Arts students. The seminar seeks to integrate the reading and field seminars.

### **471 MUST Seminar: Research on Urban Issues (HECUA) (formerly 482)**

A review of current literature on urbanism from a variety of disciplines and perspectives to provide the necessary theoretical framework for the practical experience of the field work and internship courses in the program. During weekly seminar meetings, students discuss assigned readings and individual research projects.

### **472 MUST Seminar: Field Studies in the Twin Cities (HECUA) (formerly 483)**

Firsthand exploration of Twin Cities urban life, including their people, businesses, economy, government and politics, culture and the arts. Offices and workplaces often serve as classrooms, with presentations and discussions with business people, city mayors, community activists, developers, laborers, artists and many others who serve as informants about decisions that shape city life.

### **473 MUST: Urban Studies Internship (HECUA)**

The internship is one of the four courses in the Metro Urban Studies Term (MUST). A range of placements is available, including public, private and community nonprofit organizations working on urban issues.

### **474 MUST: Urban Studies Internship Seminar (HECUA)**

The structured reflection on the internship with other MUST students. The seminar seeks to integrate the reading and field seminars.

### **475 Experiential Learning: Career Exploration Externship**

**2 credits**

Students will be placed at work sites throughout the Twin Cities area and beyond where their career interests are matched with the cooperating company's wants and needs. Externs must report to their workplace on at least a half-day basis for four weeks during January Term, a minimum of 80 hours "in- place" time on the job. Supervisors at the co-op company will assign specific tasks, duties and projects. The placements will provide students with opportunities to observe, experience and gain a better understanding of the "real world" as it relates to their own interests, values and objectives. Students will work under the direction of a faculty member and will be responsible for additional research and written assignments. This course offered during January Term only. May be repeated for a maximum total of 4 credits.

### **475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **479, 480 Honors Seminar**

**2 credits**

These interdisciplinary seminars are intended to develop integrating insights through an analysis of topics chosen from different disciplines. Often they are taught by two faculty members or by a visiting lecturer who holds one of the endowed chairs at the university. Although these seminars are part of the Aquinas Scholars program, any student who receives the permission of the instructor(s) may enroll on a space-available basis. (IDSC 479 is used if the seminar has been approved to partially fulfill a requirement in the core curriculum.)

### **481 Seminar in International Studies**

Directed readings and discussions on political, economic and historical aspects of the international system and the completion of a major research paper on a specific topic to be chosen in consultation with the instructor. The seminar will be led by the director of the international studies major and will feature guest lecturers in political science, economics and history.

### **487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **491, 492, 493, 494 Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## International Business

*See Division of Business.*

**International Business – Language Intensive**

*See Department of Modern and Classical Languages.*

**International Studies**

Alexander (ECON), director

This major seeks to give the student a basic understanding of the contemporary international system. It combines study in economics, history and political science with a concentration in one of these fields, along with the study of a foreign language beyond the College's general education requirement. The program enables students to relate international interests to a broad range of careers including government, international business, nonprofit associations and teaching.

**Major in International Studies**

ECON	251	Principles of Macroeconomics
GEOG	113	World Geography
HIST	112	The Modern World Since 1550
IDSC	481	Seminar in International Studies
POL	105	Politics and Government in a Comparative Perspective

*Plus:*

Twenty-eight credits from the following list. A student must choose 16 credits from one discipline, and the remaining 12 must include courses from each of the other two disciplines.

ECON	252	Microeconomics
ECON	345	Economics of Development and Growth
ECON	346	Country and Area Studies (offerings vary each year)
ECON	348	International Economics
ECON	349	Comparative Economic Systems
HIST	210	Modern Latin America, 1800 to present
HIST	220	Introduction to Japanese History and Culture
HIST	313	Europe 1750 to 1945
HIST	314	Modern Europe since 1945
HIST	371	History of United States Foreign Policy
POL	225	Introduction to World Politics
POL	320	American Foreign Policy
POL	326	International Law and Organizations
POL	350	Comparative Politics of the New Europe
POL	352	Third World Politics and Government
POL	424	Seminar in International Politics
POL	454	Seminar in Comparative Politics

GEOG The Department of Geography from time to time offers courses on the geography of selected regions of the world. With the approval of the director of international studies, these courses may be elected to fulfill non-concentration requirements.

*Allied requirements:*

At least twelve credits beyond the core curriculum requirement in a particular modern foreign language

*Recommended courses:*

While the student who might eventually seek employment in international business may choose any courses in business administration, the following four courses would be most appropriate for gaining general background in the field:

ACCT	211	Financial Accounting
BLAW	365	Business Law
MGMT	300	Management for Non-Business Majors
MKTG	300	Principles of Marketing

*ACTC courses:*

A student with particular academic and/or career interests should consult with the director about courses offered by the Associated Colleges of the Twin Cities that would be appropriate to the major.

*Opportunities for studying human diversity:*

Students should particularly note the opportunities in the major for enhancement of their understanding of other cultures. Courses with a non-Western focus meeting the requirements of the major are available both on campus and at the other ACTC schools.

## Journalism and Mass Communication

### *Opportunities for study abroad:*

Students majoring in international studies should seriously consider one or more of the opportunities to study abroad offered by the International Education Center.

### *Opportunities for internships:*

Students majoring in international studies should discuss with the director opportunities to relate academic and career interests through internship experiences in the Twin Cities or Washington, D.C.

## Japanese

*See Department of Modern and Classical Languages.*

## Journalism and Mass Communication (JOUR)

Craig (chair), Bunton, Connery, Gale, Kanihan, Larson, Neuzil, Nimmer

Journalism and mass media education equips students with the knowledge needed to understand the function of mass media and with the skills needed to work for the mass media. Students learn to gather and assess information; to write for, edit and design publications; to write and produce for broadcasting; and to use and take photographs. Students also acquire an understanding of the cultural role of mass media, as well as an appreciation of the social responsibility of the media.

Coupled with a firm foundation in the liberal arts, the department's courses provide a sound background in the ethical, legal, philosophical, political, social and historical principles that will enable students to interpret human affairs and communicate intelligently and effectively through the various forms of mass communication.

Courses in journalism and mass communication prepare students for a variety of careers with newspapers, magazines and other publications, with public relations and advertising agencies, with television and radio stations, with video companies, corporate and government communication departments.

All students take four core courses and follow one of five major tracks: Print Journalism, Broadcast Journalism, Public Relations, Advertising, and Media Studies. A student may also minor in one of those areas, or in Visual Communication.

Much of the work in the department's skills courses is done in a Macintosh computer lab. In addition, students who work on the school newspaper or the yearbook do all the writing, editing and design work on Macintosh computers. Other on-the-job training may be obtained in internships.

The department sponsors chapters of the Society of Professional Journalists, the Public Relations Student Society of America (PRSSA) and the American Advertising Federation.

### **Major in Journalism and Mass Communication**

All journalism and mass communication majors must take these four courses:

- 100 Contemporary Mass Communication
- 105 Visual Communication
- 110 Media Writing and Information Gathering
- 480 Media Ethics Seminar

#### *Plus:*

One of the concentrations below

#### *Plus the following allied requirements:*

All majors must also take a group of courses outside journalism and mass communication. These allied requirements can be fulfilled in various ways.

A student may take a minor, double major, or a mixture of six beginning, intermediate and advanced courses (24 credits) from two or more related disciplines.

The student has considerable freedom and flexibility in selecting courses or a minor to fulfill this requirement, but the department does have some recommendations based on the student's interests. Before choosing an option, students should consult with the department chair.

### **Concentration in Print Journalism**

- 210 Reporting for Print Media
- 211 Editing

#### *Plus two of:*

- 311 Persuasion in Writing
- 312 Critical Writing
- 370 Magazine Writing
- 410 Advanced Reporting

*Plus one of:*

- 301 Journalism History
- 302 Literary Journalism
- 304 Media Law

**Concentration in Broadcast Journalism**

- COMM 160 Electronic Media Production
- COMM 270 Videography: Television Production in the Field
- JOUR 260 Broadcast Reporting
- JOUR 460 Advanced Broadcast Reporting

*Plus one of:*

- COMM 365 The Documentary in American Television
- COMM 465 Current Issues in Electronic Media
- JOUR 301 Journalism History
- JOUR 303 Newsroom Management
- JOUR 304 Media Law

**Concentration in Public Relations**

- JOUR 250 Public Relations Principles
- JOUR 300 Mass Communication Research
- JOUR 350 Public Relations Writing
- JOUR 450 Advanced Public Relations

*Plus one of:*

- JOUR 211 Editing
- JOUR 220 Design Concepts
- JOUR 311 Persuasion in Writing
- MKTG 300 Principles of Marketing

**Concentration in Advertising**

- JOUR 240 Advertising Principles
- JOUR 445 Advertising Campaign Strategies

*Plus three of the following:*

(students interested in Account Management should choose three from 300, 340, 345, MKTG 300, 370; students interested in Creative should choose three from 220, 340, 420, 440)

- JOUR 220 Design Concepts
- JOUR 300 Mass Communication Research
- JOUR 340 Copywriting
- JOUR 345 Media Planning
- JOUR 420 Graphic Design Studio
- JOUR 440 Advertising Copywriting
- MKTG 300 Principles of Marketing
- MKTG 370 Buyer Behavior

**Concentration in Media Studies**

The media studies major provides students the opportunity to closely examine the social and cultural effects of mass media. The track is particularly suited for those more interested in graduate or law school than in careers in the mass media.

- 300 Mass Communication Research
- 402 Society, Culture and the Media
- 404 Media Structure and Power

*Plus two of:*

- 301 Journalism History
- 302 Literary Journalism
- 304 Media Law
- 305 Gender, Race and Mass Media

**Minor in Print Journalism**

- 100 Contemporary Mass Communication
- 110 Media Writing and Information Gathering
- 210 Reporting for Print Media
- 211 Editing

## Journalism and Mass Communication

*Plus one of:*

- 301 Journalism History
- 302 Literary Journalism
- 304 Media Law
- 480 Media Ethics

**Minor in Broadcast Journalism**

- COMM 160 Electronic Media Production
- JOUR 100 Contemporary Mass Communication
- JOUR 110 Media Writing and Information Gathering
- JOUR 260 Broadcast Reporting
- JOUR 460 Advanced Broadcast Reporting

*Plus one of:*

- COMM 365 The Documentary in American Television
- JOUR 301 Journalism History
- JOUR 304 Media Law
- JOUR 480 Media Ethics

**Minor in Public Relations**

- 100 Contemporary Mass Communication
- 110 Media Writing and Information Gathering
- 250 Public Relations Principles
- 350 Public Relations Writing

*Plus one of:*

- JOUR 450 Advanced Public Relations
- MKTG 300 Principles of Marketing

**Minor in Advertising**

- 100 Contemporary Mass Communication
- 110 Media Writing and Information Gathering
- 240 Advertising Principles

*Plus one of:*

- 220 Design Concepts
- 340 Copywriting
- 345 Media Planning

*Plus one of:*

- 420 Graphic Design Studio
- 440 Advanced Copywriting
- 445 Advertising Campaign Strategies

**Minor in Visual Communication**

- 100 Contemporary Mass Comm.
- 105 Visual Communication
- 220 Design Concepts of Communication
- 230 Photojournalism

*Plus:*

One upper-level visual course to be selected in consultation with the department chair

*Plus one of:*

- 301 Journalism History
- 304 Media Law
- 480 Media Ethics

**Minor in Media Studies**

- 100 Contemporary Mass Communication
- 300 Mass Communication Research
- 402 Society, Culture and the Media
- 404 Media Structure and Power

*Plus one of:*

- 301 Journalism History
- 302 Literary Journalism
- 304 Media Law
- 305 Gender, Race and Mass Media
- 480 Media Ethics

### **100 Contemporary Mass Communication (formerly 111)**

The nature of mass communication and contributions of other disciplines to a knowledge of the media. Concentration on newspapers, radio, television, magazines, and motion pictures for comparative functions and proportionate influence in a pluralistic society.

### **105 Visual Communication (formerly 125)**

Introduction to the history, theory and principles of communicating visually through art, illustration, photography, design, typography, video and other visual forms.

### **110 Media Writing and Information Gathering (formerly 112)**

Basic techniques for gathering information and presenting it in writing for the various mass media. Strategies for gathering and assessing information, including use of databases, public documents, libraries and interviews. Writing news and feature articles, news releases, and newsletter, broadcast and ad copy.

Prerequisite: 100 and passing a department language-skills test

### **210 Reporting for Print Media (formerly 200)**

This course concentrates on print media reporting, emphasizing interviewing, sources and honing news judgment. Development of observational skills, story organization and clear writing. Students write complex news stories, and spot news and develop several major writing projects, including magazine articles.

Prerequisite: 110

### **211 Editing**

Preparation of copy for publication; evaluation of news; headline writing; news display, including typography; picture editing; and editing magazines.

Prerequisite: 110

### **215 Journalistic Writing in the Workplace**

The course focuses on the fundamentals of gathering and writing information through observation, interviews and research. The emphasis is on clear, concise and straightforward writing of news releases, reports, letters, office memoranda and other kinds of writing in a business setting. In addition, the course includes rewriting and editing of the student's own and others' work and preparation of copy for publication. For non-majors only.

### **220 Design Concepts of Communication (formerly 210)**

This course has been developed to provide students with an elementary understanding of design elements and principles. Applied projects in typography and publication layout will be completed via the Macintosh. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: 105 or ARTH 350 or ARTH 355 or permission of department chair

### **230 Photojournalism**

An entry-level course on still photography as used in the mass media. Imparts mechanical skills to practice photography, creates an awareness of the aesthetics involved and introduces principles of communicating via photojournalism. Students supply own camera. Lecture and laboratory.

Prerequisite: 105 or permission of department chair

### **240 Advertising Principles (formerly 220)**

An attitudinal approach to the principles and practices of advertising in today's society. Correlation between advertising and sales, marketing, economics and research. Newspaper, magazines, radio, television and graphics as advertising channels.

Prerequisite: 100 or permission of instructor

### **250 Public Relations Principles**

Public Relations in the modern world of communication, marketing, business and institutions. A case history approach to public relations as a career and how public relations fits into the total picture of communication.

Prerequisite: 100 or permission of instructor

### **260 Broadcast Reporting**

The nature and execution of broadcast news, including the preparation and writing of news and features for broadcast, with special emphasis on writing and reporting for television.

Prerequisite: 110

### **295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **300 Mass Communication Research (formerly 320)**

This course will examine theories and methodologies underlying mass communication research, including quantitative and qualitative approaches. Among the areas covered: public opinion research, content analysis, participant observation, historical and legal methods, and discourse analysis. Students will be expected to design and conduct a mass communication research project.

Prerequisite: 110 or permission of instructor

### **301 Journalism History (formerly 315)**

European background of the American press system; development of American journalism; historical relationship of the news media to political, social and economic trends; the news media as a cultural institution; rise of the broadcast media.

Prerequisite: Juniors and seniors only

### **302 Literary Journalism (formerly 310)**

A look at journalistic writing style as a literary prose form, with emphasis upon late 19th- and 20th-century American writing, and upon the tradition of literary journalism. Newspaper and magazine articles from both centuries and book-length works from the past 50 years will be read and discussed. Students will have the option of writing a research essay or a literary journalistic article for the final project.

Prerequisite: Juniors and seniors only

### **303 Newsroom Management**

Examines the general economic realities of the media business, investigates the nature of relationships within the newsroom, explores priorities and goal-setting in the newsroom, reviews techniques and methods of managing and encouraging employees. The course also identifies the moral and legal dilemmas and guiding principles of newsroom managers.

Prerequisite: Juniors only or permission of department chair

### **304 Media Law (formerly 440)**

Freedom and responsibility of the news media viewed as public institutions; constitutional and legal developments with emphasis upon landmark court decisions; interpretation of current areas of tension.

Prerequisite: Juniors and seniors only

### **305 Gender, Race and Mass Media (formerly 325)**

This course examines two broad ways in which issues of gender and race intersect with U.S. mass media: employment in mass media and depiction in mass media. In examining media employment, the course will consider questions such as the decision-making status of women and minorities in media organizations. In examining media depictions, the course will examine such questions as how media depictions may stereotype and trivialize women and minorities, and what social and cultural values are reflected by these media portrayals. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 100 or permission of instructor

### **311 Persuasion in Writing**

Effective writing based upon principles of rhetoric. Student writing directed to the execution of editorials, advertising copy and promotion.

Prerequisite: Juniors and seniors only; 110 or permission of instructor

### **312 Critical Writing (formerly 430)**

Students study theories of criticism and the role of the critic in society and application in written form. Students write critical reviews of films, television and plays.

Prerequisite: Juniors and seniors only; 110 or permission of instructor

### **330 Advanced Photojournalism**

A realistic journalistic application of color and black and white 35 mm photography. Emphasis on original conceptualization and timely execution in the following subject areas: news, sports, feature, fashion and commercial illustrations using print and/or multi-media presentations.

Prerequisite: 230

### **340 Advertising Copywriting**

The acquisition of advertising copywriting skills as applied to the creative advertising process. The dovetailing of creative copy with the marketing and media strategies. Execution of advertising copy.

Prerequisite: 110, 240

### **345 Media Planning**

Students will develop an understanding of the use of mass media as advertising vehicles, the language of media planning, key media information sources, and how to develop a media plan.

Prerequisite: 240

**350 Public Relations Writing**

This course provides practical experience in public relations writing including: news releases, position statements, brochure writing, features, query letters and a variety of other public relations writing forms. The emphasis is on weekly assignments which are critiqued by the instructor and discussed in class. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: 250

**370 Magazine Writing (formerly 380)**

Explores the nature of writing for magazines as a staff writer or free-lance writer. Students will write service articles, profiles, human interest pieces and in-depth issue articles common to both commercial and trade magazines.

Prerequisite: Juniors and seniors only; 110 or permission of instructor

**402 Society, Culture and the Media (formerly 482)**

Society, Culture and the Media examines the role media play in social and cultural formations. The course looks beyond the media as transmitters of information to their broadest social and cultural effects. Students study media as agents of enlightened social modernism, as political and economic institutions, as purveyors of popular culture, and as aspects of cultural and subcultural rituals. History, political economy, critical studies, cultural anthropology, semiotics and sociology are among the areas from which approaches for studying the media are considered in the course.

Prerequisite: 300 or permission of instructor

**404 Media Structure and Power (formerly 484)**

Examines recent changes in mass media structures. Readings focus on how changes in ownership, media regulation and new technology have affected media-organizations and their performance. Subjects and issues covered include: media ownership trends, including internationalization and their effect on content; media monopolies; the effects of new media technology; the effects of advertising on news; media choice in society; the media's role in the political system; and the increasing globalization of mass media.

Prerequisite: 300 or permission of instructor

**410 Advanced Reporting (formerly 375)**

Refinement of reportorial and writing skills. Advanced work in interviewing, investigating, and use of public documents. Focuses on the development of news stories.

Prerequisite: 210 and permission of instructor

**420 Graphic Design Studio (formerly 410)**

Graphic Design Studio is an advanced graphic design course. Students study the history of graphic design and typography, the elements of fine typography, and produce a portfolio of graphic designs.

Prerequisites: 220 or permission of instructor

**440 Advanced Advertising Copywriting (formerly 445)**

This course is highly selective and designed for those wishing to pursue advertising copywriting as a career. It builds on 340. It develops strengths in the team concept of creative advertising, refines skills used in evaluating the effectiveness of messages and strategies used in various media, and develops greater awareness of production skills used in copywriting. Students will develop a major, multimedia campaign and have it evaluated by advertising professionals.

Prerequisite: 340 and permission of department chair

**445 Advertising Campaign Strategies (formerly 480)**

This course will study the role of the advertising campaign and media plan as key components in the analysis and planning of broad marketing strategies for various products. Students are involved in determining budgets, the role of advertising vs. sales promotion, diagnosing current advertising campaigns, and the theories and principles upon which they are based.

Prerequisite: seniors only; 340 and MKTG 300

**450 Advanced Public Relations**

Emphasis upon public relations projects in which students engage in problem solving. The focus is on strategy, planning and public relations communications techniques – magazine article, position paper, news release, press kit, and other types of public relations writing.

Prerequisite: 350

**460 Advanced Broadcast Reporting**

This course builds on 260, Broadcast Reporting. It further develops the ability to gather information through interviews, background research, and use of public documents and reports. The entire broadcast story process is emphasized: story selection, reporting, taping, editing and writing.

Prerequisite: 260

## Justice and Peace Studies

### 475, 476, 477, 478 **Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 480 **Media Ethics (formerly 485)**

Communication study as ordered by moral and legal principles and their application to current problems of the major media. Individual term project.

Prerequisite: graduating seniors only and permission of instructor

### 483, 484, 485, 486 **Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 487, 488, 489, 490 **Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 491, 492, 493, 494 **Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 495, 496, 497, 498 **Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## Justice and Peace Studies (JPST)

Smith (THEO), (director), Brady (THEO), Landry (THEO), Nichols (THEO), Penschansky (THEO), Wojda (THEO), Andregg\*, Ciriacy\*, Davidov\*, Feinstein\*, Haasl\*, Nelson-Pallmeyer\*, Palackapilly\*

Justice and Peace studies is an interdisciplinary program designed to prepare students to be responsible critics of contemporary societies and effective agents for positive social transformation. The two core courses for the minor, and the pattern of requirements for the major, make use of four stages:

1. Experience (actual and vicarious) of poverty and injustice
2. Descriptive analysis (study of the economic, political, and social realities of a culture, and the historical events that produced those realities)
3. Normative analysis (moral judgment on existing society, study of alternative possibilities for that society, and analysis of the moral values at stake)
4. Action possibilities (strategies and skills for transforming society from its present condition to a better condition).

While the two core courses for the minor integrate all four of these stages, JPST 250 concentrates on descriptive analysis and THEO 305 concentrates on normative analysis. The additional three core courses for the major, JPST 450, 470, and 472 concentrate on action possibilities.

The Justice and Peace Studies program is strongly interdisciplinary and interfaith. It promotes understanding and appreciation of widely diverse ideologies, cultures, and world views. Special attention is given to the rich tradition of Roman Catholic social teaching in the context of pluralistic world societies.

JPST 250 and THEO 305 require extensive student writing and discussion.

### Major in Justice and Peace Studies

JPST	250	Introduction to Justice and Peace Studies
JPST	450	Active Nonviolence
JPST	470	Conflict Resolution
JPST	472	Justice and Peace Methods and Resources
THEO	305	Theologies of Justice, Peace, Prosperity, and Security

### *Plus significant experience:*

May include analysis for course credit (through 475-478 Experiential Learning) or be noncredit. Appropriate experience of poverty and injustice includes: appropriate foreign study, especially in connection with the experience of poverty or oppression. Examples: Ireland with study of Northern Ireland; programs through the Center for Global Education at Augsburg, e.g., its program in Cuernavaca, Mexico; UMAIE and HECUA foreign programs in Scandinavia and Latin America; the European University Center for Peace Studies in Stadtschlaining, Austria, and in Spain; The Metro Urban Studies Term (MUST) in the Twin Cities through HECUA; January Term or summer session programs, such as those arranged through Campus Ministry and VISION at San Lucas Toliman, Guatemala and elsewhere; alternative spring break programs, such as those arranged through Campus Ministry and VISION at Turtle Mountain Indian Reservation in North Dakota, Appalachia, Twin Cities urban plunge and others. Various Twin Cities programs through VIA, such as the Loaves and Fishes program and work in shelters.

*Plus four additional credits in descriptive analysis:*

*Examples of appropriate courses include:*

BIOL	103	Nature and Society
COMM	340	Rhetorical Dimensions of Race, Class, and Gender
ECON	211	Current Economic Issues
ECON	301	History of Economic Thought
ECON	337	Economics of the Public Sector
ECON	339	Labor Economics
ECON	345	Economics of Development and Growth
ECON	349	Comparative Economic Systems
ENGL	270	Literature in Perspective – various appropriate topics courses. Check with director of justice and peace studies.
ENVR	151	Humans and the Environment
ENVR	212	Social Dynamics and the Environment
GEOG	111	Human Geography
GEOG	113	World Geography
HIST	210	Modern Latin America, 1800 to the Present
HIST	358	Twentieth-Century United States
HIST	368	Women in the United States
HIST	372	The United States and Vietnam
IDSC	472	MUST Seminar: Field Studies in the Twin Cities (HECUA)
POL	225	Introduction to World Politics
POL	314	Constitutional Rights and Liberties
POL	326	International Law and Organizations
POL	350	Comparative Politics of the New Europe
POL	352	Third World Politics and Government
PSY	121	Social Psychology
SOC	110	Social Problems
SOC	251	Race and Ethnicity
SOC	255	Gender in American Society
SOC	365	Social Psychology
SOWK	340	Human Behavior and the Social Environment

*Plus four additional credits in normative analysis.*

*Examples of appropriate courses include:*

BLAW	367	International Business Law
BLAW	368	Environmental Law
BLAW	369	Gender Issues and the Law
BUS	300	Introduction to Business Ethics (2 credits)
CATH	310	Catholic Social Tradition
ENVR	301	Environmental Ethics
IDSC	283	Introduction to Social Justice (1 credit)
IDSC	291	The Anatomy of Violence
IDSC	471	MUST Seminar: Research on Urban Issues (HECUA)
JPST	350	The Holocaust
POL	275	Introduction to Political Thought
POL	372	Political Thought from Plato to Marx
POL	373	Political Thought from Marx to the Present
POL	375	American Political Thought
THEO	306	Christian Faith and the Management of Wealth
THEO	325	The Catholic Social Traditions
THEO	337	Evil and the Suffering of God
THEO	361	Black Religious Experience
THEO	365	Prophetic Literature of the Old Testament
THEO	370	Ecology, Creation, and Providence
WMST	205	Foundations in Women's Studies

*Plus a non-credit internship in the area of justice and peace:*

May include analysis for course credit through 475-478 Experiential Learning.

"Appropriate noncredit internship" means some significant activity giving experience in the kind of work carried on by the justice and peace community including: the internship associated with the Metro Urban Studies Term program and with some programs of foreign study such as those through HECUA and the Augsburg Center for Global Education; leadership positions with the UST Student Coalition for Social Justice; work with a nonprofit or governmental group doing social services, education for peace and justice, or political action for peace and justice; work in the community service part of a for-profit corporation, etc.

Since this requirement is noncredit, there is no objection to using an appropriate internship from another major (such as social work) to fulfill this requirement.

*Plus:*

Additional courses to be selected with the approval of the program director, to bring the total number of credits to 40 (36 for a double major).

These additional courses may deal with experience, descriptive analysis, normative analysis, or action possibilities. Appropriate courses for action possibilities include:

COMM	230	Intercultural Communication
COMM	240	Persuasion
ENTR	250	Entrepreneurial Creative Thinking and Problem Solving
ENTR	252	Creating the 21st Century
ENTR	352	Change Agent Skills
ENVR	351	Environmental Policy Formation
SOWK	391	Social Policy for Social Change

### Minor in Justice and Peace Studies

JPST	250	Introduction to Justice and Peace Studies
THEO	305	Theologies of Justice, Peace, Prosperity, and Security

*Plus:*

Twelve additional credits to be selected with the approval of the program director. At least two of these courses must be outside the student's major department. Any of the courses listed for the major may be applied to the minor.

### 250 Introduction to Justice and Peace Studies

Major aspects of world and local conflict, theories of social science relating to conflict and violence, and various proposals for solutions. Among the aspects of conflict studied will be cultural differences, scarcity of resources, international trade, the arms race and oppression. Proposed solutions studied will include topics such as: development, structural changes, world government, multinational agencies, military power, civilian-based defense, conflict resolution, diplomacy, disarmament, cultural exchange, religious revival and prayer. These proposals will be considered in the light of theory, history and literature. Usually offered each semester. This course fulfills the Human Diversity requirement in the core curriculum.

### 295, 296, 297, 298 Topics

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 350 The Holocaust: Victims, Perpetrators, Bystanders

The background and development of the systematic extermination of European Jewry by the Nazis. Particular attention is given to anti-Semitism in both its religious and secular forms, to the relationship between the mass murder of genocide and the growth of bureaucracy and technology, and to the challenges posed by the Holocaust for religious and humanistic beliefs and values. The Holocaust provides an excellent case-study of how a democracy can elect a dictator to power, and how a society based on egalitarian principles can roll back equality and carry out mass murder. Attention will also be given to the role the "Christian" world played as cooperators, silent bystanders, or courageous resisters (the "righteous gentiles"); and to the contrast between desire for a culturally uniform society and respect for diversity, minorities, and the "other."

### 450 Active Nonviolence

Active nonviolence as a means for societal defense and social transformation analyzed through case studies of actual nonviolent movements, examining their political philosophy and how this philosophy is reflected in their methods and strategies. Examples of possible case studies include: Mahatma Gandhi's movement for a free India, the struggle for interracial justice in the United State (the 1961 freedom rides to Mississippi, an integrated Canada-to-Cuba peace-and-freedom walk), the Minnesota farmers' power-line struggle, and the Honeywell Project. The course emphasizes both the development of conceptual understanding and the transformation of personal experience. Usually offered fall semester.

### 470 Conflict Resolution

Conflict, the world it exists in and strategies for dealing with it. This course will range from an examination of broad system conflict to narrow interpersonal conflict. Topics of study may include: definitions of conflict, theories of dispute resolution, current forums for dispute resolution, techniques for negotiating agreement, strategies for effective interpersonal dispute resolution, and the design of an effective dispute-resolution system. It is expected that students will be able to focus their readings and projects in areas of conflict that are meaningful to them. A frequent addition to this course will be guest speakers who are involved in conflict and alternative dispute resolution. Usually offered spring semester.

Active nonviolence and conflict resolution focus on different stages of conflict. Active nonviolence is a sanction employed when conflict resolution has broken down; it is designed to move the parties toward conflict resolution. Active nonviolence also is employed when one or more of the parties to a conflict believe that conflict resolution is maintaining an unjust situation – peace without justice.

**472 Justice and Peace Methods and Resources**

Current state of the questions in justice and peace research. Students will develop familiarity with the major resources available for justice and peace research and action: bibliographies, periodicals, indexes and abstracts, newsletters, electronic media. Basic statistics and other methods necessary to understand and use the resources. Survey of the justice and peace community, analyzing the types of work involved in the profession and identifying the broad range of organizations working for relief of suffering and for social change. Usually offered spring semester.

**475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**491, 492, 493, 494 Research**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**Latin**

*See Department of Modern and Classical Languages.*

**Legal Studies**

Erstling (BLAW), director

The minor in legal studies enables students to undertake a multidisciplinary examination of the relationship of law to culture and society. Understanding the foundations and nature of law and legal process is an integral element of a liberal arts education. Several departments within the university offer courses that examine the sociological, political, philosophical, journalistic, historical, economic and business aspects of legal behavior and legal systems.

By drawing on those courses, the legal studies minor exposes students to a variety of perspectives on the study of law and provides a broad understanding of the role of law in society.

The legal studies minor is not intended as a pre-law program, although it may prove especially attractive to students interested in careers in law, public administration or related professions. Its objective is to allow students to undertake an examination of law and legal process within a liberal arts context.

**Minor in Legal Studies**

Twenty credits from the following list, or other courses selected with the approval of the program director. To ensure an interdisciplinary base of study, no more than eight credits may come from any one department.

- BLAW 365 Business Law
- BLAW 366 Legal Environment of Business
- BLAW 367 International Business Law
- BLAW 368 Environmental Law
- BLAW 369 Gender Issues and the Law
- BLAW 466 Advanced Business Law
- ECON 321 Law and Economics
- HIST 326 English Law and Government before the American Revolution
- HIST 365 U.S. Constitutional History

## Literary Studies

IDSC	340	Criminal Law and the Social Order
JOUR	304	Media Law
PHIL	351	Political and Legal Philosophy
POL	312	Judicial Process
POL	313	Constitutional Law and Politics
POL	314	Constitutional Rights and Liberties
POL	326	International Law and Organization
POL	414	Seminar in Law and Judicial Politics

## Life Science with a Concentration in Biology

*See Department of Teacher Education.*

## Literary Studies

Jordan (ENGL) and Moorman (M&CL), directors

Students wishing an excellent preparation for the many occupations in which the ability to use language effectively is absolutely essential may be interested in the following major, which is not basically career-oriented.

The primary aims of the major in literary studies are to extend to highly motivated students the opportunity:

1. To deepen their mastery of two languages
2. To provide them with double evidence that literature, as the highest form of language art, is based on the skillful use of adequately developed languages in the creation of an esthetic world of the human spirit
3. To enable them to experience firsthand that much is lost in the translation of a great literary work
4. To help them appreciate more deeply that literature transcends national and cultural boundaries.

### Major in Literary Studies

*Prerequisite:*

At least three high school years of a second language, accepted for this major by the Department of Modern and Classical Languages. Either 212 in that language, or its equivalent, must also be taken.

**Option I** (administered by the Department of Modern and Classical Languages):

Twenty credits in courses numbered 300 or higher in the literature of a non-English language, chosen in consultation with the chair of the Department of Modern and Classical Languages

*Plus:*

Sixteen credits in courses numbered 300 or higher in English literature, chosen in consultation with the chair of the Department of English

**Option II** (administered by the Department of English):

Twenty credits in courses numbered 300 or higher in English literature, chosen in consultation with the chair of the Department of English

*Plus:*

Sixteen credits in courses numbered 300 or higher in the literature of a non-English language, chosen in consultation with the chair of the Department of Modern and Classical Languages

*Plus:*

(required under both options)  
Four credits in European history

*Recommended:*

An additional four credits in European history, four credits in aesthetics, and courses in a third language, preferably a classical language if the second language is modern

Courses such as phonetics, conversation, composition and civilization (if not based on literature) will not count as courses in literature.

## Management

### Marketing Management

*See Division of Business.*

**Mathematics (MATH)**

Shakiban (chair), Dokken, Herman, Hotchkiss, Kemper, McLean, Morrow, Scholz, Shemyakin, Shepard, Smeltzer, Yang, Youn

The Department of Mathematics offers a major that can satisfy a variety of student interests. By proper choice of electives, students whose major is mathematics can prepare themselves for graduate study in mathematics or related areas, for the teaching of mathematics at the secondary school level, for professional school in law or health science, or for the application of mathematics in science, business and industry.

Students majoring in mathematics generally will have a number of elective courses and are encouraged to use these electives to broaden their background in mathematics or in a related area of special interest. The department suggests that courses in biology, business administration, chemistry, economics, geology, physics, psychology and quantitative methods/computer science are especially appropriate.

If students have not already made a choice of language, the department suggests that particularly valuable languages in the study of mathematics are French, German and Russian.

The department also has a major for students pursuing careers in actuarial science. See listing under Actuarial Science in this catalog.

Students should see the chair of the Department of Mathematics for advice in selecting courses for a particular purpose.

**Center for Applied Mathematics**

Within the Department of Mathematics, the Center for Applied Mathematics provides opportunities for students to work on significant mathematical problems of current interest to business, industry, and government.

**Major in Mathematics**

*All majors must complete the following courses:*

- 113 Calculus I (or 108-109)
- 114 Calculus II
- 200 Multi-Variable Calculus
- 210 Linear Algebra and Differential Equations
- 317 Real Analysis

*Allied requirements:*

*One of:*

- QMCS 130 Problem Solving in the Natural Sciences
- or
- QMCS 237 Software Design Using Scientific Languages

*Plus one of the following sequences:*

- ECON 351-352-418
- PHYS 111-112
- QMCS 410-411

*or a total of 44 credits in mathematics including one of the following sequences:*

- MATH 313-314
- MATH 315-316
- MATH 325-450

(to complete a pure mathematics program, a student should choose one of 301, 310, at least one of 302, 309, 385, 400, 419, 420, and two additional courses numbered 300 or above;

to complete an applied mathematics program, a student should choose 300, 310, 315, 316, plus one of 303, 313, and at least one of 385, 419;

to complete a statistics program, a student should choose 310, 313, 314, 333, 385 and one additional course)

In addition to other requirements, a student must successfully complete at least 16 credits in mathematics courses numbered 300 and above at the University of St. Thomas.

**Teacher Licensure in Mathematics**

*See Department of Teacher Education*

### Minor in Mathematics

A minor in mathematics is available to support majors in many other departments.

A total of twenty-four credits including:

113 Calculus I (or 108-109)

114 Calculus II

*Plus at least one of:*

200 Multi-Variable Calculus

210 Linear Algebra and Differential Equations

*Plus:*

At least twelve additional credits in courses numbered above 200 (or approved by the department chair).

To qualify for a minor in mathematics, in addition to other requirements, a student must successfully complete at least three courses (12 semester credits) in mathematics numbered 200 and above at the University of St. Thomas.

### 005 Basic Math Skills

**0 credit**

This review of arithmetic and elementary algebra is designed to prepare the student to study MATH 100 (Mathematical Sampler) or MATH 101 (Finite Mathematics). The course is designed as a self-directed study experience, with lectures scheduled only during the J-term and summer offerings. The student will have access to textbook explanations and exercises, videos, CD-ROMs and tutors to gain mastery of the material. Appropriate testing is done with the tutors in the Mathematics Resource Center (MaRC). A nominal registration fee is charged.

### 100 Mathematical Sampler

This survey of basic mathematical concepts includes both modern and historical perspectives. Emphasis is on the development and appreciation of mathematical ideas and their relationship to other disciplines. Topics include, among others: mathematical problem-solving; sets; an introduction to randomness, probability and statistics (through application of the normal distribution); historical systems of numeration; mathematical techniques of counting (multiplication principle, Venn and tree diagrams, etc.); coordinate geometry; simple transformations; and patterns of symmetry. This course satisfies the general requirement for a course in mathematics and is also recommended as a first course in mathematics for prospective elementary teachers.

Prerequisite: A satisfactory score on the mathematics placement exam

### 101 Finite Mathematics

Elementary set theory, linear equations and matrices, linear programming, finite probability, applications primarily in business and the social sciences.

Prerequisite: A satisfactory score on the mathematics placement examination

### 105 Precalculus (108, 109)

The real numbers; basic algebra; analytical treatment of the elementary functions emphasizing the exponential, logarithmic and trigonometric functions and their graphs. (This course is intended as preparation for 113 and does not fulfill a general graduation requirement.)

Prerequisite: A satisfactory score on the mathematics placement examination

### 108 Calculus With Review I (105, 111, 113)

The first course of a two-course sequence designed to integrate introductory calculus material with the algebraic and trigonometric topics necessary to support that study. Review topics include: number systems, basic algebra, functions, the Cartesian coordinate system, graphing and inverse functions. Calculus topics include limits, continuity, derivatives for algebraic functions, applications of derivatives and more graphing. This course is intended only for students planning to take 109 and does not satisfy a general requirement.

Prerequisite: A satisfactory score on the mathematics placement examination

### 109 Calculus With Review II (105, 111, 113)

The second course of a two-course sequence designed to integrate introductory calculus material with the algebraic and trigonometric topics necessary to support that study. Review topics include: exponential and logarithmic functions, trigonometric functions and their inverses and associated graphs. Calculus topics include: derivatives of the transcendental functions, applications of those derivatives and an introduction to integration.

Prerequisite: a grade of C- or better in 108

### 111 Calculus for Business and Social Science (108, 109, 113)

An introductory course in calculus with motivation and examples drawn from business and the social sciences whenever possible. Does not include the calculus of trigonometric functions.

Prerequisite: a grade of C- or above in 105 or a satisfactory score on the mathematics placement examination. (Four years of high school mathematics, including college algebra, also are recom-

mended as background for this course.) Students intending to continue in calculus are strongly advised to take 113.

**113 Calculus I (108, 109, 111)**

An introductory course in calculus: limits; derivatives and integrals of algebraic, exponential, logarithmic and trigonometric functions of one real variable; applications primarily in the natural sciences. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: a grade of C- or above in 105 or a satisfactory score on the mathematics placement examination. (Four years of high school mathematics, including college algebra and trigonometry, also are recommended as background for this course.)

**114 Calculus II**

Techniques of integration; applications of integration; infinite series; L'Hospital's rule; improper integrals; an introduction to vectors. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: a grade of C- or above in 113 or 109 (or 111, with permission of the department chair)

**121 Structures of Elementary Mathematics**

An examination of the mathematical underpinnings of the elementary school curriculum with an emphasis on the understanding of mathematical concepts. Topics will include foundations of integer and rational arithmetic, notions of place-value and base, number sense and estimation, functions and their applications, Euclidean geometry, regular polygons and polyhedra, concepts of symmetry, analysis and classification of patterns, mathematics of measurement, the use of models, the role of logic in mathematical discourse, applications of statistics in the schools, and mathematical connections to other disciplines. The LOGO computing language is used to explore mathematical topics.

Prerequisites: 100 and QMCS 120

**128 Introduction to Discrete Mathematics**

A survey of basic discrete mathematical concepts. Topics include: Boolean algebra, logic, analysis of algorithms, mathematical induction and matrices. Focus on applications to computer science. (This course is a prerequisite for QMCS 240.)

Prerequisite: 111 or 113 or 109 (may be taken concurrently with consent of the instructor)

**200 Multi-Variable Calculus**

Vector algebra in two and three dimensions, partial derivatives, multiple integrals, line integrals, surface integrals, Green's Theorem, Stoke's Theorem, divergence theorem. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: a grade of C- or higher in 114

**210 Linear Algebra and Differential Equations**

The course will introduce the student to linear algebra, differential equations and applications of linear algebra to differential equations. Topics to be covered will include: vector spaces, matrices, determinants, eigenvalues and eigenvectors, linear transformations, systems of ordinary differential equations, Laplace transform, series solutions to selected differential equations, and applications to engineering. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: a grade of C- or higher in 114

**264 The Mathematical Theory of Interest**

A survey of topics in the mathematical analysis of financial transactions which involve payments made over time. Specific areas of concentration will include the time value of money; the analysis of annuities; amortization and sinking funds; and the pricing and rates of return on investments. Both continuous time and discrete time problems will be considered.

Prerequisite: 200 or permission of the instructor

**295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**300 Differential Equations and Applied Mathematics**

Linear ordinary differential equations and systems; standard methods of solution; Laplace transforms; series solution; introduction to nonlinear differential equations and dynamical systems. Models and applications in the physical, biological, behavioral, and social sciences.

Prerequisite: 200 and 210 or permission of the department chair

**301 Abstract Algebra I**

Properties of sets, relations and mappings; introduction to groups, rings and fields. Offered in fall semester.

Prerequisite: 210

### **302 Abstract Algebra II**

Topics in modern algebra with applications. Includes material selected from the theory of groups, rings, and fields; linear algebra; Boolean algebra and discrete structures. Offered in spring semester of even-numbered years.

Prerequisite: 301

### **303 Statistics for the Applied Sciences (313, 314)**

Probability, Estimation, Hypothesis Testing, Analysis of Variance, Regression Analysis, Topics selected from Experimental Design, Statistical Process Control, Non-Parametric Methods, Factor Analysis as time permits. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: 200

### **309 Discrete Mathematical Structures**

An introduction to topics in discrete mathematics with applications, primarily to computer science. Topics include sets, counting, matrices, algorithms, graph theory, semigroups, logic and Boolean algebras, finite state machines and Turing machines. Offered in spring semester of odd-numbered years.

Prerequisite: programming experience and 301 or instructor's permission

### **310 Modern Linear Algebra**

Linear algebra and applications. Topics include linear equations, matrix theory, linear spaces, linear mappings, canonical forms, and inner product spaces. Applications chosen from such topics as numerical linear algebra, least squares, hermitian and positive definite matrices, and electrical networks.

Prerequisite: 210

### **313 Probability (303)**

Probability theory in discrete and continuous sample spaces; random variables and distribution functions; moments; the moment-generating function; functions of random variables; law of large numbers; central limit theorem. This course fulfills the second-level Computer Competency requirement in the core curriculum. Offered in fall semester.

Prerequisite: 200 and 210

### **314 Mathematical Statistics (303)**

Populations and random sampling; sampling distributions. Theory of statistical estimation; criteria and methods of point and interval estimation. Theory of testing statistical hypotheses; non-parametric methods. Offered in spring semester.

Prerequisite: 313

### **315, 316 Applied Mathematics and Modeling**

These are related but unsequenced courses offered through the Center for Applied Mathematics (CAM). Course content will be drawn from areas of applied mathematics, including: mathematical analysis of data, database theory, discrete and continuous modeling, simulation, applied statistics, coding theory, expert systems, neural network analysis, signal processing and optimization theory. Students will work in teams on projects of current interest to local industry, business and government organizations.

Prerequisite: 200 and 210

### **317 Real Analysis**

Topology of the real numbers. Functions of one real variable. Rigorous development of continuity and uniform continuity; differentiability; uniform convergence. Sequences and series. Offered fall semester.

Prerequisite: 200 and 210

### **325 Geometry**

Axioms for geometries; geometrical transformations and their invariants; non-Euclidean geometries; additional topics. Offered in spring semester.

Prerequisite: 200 and 210 or permission of the instructor

### **333 Applied Statistical Methods: Regression, Time Series, Forecasting**

Regression and exponential smoothing methods; Stochastic Time Series: auto- and cross-correlation, autoregressive moving average models; application to forecasting.

Prerequisite: 314

### **385 Mathematical Methods of Numerical Analysis**

Rigorous mathematical treatment of standard topics in numerical analysis including solutions to linear and nonlinear systems, interpolation, numerical integration and differentiation, differential equations, and iterative techniques in matrix algebra. This course provides a theoretical foundation for the numerical solution of mathematical problems. Offered in spring semester.

Prerequisite: 317 and QMCS 130 or QMCS 237 or permission of instructor

**400 Dynamical Systems and Chaos**

An introduction to discrete and continuous dynamical systems and applications with topics including: iterated mappings in one and two dimensions, phase-plane theory, nonlinear differential equations, and chaos. Additional topics will be chosen from among bifurcations, stability, attractors, Lyapunov functions, Julia sets and Mandelbrot sets.  
Prerequisite: 300 or 317 or permission of instructor

**419 Complex Variables**

Analytic functions; theorems of Cauchy; Laurent series; residue calculus; entire and meromorphic functions; conformal mapping.  
Prerequisite: 317

**420 Topology**

Properties of Euclidean spaces; general spaces; mappings; separation properties; connectedness; compactness; metrizable spaces.  
Prerequisite: 317

**450 Advanced Mathematics from an Elementary Point of View**

This course gives students a sense of the history, applicability and currency of one or more mathematical ideas and serves as a capstone mathematics course for students seeking to teach secondary mathematics. In the course, students make substantial oral and written presentations on topics carefully selected to have a strong relationship to secondary school mathematics. They use publications, e.g. *The American Mathematical Monthly*, *Mathematics Magazine*, *Mathematical Intelligencer* and *Scientific American*, as well as standard texts, as sources for their work.

Prerequisite: 301 and 317, senior or graduate standing and declared intent to complete secondary licensure in mathematics. Other students having the course prerequisites may be admitted, but it is their responsibility to determine the relationship of this course to their program of study

**475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**491, 492, 493, 494 Research**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**Media Studies**

*See Department of Journalism and Mass Communication.*

**Modern and Classical Languages**

Moorman (chair), Badessich, Dziekowicz, Federico, Feigenbaum, Heberlein, Hundley, Martín-Morán, Raschio, Sandmann, Schons, Shambour, Wolsey, Gochberg\*, Richmond\*

The Department of Modern and Classical Languages offers major and minor concentrations in classical languages, French, German, Latin and Spanish, with additional minors in Greek and Japanese. A Russian major and minor and a Japanese major are available through the Associated Colleges of the Twin Cities. In cooperation with the ACTC, courses also are available in Chinese and Italian.

The department also offers major concentrations in language with business (international business – language intensive) and language with English (literary studies).

**National Collegiate Foreign Language Honor Society**

Alpha Mu Gamma, the National Collegiate Foreign Language Honor Society, was organized at St. Thomas in 1980. The aims of the society are to recognize achievement in the field of foreign language study and to encourage an interest in the study of foreign languages, literatures and civilizations.

## Modern and Classical Languages – Latin

Alpha Mu Gamma offers membership to outstanding students who have completed a third semester of college study of any modern or classical language. For details on membership consult the Department of Modern and Classical Languages.

### Teacher Licensure

*See Department of Teacher Education*

### Classical Languages

This major engages students in the study of the languages, literatures and cultures of two ancient cultures that have left a lasting impact upon the modern world: classical Greece and Rome. This major prepares students to read both languages, introduces significant works of essential authors, and provides analytical tools for examining the relationship between language and the unique identity of different cultures.

#### Major in Classical Languages

Twenty-eight credits in Latin and Greek

*Plus:*

Twelve additional credits in Latin or Greek, ancient history, ancient philosophy, classical art, mythology, or classical literature in translation.

#### Minor in Classical Languages

Twelve credits in Latin

Twelve credits in Greek

### Latin (LAT)

The courses in Latin are offered with the following objectives:

1. To give students the necessary grasp of the language to read the works of Latin authors, and to read them with some degree of appreciation
2. To acquaint students with the unique character of Roman culture and its contribution to succeeding ages
3. To improve students' understanding of the structures of language.

These objectives are pursued with a view to the needs of students who are preparing to do graduate work in the field of Latin, who are preparing to teach Latin in secondary schools, or who are seeking a background for the study of theology, philosophy, history, law, science, English or the Romance languages.

The major engages students in the study of the language, literature and culture of ancient Rome. It prepares students to read Latin, introduces significant works of essential authors, and provides analytical tools for examining the relationship between language and the unique identity of different cultures.

#### Major in Latin

Four years of high school Latin or the completion of 212 or 255

*Plus:*

Twenty-eight credits in Latin numbered above 255

*Plus:*

Eight additional credits in ancient history, ancient philosophy, classical art, mythology or classical literature in translation.

#### Minor in Latin

Completion of twelve credits above 211

*Plus:*

Eight additional credits in ancient history, ancient philosophy, classical art, mythology or classical literature in translation.

#### 111 Elementary Latin I

A beginning course, with emphasis on reading Latin prose in passages of increasing complexity. Introduction to essential forms, syntax and vocabulary. Practice in reading Latin aloud and composing simple sentences. Exploration of the social and cultural context of the Latin language.

#### 112 Elementary Latin II

Continuation of 111. More graded readings, further mastery of forms, syntax and vocabulary.

Prerequisite: 111 or equivalent

#### 211 Intermediate Latin I

Readings of narrative prose. Review and further study of grammar.

Prerequisite: 112 or equivalent

**212 Intermediate Latin II**

Selections from Vergil's epic poem, the Aeneid.  
Prerequisite: 211 or equivalent

**255 Latin Readings in the Old and New Testament**

Readings from St. Jerome's Latin translation of the Old and New Testament.  
Prerequisite: 211 or equivalent

**295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**311 Latin Composition**

A thorough review of Latin grammar. Practice in the writing of continuous Latin prose.  
Prerequisite: 212 or 255 or equivalent

**325 Catullus and Horace**

Selections from the lyric poetry of Catullus and Horace. Poetic sources, influence, the principal lyric meters.  
Prerequisite: 212 or 255 or equivalent

**360 Philosophy in Latin Texts (PHIL 300)**

A survey of various kinds of treatises principally from the works of St. Thomas Aquinas for students who want to acquire a facility in reading philosophical and theological texts in medieval Latin.  
Prerequisites: Three courses in Philosophy and 211 or permission of the instructor.

**421 Vergil**

Reading of extensive selections from *The Aeneid* in Latin and of the entire poem in English translation. Discussion of the sources, themes and techniques of the epic.  
Prerequisite: 212 or 255 or equivalent

**430 Caesar and Cicero**

Extensive reading of the Gallic War and of the Orations of Cicero. A study of the character and career of each author.  
Prerequisite: 212 or 255 or equivalent

**475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**491, 492, 493, 494 Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**Greek (GRK)**

Through courses in Greek, the student learns to read classical Greek, and at the intermediate level begins reading selections from ancient Greek authors. In addition to facility in reading classical Greek, the student gains an awareness of the unique character of classical Greek culture and its contribution to succeeding ages.

**Minor in Greek**

Sixteen credits in Greek language

*Plus:*

Eight additional credits in Greek, ancient history, ancient philosophy, classical art, mythology or classical literature in translation.

## Modern and Classical Languages – French

### 111 Elementary Greek I

A beginning course, with emphasis on reading classical Greek prose in passages of increasing complexity. Introduction to essential forms, syntax and vocabulary. Practice in reading Greek aloud and composing simple sentences. Exploration of the social and cultural context of the Greek language.

### 112 Elementary Greek II

Continuation of 111.

Prerequisite: 111

### 211 Intermediate Greek I

Selected readings in Greek prose; review of grammar.

Prerequisite: 112 or equivalent

### 212 Intermediate Greek II

Readings in classical Greek prose, particularly Plato.

Prerequisite: 211 or equivalent

### 295, 296, 297, 298 Topics

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### 342 Greek Reading and Exegesis: John (THEO 342)

Careful reading of the Gospel of John in Greek combined with theological commentary from the Greek text, adapted to intermediate-level Greek students.

Prerequisite: 112 or equivalent (Recommended: THEO 205 or THEO 210)

### 475, 476, 477, 478 Experiential Learning

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### 483, 484, 485, 486 Seminar

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### 487, 488, 489, 490 Topics

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### 491, 492, 493, 494 Research

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### 495, 496, 497, 498 Individual Study

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog. The content of seminars, topics, and individual study courses will vary. Material will be chosen from Homer, Greek philosophers, tragedians or historians.

## French (FREN)

The primary goal of the department is to provide opportunity to its majors for acquiring:

- A solid command of the French language
- A thorough introduction to the literary and cultural origins of France and the role of French in today's world
- Enough diversity in courses to prepare for a variety of potential careers or possible co-careers for which their French skills will be of primary importance
- The intellectual background which characterizes those educated in a liberal arts setting.

### Major in French

Four years of high school French or the completion of Intermediate French II or its equivalent.

Each prospective major will present a program to the major French adviser for departmental approval. Two tracks are allowed: a literary track stressing courses needed for graduate study; and a general track stressing the cultural and communication skills necessary for double, combined or co-career majors. A minimum of 28 credits beyond 212 is required for a French major. At least eight of these credits must be completed at the University of St. Thomas.

The major normally consists of eight credits in civilization or culture, eight credits in literature, and eight credits in advanced language study (grammar, composition or oral-intensive), plus elective courses at the 300-level or beyond.

Courses in a second foreign language are highly recommended.

The department strongly encourages all students planning a major in French to spend some time (a summer, a January Term, a semester or an academic year) in a French-speaking country and to participate in a French course on campus upon their return.

**Minor in French**

Completion of 212 or equivalent

*Plus:*

Four credits in French language or composition at the 300-level or beyond

Four credits in French literature

Four credits in French civilization

Courses to be selected in consultation with the French faculty.

**111 Elementary French I**

Practice in understanding, speaking, reading and writing simple French for beginners. Use of cassettes in preparation of assignments.

**112 Elementary French II**

Continuation of 111.

Prerequisite: 111 or its equivalent

**211 Intermediate French I**

Introduction to cultural and literary materials along with rapid review of basic skills in reading, speaking, writing and understanding oral French.

Prerequisite: 112 or its equivalent

**212 Intermediate French II**

Continuation of 211 with emphasis on oral and written use of complex sentence structure.

Prerequisite: 211 or its equivalent

**295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**300 Advanced Oral and Written French I**

A course required for all potential majors or co-majors as a preliminary to the upper-division courses they may take, as well as for any student wishing to investigate fine points of grammar and inherently intricate areas of pronunciation and intonation. Prerequisite: 212

**301 Chansons et Poesie**

Individualized and group exercise in oral expression and comprehension – beginning with song texts and moving to a study of the elements of French versification with intensive use of cassettes for transcription.

Prerequisite: 300 or equivalent

**302 Advanced Oral and Written French II**

Intensive practice in both oral and written French using selected materials to acquire a high level of oral comprehension and communication as well as competence in writing French.

Prerequisite: 300 or its equivalent

**309 Introduction to French Literature I**

Excerpts of French literature from the Middle Ages to the Age of Reason will be studied. Emphasis will be placed on reading skills and the tools for literary analysis. Recommended as a prerequisite for upper-level literature courses.

Prerequisite: 300 or equivalent

**310 Introduction to French Literature II**

Excerpts of postrevolutionary French literature. Emphasis will be placed on reading skills and the tools for literary analysis. Recommended as a prerequisite for upper-level literature courses.

Prerequisite: 300 or equivalent

**311 French Civilization I**

An introduction to the most significant historical, cultural, social, religious and economic realities of France from the prehistoric period through the middle of the 17th century.

Prerequisite: 300 or equivalent

**312 French Civilization II**

An introduction to the most significant historical, cultural, social, religious and economic realities of France from the 17th century to the present.

Prerequisite: 300 or equivalent

## Modern and Classical Languages – German

### 370 French Phonetics

2 credits

A course designed to improve pronunciation and intonation by means of phonetic transcription and language tapes. May be taken in conjunction with 371, 372 or 373.

Prerequisite: 300 or equivalent

### 371, 372, 373 Individualized French Conversation

2 credits

Individualized French conversation practice in comprehension and speaking involving group and individualized activities.

Prerequisite: 300 or permission of instructor

### 401 French Theater

Intensive study of the trends in French theater with analysis and interpretation of selected works from the seventeenth century to the present.

Prerequisite: 300 or equivalent

### 402 The French Novel

In depth study of selected works of fiction primarily from the 19th and 20th centuries.

Prerequisite: 300 or equivalent

### 475, 476, 477, 478 Experiential Learning

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### 483, 484, 485, 486 Seminar

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### 487, 488, 489, 490 Topics

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### 491, 492, 493, 494 Research

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### 495, 496, 497, 498 Individual Study

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## German (GER)

The department strives to offer a diversified program capable of accommodating a variety of student interests and professional goals connected with German studies. The aims of the department are:

1. To give a command of the German language for use in professional and academic life
2. To acquaint students with the history, literature and culture of the German-speaking countries
3. To familiarize students with the role these countries and their culture play in the world today.

Lectures, reports, and discussion in courses numbered above 300 will be conducted in German.

### Major in German

Four years of high school German or the completion of German 212

300 Introduction to German Studies

*Plus:*

Twenty-four additional credits numbered above 300

At least eight of these 28 credits must be completed at the University of St. Thomas.

At least eight of these 28 credits must be literature courses.

No more than 12 credits may be in the area of advanced language skills development.

Elective courses for the major in German should be selected in consultation with a member of the German faculty.

*Plus:*

Four credits in European history

*Recommended:*

Courses in a second foreign language.

The department strongly urges all students planning to major in German to spend some time, usually one semester, studying in a German-speaking country. See a member of the German faculty for information on study-abroad opportunities for St. Thomas students in Germany or Austria.

**Minor in German**

Four years of high school German or the completion of 212 or equivalent

*Plus:*

300 Introduction to German Studies

*Plus:*

Eight additional credits numbered above 300

At least four of these 12 credits must be a literature course.

Elective courses for the minor in German should be selected in consultation with a member of the German faculty.

**111 Elementary German I**

Introduction to fundamentals of language structure and vocabulary. Practice in speaking, reading, writing and understanding.

**112 Elementary German II**

Continuation of 111.

Prerequisite: 111 or equivalent

**211 Intermediate German I**

Review of fundamentals. Study of cultural texts with practice in speaking, reading, writing and understanding.

Prerequisite: 112 or equivalent

**212 Intermediate German II**

Continuation of 211.

Prerequisite: 211 or equivalent

**295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**300 Introduction to German Studies**

Intended as an introduction to more advanced work in German, this course, which is required of all majors and minors, will offer an overview of the evolution of German culture and civilization (society, politics, the arts) within an historical context. The course will also contain a review of advanced grammar and offer students an opportunity to improve their reading, writing, and speaking skills.

Prerequisite: 212 or equivalent

**311 Conversation and Composition**

Advanced practice in speaking and writing German in formal and informal situations. Instruction in the social patterns that govern language usage in various situations and discussion of contrasting linguistic and social practices among the German-speaking nations and among the regions within those nations.

Prerequisite: 300

**315 Influential Ideas in Nonfictional German**

A study of the initiation and development of influential ideas on the part of German-speaking thinkers such as Hildegard von Bingen, Luther, Angeles Silesius, Novalis, Büchner, Marx, Nietzsche and Freud. Works selected have had a profound impact not only in German-speaking areas, but also on a worldwide scale. In addition, students will read selections from the writings and speeches of influential German political figures, past and present.

Prerequisite: 300

**320 Contemporary Germany and Current Events**

Examinations of the development of the Federal Republic of Germany since 1949, and examination, evaluation and discussions of events as they develop during the course of the semester. Course materials include German pamphlets, newspapers, magazines, speeches by leading figures, and materials from the Internet. Attention is given to domestic developments in the Federal Republic of Germany as well as to international events as they concern Germany.

Prerequisite: 300

**341 Highlights of German Literature I**

A survey of German literature from 1770 to 1890. The course will focus on important works by Goethe and Schiller, German Romanticism, and the literature of the later-19th century.

Prerequisite: 300

### **342 Highlights of German Literature II**

Continuation of 341 with emphasis on literary developments in the 20th century. The course will focus on the period preceding World War I, on literary developments during the Weimar Republic, and on the attempts by postwar German authors to deal with the legacy of the World War II. The course also will discuss more recent literature.

Prerequisite: 300

### **345 Austria: The Golden Age**

The course will examine historical and cultural developments in Austria from 1815 to 1918 with special emphasis on the literature and culture of turn-of-the-century Vienna. Students will read works by important Austrian writers such as Stifter, Nestoy, Schnitzler, Hofmannsthal, Freud and Stefan Zweig; listen to music by composers such as Schubert, Mahler and Lehar; and discuss relevant topics such as the Habsburg Empire, Biedermeier culture, art nouveau and operetta.

Prerequisite: 300

### **401 German Poetry**

A critical study of selections from important German poets.

Prerequisite: 300

### **410 The German Opera**

Operas of the German masters from Mozart to Weill are studied. The primary emphasis is given to the German texts of the operas, but students are given the opportunity to listen to German language recordings of the operas and to investigate the unity of poetry and music. Attention is given to the literary trends of the times.

Prerequisite: 300

### **440 Introduction to Business German and German Business**

An introduction to the vocabulary of business and economics in German. A survey of German business structure, economic principles, business-government-union interrelationships and international trade status. Readings, discussions and tests are primarily in the German language.

Prerequisite: 300

### **475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### **483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### **487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### **491, 492, 493, 494 Research**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### **495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

## **International Business – Language Intensive**

Students seeking a good mastery of a language (French, German, Spanish) and training in one or more business areas may enroll in this major which is administered by the Department of Modern and Classical languages.

### **International Business – French Intensive**

300 Advanced Oral and Written French

One course in French on contemporary France

*Plus:*

Twenty additional credits in French courses numbered above 300, including literature and civilization, selected in consultation with the French section coordinator

### **International Business – German Intensive**

300 Introduction to German Studies

440 Introduction to Business German and German Business

*Plus:*

Twenty additional credits in German courses numbered above 300

**International Business – Spanish Intensive**

300 Oral and Written Spanish  
320 Business Spanish

*Plus:*

Twenty additional credits in Spanish courses numbered above 300

*Allied requirements for all languages:*

Twenty credits in business administration

*Plus:*

ECON 251 Principles of Macroeconomics  
ECON 252 Principles of Microeconomics  
ECON 348 International Economics  
QMCS 110 Introduction to Information Processing and Programming

*Plus one of:*

MATH 101 Finite Mathematics  
MATH 111 Calculus for Business or Social Science  
MATH 113 Calculus I

A program of study abroad is strongly recommended.

*Other recommended courses*

ECON 345 Economics of Development and Growth  
ECON 349 Comparative Economic Systems  
IDSC 481 Seminar in International Studies  
JPST 250 Introduction to Justice and Peace Studies  
POL 105 Politics and Government in Comparative Perspective  
POL 326 International Law and Organizations  
POL 350 Comparative Politics of the New Europe  
THEO 325 The Catholic Social Traditions

**Japanese (JAPN)**

The objectives of the course in Japanese are:

1. To help the students speak and understand the language for use in everyday situations
2. To introduce “kanji” (Hiragana, Katakana) and basic “kanji” (Chinese characters) for reading and writing Japanese
3. To present an overview of the culture, values and beliefs of the Japanese people.

**Minor in Japanese**

Completion of 212 or equivalent

311 Advanced Japanese  
489, 490 Topics

**111 Elementary Japanese I**

Practice with the skills of speaking, reading and writing. Cultural topics will include daily living, education, current events.

**112 Elementary Japanese II**

Continuation of 111. Basic “Kanji” (Chinese characters) will be introduced for the first time.  
Prerequisite: 111 or equivalent

**211 Intermediate Japanese I**

Expansion of speaking, reading and listening comprehension. Cultural topics will include social systems and history.  
Prerequisite: 112 or equivalent

**212 Intermediate Japanese II**

Continuation of 211. “Keigo” (Japanese honor expression) will be introduced.  
Prerequisite: 211 or equivalent

**311 Advanced Japanese**

In-depth study of sentence patterns. Additional “Kanji” characters will be presented to increase reading skills.  
Prerequisite: 212 or equivalent

**487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.  
Prerequisite: 311 or equivalent or permission of instructor

## Modern and Classical Languages – Russian

### Major in Literary Studies

See Literary Studies

### Russian (RUSS)

The objectives of the Russian program are to provide students the opportunity:

1. To learn the basics of Russian language for reading and for communicating in everyday situations
2. To acquire an elementary knowledge of the culture of the people using this study of the language – at home or abroad – for purposes of business, government work, teaching, literacy or linguistic studies

Four courses are currently offered (which fulfill the language requirement for the Russian, Central and East European area studies major). Classes meet three periods a week, with a flexible fourth period devoted specifically to oral proficiency taught usually by a native Russian speaker. Students with previous high school study of Russian will be tested for appropriate placement. Students wishing to major or minor in Russian may do so by special arrangement with Macalester College and approval of the St. Thomas ACTC Russian, Central and East European area studies representative.

#### Major in Russian

Completion of 212 or equivalent

*Plus:*

Twenty-eight additional credits in Russian, and a study abroad program in Russia jointly approved by Macalester College and the University of St. Thomas

#### Minor in Russian

Completion of 212 or equivalent

*Plus:*

Two advanced Russian language or literature courses

#### 111 Elementary Russian I

Introduction to the Russian sound system and grammar encompassing reading, writing, speaking and listening skills. Some exposure to Russian culture. Offered in fall semester.

#### 112 Elementary Russian II

Continuation of 111 with further development of same skills. Offered in spring semester.

Prerequisite: 111 or permission of instructor

#### 211 Intermediate Russian I

Continuation of 112 with further development of same skills. Offered in fall semester.

Prerequisite: 112 or permission of instructor

#### 212 Intermediate Russian II

Continuation of 211 course with added emphasis on vocabulary building, translating and discussing short texts. Offered spring semester.

Prerequisite: 211 or permission of instructor

### Spanish (SPAN)

The basic aim of the department is to give students a command of Spanish and a knowledge of Hispanic culture in order to fulfill professional and personal endeavors. This aim is pursued with a view to the needs of students who desire to do graduate work, enter international business, teach, travel or read great literature in the original.

#### Major in Spanish

In consultation with their major field adviser, students must complete twenty-eight credits in courses numbered 300 and above with a minimum of six credits in each of the following areas:

- Oral and Written Spanish
- Culture/Civilization
- Literature

Students in teacher licensure programs should include a course in linguistics.

Students who major in Spanish must take a minimum of sixteen credits in Spanish at the 300-level or above at the University of St. Thomas.

#### Minor in Spanish

In consultation with their major field adviser, students must complete sixteen credits in upper-division courses (300 or above) including:

- Oral and Written Spanish
- Culture/Civilization
- Literature

Students who minor in Spanish must take a minimum of eight credits in Spanish at the 300-level or above at the University of St. Thomas.

**111 Elementary Spanish I**

Pronunciation, essentials of grammatical structures, aural-oral practice, writing, reading of simple Spanish prose, introduction to the culture of the Spanish-speaking world.

**112 Elementary Spanish II**

Continuation of 111. Emphasis on grammatical structure, aural-oral practice, writing, reading. Continuation of Hispanic culture.

Prerequisite: 111 or its equivalent

**211 Intermediate Spanish I**

Designed to increase listening, speaking, reading, and writing skills in Spanish. Intensive review of grammatical structures of Elementary Spanish I and II. Continued exposure to Hispanic culture.

Prerequisite: 112 or its equivalent

**212 Intermediate Spanish II**

Continuation of 211. Emphasis on Hispanic culture, conversation, writing, and expansion of vocabulary based on thematic discussions and cultural readings.

Prerequisite: 211 or its equivalent

**295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**300 Oral and Written Spanish**

Conversation and composition through the study of contemporary issues in Hispanic societies. Emphasis on review of basic structures and expansion of vocabulary. Writing of basic structures in expository prose.

Prerequisite: 212 or its equivalent

**301 Advanced Oral and Written Spanish**

Intensive practice in both oral and written Spanish using selected materials to acquire a high level of oral comprehension and communication as well as competence in writing Spanish.

Prerequisite: 300 or its equivalent

**305 Spanish Oral Expression**

The aim of this course is to develop aural and oral skills through the analysis and interpretation of representative cultural expressions of the Spanish-speaking world.

Prerequisite: 300 or its equivalent

**310 Advanced Spanish Writing**

This writing course aims to improve technique, expand syntactic depth and increase vocabulary. Students will write essays in a variety of forms. The goal of the course is to learn good writing through a process approach involving stages of idea development, re-evaluation of ideas and rewriting of the text.

Prerequisite: 300 or its equivalent

**315 Hispanic Linguistics**

An introduction to both contemporary and historical Hispanic linguistics. Descriptive Spanish phonetics and phonology. History of the Spanish language with emphasis on historical sound-change phenomena. Systematic study of dialectal variation in both Spain and Spanish America. Offered in fall semester.

Prerequisite: Eight credits numbered 300 or above

**320 Business Spanish**

Practice in the language skills and vocabulary needed to conduct business in the Hispanic world; an overview of political, economic, social and cultural factors which affect business in the Hispanic countries. Offered in fall semester.

Prerequisite: Eight credits numbered 300 or above

**330 Temas Hispanicos**

This course focuses on the integration of the various components that have forged the diverse Spanish and Spanish American cultures. Lectures and class discussions are based on major topics that relate to the foundations of the Hispanic world. This course meets the civilization distribution area for minors; it contributes to the language area for majors.

Prerequisite: 300

## Modern and Classical Languages – Spanish

### **331 Survey of Spanish Culture and Civilization**

A study of the evolution of the civilization of Spain from the time of early human settlements through the present. This course examines socio-economic developments, political movements and artistic creations within an historical context. Offered in fall semester.

Prerequisite: Eight credits numbered 300 or above

### **332 Survey of Latin American Culture and Civilization**

Physical and human geography. History of Latin America from pre-Hispanic civilizations through independence. Political problems. Rural Latin America. Latin American society, cultural values. Religion. Economic problems. Offered in spring semester.

Prerequisite: Eight credits numbered 300 or above

### **335 Introduction to Spanish Literature**

An introduction to Spanish and Spanish American narrative, drama and poetry. Strongly recommended for students who minor in Spanish. The course is designed to teach students the skills of critical reading and literary analysis.

Prerequisite: Eight credits numbered 300 or above

### **340 Survey of Spanish Literature I**

Readings in Spanish literature from the *Poema de Mio Cid* through the Golden Age.

Prerequisite: Eight credits numbered 300 or above

### **341 Survey of Spanish Literature II**

Readings in Spanish literature from the 18th through the 20th centuries.

Prerequisite: Eight credits numbered 300 or above

### **380 Spanish American Literature I**

Readings in Spanish-American literature from the colonial period through the 19th century.

Prerequisite: Eight credits numbered 300 or above

### **381 Spanish-American Literature II**

Readings in 20th century Spanish-American literature.

Prerequisite: Eight credits numbered 300 or above

### **385 Modern Spanish-American Short Story**

Intensive readings in the modern Spanish-American short story from Horacio Quiroga to the contemporary period (Rulfo, Fuentes, Cortazar, Onetti, Borges, etc.).

Prerequisite: Eight credits numbered 300 or above

### **390 Contemporary Spanish-American Novel**

Latin American society as reflected by a study of major contemporary Spanish-American novelists. Selected works from some of the following authors: Asturias, Cortazar, Carpentier, Fuentes, Garcia Marquez, Rulfo, Vargas-Llosa.

Prerequisite: Eight credits numbered 300 or above

### **405 Spanish Genre Studies**

An examination of particular genres of Spain and Spanish America during defined literary periods. Topics will vary with each offering and may include the 19th-century novel, nonfictional prose and contemporary poetry, theater and narrative of Spain and Spanish America. Credit may be earned more than once under this number for different emphases.

Prerequisite: Eight credits numbered 300 or above

### **410 Hispanic Women Writers**

An exploration of the writings of selected Spanish/Spanish American women authors, highlighting both their literary significance as well as their importance as an expression of the cultural milieu of their countries and times. Content of the course will vary with each offering.

Prerequisite: Two courses numbered 300 or above

### **440 Advanced Spanish Oral Expression**

This course is intended to stimulate creative, critical thinking in Spanish through activities which require students to argue, persuade, analyze, and interpret other points of view. The course is geared toward the advanced level of the ACTFL guidelines for speaking.

Prerequisite: Eight credits numbered 300 or above

### **475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**491, 492, 493, 494 Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**Music (MUSC)**

Krebsbach (chair), A. Bryan, M. Bryan, Callahan, George, Gustafson, Jorgenson, Kachian

The Department of Music offers a Bachelor of Arts in music plus a concentration in music/business, and a Bachelor of Arts in music education.

Individualized majors in such areas as accompanying and liturgical music also are available. Consult the department chair.

The department offers minors for those students who have an interest in music, but do not wish to major in the field.

A variety of musical ensembles are available for instrumentalists and vocalists.

Individual lessons are provided for all standard instruments and voice on a credit basis through the department, or on a non-credit basis through the St. Thomas Conservatory of Music.

The University of St. Thomas is a member of the National Association of Schools of Music.

More information concerning the department's offerings can be found in the *Handbook for Music Students*, which is available from the office of the Department of Music.

Students majoring in music may not have a letter grade lower than C- in a required music course.

**Major in Music**

112 Introduction to Music

113 Theory I

212 Theory II

213 Theory III

312 Theory IV

411 History and Literature of Music I

412 History and Literature of Music II

*Plus performance studies (MUSP):*

Eight semesters of performance studies at 200-level in the same performance medium (2 credits per semester)

*Plus:*

MUSP 102 or 103 Skills for Piano Proficiency

MUSR 200 Piano Proficiency

MUSR 270 Level I Recital

MUSR 350 Level II Recital

MUSR 450 Level III Recital

*Plus ensemble (MUSN) participation:*

Every music major is required to register for and successfully complete an ensemble during each semester of full-time enrollment. A minimum of eight semesters of ensemble participation is required for graduation regardless of full- or part-time status. (Students majoring in music register for ensembles on an audit basis.)

*Guidelines for choosing an ensemble:*

If principal instrument is:

*Piano* – at least two semesters in 171; at least two semesters in 172; at least two semesters in one of: 143, 160, 181, 185, 186, 190; two semesters may be in 161, 182, 183

*Voice* – at least eight semesters in choral ensembles (a maximum of six semesters in any one of: 140, 143, 160; a maximum of two semesters in 190)

*Woodwind, brass, or percussion* – at least eight semesters in 185 or 186

*Orchestral string* – at least eight semesters in 181

*Guitar* – at least six semesters in 173; at least two semesters in 174

*Other instruments* – at least eight semesters chosen from: 143, 160, 171, 172, 181, 185, 190

## Music

### *Allied requirements:*

PHYS 105 Musical Acoustics  
One course in Art History or Theater

### **Concentration in Music/Business**

This emphasis allows a person to have a solid music foundation while pursuing a related field in business. The seminar and internship included in this emphasis help the student focus on the type of music business that is of interest to him/her.

112 Introduction to Music  
113 Theory I  
212 Theory II  
213 Theory III  
312 Theory IV  
411 History and Literature of Music I  
412 History and Literature of Music II  
480 Music/Business Seminar

### *Plus performance studies (MUSP):*

Six semesters of performance studies at 200-level in the same performance medium (2 credits per semester)

### *Plus:*

MUSP 102 or 103 Skills for Piano Proficiency  
MUSR 200 Piano Proficiency  
MUSR 270 Level I Recital  
MUSR 350 Level II Recital

### *Plus Ensemble participation:*

See ensemble (MUSN) participation under Major in Music

### *Allied requirements:*

ACCT 211 Financial Accounting  
BUS 300 Business Ethics (2 credits)  
IDSC 475 Experiential Learning: Career Exploration Externship (2 credits)  
MGMT 150 Introduction to Business  
MGMT 340 Management I  
MKTG 300 Principles of Marketing

### *Plus one of:*

BLAW 365 Business Law  
BLAW 366 Legal Environment of Business  
BLAW 367 International Business Law

### *Plus one of:*

ECON 251 Principles of Macroeconomics  
ECON 252 Principles of Microeconomics

### *Plus:*

PHYS 105 Musical Acoustics  
One course in Art History or Theater

### **Major in Music Education (B.A.)**

Licensure for music teachers in the state of Minnesota is in one of the following categories:

Vocal and Classroom Music K-12  
Instrumental and Classroom Music K-12

### **Vocal and Classroom Music K-12**

112 Introduction to Music  
113 Theory I  
212 Theory II  
213 Theory III  
312 Theory IV  
351 Introduction to Conducting (2 credits)  
352 Choral Conducting  
411 History and Literature of Music I  
412 History and Literature of Music II

### *Plus performance studies:*

Six semesters of performance studies at 200-level in the same performance medium (2 credits per semester)

Four semesters of 133 (1/2 hour lesson) if voice is not principal instrument

*Plus:*

MUSP	102 or 103	Skills for Piano Proficiency
MUSR	200	Piano Proficiency
MUSR	270	Level I Recital
MUSR	350	Level II Recital

*Plus ensemble participation:*

See ensemble (MUSN) participation under Major in Music

*Allied requirements:*

EDUC	210	Education's Place in Society
EDUC	212	Human Relations and Multicultural Education
EDUC	226	Woodwinds in Classroom Teaching (2 credits)
EDUC	228	Brass and Percussion in Classroom Teaching (2 credits)
EDUC	230	Strings in Classroom Teaching (2 credits)
EDUC	260	Elementary Classroom Music Pedagogy*
EDUC	320	Psychology of Instruction for a Continuum of Learners
EDUC	323	Personal and Community Health, Alcohol, and Drugs
EDUC	360	Secondary Classroom Music Pedagogy*
EDUC	362	Teaching Techniques for Voice
PHYS	105	Musical Acoustics

\*Fulfills Block III requirement (EDUC 400)

An additional ten credits taken in Graduate Education complete licensure. These credits may apply towards a master's degree (Plan B).

*See Department of Teacher Education in this catalog for further details.*

EDUC	520	Student Teaching and Seminar (3 credits)
EDUC	670	Teacher as Agent of Change (3 credits)
MUS	516	Developing the Child Voice (2 credits)
MUS	561	Teaching World Music (2 credits)

**Instrumental and Classroom Music K-12**

112	Introduction to Music
113	Theory I
212	Theory II
213	Theory III
312	Theory IV
351	Introduction to Conducting (2 credits)
353	Instrumental Conducting
411	History and Literature of Music I
412	History and Literature of Music II

*Plus performance studies:*

Six semesters of performance studies at 200-level in the same performance medium (2 credits per semester)

*Plus:*

MUSP	102 or 103	Skills for Piano Proficiency
MUSR	200	Piano Proficiency
MUSR	270	Level I Recital
MUSR	350	Level II Recital

*Plus ensemble participation:*

See ensemble (MUSN) participation under Major in Music

*Allied requirements:*

EDUC	210	Education's Place in Society
EDUC	212	Human Relations and Multicultural Education
EDUC	214	Teaching Techniques Woodwinds I (2 credits)
EDUC	216	Teaching Techniques Woodwinds II (2 credits)
EDUC	218	Teaching Techniques Brass and Percussion I (2 credits)
EDUC	220	Teaching Techniques Brass and Percussion II (2 credits)
EDUC	222	Teaching Techniques Strings I (2 credits)
EDUC	224	Teaching Techniques Strings II (2 credits)
EDUC	260	Elementary Classroom Music Pedagogy*
EDUC	320	Psychology of Instruction for a Continuum of Learners
EDUC	323	Personal and Community Health, Alcohol and Drugs
EDUC	360	Secondary Classroom Music Pedagogy**
PHYS	105	Musical Acoustics

\*Fulfills Block III requirement (EDUC 400)

## Music

An additional 10 credits taken in Graduate Education complete licensure. These credits may apply towards a master's degree (Plan B).

*See Department of Teacher Education section for further details.*

EDUC	520	Student Teaching and Seminar (3 credits)
EDUC	670	Teacher as Agent of Change (3 credits)
MUS	516	Developing the Child Voice (2 credits)
MUS	561	Teaching World Music (2 credits)

### Minor in Music

112	Introduction to Music
113	Theory I
412	Music History & Literature II

*Plus one of the following:*

212	Theory II
411	History and Literature of Music I

*Plus performance studies:*

Four semesters at 100-level (50-minute lessons) in same performance medium (1 credit per semester).

*Plus:*

MUSR	270	Level I Recital
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*Plus ensemble participation:*

Four semesters in appropriate ensemble for principal instrument (see guidelines for choosing an ensemble under Major in Music)

### Minor in Electronic Music Production

112	Introduction to Music
113	Theory I
114	Theory II
150	MIDI Studio (2 credits)
180	Multi-Track Tape Recording (2 credits)
220	Digital Recording/Sampling (2 credits)
240	Musical Audio Post Production (2 credits)

*Allied requirement:*

PHYS	105	Musical Acoustics
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### Minor in Jazz Studies

125	Jazz Theory I (2 credits)
126	Fundamentals of Jazz Musicianship I (2 credits)
216	Jazz in America
223	Jazz Arranging (2 credits)
226	Fundamentals of Jazz Musicianship II (2 credits)

*Plus two of:*

224	Jazz Composition/Song Writing (2 credits)
225	Jazz Theory II (2 credits)
228	Advanced Jazz Arranging (2 credits)

*Plus performance studies:*

Four semesters of performance jazz studies at the 100-level (50-minute lessons)

*Plus:*

MUSR	290	Jazz Recital
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*Plus ensemble participation:*

Four semesters in		
MUSN	182	Instrumental Jazz Ensemble
or		
MUSN	183	Jazz Singers

### Music Courses (MUSC)

#### 105 Fundamentals of Music

A basic course designed to give students an understanding of the rudiments of music.

**2 credits**

**112 Introduction to Music (115, 217, 219)**

An introduction to the history, literature, and theory of music. This course establishes fundamental theoretical concepts and skills, provides an historical overview of western art music, and includes an introduction to world music. Meaning, expression, and music in culture are explored through discussion, critical listening, reading, and writing.

**113 Theory I**

Basic materials and structures of music, approached through analysis and experience. The four-semester sequence integrates sight-singing and ear-training with the analysis of harmony, form and contrapuntal procedures from the 16th through the 20th centuries. Assignments will include the development of compositional and arranging skills including those skills needed to write for the standard instruments of the wind ensemble and orchestra. Lecture plus 100 minutes laboratory per week.

Prerequisite: 112

**115 Music Literature (112, 118, 119)**

Music listening designed for the non-major. Discussion of representative works from the symphony, concerto, opera, chamber music and keyboard repertoire. Includes works by European and American composers showing intercultural influences and various ethnic and indigenous traditions representative of the great periods of musical art.

**118 Music Literature to 1850 (112, 115)****2 credits**

The first half of 115, the general survey of music up to approximately 1850. Offered in January Term.

**119 Music Literature 1850 to Present (112, 115)****2 credits**

The second half of 115, the general survey of music, beginning around 1850 and continuing the survey to the present. Offered in January Term.

Prerequisite: 118

**120 Orchestral Literature**

This course presents an overview of orchestral and instrumental chamber music, combining a critical and historical study of music with the regular experience of hearing live music. The course includes preparation for seven Wednesday evening concerts at Orchestra Hall as well as in-class presentations which cover knowledge and appreciation of music, musical performance, and the creative process.

**125 Jazz Theory I****2 credits**

This course will present a detailed exploration of the harmonic vocabulary used in jazz performance. The course will cover basic chord construction as well as chord extensions and alterations. The chords will be presented with their related modes and scales so the student may be able to analyze the relationship of melody to harmony. The student will learn several approaches to chord substitution including the chromatic dominant approach and substitution based on plurality.

Prerequisite: Ability to read music

**126 Fundamentals of Jazz Musicianship I****2 credits**

This course is designed to give the student a working knowledge of the skills required for jazz performance and research of historical performance practice. Study will include rhythm (how to swing); melody (how to jazz it up); harmony (how to jazz it up part 2). All styles of jazz will be examined, beginning with blues, modal tunes and the study of jazz standards. A systematic approach to the art of improvisation with emphasis placed on ear training exercises, in-class improvisation and performance. This course is open to all instrumentalists and singers.

**130 Introduction to World Music**

This course studies the phenomenon of music as an activity in people's lives. Students will be guided to think critically about music employing a multicultural perspective. Models will be presented to provide a context in which music serves as part of larger social ritual. European Art Music from the Middle Ages to the present day in addition to music of cultures such as African, Indian, Japanese, Eastern European, Native American, Indonesian, Chinese and American popular music will be covered. Designed for the non-major. This course fulfills the Human Diversity requirement in the core curriculum.

**150 MIDI Studio****2 credits**

Work with synthesizers and record the results with a Macintosh computer in a state-of-the-art MIDI studio. Special emphasis is placed on sequencing techniques and music editing on multi-track arrangements. Basic-to-advanced MIDI functions will be explained and utilized in team studio sessions. This course partially fulfills the second-level Computer Competency requirement in the core curriculum.

**175 Italian Diction for Singers****1 credit**

An introduction to Italian pronunciation, utilizing the International Phonetic Alphabet. A guide to

## Music

the use of the dictionary in the language. Special emphasis on the problems encountered by the singer.

### **176 German Diction for Singers** **1 credit**

An introduction to German pronunciation, utilizing the International Phonetic Alphabet. A guide to the use of the dictionary in the language. Special emphasis on the problems encountered by the singer.

### **177 French Diction for Singers** **1 credit**

An introduction to French pronunciation, utilizing the International Phonetic Alphabet. A guide to the use of the dictionary in the language. Special emphasis on the problems encountered by the singer.

### **178 Spanish Diction for Singers** **1 credit**

An introduction to Spanish pronunciation, utilizing the International Phonetic Alphabet. A guide to the use of the dictionary in the language. Special emphasis on the problems encountered by the singer.

### **180 Multi-Track Tape Recording** **2 credits**

Students will learn to record and mix music in an up-to-date multi-track recording studio: effects processors, compressor/limiter, vocal booth, large console, 8-track deck and more. Add to the recording by synchronizing the Macintosh computer and sequenced synthesizers. Operation of a mixing board and stereo mixdown will be covered early in the semester. This course partially fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: 150

### **212 Theory II (formerly 114)**

Continuation of 113

Prerequisite: 113 or successful placement test

### **213 Theory III**

Continuation of 212

Prerequisite: 212, or successful placement test

### **216 Jazz in America (formerly 116)**

The origins and history of jazz in the United States. Various phases in the development of jazz style are discussed. Blues, ragtime, Dixieland, swing, bop, cool jazz, fusion, as well as other recent developments in jazz performances are investigated. An essential part of the course is the analysis and evaluation of recorded performances by outstanding jazz musicians. Designed for non-majors as well as an elective for music majors interested in jazz. Offered spring semester. This course fulfills the Human Diversity requirement in the core curriculum.

### **217 Music of the Americas (112)**

A survey of music from the sixteenth century to the present as found in the Western hemisphere. Primarily concerned with the European influence brought by the various colonizing nations, some time is spent with the folk music of Canada, the United States and Latin America. Music of non-Western cultures are discussed as they relate to the native American and African-American influences in the New World. Designed for the non-major. This course fulfills the Human Diversity requirement in the core curriculum.

### **218 Black American Music: An Historical Survey**

This course explores and examines the history and musical practices of Black American artists and music dating from Francis Johnson of the late 18th century to contemporary artists such as Prince, Sweet Honey in the Rock, and Wynton Marsalis. Styles examined and discussed begin with the formation of the spirituals, blues and jazz to contemporary concert composers (Anthony Davis, Tania Leon), to Motown, soul, rap, and other popular American music forms.

### **219 Music in the United States (112)**

A survey of music heard in the United States from pre-Revolutionary days to the present, including discussions of the popular, folk and concert music. Particular emphasis will be given to forms of music which are unique to this country because of the diversity of its population. Designed for the non-major. Offered in fall semester.

### **220 Digital Recording and Sampling** **2 credits**

Recording music and sound effects into the Macintosh and combining the results with MIDI sequences will be covered in this course. Students will sample both live sounds and material from compact-disc libraries, then edit them and finally place them alongside instrumental MIDI tracks. Subjects covered: digital recording theory and practice, digital media, evolution of digital technology, new equipment, musical applications. This course partially fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: 150

**222 The Theology of American Popular Music** **2 credits**  
 An examination of contemporary popular American music (spirituals, blues, jazz, rock, pop, and hip-hop) and discussion of the theological and artistic implications of these styles and traditions. The course will place an emphasis on their dual nature as cultural products expressing political and physical liberation as well as road maps for specific theological and spiritual world views.

**223 Jazz Arranging** **2 credits**  
 The emphasis of this course is to introduce arranging concepts for instrumental and vocal applications. A basic overview of arranging materials (i.e. chord voicing, discussion of forms, music notation, ranges, vocal and instrumental differences, transpositions, rhythm section writing, and the construction of introductions and codas) will be covered. In addition, several scores will be discussed and analyzed.

**224 Jazz Composition/Song Writing** **2 credits**  
 Introduces the concept of the nine basic chord families and the scales that play through each chord. Also covers polychords and their applications to conventional chord symbols. Study the craft of song and lyric writing.  
 Prerequisite: 125 or 126 or permission of the instructor

**225 Jazz Theory II** **2 credits**  
 Continuation of 125. This course covers complex modes, altered scales, bitonality and advanced application of pentatonic scales. The student also will study tritonic and tetratonic scale structures and analyze selected jazz solos to understand their melodic and harmonic content.  
 Prerequisite: 125

**226 Fundamentals of Jazz Musicianship II** **2 credits**  
 Continuation of 126. Further study of standards, including bebop, post bop, jazz-rock fusion and other contemporary styles.  
 Prerequisite: 126

**228 Advanced Jazz Arranging** **2 credits**  
 Continuation of 223 with emphasis on both vocal and instrumental writing. The student will arrange selected jazz standards for the following ensembles: three horns with rhythm section, vocal jazz group (four voices, with and without rhythm section), and big band. The student also will study existing arrangements of Horace Silver, Duke Ellington, Manhattan Transfer and Gil Evans.  
 Prerequisites: 125, 223, 226

**240 Music/Audio Post Production** **2 credits**  
 Emphasis is placed on the creation of soundtracks for video. Source material will come from taped television broadcasts, commercial tapes and in-house video productions. Elements of synchronization (VITC, SMPTE) will be explored. Writing musical soundtracks for advertisements and programs, students will have the opportunity to lay-in sound effects and dialogue using the Macintosh computer and digital recording and sequencing software and hardware. This course partially fulfills the second-level Computer Competency requirement in the core curriculum.  
 Prerequisite: 220

**250 Introduction to Liturgical Music**  
 A study of documentation and guidelines for sung prayer in the Roman Catholic Church. Explorations of various styles of music, the rites that they serve and the function of music in the liturgical context. An approach to issues and roles in contemporary music ministry.

**251 Hymns and Psalms**  
 History of hymn texts and tunes from early Christian through reforming churches to the present time. A study of psalm texts and their settings in antiphonaries, psalters and contemporary graduals.

**252 Ritual Music**  
 Planning repertoire for the assembly at Eucharist, as well as other music ministries. Relation of music to all the other rites: marriage, baptism, confirmation, funerals, etc. Some emphasis on celebration of Liturgy of the Hours as well.

**253 Liturgical Planning**  
 Overview regarding the integration of various components of liturgy: music and rite, environment and sound, word and music, etc. Long-range visions for parish planning and development in the Vatican II Church. Development of team-ministry attitudes.

**281 Introduction to Accompanying** **2 credits**  
 This course focuses on topics related to the accompanying of singers and solo instrumentalists.

**295, 296, 297, 298 Topics**  
 The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **300 Introduction to Piano Pedagogy** **2 credits**

This class will survey methods and materials for piano study at various levels of advancement. Discussions will include principles of technique, learning theories, musicianship and performance skills. Class members will be required to observe piano lessons. Although the course is designed primarily for music majors (pianists), other qualified students may be admitted with the consent of the instructor.

### **303 Music Notation on Computer** **2 credits**

Develop skills in using music publishing software. Intended for composers, music educators, choral and instrumental conductors and anyone interested in producing print-quality music using the Macintosh or IBM. This course partially fulfills the second-level Computer Competency requirement in the core curriculum.

### **307 Guitar Pedagogy** **2 credits**

Historical overview of teaching methods beginning through advanced primers and student repertoire, exposure to all types of notational systems and discussion of professional teacher preparation.

### **312 Theory IV (formerly 214)**

Continuation of 213

Prerequisite: 213, or successful placement test

### **318 Voice Literature**

A survey of song literature by outstanding composers in Italy, France, Germany, Spain, Russia, Great Britain and America from 1800 to the present. Areas explored include performance, analysis of poetry and music, and comparison of nationalistic styles.

### **319 Piano Literature**

A survey of keyboard literature from the beginning of the 18th century to the present day. Primarily for the music major (pianist) but open to all interested in piano literature.

### **320 Guitar Literature**

A selected chronological survey of solo, ensemble and chamber ensemble literature for guitar from the 15th through the 20th centuries, including transcriptions from early music to popular.

### **335 Topics in World Music** **2 credits**

Each time this course is offered, it presents an in-depth survey of the music of a particular culture, exploring the music of: East India, Java, the Orient, Africa, the Middle East, Native Americans, etc.

### **351 Introduction to Conducting** **2 credits**

Content of the course includes basic conducting patterns and gestures, general knowledge of score types (choral, orchestral, band), score study and basic rehearsal planning. Practice in conducting small ensembles will be provided. Includes four hours of clinical experience. Offered in fall semester of even-numbered years.

### **352 Choral Conducting**

Includes advanced choral conducting and rehearsal techniques, the study of performance practices, and a survey of choral literature appropriate for use in school or church choirs. Consideration is given to the daily rehearsal plan, rehearsal techniques and classroom management as these relate to the expected outcome of the entire unit. Laboratory method. Offered in spring semester of odd-numbered years.

Prerequisite: 351

### **353 Instrumental Conducting**

As a continuation of 351, the conducting student will learn more complex conducting patterns and refined expressive gestures. A survey of the literature for orchestra and band with an in-depth study of selected pieces. An introduction to directing the jazz ensemble and marching band, including computer-assisted field show charting. Consideration also is given to the daily rehearsal plan, rehearsal techniques and classroom management as these relate to the expected outcome of the entire unit. Offered in spring semester of odd-numbered years.

Prerequisite: 351

### **411 History and Literature of Music I (formerly 311)**

A survey of Western European music to 1800: the medieval, Renaissance, Baroque and Classical periods. Ancient traditions, historical development, social context, forms, styles and issues of expression are explored. Offered in fall semester.

### **412 History and Literature of Music II (formerly 312)**

A survey of Western European music from 1800 to the present: the Romantic period and the twentieth century. This course includes traditional musics of the world and selected American popular styles. Emphasis is on social context and issues of meaning and expression. Continuation of 411. Offered in spring semester.

**416 Orchestration****2 credits**

Ranges, timbres, and performance characteristics of string, winds and percussion instruments in the western tradition. Scoring for small and large ensembles of such instruments. Offered in fall semester.

Prerequisite: 200, 214

**475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**480 Music/Business Seminar**

A course involving individual research that is shared among the participants. Adjunct faculty from various areas of music business, the electronic media industries and arts management make presentations to the seminar, which is under the direction of a faculty coordinator. A major research project is required.

**483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**491, 492, 493, 494 Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**Music Ensembles (MUSN)**

Membership in music ensembles is based upon a successful audition. Students may register for the same ensemble in as many semesters as desired.

The Fine Arts requirement may be fulfilled by four semesters of participation (for credit) in one of the following ensembles: 140, 143, 160, 185, or 186. There is no tuition charged for ensemble registration.

Students majoring in music are required to register for and successfully complete an ensemble during each semester of full-time enrollment. A minimum of eight semesters is required for graduation regardless of full- or part-time status. (See specific ensemble requirements for various major emphases in the first part of the music section of this catalog, or consult the *Handbook for Music Students* available from the Department of Music office.) Music majors audit all ensembles.

**140 Women's Choir****1 credit**

A vocal ensemble that explores the wide variety of secular and sacred repertoire composed for women's voices. Choral literature performed includes unaccompanied works as well as works performed with a professional chamber orchestra. Major performances are given each semester and may include exchange/joint concerts with other choirs. Three rehearsals a week. Membership by audition. Four semesters of participation fulfill the Fine Arts requirement, or a combination of four semesters in 140 and 160, or a combination of four semesters in 140 and 143.

**143 Liturgical Choir****1 credit**

Liturgical Choir is an ensemble of students of varied faith and cultural backgrounds that sings for services in the UST chapel. Local, regional and international tours are part of the choir's ministry as well as concert performances with other Music Department ensembles. Two rehearsals a week plus bi-weekly Sunday chapel liturgies. Membership by audition. Four semesters of participation fulfill the Fine Arts requirement, or a combination of four semesters in 143 and 140.

**151 Men's Schola Cantorum****1 credit**

This vocal ensemble focuses primarily on early Plainchant from the Gregorian chant tradition as well as contemporary chant repertoire. Historical and modern chant notations are studied and repertoire will be performed in the context of both liturgical service and concert. Membership by audition.

**160 Concert Choir****1 credit**

A mixed vocal ensemble that performs a variety of secular and sacred repertoire from the Middle Ages to the 20th century. Choral literature performed includes unaccompanied works as well as works with professional chamber orchestra. Major performances are given each semester and may include exchange/joint concerts with other choirs. Tours locally, nationally and internationally.

## Music

Three rehearsals a week. Membership by audition. Four semesters of participation fulfill the Fine Arts requirement, or a combination of four semesters of 160 and 140.

### **161 String Ensembles** **1 credit**

Formation of string trios, quartets, quintets. Ensembles meet once a week and are coached by a member of the string faculty. Membership by audition.

### **162 Flute Ensembles** **1 credit**

Formation of trios, quartets and other small ensembles, dependent upon personnel available. Ensembles may include piccolo, soprano flutes, alto flute and bass flute. Ensembles meet once a week and are coached by a member of the woodwind faculty. Membership by audition.

### **163 Clarinet Ensembles** **1 credit**

Formation of small ensembles involving various members of the clarinet family. Ensembles meet once a week and are coached by a member of the woodwind faculty. Membership by audition.

### **164 Saxophone Ensembles** **1 credit**

Formation of small ensembles involving various members of the saxophone family. Ensembles meet once a week and are coached by a member of the woodwind faculty. Membership by audition.

### **165 Woodwind Ensembles** **1 credit**

Formation of mixed woodwinds and horn to form quartets and quintets. Ensembles meet once a week and are coached by a member of the woodwind faculty. Membership by audition.

### **166 Brass Choir** **1 credit**

Formation of small and large ensembles using only brass and sometimes percussion instruments. The choir, directed by a member of the brass faculty, gives regularly scheduled public performances. Membership by audition.

### **167 Percussion Ensembles** **1 credit**

A variety of mallet and stick instruments are used to form these ensembles. Ensembles meet once a week and are coached by a member of the percussion faculty. Membership by audition.

### **169 African Music Ensemble** **1 credit**

This course provides a non-Western music performance experience. The repertoire to be studied includes traditional genres such as Adowa, Agbadza, Gota, Kpanlogo, Boboobo, and includes contemporary compositions. Three main areas in the ensemble are drumming, flutes and vocal. No prior experience is necessary for this ensemble. An audition is required.

### **170 Handbell Choir** **1 credit**

This instrumental ensemble performs with both English and Dutch handbells. Repertoire consists of arrangements for two to five octaves from a variety of musical periods and styles as well as music composed specifically for the expanding contemporary handbell literature. Performances include monthly appearances in chapel liturgical settings as well as regular campus and public performances. No previous handbell experience necessary but ability to read music is required. Membership by audition or permission of instructor.

### **171 Piano Ensembles** **1 credit**

Study and performance of duets and two-piano music. One major performance per semester. Membership by audition.

### **172 Accompanying Ensembles** **1 credit**

Qualified pianists have the opportunity to accompany solo vocalists and solo instrumentalists. This is a one-on-one situation for the student and instructor. Membership by audition.

### **173 Guitar Ensemble** **1 credit**

Study and performance of music for multiple guitars from Renaissance through twentieth-century composers including American jazz. Repertoire includes original works, transcriptions, and arrangements. Opportunities provided for students to learn improvisation. Membership by audition.

### **174 Guitar Chamber Ensemble**

The study and performance of chamber music for guitar and diverse instruments. At least one major performance per semester. Membership by audition.  
Prerequisite: Ability to read music.

### **181 Orchestra** **1 credit**

Study and performance of music from early Baroque through contemporary. Basic orchestral performance skills and player responsibilities are discussed for ensemble playing. Four major performances a year. Membership by audition.

### **182 Instrumental Jazz Ensemble** **1 credit**

Study and performance of instrumental jazz in various styles with exposure to improvisation. Formal concert is presented each semester, and informal campus appearances occur on a regular basis. Membership by audition.

**183 Jazz Singers** **1 credit**  
Study and performance of vocal jazz in various styles. Group is limited in size, thus allowing each member to develop independence in singing and microphone technique. Membership by audition.

**185 Symphonic Band** **1 credit**  
Study and performance of original works for wind-band; transcriptions, manuscripts, and solo repertoire with band accompaniment. Three rehearsals per week; regular series of concerts, including regional, national and international tours. Private lessons recommended. Membership by audition. Four semesters of participation fulfill the Fine Arts requirement, or a combination of four semesters in 185 and 186.

**186 Symphonic Wind Ensemble** **1 credit**  
This course is designed for the advanced woodwind, brass and percussion student. A select group of approximately forty musicians studies and performs music primarily written for the wind ensemble genre. Literature studied and performed comes from a diversity of cultures and style periods. The Wind Ensemble gives public performances on a regular basis throughout the school year including regional, national and international tours. Meets three times a week. Membership by audition. Four semesters of participation fulfill the Fine Arts requirement, or a combination of four semesters in 185 and 186.

**190 Music Theater Production** **1 credit**  
Musical and dramatic preparation of a musical show or opera, leading to complete performance with costumes, set and orchestra. Participation by audition.

**191 Music Theater Scenes** **1 credit**  
Musical and dramatic preparation of scenes from musical shows or operas. An informal performance may be presented. Participation by audition.

**196 Topics Ensembles** **1 credit**  
The ensemble(s) will be announced in the annual Class Schedule. Content will vary but will not duplicate existing ensembles.

#### **Performance Studies (MUSP)**

Performance studies are generally on an individual basis, although some group lessons are available.

A course fee is charged for all performance studies, based on the length of the lesson.

#### *Elective Level*

Performance studies on the elective level are available for all students. No audition is required for elective studies. These courses are designed for non-majors who are interested in beginning or continuing study on an instrument or voice. Students wishing to study piano, having little or no previous study on the instrument, are encouraged to register for group lessons. Half-hour or 50-minute lessons are available. Twelve lessons are scheduled each semester. A minimum of six hours a week practice is required. These courses must be taken for credit. They cannot be audited. Performance studies do not fulfill the Fine Arts requirement.

**101 Group Piano** **1 credit**  
This course is designed for students who have little or no piano background. The small group setting includes work on keyboard technique, reading music, transposing, improvising, playing by ear and harmonizing melodies. Groups are limited to eight students and meet for an hour each week.

**102 Skills for Piano Proficiency (non-piano majors)** **0 credit**  
This course teaches the skills required for the piano proficiency exam, which include basic keyboard technique, sight-reading simple melodies, basic accompanying, transposing and harmonizing melodies, scale and arpeggio technique. Students whose principal instrument is other than piano are required to enroll in this course.  
Prerequisite: Music major with principal instrument other than piano.

**103 Skills for Piano Proficiency (piano majors)** **0 credit**  
This course is similar to 102, but designed for the piano proficiency exam required of music majors whose principal instrument is piano.

**106 Class Piano** **1 credit**  
Keyboard instruction in an electronic piano laboratory. Course designed for beginners or students with limited experience.

**108 Class Voice** **1 credit**  
Designed for non-music majors who wish to study voice and also for non-vocal music majors who wish to develop their singing in a class situation.

## Music

- 110 Electronic Music Lessons** **1 credit**  
The practical application of contemporary music-making technology is the focus of these lessons. Synthesizers, a digital audio sampler, a multi-track tape deck, and mixing console are used in conjunction with a computer in a state-of-the-art recording studio. New music composition ideas and techniques are presented each week. Students then sign up for hands-on time in the studio to work out assignments.  
Prerequisite: Basic computer and music keyboard skills.
- 121 Harpsichord: elective** **1 credit**  
**122 Lute: elective** **1 credit**  
**128 Recorder: elective** **1 credit**  
**131 Piano: elective** **1 credit**  
**133 Voice: elective** **1 credit**  
**135 Organ: elective** **1 credit**  
**136 Flute: elective** **1 credit**  
**137 Oboe: elective** **1 credit**  
**138 Clarinet: elective** **1 credit**  
**139 Bassoon: elective** **1 credit**  
**141 Saxophone: elective** **1 credit**  
**144 Trumpet: elective** **1 credit**  
**145 French horn: elective** **1 credit**  
**146 Trombone: elective** **1 credit**  
**147 Euphonium: elective** **1 credit**  
**148 Tuba: elective** **1 credit**  
**149 Percussion: elective** **1 credit**
- 152 Jazz Voice: elective** **1 credit**  
Covers techniques for communicative lyric singing, including repertoire from different eras of jazz. Considers stage presence, microphone technique, vocal inflection and communication with an accompanist or rhythm section. Some theory about lead sheets, improvisation and transcription of solos.
- 153 Jazz Piano: elective** **1 credit**  
Individual studies with a jazz pianist, developing jazz style and working on improvisation.  
Prerequisite: Some facility on the piano.
- 154 Violin: elective** **1 credit**  
**155 Viola: elective** **1 credit**  
**156 Cello: elective** **1 credit**  
**157 Double Bass: elective** **1 credit**  
**158 Guitar: elective** **1 credit**  
**159 Harp: elective** **1 credit**
- 168 African Drumming: elective** **1 credit**  
Study the art and techniques of both hand and stick drumming in West African traditions. Covers a wide variety of repertoire (Agbadza, Kpanlogo, Adowa, Gota, etc.), including those performed by the African Music Ensemble.
- 187 Electric Guitar: elective** **1 credit**  
Students will study basic to advanced plectrum and fingerstyle techniques as they apply to the amplified guitar. Other topics will include fretboard theory, improvisation, ensemble performance practice and current technologies in amplification and MIDI applications. Repertoire will include all American popular music styles .
- 188 Flamenco Guitar: elective** **1 credit**  
Students will study the techniques involved in picado, arpeggio, tremolo, and rasqueado. The course includes intensive study of various rhythms and styles including Sevillanas, Soleareas, Alegrias, Siguiryas, Tango, Bulerias, Tiento, etc., and an introduction to basic flamenco dance and song accompaniment. Students will learn about the Gypsy and Moorish influences on the history of this artform.

### *Performance Level*

Performance studies at the performance level are required of music majors on their principal instrument. An audition before the music faculty is required for performance-level studies. Qualified non-majors also may audition. Twelve 50-minute lessons are scheduled each semester. A minimum of 12 hours a week practice is required. These lessons provide an in-depth study of representative literature for the instrument. Juries and recitals are required of all students taking performance-level studies. See the *Handbook for Music Students*.

221	<b>Harpichord: performance</b>	2 credits
231	<b>Piano: performance</b>	2 credits
233	<b>Voice: performance</b>	2 credits
235	<b>Organ: performance</b>	2 credits
236	<b>Flute: performance</b>	2 credits
237	<b>Oboe: performance</b>	2 credits
238	<b>Clarinet: performance</b>	2 credits
239	<b>Bassoon: performance</b>	2 credits
241	<b>Saxophone: performance</b>	2 credits
244	<b>Trumpet: performance</b>	2 credits
245	<b>French horn: performance</b>	2 credits
246	<b>Trombone: performance</b>	2 credits
247	<b>Euphonium: performance</b>	2 credits
248	<b>Tuba: performance</b>	2 credits
249	<b>Percussion: performance</b>	2 credits
254	<b>Violin: performance</b>	2 credits
255	<b>Viola: performance</b>	2 credits
256	<b>Cello: performance</b>	2 credits
257	<b>Double Bass: performance</b>	2 credits
258	<b>Guitar: performance</b>	2 credits
259	<b>Harp: performance</b>	2 credits

**265 Music composition 1 credit**

The course aims at developing the student's own imagination and musical style, as well as providing studies for the developing of technical and notational skills. Individual guidance and group meetings. Half-hour sessions.

Prerequisite: 212 and permission of instructor

**266 Music Composition 2 credits**

Same as 265, but 50-minute sessions.

Prerequisite: 212 and permission of instructor

**Music Proficiencies and Recitals (MUSR)**

Piano proficiency is required in all of the major emphases.

Recitals are required in all major emphases and in some minor emphases.

Recitals and proficiencies carry no course credit. All MUSR courses are graded on an S-R basis.

**200 Piano Proficiency**

Required of all majors, piano proficiency should be completed by the end of the second year of study. See the *Handbook for Music Students* for specific details of the proficiency examination.

**270 Level I Recital**

A Level I recital can be given in any semester. It requires a minimum of 15 minutes of music. A student performing at this level usually will be presented on a program with two or three other students.

**290 Jazz Recital**

A Jazz recital is required of all students in the Jazz Studies minor. A minimum of five songs is required with one from each of the following categories: standard; ballad; swing; bossa nova, samba or other Latin style; and bop. Brass, winds and singers must be accompanied by piano, bass and drums. Piano and guitar must be accompanied by bass and drums and play one selection as a soloist without the rhythm section. Bassists will be accompanied by piano and drums and must play the melody on all selections. Percussionists will appear with piano and bass, and will be required to play one selection on vibraphone.

**350 Level II Recital**

A Level II recital can be given in any semester. It requires a minimum of 25 minutes of music. Students performing at this level usually will be presented with one or two other students in the recital.

Prerequisite: 270

**400 Festival Orchestra Honors Concert**

This concert is presented in the spring semester. Professional musicians from the Twin Cities area are hired to form the orchestra, and students are auditioned in December to perform vocal or instrumental music that originally was intended to be presented with orchestra. Festival Orchestra auditions are open to all full-time St. Thomas undergraduate students and graduate students currently enrolled in performance studies. See the *Handbook for Music Students* for details.

## Philosophy

### 450 Level III Recital

A Level III recital usually is given in the last semester of the student's work. This is a solo recital and requires a minimum of 45 minutes of music.

Prerequisite: 350

## Operations Management

*See Department of Management in the Division of Business.*

## Philosophy (PHIL)

Atkinson (chair), Berquist, Coulter, Degnan, Farmer, Hayden-Lemmons, Heaney, Herrman, Hubbard, Kemp, Kronen, Laumakis, Menssen, Piché, Reiter, Stromberg, Sullivan, van Ingen, Winter

The philosophy program offers work on major figures in all periods of the history of philosophy, with special attention to the thought of Aristotle and St. Thomas Aquinas.

The two core requirements, Philosophy of the Human Person and Introductory Ethics, are intended to introduce students to the fundamental philosophical questions about human nature and conduct and to help them develop their ability to reason.

### Philosophy Honor Society

Psi Sigma Tau is a society whose objectives are to serve as a means of awarding distinction to students having high scholarship and personal interest in philosophy; to promote student interest in research and advanced study in this field; to provide opportunities for the publication of student research papers of merit; to encourage a professional spirit and friendship among those who have displayed marked ability in this field; and to popularize interest in philosophy among the general collegiate public.

Students are eligible for membership if they have a manifest interest in research and study of philosophy (having completed a minimum of 8 semester credits in the field); hold a cumulative GPA of at least 3.00 in either philosophy or general courses; and have completed at least two semesters of college education.

### Major in Philosophy

115 Philosophy of the Human Person

214 Introductory Ethics

*Plus one of:*

221 Critical Thinking

223 Formal Logic

*Plus sixteen credits in philosophy through the ages:*

*Four credits in ancient philosophy:*

200 Introduction to Classical Philosophy

230 Greek Philosophers on the Foundations of Knowledge

320 Aristotelian Logic

*Four credits in medieval philosophy:*

202 Problems in Medieval Philosophy

270 Minds Without Bodies: Angels

300 Philosophy in Latin Texts

400 Thought of Thomas Aquinas

*Four credits in modern philosophy:*

232 Modern Philosophy: Descartes to Kant

280 Modern Philosophers on God and Religion

350 Modern Ethical Theory

*Four credits in 20th-century philosophy:*

302 Christian Philosophy and 20th-Century Controversies

304 Twentieth-Century Thomism

354 Biomedical Ethics

356 Contemporary Social Issues: Life, Death and Sexuality

358 Environmental Ethics

430 The End of Philosophy?

440 Contemporary Issues in the Philosophy of Mind

480 Reason and Belief

*Plus:*

Sixteen additional credits in Philosophy, four of which must be a major seminar:

- 302 Christian Philosophy and 20th-Century Controversies
- 400 Thought of Thomas Aquinas
- 430 The End of Philosophy?
- 440 Contemporary Issues in the Philosophy of Mind
- 480 Reason and Belief

A major seminar can satisfy both the seminar and chronological period requirement.

**Minor in Philosophy**

- 115 Philosophy of the Human Person
- 214 Introductory Ethics

*Plus:*

Twelve additional credits in philosophy chosen in consultation with the chair of the department.

**Minor in Philosophy for St. John Vianney students**

- 115 Philosophy of the Human Person
- 200 Introduction to Classical Philosophy
- 214 Introductory Ethics

*Plus one from each group below:*

- 221 Critical Thinking
- 223 Formal Logic
- 232 Modern Philosophy: Descartes to Kant
- 302 Christian Philosophy and 20th-Century Controversies
- 356 Contemporary Issues: Life, Death and Sexuality
- 202 Problems in Medieval Philosophy
- 300 Philosophy in Latin Texts
- 304 Twentieth-Century Thomism
- 400 Thought of Thomas Aquinas

**115 Philosophy of the Human Person**

An examination of fundamental conceptions of the human person in ancient, medieval and modern philosophy. Possible topics include: the existence and immortality of the human soul, free will and determinism, the immateriality of the intellect, the relationship between mind and body, and the relevance of different conceptions of the human person for ethics and religion. Attention is given to relevant issues of human diversity. The development of logical and critical thinking receives special attention.

**200 Introduction to Classical Philosophy**

A survey of the roots of philosophical inquiry in the classical period. The pre-Socratics, Plato, Aristotle, the Stoics, and if time permits the Sceptics and neo-Platonists.  
Prerequisite: 115

**202 Problems in Medieval Philosophy**

An investigation of major philosophical problems in their medieval context. Possible topics include: faith and reason, free will, the role of authority, and the existence of God.  
Prerequisite: 115

**214 Introductory Ethics**

An inquiry into the rational foundations and methods of ethics, with attention to the application of ethical principles to areas of personal conduct, institutional behavior and public policy, and diversity within and across cultures.  
Prerequisite: 115

**221 Critical Thinking**

A course that stresses the ability to recognize and analyze arguments and fallacies drawn from a variety of fields. Syllogistic, propositional and inductive forms of reasoning are examined in the context of ordinary prose.  
Prerequisite: 115

**223 Formal Logic**

An introduction to propositional logic, first-order predicate calculus with identity, and quantified modal logic. Students construct proofs in these areas and apply principles of formal logic to philosophical arguments.  
Prerequisite: 115

**230 Greek Philosophers on the Foundations of Knowledge**

An examination of Plato and Aristotle on the justification of claims to knowledge, with particular

## Philosophy

emphasis placed on the justifications of first principles.

Prerequisite: 115

### **232 Modern Philosophy: Descartes to Kant**

An examination of major philosophers of the early modern period, with emphasis on methodology and claims to knowledge.

Prerequisite: 115

### **260 Introduction to the Philosophy of Nature**

An investigation of change in the world of nature, covering such topics as the principles of change, nature, causes in nature and definitions of change.

Prerequisite: 115

### **270 Minds Without Bodies: Angels**

A philosophical inquiry into the existence and nature of angels. A survey of recent works on angels and arguments for and against the existence of angels in the works of such writers as Pseudo-Dionysius, Aquinas, Descartes, Hobbes, Locke, and Adler.

Prerequisite: PHIL 115

### **280 Modern Philosophers on God and Religion**

An introduction to philosophical theology in the modern period. Movements covered include seventeenth-century scholastic orthodoxy, the enlightenment, and the romantic synthesis of the two.

Prerequisite: 115

### **295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **300 Philosophy in Latin Texts**

A survey of various writings, principally those of Thomas Aquinas, for students who wish to acquire familiarity with reading medieval philosophical texts in the original Latin.

Prerequisites: 115 and LAT 111

### **302 Christian Philosophy and 20th-Century Controversies (Major Seminar)**

An investigation of major philosophical problems of the 20th century, together with responses from a Christian philosophical point of view.

Prerequisite: 221 or 223

### **304 Twentieth-Century Thomism**

An examination of the influence of Thomas Aquinas on prominent Thomistic philosophers of the 20th century. Possible thinkers include: Rousselot, Marechal, Maritain, Gilson, Rahner and Lonergan.

Prerequisite: 214

### **320 Aristotelian Logic**

An examination of the logical works of Aristotle. Topics include: categories, propositions, forms of argument. Emphasis on demonstration (proof of necessary truths) and its distinction from dialectical reasoning. Applications to philosophical texts.

Prerequisite: 221 or 223

### **331 Philosophy of Science**

A philosophical investigation into the foundations of the natural sciences, with special emphasis on scientific methodology and the differences among various sciences.

Prerequisites: 115 and prior or concurrent registration in a college-level science course

### **341 Love, Sex and Friendship**

A philosophical examination beginning with Plato of the problems inherent in love relationships, e.g., the problems of reciprocity and permanence. Particular attention is given to Karol Wojtyla's analysis of romantic love.

Prerequisite: 214

### **350 Modern Ethical Theory**

An examination of modern and contemporary normative and metaethical theories in such writers as Hobbes, Hume, Kant, Mill and contemporary authors.

Prerequisite: 214

### **351 Political and Legal Philosophy**

An investigation into the philosophical and ethical foundations of law and politics in the classical and liberal traditions. Possible topics include: the common good and individual freedom, natural law and positive law, justice, liberalism and communitarianism.

Prerequisite: 214

**352 Freedom, Culpability and Punishment**

An examination of classical and contemporary philosophers on the topics of human freedom, culpability and the justification of punishment.

Prerequisite: 214

**353 Personalism and the Common Good**

An examination of the writings of ancient, medieval and contemporary authors on the highest good for the human person and its relation to the good of the state.

Prerequisite: 214

**354 Biomedical Ethics**

An investigation of ethical problems in medicine and biological technology. Possible topics include: genetic engineering, experimentation with human subjects, the right to health care, and the concept of mental illness.

Prerequisite: 214

**355 Philosophy of Moral Education and Development**

An examination of moral development and moral education in the writings of such figures as Plato, Aristotle, Wollstonecraft, Piaget, Kohlberg and Gilligan. Students interview practicing moral educators.

Prerequisite: 214

**356 Contemporary Social Issues: Life, Death and Sexuality**

An investigation of contemporary arguments relating to matters of life and death and to the topic of sexuality. Abortion, infanticide, euthanasia, and sexual and reproductive practices receive attention.

Prerequisite: 214

**358 Environmental Ethics (ENVR 301)**

Consideration of the ethical issues arising from human interaction with the environment, including population pressure, pollution, conservation and preservation. Focus is on the grounds of our obligation to resolve such issues; the question of what persons and things are worthy of moral consideration; and the respective roles of individuals, organizations and government in addressing environmental problems. Case studies will be used to trace the implications of various ethical and political theories.

Prerequisites: 214 and ENVR 151

**400 Thought of Thomas Aquinas**

An examination of some major topics in the theoretical philosophy of Thomas Aquinas. Possible topics include: Aquinas' conception of philosophy and its relation to faith; God; and the destiny of the human being.

Prerequisite: Three courses in philosophy including 223 or permission of instructor

**430 The End of Philosophy? (Major Seminar)**

An examination of the postmodern and feminist critiques of western philosophy. Particular attention is given to the question of whether philosophy will survive into the 21st century.

Prerequisites: 221 or 223, and any philosophy course of the modern period or permission of instructor

**440 Contemporary Issues in the Philosophy of Mind (Major Seminar)**

An investigation, principally from a contemporary standpoint, of central issues in the philosophy of mind: consciousness and thought, voluntary action, and the mind's relationship to matter. Current developments in related disciplines receive attention.

Prerequisites: 214 and 223

**475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**480 Reason and Belief (Major Seminar)**

An investigation, principally from a contemporary standpoint, of the rationality of religious belief. Topics include: the problem of evil, the bearing of contemporary science on traditional arguments for God's existence and religious pluralism.

Prerequisites: 115, 223, and either one additional philosophy course or CATH 307

**483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## Physics

### 491, 492, 493, 494 **Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 495, 496, 497, 498 **Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## Physical Education

*See Department of Health and Human Performance.*

## Physical Science with a Concentration in Chemistry

## Physical Science with a Concentration in Physics

*See Department of Teacher Education.*

## Physics (PHYS)

Tommet (chair), Johnston, Lane

Physics majors learn the fundamental laws that govern the physical universe, from the smallest sub-atomic particle to the largest galaxies to the very structure of space and time. Emphasis is placed on general understanding, problem solving, and the communication skills essential for success in a career grounded in science. In the laboratory, students use state-of-the-art instrumentation in applying physics to a wide variety of systems. Opportunities are available for students to participate in research projects during the school year and over the summer.

There are three educational options from which to choose: a Bachelor of Science (B.S.) degree; a Bachelor of Arts (B.A.) degree; or a minor in physics. The B.S. degree provides the necessary background for students interested in graduate school, engineering or industrial work; for students interested in professional programs such as medicine or patent law, or students double majoring in areas such as mathematics or chemistry, the Bachelor of Arts degree gives a solid background in physics with the flexibility to meet other needs.

The pre-engineering program sponsored by the Department of Physics allows students to combine a liberal arts education at the University of St. Thomas with an engineering program at another institution. See the description under Pre-Professional Programs in this catalog.

For students interested in secondary education, the department offers a major for teachers of physical science with a concentration in physics, and a teaching minor in physics. See the description of these programs in the Department of Teacher Education.

For students interested in elementary education, the department participates in the Science and Mathematics Major for Elementary Education (SMEE). Further information is available under that title in this catalog.

### Major in Physics (B.S.)

- 111 Introduction to Classical Physics I
- 112 Introduction to Classical Physics II
- 225 Introduction to Modern Physics I
- 226 Introduction to Modern Physics II
- 260 Principles of Electronic Instrumentation
- 310 Statistical Mechanics and Thermodynamics
- 341 Electricity and Magnetism
- 399 Advanced Physics Laboratory I
- 400 Advanced Physics Laboratory II
- 411 Theoretical Mechanics
- 421 Quantum Mechanics

*Plus one of:*

- 342 Electromagnetic Waves
- 451 Introduction to Solid State Physics

*Allied requirements:*

- |      |     |   |
|------|-----|---|
| CHEM | 111 | General Chemistry I                       |
| CHEM | 112 | General Chemistry II                      |
| MATH | 113 | Calculus I                                |
| MATH | 114 | Calculus II                               |
| MATH | 200 | Multi-Variable Calculus                   |
| MATH | 210 | Linear Algebra and Differential Equations |
| QMCS | 130 | Problem Solving in the Natural Sciences   |

**Major in Physics (B.A.)**

111 Introduction to Classical Physics I  
 112 Introduction to Classical Physics II  
 225 Introduction to Modern Physics I  
 226 Introduction to Modern Physics II  
 260 Principles of Electronic Instrumentation  
 341 Electricity and Magnetism  
 399 Advanced Physics Laboratory I  
 400 Advanced Physics Laboratory II  
 411 Theoretical Mechanics

*Plus one of:*

310 Statistical Mechanics and Thermodynamics  
 342 Electromagnetic Waves  
 421 Quantum Mechanics  
 451 Introduction to Solid State Physics

*Allied requirements:*

MATH 113 Calculus I  
 MATH 114 Calculus II  
 MATH 200 Multi-variable Calculus  
 MATH 210 Linear Algebra and Differential Equations

**Major for Teaching Physical Science with a Concentration in Physics**

*See Department of Teacher Education*

**Minor in Physics**

111 Introduction to Classical Physics I  
 112 Introduction to Classical Physics II  
*or*  
 109 General Physics I  
 110 General Physics II

*Plus:*

225 Introduction to Modern Physics I  
 Eight credits in courses numbered 226 or above

**Teaching Minor in Physics**

*See Department of Teacher Education*

**101 General Physics For Liberal Arts Students (109, 111)**

Intended for non-science majors; treats fundamental principles of physics and their application to familiar phenomena, stressing qualitative understanding. The course will survey topics from mechanics, fluids, temperature and heat, oscillations, waves and sound, light and optics, and properties of matter. The course consists of lecture, discussion and laboratory. This course is designed especially for elementary education majors. It is not intended for students who have had high school physics.

Prerequisite: three years of high school mathematics

**102 Topical Introduction to Physics****2 credits**

This course will introduce students to physics by studying a specific but broad topic. The course will have laboratory experience and will fulfill one-half of the general education laboratory science requirement. The course may be repeated for credit under different topics. Examples of topics are: light and color, physics and the human body, science of hi-fidelity, electronics of a computing machine, modern physics, and biomechanics. Offered in January Term.

Prerequisite: three years of high school mathematics

**103 Physics of Energy**

Intended for non-science majors; treats fundamental principles of physics and their application to understanding energy. This is an introductory course in physics with the focus on energy; it will give the underlying science and a quantitative approach to energy. Topics included are mechanics, thermodynamics, electricity and magnetism, atomic and nuclear concepts and radiation theory. The course consists of lecture, discussion and laboratory.

Prerequisite: three years of high school mathematics

**104 Astronomy**

Introduction to physical principles and their application to astronomy for non-science majors. Emphasis is on comprehension of ideas and principles. Topics include the motions of the sun, moon, stars and planets; properties of the solar system; the stars including giants, dwarfs, pulsars

## Physics

and black holes; nebulae, galaxies and quasars; cosmology and life. The course consists of lecture, discussion and laboratory.

Prerequisite: three years of high school mathematics

### 105 Musical Acoustics

An introductory course intended for non-science majors; treats fundamental principles of physics and acoustics as they relate to musical sounds and musical instruments. The course consists of lecture, discussion and laboratory. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisites: high school algebra and a music background (one year practice, instrument or voice, or one course)

### 109 General Physics I (111)

This course and its continuation 110 are a two-semester sequence of introductory physics, both classical and modern. Topics include principles of classical mechanics: description of motion, force, torque and rotational motion, energy, momentum and their conservation, fluid mechanics; thermal phenomena; oscillations, waves and sound. Appropriate topics and applications are chosen for the life-science student. The course consists of lecture, discussion and laboratory.

Prerequisite: Math placement at a level of MATH 111 or above.

### 110 General Physics II (112)

Continuation of 109. Topics include electricity; magnetism; light and optics; atomic, quantum and nuclear physics. The course consists of lecture, discussion and laboratory.

Prerequisite: A minimum grade of C- in 109 or 111

### 111 Introduction to Classical Physics I (109)

This course and its continuation 112 are intended for physical science, mathematics and pre-engineering students. The principles of classical mechanics: vectors, kinematics, particle and rigid body rotational dynamics and statics; conservation laws; fluid mechanics. The course consists of lecture, discussion and laboratory. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: A minimum grade of C- in MATH 113

### 112 Introduction to Classical Physics II (110)

Continuation of 111. The principles of thermal, wave, optical and electromagnetic phenomena. The course consists of lecture, discussion and laboratory. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisites: A minimum grade of C- in both 111 and MATH 114

### 225 Introduction to Modern Physics

This course and its continuation 226 serve as an introduction to modern physics. The topics of this first course are quantum theory of light, particle nature of matter, wave aspects of particles, quantum mechanics in one-dimension, statistical physics, lasers, solid state physics. The course consists of lecture, discussion and laboratory. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisites: 110 or 112 and MATH 200

### 226 Introduction to Modern Physics II

Continuation of 225. Topics include atomic structure, molecular structure, relativity, nuclear physics, elementary particles, other topics of contemporary interest. The course consists of lecture, discussion and laboratory. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: A minimum grade of C- in 225

### 260 Principles of Electronic Instrumentation (261, 262)

Intended to provide scientists (both physical and life) and engineers with a background in electronics and instrumentation. Course will cover analysis of basic electronic circuits used in scientific electronic instrumentation, with emphasis on a practical approach to circuits using integrated circuit devices: circuit analysis; filters; feedback; amplifiers; power supplies; oscillators; digital logic; counting, switching, timing; transducers; analog-digital conversions. The course consists of lecture, discussion and laboratory.

Prerequisite: 110 or 112 or permission of the instructor

### 261 Principles of Electronic Instrumentation: Analog Electronics (260)

2 credits

The analog portion of 260. This course is sometimes offered during January Term.

Prerequisite: 110 or 112 or permission of the instructor

### 262 Principles of Electronic Instrumentation: Digital Electronics (260)

2 credits

The digital portion of 260. Note that QMCS 340 may be substituted for this course. This course is sometimes offered during January Term.

Prerequisite: 110 or 112 or permission of the instructor

**295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**310 Statistical Mechanics and Thermodynamics**

Concepts and laws of thermodynamics and of statistical mechanics. Applications of these to various systems, including gases, liquids, solids and chemical systems. Lecture and discussion.

Prerequisite: 226 or permission of the instructor

**341 Electricity and Magnetism**

Electrostatic and magnetostatic fields in vacuum and material media; energy and force relations; methods for the solution of static problems; fields and currents in conducting media; Maxwell's equations and time-dependent fields. Lecture and discussion.

Prerequisites: 110 or 112 and MATH 210 or permission of the instructor

**342 Electromagnetic Waves**

A continuation of electricity and magnetism with a view of Maxwell's equations and the resulting wave equation, traveling wave solutions and applications, radiation, interference and diffraction, optics, wave guides. Lecture and discussion.

Prerequisite: 341

**399 Advanced Physics Laboratory I****2 credits**

Advanced physics experiments in a number of areas including nuclear, atomic, optical and solid state physics. Some lectures and library research will be included. Four hours per week. This course partially fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisites: 226, 260 (261-262) and concurrent registration in an upper-division physics course

**400 Advanced Physics Laboratory II****2 credits**

Conduct a rigorous experimental physics project proposed by the student and approved by the instructor. This course partially fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: 399

**411 Theoretical Mechanics**

Newtonian dynamics of particles and systems of particles; conservation laws; moving coordinate systems; central-force motion; collisions and scattering; plane and general motion of rigid bodies; free, forced and coupled oscillations; Lagrangian dynamics. Lecture and discussion.

Prerequisite: 112, MATH 200 or permission of the instructor

**421 Quantum Mechanics**

Application of quantum mechanics to advanced problems in modern physics; perturbation theory; spin and its effects; identical particles; many-electron atoms; topics in scattering theory and nuclear physics. Lecture and discussion.

Prerequisite: 226 or permission of the instructor

**451 Introduction to Solid-State Physics**

Theory and applications of mechanical, thermal, electric, and magnetic properties of solids; band theory; semi-conductors. Lecture and discussion.

Prerequisite: 226 or permission of instructor

**483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**491, 492, 493, 494 Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## Political Science

### Political Science (POL)

Farlow (chair), Hatting, Hoffman, Toffolo

The program of courses offered by the Political Science Department is designed to enable students to acquire an understanding of political processes and governmental institutions.

As one of the liberal arts, political science enables students to develop skill in communication and analytic problem solving that is useful in a wide variety of careers, including business. More specifically, the major in political science prepares students for the study of law, graduate study in political science or public administration or for careers in government, politics or teaching.

Courses are offered in the sub-fields of

- American politics
- Comparative and international politics
- Law and judicial politics
- Political thought

#### Major in Political Science

- 105 Politics and Government in Comparative Perspective
- 205 Introduction to the American Public Policy Process
- 225 Introduction to World Politics
- 275 Introduction to Political Thought

*Plus:*

Sixteen credits in 300-level courses  
(completed in at least two of the four sub-fields)

*Plus:*

One 400-level seminar  
Four elective credits

Majors must take at least 16 credits in political science at St. Thomas.

While students are encouraged to take an experiential learning course (475, 476, 477, 478), these internships do not normally fulfill a major field requirement.

#### Teacher Licensure

*See Social Studies in Department of Teacher Education.*

#### Minor in Political Science

- 105 Politics and Government in Comparative Perspective

*Plus two of:*

- 205 Introduction to the American Public Policy Process
- 225 Introduction to World Politics
- 275 Introduction to Political Thought

*Plus:*

Twelve credits in 300-level courses  
(completed in at least two of the four sub-fields)  
One 400-level seminar may be completed in place of a 300-level course.

#### Recommended Sequencing

1. Students enrolling in POL courses, especially those desiring a major or minor field concentration in political science, are strongly advised to begin with 105 before enrolling in any of the 200-level core courses.
2. Students should normally complete successfully the appropriate 200-level core course before enrolling in any of the 300-level courses in that sub-field.
3. While these expectations do not constitute formal prerequisites, students who deviate from these recommendations may not be as well prepared for more advanced courses as those who observe them.

#### Prerequisites

1. Students who intend to complete a major or minor in political science may not enroll in a 400-level seminar unless they have completed successfully a 200-level or 300-level course in the sub-field of the 400-level seminar.
2. Students who are not pursuing a major or minor in political science must obtain permission of the instructor of a 400-level seminar and the department chair to enroll in that seminar if a 200-level or 300-level course has not been completed in the sub-field of the seminar.

#### 105 Politics and Government in Comparative Perspective

An introduction to concepts basic to an understanding of politics and government, such as power,

authority and legitimacy. A comparative examination of political processes, decision-making institutions and policy issues in the contemporary world. Countries surveyed will include the United States, the United Kingdom, Russia or China and selected third-world political systems. This course fulfills the Human Diversity requirement in the core curriculum.

### **205 Introduction to the American Public Policy Process**

A survey of the way public policy is made in the American political system including agenda-setting, formulation of alternative policy choices, representation of interests and selection and implementation of policy options. Public policy case studies will be used as illustrations. Students also will be introduced to data analysis as a tool for policy evaluation. This course fulfills the second-level Computer Competency requirement in the core curriculum.

### **225 Introduction to World Politics**

An overview of the contemporary international political system that examines the nature of power in global politics, particularly the transition from a bipolar to a post-cold war world. Emphasis is given to the changing relationships among the great powers, such as the United States and Russia, and to the interaction between the industrialized democracies of the North and the less-developed states of the South. Issues that cut across international politics – arms proliferation, the debt crisis, terrorism, resurgent nationalism – are examined. The course also analyzes the role and impact of non-state actors, such as the United Nations and multi-national corporations, on the international system.

### **275 Introduction to Political Thought**

By examining the ideas of some major political thinkers and contemporary political ideologies, this course introduces students to the central philosophical issues which confront every political system: What is political community? What is justice? How are individuals related to the state? What is power and how should it be allocated? What are the best ways for a society to deal with conflict and change? Are equality and/or individual freedom desirable ideals? Teaches students how to look critically at their political assumptions and to read political philosophy texts.

### **295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **301 American Political Behavior**

An examination of the political attitudes and behavior of the public, as well as the linkages between the public and their government. Topics include: public opinion; political psychology; political participation; voting; elections; political parties; interest groups; and the mass media. The emphasis is on the American system, but comparisons will be made with other democratic systems. Attention also will be paid to survey research as a principal method by which these topics are studied.

### **303 Urban and Metropolitan Politics and Government**

An examination of the nature and role of urban and metropolitan places in American civic life. The evolution of cities from villages to metropolitan areas is examined. Topics examined include: the structure of American urban government, the role of community-based organizations in urban governance, the city as a vehicle for social segregation, the city as an economic entity and the relationship between cities and an increasingly global society.

### **305 Congress and the Presidency**

An examination of the development and contemporary operation of the legislative and executive branches of government, focusing particularly on the interaction between them in the policy-making process. Topics include: the evolution of selection processes; the growth of careerism in the legislature; increasing complexity and bureaucratization of both branches; the nature of representation; the role of political parties; and the expansion and contraction of each branch's powers relative to the other. Primary attention will be on Congress and the presidency, but parallels also will be drawn with state legislatures and governors.

### **307 Public Policy Analysis and Administration**

An examination of the processes underlying the formation, implementation and administration of public policy. The nature of administrative organizations is studied, as is recent literature on contemporary organizational theory. A variety of techniques commonly used in public sector organizations, including experimental designs, benefit-cost analysis and risk assessment are explored. Emphasis will be placed upon the historical character of American public administration and its changing role in American society.

### **312 Judicial Process**

An examination of the relationship of law and judicial policy-making to American political culture. The selection, powers and operation of American courts – trial and appellate, federal and state; the evolution of the judiciary in American constitutional history with emphasis on the decision-making

process; relations with law enforcement agencies, the legal profession, interest groups, executive and legislative institutions.

**313 Constitutional Law and Politics**

The Supreme Court as a legal and political institution; leading cases and related materials on the presidency, Congress, the judiciary, federalism and national emergency.

**314 Constitutional Rights and Liberties**

The Supreme Court as a legal and political institution; leading cases and related materials on the Bill of Rights and the Fourteenth Amendment, including the freedom of speech and press, the freedom of religion, the rights of the criminally-accused and equal protection of the laws.

**320 American Foreign Policy**

Examination of the traditional American approach to foreign policy; America's post-World War II role in the world; the roles of the president and Congress in the making of foreign policy; the foreign-policy bureaucracy; nuclear-weapons policy; contemporary American foreign policies.

**321 Comparative Foreign Policy**

Analysis of the domestic and external determinants of foreign-policy behavior. The general processes discovered by analysis will be examined on a comparative basis in the foreign policies of the major powers.

**326 International Law and Organizations**

The nature and role of international organizations with special emphasis on the United Nations and its affiliated specialized agencies. The function of law in the international setting: the concept of sovereignty; recognition; the law of the seas; aggression; the International Court of Justice.

**350 Comparative Politics of the New Europe**

A comparative analysis of governmental structures, political culture, political economy, and political behavior across a broad range of political systems in post-cold war Europe, ranging from the United Kingdom, France and Germany, to the emerging democracies and market economies of Poland, Hungary, the Czech Republic and Russia. The impact of resurgent nationalism is also examined. Regional developments and organizations, such as the European Union, and NATO, are included in the attempt to explain the political dynamics of the "new Europe."

**352 Third World Politics and Government**

A survey of the governments, politics and economics of "third world" countries. Also includes an overview of colonialism and its legacy, strategies for economic and political development, and such common problems as the effects of rapid social change, controversy over forms of government, and the linkages and tensions between the North and the South. Films and novels from and about representative countries will be used as one means by which these issues are examined. This course fulfills the Human Diversity requirement in the core curriculum.

**372 Political Thought from Plato to Marx**

Using both original sources and secondary texts, this course introduces students to the political writings of Plato, Aristotle, Augustine, Aquinas, Machiavelli, Hobbes, Locke, Rousseau, Hegel and Marx. These thinkers are examined both for their historical importance and for the insights they can provide into contemporary political problems. Other theorists of the periods will be given consideration when appropriate.

**373 Political Thought from Marx to the Present**

Using original sources and secondary texts, this course examines some major trends in political theory from Karl Marx to the present. Although the emphasis may shift, topics to be covered include: developments in Liberalism from J.S. Mill to Rawls; developments in western Marxism; post-modernist political thought; participatory democracy; and feminist political theory.

**375 American Political Thought**

A survey of important American political thinkers, such as Jefferson, Thoreau, Dewey, Lincoln, Debs, Mencken, and Walzer from the 17th century to the present; includes analysis of the relevance of American political experience to abiding questions in normative political philosophy.

**404 Seminar in American Politics**

**414 Seminar in Law and Judicial Politics**

**424 Seminar in International Politics**

**454 Seminar in Comparative Politics**

**474 Seminar in Political Thought**

Seminars in political science provide an opportunity for students to synthesize and further develop knowledge gained in earlier courses and enhance their critical and analytical skills. Students in the seminars will engage in reading and discussion and undertake a major research project pertinent to

the seminar's topic. Specific topics or themes of each seminar will vary. Seminars are offered in each of the sub-fields of the discipline.

**475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog. Specific possibilities in political science include:

*Administrative internship*

Fifteen hours per week of supervised practical government experience in an administrative agency plus a term paper and regular conferences with the supervising instructor.

Prerequisites: 205 plus previous or concurrent enrollment in 307

*Legislative internship*

Fifteen hours per week of supervised work assisting a legislator or legislative committee plus a term paper and regular conferences with the supervising instructor.

Prerequisites: 205 plus previous or concurrent enrollment in 305

*Field work in practical politics*

Fifteen hours per week of supervised work in a political campaign or with a political party or interest group plus a term paper and regular conferences with the supervising instructor.

Prerequisites: 205 plus previous or concurrent enrollment in 301

*Legal Internship*

Fifteen hours per week of supervised work experience in an agency or office engaged in the legal process plus assigned readings, a term paper and regular conferences with the supervising instructor.

Prerequisites: 205 plus previous or concurrent enrollment in 312.

**480 Research Seminar (formerly 484)**

Empirical research in political science, building upon and furthering skills developed in 105 and 205. Students will undertake an independent research project. Recommended for students planning to enter a graduate program in political science.

Prerequisites: 105, 205, and permission of instructor

**483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**491, 492, 493, 494 Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**Pre-Professional Programs**

A carefully-crafted baccalaureate degree can prepare a student for entrance to a professional school. The following programs of study will be helpful for students planning such a career.

**Pre-Engineering (PNGR)**

Tommet (PHYS), Pre-engineering adviser

A student interested in areas other than mechanical engineering is offered a choice of pre-engineering programs designed to meet various needs. Some advantages of starting engineering studies at the University of St. Thomas are:

the student can benefit fully from the atmosphere of a liberal arts college and from the university's locale;

a clearer picture of her or his goals can be formed before starting on concentrated engineering studies; and

a smoother transition from high school to engineering school is possible.

Engineering and architectural fields include: aeronautical, aerospace, agricultural, architecture, biomedical, chemical, civil, electrical, engineering science, geological, industrial, materials science, mechanical, metallurgical, mineral and nuclear. The University of St. Thomas offers the Bachelor of Science in Mechanical Engineering (B.S.M.E.).

## Pre-Professional Programs – Pre-Engineering

The programs of study are arranged so that a student may transfer to an engineering school with a maximum number of acceptable credits and yet, if a change to a non-engineering major is made while at the university, a maximum number of credits will be applicable to the St. Thomas requirements for graduation. At St. Thomas, technical courses in mathematics, physics, chemistry, engineering and computer programming, as well as a number of technical and liberal arts electives, are offered. The University of St. Thomas offers a variety of pre-engineering programs with few significant differences in the programs during the first two years.

A two-year (2-2) program is offered. In this program the student normally spends two years at St. Thomas (although transfer may be initiated at any time) and two years in a selected engineering field at an engineering school, such as the Institute of Technology of the University of Minnesota. A degree from the engineering school will be received upon satisfying its graduation requirements.

Liberal Arts-Engineering (3-2) programs are offered formally in cooperation with the University of Notre Dame, Washington University in St. Louis, and the University of Minnesota and informally with virtually any other engineering school. The student normally spends three years at St. Thomas and, upon approval of St. Thomas and acceptance by the engineering school, two more years at the engineering school in an engineering field. Note that architecture is not included. Upon satisfying the requirements for graduation of both institutions, the student will receive a bachelor of arts (B.A.) degree from the University of St. Thomas and a bachelor of science degree in the selected field of engineering from the engineering school.

A third program (4-2) offered in cooperation with the Institute of Technology at the University of Minnesota leads to a bachelor of arts (B.A.) or a bachelor of science (B.S.) degree from the University of St. Thomas and a bachelor or master of engineering degree from the Institute of Technology. This program involves four years at St. Thomas and ordinarily two years at the Institute of Technology. The student must complete a major at St. Thomas, typically in physics, chemistry, mathematics, quantitative methods/computer science, or the B.S.M.E. in mechanical engineering. Application for admission into the (4-2) program is made during the second semester of the junior year at St. Thomas. Those admitted will receive special counseling from the pre-engineering advisers at St. Thomas and staff of the Institute of Technology regarding courses that should be taken during the senior year at St. Thomas.

Two more programs are 2-3 and 3-3 programs with the Kettering Institute, formerly General Motors Institute, located in Flint, Michigan. The Institute offers accredited undergraduate programs in electrical, mechanical, industrial and manufacturing engineering. The three years with Kettering involve an intern program of alternating quarters of work and school. The 2-3 program corresponds to the 2-2 program above and the student receives only the Kettering degree. The 3-3 program corresponds to the 3-2 programs above and the student receives two degrees: bachelor of arts or bachelor of science from the University of St. Thomas and bachelor of science from the Kettering Institute.

Some advantages of the 3-2, 3-3 and 4-2 programs are that two degrees are earned, a wider liberal arts background is attained, and broader professional and intellectual opportunities are possible than in the normal four-year engineering programs. Also, a possible deferment of commitment to an engineering program for at least a year longer is afforded. A particular advantage of the formal 3-2 cooperative programs is that upon entering the University of Notre Dame or Washington University, the student is treated not as a transfer student but as a regular student with all of the rights, privileges and responsibilities associated with that status.

### Pre-Engineering – General Concentration

CHEM	111	General Chemistry I
CHEM	112	General Chemistry II
ENGR	150	Introduction to Engineering I
ENGR	151	Introduction to Engineering II
ENGR	220	Engineering Mechanics I
ENGR	221	Engineering Mechanics II
MATH	113	Calculus I
MATH	114	Calculus II
MATH	200	Multi-Variable Calculus
MATH	210	Linear Algebra and Differential Equations
PHYS	111	Introduction to Classical Physics I
PHYS	112	Introduction to Classical Physics II
PHYS	225	Introduction to Modern Physics I
QMCS	130	Problem Solving in the Natural Sciences

### Pre-Engineering – Electrical Concentration

CHEM	111	General Chemistry I
CHEM	112	General Chemistry II
ENGR	150	Introduction to Engineering I
ENGR	151	Introduction to Engineering II
MATH	113	Calculus I

MATH	114	Calculus II
MATH	200	Multi-variable Calculus
MATH	210	Linear Algebra and Differential Equations
PHYS	111	Introduction to Classical Physics I
PHYS	112	Introduction to Classical Physics II
PHYS	225	Introduction to Modern Physics I
PHYS	226	Introduction to Modern Physics II
QMCS	130	Problem Solving in the Natural Sciences

**Pre-Engineering – Chemical Concentration**

CHEM	111	General Chemistry I
CHEM	112	General Chemistry II
CHEM	201	Organic Chemistry I
CHEM	202	Organic Chemistry II
ENGR	150	Introduction to Engineering I
ENGR	151	Introduction to Engineering II
MATH	113	Calculus I
MATH	114	Calculus II
MATH	200	Multi-Variable Calculus
MATH	210	Linear Algebra and Differential Equations
PHYS	111	Introduction to Classical Physics I
PHYS	112	Introduction to Classical Physics II
QMCS	130	Problem Solving in the Natural Sciences

The above courses constitute the St. Thomas component of the major; the other component is the successful completion of an engineering degree at an accredited school.

Successful completion of all general requirements of the College is required of students in 3-2, 3-3 or 4-2 engineering programs.

Other courses are required for specific fields of engineering and for particular engineering schools. Students should consult periodically with the engineering advisers and should become acquainted with the current requirements of the professional school at which they expect to continue their study.

**Pre-Health Professions**

Ovechka, Pre-health professions adviser

The pre-health professions adviser will help students interested in any of the health professions to plan a specific program of coursework in preparation for a professional school.

To aid students in making an informed choice of a health professions career, there are four non-credit health professions internships:

- BIOL 215 Regions Hospital Volunteer Program
- BIOL 216 Nursing Assistant Training Program
- BIOL 217 Students and Physicians Program
- BIOL 218 Pre-Dental Internship Program

**Pre-dentistry**

Schools of dentistry generally require a minimum of three years of college coursework prior to admission to their programs. While a baccalaureate degree generally is not required, 85 percent of accepted applicants in 1997 had four years of college work. The School of Dentistry at the University of Minnesota requires a minimum of three years of undergraduate work (87 semester hours).

Specifically required or highly recommended courses vary from one dental school to another. The School of Dentistry at the University of Minnesota requires the listed semesters of study in each of the following subjects:

- three semesters of biology
- two semesters of general chemistry
- two semesters of organic chemistry
- two semesters of physics
- two semesters of English
- one semester of psychology
- a course in public speaking is recommended
- college algebra or pre-calculus (by college credit or college validation) or computer science or statistics

**Pre-medicine**

Most medical schools require a minimum of three years of undergraduate work before entrance to their program, and the three medical schools in Minnesota all require a baccalaureate degree. Specifically required or highly recommended courses vary from one medical school to another.

## Pre-Professional Programs – Pre-Law

Two semesters of study in each of the following subjects are required for admission to many medical schools. Particular medical schools may require more coursework in these subject areas or in other disciplines:

- biology
- general chemistry
- organic chemistry
- physics
- English

A number of medical schools also require one to two semesters of calculus or other college-level mathematics or statistics. The University of Minnesota (Twin Cities and Duluth) also require one semester of biochemistry. Medical schools generally do not require candidates for admission to present a specified undergraduate major.

The health professions adviser is available to help students choose the specific coursework necessary to meet admissions requirements, explain admissions procedures, provide information to students about career alternatives, etc. Students interested in a career in medicine should consult with the health professions adviser early in their freshman year to plan an appropriate four-year program.

### Pre-pharmacy

Required courses vary from one school to another, and students are encouraged to research various programs early in their undergraduate program. The Pharm.D. program at the University of Minnesota requires completion of the following courses:

- one semester of biology
- one semester of anatomy
- one semester of microbiology
- two semesters of general chemistry
- two semesters of organic chemistry
- two semesters of physics
- two semesters of calculus
- two semesters of behavioral science
- two semesters of English
- one semester of microeconomics
- one semester of public speaking

### Pre-veterinary

Required courses vary from one school to another, and students are encouraged to research various programs early in their undergraduate program. The veterinary school at the University of Minnesota requires the following coursework:

- biology
- general chemistry
- organic chemistry
- biochemistry
- mathematics
- physics
- genetics
- microbiology
- English

Four courses from history and social sciences, arts and humanities are also required.

### Other Pre-Health Professions

Many courses are offered at St. Thomas to prepare students for admission to the following health professional schools: chiropractic, optometry, osteopathy, physician assistant and podiatry.

Students are encouraged to research the programs at each professional school and to seek the guidance of the pre-health professions adviser.

### Pre-Law

Hatting (POL), adviser

The best preparation for the study of law is a rigorous undergraduate program that combines depth of study in a major field with breadth of study in the liberal arts. The only true criterion for choice of a major is that it challenge the student's intellectual capabilities.

Regardless of major, pre-law students should include as wide a selection of the following courses, listed alphabetically by departmental designation, as their degree program allows. Each is beneficial for:

#### A. Increasing the student's knowledge of law

- BLAW 365 Business Law
- BLAW 367 International Business Law
- ECON 321 Law and Economics

ECON	332	Industrial Organization
HIST	326	English Law and Government before the American Revolution
HIST	365	U.S. Constitutional History
JOUR	304	Media Law
PHIL	352	Freedom, Culpability and Punishment
POL	205	Introduction to American Public Policy Process
POL	312	Judicial Process
POL	313	Constitutional Law and Politics
POL	314	Constitutional Rights and Liberties
POL	326	International Law and Organization
POL	414	Seminar in Law and Judicial Politics

#### **B. Fostering critical thinking about society**

HIST	361	American Thought and Culture Since the Civil War
PHIL	221	Critical Thinking
PHIL	351	Political and Legal Philosophy
POL	373	Political Thought from Marx to the Present
POL	375	American Political Thought

#### **C. Providing useful skills and improving analytical ability**

ACCT	211	Financial Accounting
COMM	103	Public Speaking
ECON	251	Principles of Macroeconomics
ECON	252	Principles of Microeconomics
ENGL	200	Written English
		<i>or</i>
ENGL	300	Advanced Writing: Theory and Practice
MATH	101	Finite Mathematics
		<i>or</i>
MATH	113	Calculus I
PHIL	223	Formal Logic

### **Psychology (PSY)**

Giebenhain (chair), Amel, Buri, Chalkley, Johnson, Mabry, Robinson-Riegler, Scott, WilliamsMorris, Winton

The courses and programs offered by the Department of Psychology are meant to be a part of a liberal arts education, teaching the basic principles and theory of the science of psychology, preparing students for graduate study in psychology and for careers in human services and other occupations for which a psychology background is valuable, introducing psychology to non-majors, serving other programs on campus and enabling students to make practical applications of psychology to their own lives.

#### **Psychology Honor Society**

Psi Chi, the National Honor Society in psychology, was founded in 1929 for the purpose of encouraging, stimulating, and maintaining excellence in scholarship and advancing the science of psychology. The St.Thomas chapter was established in 1997. Students who have a grade point average of at least 3.00 in psychology, rank in the highest 35 percent of their class, and who have completed at least three semesters of college coursework, including nine hours in psychology, are eligible to apply for membership.

The Department of Psychology also recognizes selected students each year for outstanding research, service, and academic achievements.

Transfer students majoring in psychology must successfully complete at least twenty-four credits in psychology at the University of St. Thomas.

#### **Major in Psychology**

111	General Psychology
212	Research Methods in Psychology
422	History and Systems (to be taken during the senior year)

*Plus two laboratory courses from:*

321	Current Research Issues in Social Psychology
322	Sensation and Perception
323	Learning and Memory

## Psychology

325 Research Issues in Cognition

401 Physiological Psychology

*Plus one of:*

200 Psychology of Infancy and Childhood

202 Lifespan Development (students may not receive credit for both 202 and 200)

203 Psychology of Adolescence

204 The Psychology of Adulthood and Aging

*Plus one of:*

121 Social Psychology

301 Psychopathology

302 Personality Theories

*Plus one of:*

206 The Brain and Human Behavior

275 Cognition

400 Seminar in Cognitive and Language Development

*Plus three elective courses in psychology*

A total of 44 credits in psychology are required for the major. Twenty of the 44 credits in psychology must be 300- or 400-level courses.

*Allied requirements:*

All of the following or an adequate substitute approved by the chair:

BIOL 101 General Biology

or

BIOL 105 Human Biology

*Plus:*

MATH 101 Finite Mathematics

(or MATH 108-109, 111 or 113; student should take highest level for which eligible)

QMCS 220 Statistics I

Students should take the following courses in the following order:

MATH 101 (or 108-109 or 111 or 113)

QMCS 220

PSY 212

These courses should be taken early in the college career, since they are prerequisites for some required courses in psychology.

A student should consult early with her/his department adviser to have her/his plan approved.

### **Concentration in Behavioral Neuroscience**

111 General Psychology

212 Research Methods in Psychology

422 History and Systems (to be taken during the senior year)

*Plus one of:*

200 Psychology of Infancy and Childhood

202 Lifespan Development (students may not receive credit for both 202 and 200)

203 Psychology of Adolescence

204 The Psychology of Adulthood and Aging

*Plus one of:*

121 Social Psychology

301 Psychopathology

302 Personality Theories

*Plus:*

206 The Brain and Human Behavior

207 Alcohol, Other Drugs and Behavior

322 Sensation and Perception

401 Physiological Psychology

*Plus:*

Two elective courses in psychology

*Allied requirements:*

All of the following or an adequate substitute approved by the chair:

BIOL 101 General Biology

or

BIOL 105 Human Biology

*Plus:*

- MATH 101 Finite Mathematics  
(or MATH 108-109, 111 or 113; student should take highest level for which eligible)  
QMCS 220 Statistics I

Students should take the following courses in the following order:

- MATH 101 (or 108-109 or 111 or 113)  
QMCS 220  
PSY 212

These courses should be taken early in the college career, since they are prerequisites for some required courses in psychology.

*Recommended:*

Those students planning to pursue graduate study in behavioral neuroscience should consider: 493, 494 Research  
Additional courses in biology and chemistry (consult the Behavioral Neuroscience adviser)

### **Teacher Licensure**

*For secondary teacher licensure, see Social Studies in the Department of Teacher Education.*

### **Minor in Psychology**

111 General Psychology

*Plus two of:*

- 121 Social Psychology  
151 Cross-Cultural Psychology  
200 Psychology of Infancy and Childhood  
202 Lifespan Development (students may not receive credit for both 202 and 200)  
203 Psychology of Adolescence  
204 The Psychology of Adulthood and Aging  
205 Psychology of Women  
206 The Brain and Human Behavior  
207 Alcohol, Other Drugs and Behavior  
212 Research Methods in Psychology  
242 Industrial/Organizational Psychology  
275 Cognition  
288 Psychology of Marriage and the Family

*Plus two of:*

- 301 Psychopathology  
302 Personality Theories  
308 Motivation and Emotion  
313 Psychological Testing  
321 Current Research Issues in Social Psychology  
322 Sensation and Perception  
323 Learning and Memory  
325 Research Issues in Cognition  
400 Seminar in Cognitive and Language Development  
401 Physiological Psychology  
422 History and Systems  
424 Clinical Psychology  
428 Theories of Counseling and Psychotherapy

Students should consult early with a department adviser to have their plan approved.

#### **111 General Psychology**

An introduction to the scientific study of behavior and experience, maturation and development, sensation and perception, learning, imagination and thinking, language and speech, motivation and emotion, conflict and adjustment, personality, intelligence and psychological measurement.

#### **121 Social Psychology**

A survey of theories and research findings in social psychology. Topics covered include attitude change, love and liking, aggression, stereotypes and altruism and conformity.  
Prerequisite: 111

#### **151 Cross-Cultural Psychology**

This course is designed to cover the issues and themes current in the field of cross-cultural psychology. Examples of such issues include: cultural variation along the lines of collectivism and individualism; psychological principles that might be universal compared to those that are culturally spe-

## Psychology

cific; how content and context affect psychological functioning, and variation within as well as between cultures. A range of substantive areas within psychology will be examined, including social, developmental, organizational, cognitive, health psychology, and psychology of emotion. Examples will be drawn from a range of non-Western cultures (e.g., Japan, India, Liberia) as well as various cultures within the United States (e.g., African-American, Hispanic, American Indian). Emphasis will be placed on how Western and non-Western cultures differ from each other, on how non-Western cultures differ from each other, and on how intra-cultural variation also plays important roles in psychological functioning. This course fulfills the Human Diversity requirement in the core curriculum. Prerequisite: PSY 111

### **200 Psychology of Infancy and Childhood (202)**

An introduction to issues and theories of development dealing with infancy, toddlerhood, and early and middle childhood. The course covers physical, intellectual, emotional, personality, and social development. Mechanisms of heredity, as well as the relative effects of heredity and environment also are covered.

Prerequisite: 111

### **202 Lifespan Development (200)**

Principles and theories of development throughout the life span; interplay among the physical, emotional, social and intellectual variables in the process of growth and development.

Prerequisite: 111

### **203 Psychology of Adolescence**

This course reviews the principles, theories, research and application of physical, psychological and social growth during the adolescent's relationships with adults and peers, their sex attitudes and behaviors, moral development and religious values, school and vocational choices, alienation and commitment.

Prerequisite: 111

### **204 The Psychology of Adulthood and Aging**

Theories of and research in physical, emotional, social, personality and intellectual development in adulthood and in old age. This course will emphasize the psychological adjustment to the stresses and demands (e.g., vocation, marriage, retirement, bereavement) the individual encounters during those developmental stages.

Prerequisite: 111

### **205 Psychology of Women**

An examination of physiological, experiential, and social factors affecting the psychological development of women and their status as adults. Topics include: biological and social learning factors in the development of sex roles and other prescribed behavior patterns, the development of performance and intellectual skills, achievement motivation, identity and self-esteem, changing concepts of sex roles, women and psychological disorders, global women's issues, etc. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 111

### **206 The Brain and Human Behavior**

An examination of brain systems that subserve human behavior. Topics include: human development, consciousness, social behavior, cognition, emotion and abnormal behavior.

Prerequisite: 111

### **207 Alcohol, Other Drugs and Behavior**

The course surveys some basic facts and principles of administration, absorption, transport, action, deactivation and elimination of drugs. Various classes of drugs; their effects on mood, behavior, and consciousness; their use and misuse; and phenomena of chemical dependency and its treatment modalities are discussed. Lectures, readings, films, tapes and invited speakers are employed.

Prerequisite: 111

### **212 Research Methods in Psychology**

Research designs and problems, with emphasis on operationalization of concepts, development of hypotheses, specific research designs, sources of error, literature reviews, data collection, data analysis and use of APA format. Three lecture and two laboratory hours per week.

Prerequisites: 111 and QMCS 220

### **242 Industrial/Organizational Psychology**

This course presents basic concepts of psychology as they apply everyday in the workplace. Topics to be covered include measurement and its applications in the workplace (e.g., personnel decisions and performance appraisals), worker training, worker attitudes and motivation, worker adjustment, health and safety, leadership, communication and group behavior and development of the organization.

Prerequisite: 111

**275 Cognition**

This course will provide an overview of cognitive processes, the processes that collectively comprise what is commonly termed "thinking." Topics discussed will include perception, attention, remembering, language, problem solving, reasoning, and social cognition. The course will focus on how these processes operate in everyday situations, as well as empirical (laboratory) investigations of these processes. Connections between cognitive psychology and other areas of psychology (e.g., clinical, biological) will also be discussed.

Prerequisite: 111

**288 Psychology of Marriage and the Family**

An examination of the psychological concepts, issues, challenges and changes relevant to marriage and family today. Topics include intimacy, liking and loving, power and control, gender, marriage and family therapy, and the psychological effects of marriage vs. non-marriage, divorce, and various parenting styles.

Prerequisite: 111 and junior standing or permission of the instructor

**295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**301 Psychopathology**

This course sets forth a framework for understanding abnormal or maladaptive behavior. It will investigate specific diagnostic categories (such as depression and schizophrenia), causal factors and treatments of these maladaptive patterns.

Prerequisite: 111 and junior standing

**302 Personality Theories**

A review of major theories of personality, including psychoanalytic, behavioristic, humanistic and trait-factor approaches.

Prerequisite: 111

**308 Motivation and Emotion**

Survey of research and theories related to specific motives (such as hunger and thirst) as well as approaches to emotional states such as anger, happiness and sadness. Relevant research will be drawn from both the social and physiological branches of psychology.

Prerequisites: 111 and junior standing

**313 Psychological Testing**

This course provides an overview of the principles of testing and measurement, particularly as they relate to the practice of psychology and education. The course examines the theories underlying individual and group-administered tests in such areas as intelligence, aptitude, achievement, interests, personality, neuropsychological and educational tests. Various controversial issues in the field of testing will also be addressed including ethics, bias, computer-based assessment, and testing of special populations.

Prerequisite: 212

**321 Current Research Issues in Social Psychology**

Discussion of several specific research issues in contemporary social psychology. The course includes presentation of computer applications. An original research project is required. Four lectures and three laboratory hours per week.

Prerequisite: 121 and 212

**322 Sensation and Perception**

A study of the structure and function of sensory systems, the information that these systems provide the brain, and the subsequent interpretation of sensory information that we call perception. The course focuses on visual perception (e.g., brightness, color, form, depth, movement, constancy, illusions) and auditory perception (e.g., detection, discrimination, loudness, pitch) and incorporates art and music. Four lectures and three laboratory hours per week.

Prerequisite: 212

**323 Learning and Memory**

The basic concepts involved in simple associative learning are presented, along with theoretical and applied concerns. The analysis and modification of animal and human behavior by means of classical and instrumental conditioning are discussed. The course also will trace the history of the study of learning from its roots in philosophy to the current cognitive approach.

Prerequisite: 212

**325 Research Issues in Cognition**

This course will explore research issues in cognitive psychology, with special emphasis on cognitive psychology methodology, current research issues, hands-on research, and discussion/analysis

## Quantitative Methods and Computer Science

of primary research sources. Specific topics covered each semester may vary slightly. Examples of topics include: subliminal perception; automatic processing; implicit memory; eyewitness testimony; memory reconstruction; expertise and problem solving; the use of heuristics in decision making; person memory.

Prerequisite: 212 and 275

### **400 Seminar in Cognitive and Language Development**

Current theory and research regarding children's understanding, thinking processes, and language acquisition are discussed. Topics include knowledge acquisition, concept formation, grammatical development, and the nature of developmental change.

Prerequisites: 200 and one additional PSY course or permission of the instructor

### **401 Physiological Psychology**

A study of the brain, its function and its control of behavior. Neuroanatomical, neurophysiological, and biochemical substrates of behaviors associated with feeding, drinking, sex, sleep, arousal, emotion, learning and memory are examined. Four lectures and three laboratory hours per week.

Prerequisites: 212 and BIOL 101 (or equivalent)

### **407 Seminar in Behavioral Neuroscience**

Analysis and discussion of selected theories and new research concerning brain mechanisms that subserve behavior. Advances in methodology and instrumentation also will be examined.

Prerequisite: 401

### **422 History and Systems**

How contemporary psychology developed from its remote and more recent roots. Emphasis upon the contributions, contributors and perennial issues that led to psychology today and that could help to fashion its future.

Prerequisites: four courses in psychology

### **424 Clinical Psychology**

Study of the clinical application of the psychological processes in the evaluation, diagnosis and treatment of behavioral disorders

Prerequisites: 301 and three psychology courses or permission of instructor

### **428 Theories of Counseling and Psychotherapy**

Theories and procedures of counseling and psychotherapy are discussed, including psychoanalysis, client-centered therapy, cognitive therapy, behavior therapy, and others.

Prerequisites: 301 and three psychology courses or permission of the instructor

### **475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **491, 492, 493, 494 Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## **Public Relations**

*See Department of Journalism and Mass Communication.*

## **Quantitative Methods and Computer Science (QMCS)**

Schwebel (chair), Bennett, Hanna, Hansen, Jaede, Jarvis, Misra, Raymond, Sharrock, Sturm, Werness, West, Callaghan\*, Darling\*, Kaminski\*

Quantitative Methods and Computer Science is part of the liberal arts curriculum at the University of St. Thomas. The QMCS program is concerned with the areas of today's society that involve the collection, organization, processing, storage, retrieval, communication and use of information. The

department's emphasis is on the broad basic core of knowledge required to become an effective user of information; to design and implement system and application software; and to understand the concepts involved in areas such as computer graphics, telecommunication, artificial intelligence, database design, statistics and operations research.

The department has arranged its program to prepare students to work in business, industry, education, and government, as designers or users, or to pursue entrepreneurial interests in technologically supported areas or to continue study in graduate school. Courses are arranged so that students from other disciplines may participate to whatever extent they wish.

The undergraduate major or minors in QMCS are offered in the day school and through the School of Continuing Studies.

Students interested in elementary education and math, science or computer science should see Science and Mathematics in Elementary Education.

**Major in Quantitative Methods and Computer Science**

*One of:*

- 130 Problem Solving in the Natural Sciences\*
- 237 Software Design using Scientific Languages\*
- 238 Software Design Using Business Languages\*

*Plus:*

- 220 Statistics I
- 280 Object-Oriented Design and Programming\*
- 350 Data and File Structures

\*A grade of C- or higher must be earned by majors in each of these courses chosen to fulfill the core requirement.

*Plus (for all majors):*

Two elective courses numbered 240 through 450. Students should consult with their department adviser in choosing the most appropriate courses.

*Plus:*

A set of courses in one of three paths (CS, CIS, or QM) below:

**Computer Science (CS)**

A traditional computer-science path that emphasizes low-level computing fundamentals as well as high-level design issues.

- 420 Systems Analysis and Design I
- 450 Database Design

*Plus one of:*

- 300 Computer Organization
- 340 Digital Electronics and Microprocessors

**Computer Information Systems (CIS)**

A management information systems path emphasizing high-level design issues and designer/user interaction.

- 420 Systems Analysis and Design I
- 450 Database Design

*Plus one of:*

- 421 Systems Analysis and Design II
- 425 Information Resource Management

**Quantitative Methods (QM)**

A path emphasizing the role of statistics, mathematics and operations research as well as the use of computers in solving problems in organizations.

- 410 Operations Research I

*Plus two of:*

- 320 Statistics II
- 411 Operations Research II
- 420 Systems Analysis and Design I
- 450 Database Design

*Allied requirements:*

- MATH 128 Introduction to Discrete Mathematics

*Plus one of:*

- MATH 109 Calculus with Review II
- MATH 111 Calculus for Business and Social Science
- MATH 113 Calculus I

## Quantitative Methods and Computer Science

*Plus one of:*

- COMM 100 Public Speaking
- COMM 105 Communication in the Workplace

The department also strongly encourages its majors to obtain a minor in another field.

### **Minor in Quantitative Methods and Computer Science – for sciences**

This minor is intended to support majors in biology, chemistry, environmental studies, geology, mathematics and physics.

280 Object-Oriented Design and Programming

*Plus one of:*

- 130 Problem Solving in the Natural Sciences
- 237 Software Design Using Scientific Languages

*Plus three of:*

- 220 Statistics I
- 300 Computer Organization
- 320 Statistics II
- 330 Graphics and Numerical Methods
- 340 Digital Electronics and Microprocessors
- 342 Computer Applications in Experimental Sciences
- 350 Data and File Structures
- 380 Artificial Intelligence and Robotics
- 381 Expert Systems
- 410 Operations Research I
- 411 Operations Research II
- 450 Database Design

### **Minor in Quantitative Methods and Computer Science – for business**

This minor is intended to support majors in any concentration of business administration, economics and other related disciplines.

110 Introduction to Information Processing

*Plus one of:*

- 237 Software Design using Scientific Languages
- 238 Software Design using Business Languages

*Plus three of:*

- 280 Object-Oriented Design and Programming
- 420 Systems Analysis and Design I
- 425 Information Resource Management
- 450 Database Design

### **Minor in Quantitative Methods and Computer Science – for mathematics**

This minor is intended to support majors in mathematics and those interested in statistics and operations research.

*One of:*

- 130 Problem Solving in the Natural Sciences
- 237 Software Design Using Scientific Languages

*Plus four of:*

- 220 Statistics I
- 280 Object-Oriented Design and Programming
- 320 Statistics II
- 330 Graphics and Numerical Methods
- 410 Operations Research I
- 411 Operations Research II

### **110 Introduction to Information Processing**

Introduction to basic concepts of hardware, software and information processing systems. Introduction to computer programming concepts. Use of microcomputer application packages, including spreadsheets and database packages. Introduction to the Internet and World Wide Web. Investigation of the impact of the computer and future trends. This course fulfills the second-level Computer Competency requirement in the core curriculum.

### **120 Computers in Elementary Education and LOGO**

This course is intended for elementary education majors. Topics will include the role of the computer in elementary education, computer applications in science and mathematics, software pack-

ages for use in elementary school classrooms, Computer-Assisted Instruction (CAI), multimedia, telecommunication and LOGO programming, experiments and examples. LOGO will be used to teach programming concepts and to solve problems in math and science using LOGO's arithmetic, graphic and animation capabilities. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: elementary education or SMEE major

**130 Problem Solving in the Natural Sciences (237)**

Introduction to solving problems in the natural sciences with the aid of a computer. Introduction to the use of scientific languages for writing programs to solve scientific problems. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: MATH 109 or 111 or 113

**201 Introductory Statistics II (220)****2 credits**

This course is for students desiring to satisfy the coverage of QMCS 220 (a full semester of statistics), but who have taken less than one full semester of statistics. Review of basic statistical techniques (confidence intervals, hypothesis testing, regression), multiple regression, contingency tables, analysis of variance, sampling, plus emphasis on use of statistical packages and design of a statistical study.

Prerequisite: 206 or at least .35 semester, but less than one semester, of statistics

**215 Spreadsheet and Database Software**

Introduction to current, user-friendly program development tools. These tools allow non-programmers to create usable software without significant programmer assistance. Students will be exposed to software packages emphasizing structured programming techniques, integrated spreadsheet processors, database management software and application generators. QMCS majors may take this course but it cannot substitute for a QMCS course specified for an individual concentration nor serve as a prerequisite for QMCS 280. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: 110 or equivalent

**216 Quantitative Techniques in Business (110)****2 credits**

The use of microcomputer spreadsheet software to aid in solving quantitative business problems.

Prerequisite: ACCT 211

**220 Statistics I (201)**

Introductory applied statistics: sampling, descriptive (exploratory) statistics, probability, sampling distributions, estimation and hypothesis testing, non-parametrics, simple and multiple linear regression, introduction to analysis of variance; use of statistical packages. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: math placement at level of MATH 111 or above; or MATH 100, 101, or 105, or 109, 111 or 113

**237 Software Design Using Scientific Languages (130)**

Introduction to applications software using algorithmic programming languages. Topics include: algorithm development, sequential and direct-access file processing, arrays, iteration and recursion, structured programming and program correctness. This course fulfills the second-level Computer Competency requirement in the core curriculum.

**238 Software Design Using Business Languages**

Introduction to applications software using COBOL and other business languages. Topics include algorithm development, sequential and direct-access file processing, tables, sorting, structured programming and software validation. This course fulfills the second-level Computer Competency requirement in the core curriculum.

**280 Object-Oriented Design and Programming**

Object-oriented design and programming using an object-oriented language with procedural capabilities (such as C++ or JAVA). Object-oriented design and programming topics include: classes, inheritance, encapsulation, polymorphism, information hiding, patterns, and CRC cards. Typical programming language topics might include: templates, exception handling, virtual functions, and the parameterized data types. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: 130 or 234 or 237 or 238

**295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **300 Computer Organization (formerly 240)**

Concepts of computer system organization and programming. Instruction and data representations. Instruction set decoding, addressing modes, and fundamentals of assembly language. The organization and the operation of the central processing unit, instruction fetching and execution, hardwired and microprogrammed control, I/O structures, direct memory access, interrupts, bus protocols and I/O interfaces, multiple-module memory, caches, memory, memory organization, registers, microprocessor families, pipelining, and RISC features.

Prerequisite: 130, or 237, or 238 and MATH 128

### **320 Statistics II**

Analysis of variance; regression with indicator variables; topics from: general linear model; design of experiments; further use of statistical packages, discriminant, cluster analysis, time series.

Prerequisite: 201 or 220

### **330 Graphics and Numerical Methods**

An integrated approach to using the computer to solve numerical problems and to present information in graphical form. Includes: non-linear equations, systems of linear equations, interpolation, approximation, differential equations, two and three-dimensional picture transformations plus viewing and rendering of graphical images.

Prerequisite: 130, or 237 and MATH 109, or 111 or 113

### **340 Digital Electronics and Microcomputers**

Digital electronics techniques: semiconductor devices, digital logic, counters, clocks, shift registers, combinatorial and sequential logic circuits and minimization. Microprocessor organization, programming, device addressing, buffering and enabling. Microprocessor interfacing with switches, A to D, D to A, and communications.

Prerequisite: 130, or 237, or 238 and MATH 128

### **342 Computer Applications in Experimental Sciences**

Introduction to the use of computers in the collection and analysis of scientific information. The course is designed to meet the needs of both natural science majors with an interest in scientific computing and computer science majors with an interest in laboratory science. Emphasis is placed on application of concepts and techniques using software packages and not on programming. Topics include laboratory device interfacing, analog-signal acquisition and processing, data-analysis packages and simulation. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisites: 130, or 237 or 238; MATH 109, or 111 or 113; and one course in a laboratory science

### **350 Data and File Structures**

A study of data handling as related to both computer hardware and software. Data structures, direct access storage devices, file accessing mechanisms, sorting and searching, file recovery, database security and maintenance of integrity.

Prerequisites: 280 and MATH 128

### **360 Operating Systems Design**

Topics include batch and interactive processing, concurrent processes, memory management, resource allocation, deadlock, processor scheduling and system security.

Prerequisite: 130 or 237 or 238

### **370 Telecommunications and Teleprocessing**

The fundamental concepts of telecommunications and networking for voice, data and video, including hardware, media, signaling and digital switching, open-system interconnection model, standards and protocols, local and wide-area networks and inter-networking.

Prerequisites: 130, or 237, or 238 and MATH 128

### **371 Advanced Voice and Data Communications**

Analysis of voice, data and video telecommunication requirements, network configuration, network operations, network monitoring and optimization, documentation and legal issues.

Prerequisite: 370

### **380 Artificial Intelligence and Robotics**

Theory and implementation techniques using computers to solve problems, play games, prove theorems, recognize patterns, create artwork and musical scores, translate languages, read handwriting, speak and perform mechanical assembly. Emphasis placed on implementation of these techniques in robots.

Prerequisites: 220 and 280

### **381 Expert Systems**

Emphasis on a practical understanding of artificial intelligence, LISP, and the expert system-building process. Course goals include understanding what expert systems are, how they operate, techniques

used to build expert systems, and evaluating commercially available expert systems packages.

Prerequisites: 280 and junior standing

**410 Operations Research I**

Utilization of computer and analytic techniques to support the decision-making process in both the public and private sectors. Topics include linear programming, simulation, PERT, inventory control, goal programming and queuing theory. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: 220; MATH 109, or 111 or 113

**411 Operations Research II**

Advanced modeling techniques. Techniques include: decision theory, Markov chains, integer programming, dynamic programming, forecasting, game theory, transportation problems and decision theory.

Prerequisite: 410; MATH 112 or 114

**420 Systems Analysis and Design I**

A study of process, data, and object models for the analysis and design of information systems. Includes enterprise models, data-flow diagrams, structure charts, entity-relationship models, normalization and state transition diagrams. Alternative system development life cycles are discussed, as well as testing, quality and installation strategies.

Prerequisites: 130 or 237 or 238 and junior standing

**421 Systems Analysis and Design II**

Continuation of 420. Concentration on implementation problems, software and hardware limitations. Emphasis on managerial problems in an information-processing system. Continued use of computer-based analysis and design and project-management tools. A "real world" project is an integral part of this course.

Prerequisite: 420

**425 Information Resource Management**

A study of relevant technologies and how they are used in today's modern organizations to help manage the information resource of those organizations. Emphasis is placed on the organizational issues and concerns wrought by these technologies. This is an "active learning" course in which students will be researching current information systems technologies and participating in the establishment of an organization that provides information services.

Prerequisites: 130 or 237 or 238 and junior standing

**450 Database Design**

Introduction to database management systems design philosophy. Design considerations for satisfying both availability and integrity requirements. Data models used to structure the logical view of the database. Schema, subschemas, binding. Custom, special purpose and generalized database systems.

Prerequisite: 280 or 420 or 425

**460 Senior Project**

Work on a software analysis, design, and implementation project under the direction of a faculty member.

Prerequisite: Senior status with approved B.S. degree program on file and permission of the instructor

**475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**491, 492, 493, 494 Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## Renaissance Program

### Renaissance Program

Coulter (PHIL), director

The Renaissance Program is an interdisciplinary program which provides students the opportunity of combining the distinct learning experiences of a concentration in a liberal or non-business related field with exposure to career-related studies and significant work experience. It targets students majoring in the liberal arts who want preparation for their career search.

Specifically, the Renaissance Program has a three-fold set of objectives for each of its students.

1. Participants elect a major field of study from any of the liberal arts disciplines, namely, from the humanities, social sciences, natural sciences and the like. Majors in the Division of Business or the Department of Health and Human Performance are excluded from this program.
2. Participants take the Renaissance Program Professional Minor, composed of a set of six courses selected by each student according to personal interest and career-plan, from a broad range of pre-professional and professional areas.
3. Participants complete one internship in a career-related field. Students are encouraged to be creative and to search for inventive ways of implementing a plan of practical work experience. A variety of options and opportunities are available through the Career Center.

As part of its commitment to Renaissance Program participants, the University of St. Thomas extends to graduates of this program the offer of undergraduate business courses, free of charge and without limit, on a space-available basis. These courses may be taken either for credit or as audits (but may not be used toward a second degree at the university).

Application for admission is made through the office of the Renaissance Program, currently in the Department of Philosophy. Such application should normally take place during the second semester of the sophomore year, but may occur later.

#### Renaissance Program Professional Minor

*One of:*

ECON 251 Principles of Macroeconomics

ECON 252 Principles of Microeconomics

(Other courses from the Department of Economics may be acceptable if the necessary prerequisites have been met, and on the approval of the director of the Renaissance Program.)

*Plus one of:*

QMCS 110 Introduction to Information Processing

QMCS 120 Computers in Elementary Education and LOGO

QMCS 130 Problem Solving in the Natural Sciences

QMCS 220 Statistics I

QMCS 221 Statistics II

QMCS 238 Software Design Using Business Languages

(Other courses from the QMCS Department may be acceptable if the necessary prerequisites have been met, and on the approval of the director of the Renaissance Program.)

*Plus a total of 12 credits in:*

ACCT 211 Financial Accounting

BLAW 366 Legal Environment of Business

FINC 300 Finance for Non-Business Majors

MGMT 150 Introduction to Business

MGMT 300 Management for Non-Majors

MKTG 300 Principles of Marketing

Other courses from the Division of Business may be acceptable if the necessary prerequisites have been met, and on the approval of the director of the Renaissance Program.

*Plus:*

IDSC 330 Renaissance Program Internship

IDSC 333 Renaissance Program Studies

Another course that integrates theoretical and practical themes may be acceptable provided the necessary prerequisites have been met, and on the approval of the director of the Renaissance Program.

### Russian

*See Department of Modern and Classical Languages*

### Russian, Central and East European Studies

Shambour (RUSS), adviser

The ACTC program in Russian, Central and East European Studies seeks to give the broadest possi-

ble exposure to the history, politics, literature and philosophy of central and eastern Europe and Russia. This interdisciplinary major offers the student an opportunity to become well-acquainted at the undergraduate level with the rich literary and cultural achievements of the area. The student also acquires fluency and experience with the Russian language, or (through the ACTC language contract with the University of Minnesota) with one of the eastern European languages.

While the collapse of the Soviet Union and its eastern European sphere of influence has eliminated the perceived threat of a world communist movement, the human talent, residual military power and resources of the area guarantee that it will continue to play an important role in global affairs.

Drawing upon the faculty and resources of the five ACTC institutions, courses are offered at Augsburg College, Hamline University, Macalester College, The College of St. Catherine and the University of St. Thomas.

In choosing any major, future career options are an important consideration. This is a sound liberal arts major that offers considerable flexibility and career opportunities, especially when combined with another major or minor in business, economics, history, language and literature, or political science. As this area of the world undergoes transition from Russian socialist dominance to democratic market-oriented societies, the major will offer fascinating career opportunities in government, international business and journalism, as well as in teaching and research. Students who plan to do graduate work in a related discipline, such as history, economics or political science will find the major a strong background for such study. Students are urged to seek career counseling from their adviser in the major.

### **Major in Russian, Central and East European Studies**

Forty-four credits, including language and area studies courses:

#### *Language:*

Two years of basic college Russian, Polish, Serbo-Croatian, Czech, Hungarian or equivalent competencies

#### *Area studies:*

Concentration in Humanities

Sixteen credits from the list of approved courses in Track #1, plus four credits from Track #2, as approved by adviser

Concentration in Social Sciences

Sixteen credits from the list of approved courses in Track #2, plus four credits from Track #1, as approved by adviser

#### *Plus:*

Eight additional credits in courses selected from either Track #1 or Track #2

Students are strongly recommended to take a third year of Russian or any other east European language. A program of study abroad in Russia or one of the central or east European countries, during a semester, a January Term, or during the summer, is strongly encouraged. All options should be discussed with the student's adviser.

### **Courses available for this program**

Letter following the course number indicates the institution offering the course:

- A Augsburg College
- C The College of St. Catherine
- H Hamline University
- M Macalester College
- T University of St. Thomas

#### *Language courses*

- RUSS 111T Elementary Russian I
- RUSS 112T Elementary Russian II
- RUSS 211T Intermediate Russian I
- RUSS 212T Intermediate Russian II
- RUSS 31M Advanced Russian I
- RUSS 32M Advanced Russian II
- RUSS 33M Advanced Russian Conversation

#### *Track #1: Humanities concentration*

- HIST 348A Russia and Soviet Union in 20th Century
- HIST 337H Modern Russia from the Empire to Revolution
- HIST 371H The Rise and Fall of the Soviet Union
- HIST 373H Heart of Europe: Central and Eastern Europe in 20th Century

## Science and Mathematics Major for Elementary Education

HIST	55M	History and Philosophy of Socialism
HIST	60M	State and Society in Tsarist Russia
HIST	62M	History of the Soviet Union and Its Successors
HIST	314T	Social and Intellectual History of Early Modern Europe
HIST	331T	Eastern Europe, 1699-1914
HIST	333T	Eastern Europe, 1914 to Present
HIST	464T	Seminar in European History

### *Russian literature*

RUSS	61M	19th Century Literature in Translation
RUSS	62M	20th Century Literature in Translation
RUSS	64M	Culture and Revolution

### *Advanced language*

RUSS	41AM	Russia in Russian—Speaking/Listening
RUSS	41BM	Russia in Russian—Reading/Writing

### *Culture*

RUS	50-01M	Topics
RUS	55M	Russian Culture
RUS	56M	Soviet Mass Culture

### *Theology*

REL	420A	The Russian Orthodox Church
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### *Track #2: Social sciences concentration*

ECO	317A	Comparative Economic Systems
ECO	495A	Topics
ECON	25M	Comparative Economic Systems
ECON	35M	Economics of the Transition
ECON	346T	Topics: Country and Area Studies in Economics
ECON	439T	Comparative Economic Systems
GEOG	45M	Regional Geography of the Post-Soviet Union
POL	351A	Topics in Communist/Post-Communist Systems
POL	363A	Russian and Chinese Foreign Policy
POSC	220C	Introduction to Comparative Government
POSC	225C	Introduction to World Politics
POL	362H	Politics of Change: Eastern European Political Systems
POL	350T	Comparative Politics of the New Europe
POL	424T	Seminar in International Politics
POL	454T	Seminar in Comparative Politics

### *Business/Management*

BUS	364A	East-West Trade
BADM	350C	International Marketing and Management

## Science and Mathematics Major for Elementary Education (SMEE)

Werness (QMCS), (director), Sullivan (BIOL), Hartshorn (CHEM), Brownstein (GEOL), Kemper (MATH), Tommet (PHYS)

This major provides an integrated background in science and mathematics appropriate for individuals who will teach in the elementary grades. The SMEE major was designed as a co-major along with elementary education and should be considered by any student planning to pursue a degree in elementary education, particularly those who wish to emphasize science and mathematics. Students should contact the program director, the Department of Education, or members of program faculty for further information on this major. SMEE is only available as a co-major for those students also majoring in elementary education.

BIOL	101	General Biology
CHEM	100	Chemistry in Our World
GEOL	111	Introductory Geology I
MATH	100	Mathematical Sampler
MATH	121	Structures of Elementary Mathematics
PHYS	101	General Physics for Liberal Arts Students
QMCS	120	Computers in Elementary Education and LOGO

A *specialization sequence* consists of two or more additional courses in one department, to be approved by the student's SMEE adviser. These courses will build on the "core courses" above and develop specialized knowledge in one of the areas served by the Division of Science and Mathematics.

- 181 Science Seminar
- 182 Science Seminar
- 359 Integrated Studies in Science and Mathematics

*Plus:*

EDUC Those courses offered through the Department of Education which are required for the Elementary Education Licensure Program.

**181 Science Seminar** **0 credit**

The seminar consists of five one-hour meetings per semester and is offered for SMEE students enrolled in the laboratory science courses. Two semesters of the seminar are required.

**182 Science Seminar** **0 credit**

Same as 181. This number is used for the second semester of the seminar.

**359 Integrated Studies in Science and Mathematics**

The capstone course in the SMEE interdisciplinary major. A number of currently important science and mathematics-related topics will be studied in depth, and will emphasize the integration of the natural sciences and mathematics. Consideration will be given to the relevance of the topics to modern society and their potential use in the elementary classroom.

Prerequisites: BIOL 101, CHEM 100, GEOL 111, MATH 100 and 121, QMCS 120, PHYS 101. (In certain cases, permission of the adviser may allow a substitution.)

**Science Middle School Education**

*See Department of Teacher Education.*

**Social Sciences**

The major in the social sciences is intended for the liberal arts student who wishes to become familiar with the perspective of the four disciplines traditionally defined as the social sciences – economics, history, political science, and sociology – and who wishes at the same time to study more intensively one of those disciplines. In requiring both introductory and advanced courses in each of the disciplines, irrespective of the area of concentration, the major provides both opportunity and challenge for the student seriously interested in understanding the order, structure and interrelationships involved in human behavior.

**Major in Social Sciences**

*Either:*

- HIST 111 Origins of the Modern World to 1550
- HIST 112 The Modern World Since 1550

*or*

- HIST 113 Early America in Global Perspective
- HIST 114 The Modern U.S. in Global Perspective

*Plus:*

- ECON 251 Principles of Macroeconomics
- ECON 252 Principles of Microeconomics
- ECON One additional course in economics numbered above 300
- HIST One additional history course numbered above 300
- POL 105 Politics and Government in Comparative Perspective
- POL Two additional political science courses
- SOC 100 Introduction to Sociology
- SOC 210 Research Methods in Sociology
- SOC One additional sociology course numbered above 300

*Plus:*

Twelve additional credits in courses numbered above 300 from one of the following departments: Economics, History, Political Science, or Sociology. The choice of these courses is subject to the approval of the department involved.

*Plus one of:*

- MATH 101 Finite Mathematics

## Social Work

MATH	111	Calculus for Business and Social Science
MATH	113	Calculus I
QMCS	220	Statistics I

## Social Studies

*See Department of Teacher Education.*

## Social Work (SOWK)

Shank (dean), Thornton (undergraduate program director), Andrews, Barretta-Herman, Berger, Brenden, Chovanec, Cochrane, Dziengel, Freeman, Garrett, Graham, Hanley, Herman, Hollidge, Holloway, Kaiser, Kuechler, Miller, Parnell, Rottenberg, Canfield\*, Erb-Caron\*, Gearity\*, Jacobson\*, Landis\*, McPartlin\*, Mowatt\*, Peterson\*, Shelton\*

A major in social work is available through a joint department at both The College of St. Catherine and the University of St. Thomas. The major also is offered in Weekend College at The College of St. Catherine. The courses in the social work major prepare the student for beginning-level generalist social work practice as a B.A. social worker (B.S.W. level) as well as for graduate study.

The program described below is accredited by the Council on Social Work Education at the baccalaureate level and qualifies graduates to take the examination for licensure at the licensed social worker level.

### Social Work Honor Society

Beta Epsilon, the campus chapter of Alpha Delta Mu National Social Work Honor Society, was established at the University of St. Thomas and the College of St. Catherine in 1980. The purpose of this organization is to advance excellence in social work practice and to encourage, stimulate and maintain scholarship of the individual members.

Students become eligible for membership after they have achieved a junior or senior standing, earned a minimum of six semester hours or equivalent in social work, achieved a grade point average of 3.00 or above and been duly enrolled in an undergraduate social work program accredited by the Council on Social Work Education.

### Licensure of School Social Workers

The social work program is approved by the Minnesota Department of Education to recommend candidates for licensure as school social workers Level I, based upon completion of this approved licensure program. Contact your adviser for information on program requirements.

### Major in Social Work

- 281 Introduction to Social Work
- 340 Human Behavior and the Social Environment
- 355 Communication and Interviewing Skills
- 375, 376 or 378 Junior Fieldwork in Social Work
- 380 Social Research: Designs and Statistical Applications
- 385 Working with Groups: Theory and Practice
- 391 Social Policy for Social Change
- 401 Generalist Practice with Individuals, Families and Groups
- 402 Generalist Practice for Social Action
- 405, 406 Senior Fieldwork in Social Work

#### Allied requirements:

##### One of:

- BIOL 101 General Biology
- or
- BIOL 112C Biology of Women

##### Plus:

- PSY 111 General Psychology
- PSY 202 Lifespan Developmental Psychology
- SOC 100 Principles and Concepts of Sociology

Transfer students must be in social work courses for a minimum of three semesters, excluding summer sessions.

### Required Fieldwork Experience

These experiences, arranged by the Department of Social Work, provide practical learning in social work agencies, institutions and, or departments to complement the students' academic work through integration of theory and practice.

*Junior year:*

Two semesters of approximately 10 hours per week off campus totaling 200 hours, plus weekly seminar groups on campus. Students should contact their social work adviser during the second semester of their sophomore year so that placement can be discussed.

*Senior year:*

Two semesters of approximately 15-20 hours per week off campus totaling 400 hours, plus weekly seminar groups on campus. A total of 150 hours must be completed in the first semester.

*Recommended:*

IDSC	291	The Anatomy of Violence
SOWK	210	Relationship, Intimacy and Sexuality
SOWK	290	Death, Dying and Bereavement
SOWK	490	Human Diversity and Family Systems
SOWK	490	School Social Work

Students should select elective courses in consultation with their adviser.

**Admission Process**

The Department of Social Work requires students to be formally admitted to the major. This process takes place at the beginning of the junior year. Prospective majors must have a GPA of 2.25 and be interviewed by faculty of the department. Contact an adviser for more details.

**Minor in Social Welfare**

A minor in social welfare is available through the joint department at The College of St. Catherine and the University of St. Thomas. A minor in social welfare is not accepted by the Council on Social Work Education as preparation for beginning-level generalist social work practice. A minor is offered for the student's own learning in the area of social welfare. Formal application for a minor must be approved by the Department of Social Work.

- 281 Introduction to Social Work
- 340 Human Behavior and the Social Environment
- 391 Social Policy for Social Change

*Plus two of:*

- PSY 202 Lifespan Developmental Psychology
- PSY 207 Alcohol, Other Drugs and Behavior
- SOC 251 Issues of Race and Ethnicity
- SOC 303 Aging and the Lifecourse
- SOWK 380 Social Research: Designs and Statistical Applications

(The CT designation beside course numbers indicates the same course is offered at The College of St. Catherine and the University of St. Thomas.)

**210CT Relationship, Intimacy and Sexuality**

This course addresses three major areas: exploring values and societal influence on relationships, intimacy and sexuality – the influence of culture, religion, family and friends; understanding self-worth, communication patterns and the effect of family and other significant relationships on the development of one's needs/wants in relationships, intimacy and sexuality; discovering the basic attributes, purposes and powers of significant relationships, intimacy and sexuality. Participation in a structured small-group discussion is required. Open to non-majors.

**281 Introduction to Social Work**

This course introduces the student to the profession of social work within the context of the social welfare system. It provides an overview of an integrative approach to generalist social work practice which emphasizes intervention on individual, environmental and societal levels. Special emphasis is placed on values, human diversity, social problems and social work fields of practice.

Prerequisites: SOC 100 and PSY 111 or permission of the instructor

**290CT Death, Dying and Bereavement**

This course focuses on understanding loss and grief in the human experience. Emphasis is given to recognizing loss in various forms and to understanding grief as a generic process. Skills are taught for coping with personal loss and for relating in helpful ways to bereaved persons. Special topics relating to death and dying in our society (e.g., medical ethics, suicide) are covered. Open to non-majors.

**295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **340CT Human Behavior and the Social Environment**

The primary focus of this course is to provide students with knowledge and understanding of human behavior and development from a social systems approach as affected by biological, cultural, environmental, and psycho-social factors. Emphasis is on the role of individual, family, small group, organization and community in human behavior as related to social-work practice. Cultural, ethnic and life-style diversity and their effects on the development of human systems is stressed. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisites or concurrent registration for majors: 281; PSY 202; and BIOL 101T or 112C; or consent of the instructor

### **355CT Communication and Interviewing Skills**

This course is the first of a four-course practice sequence. The primary focus is on communication theory and skills as applied to social work with individuals, families, small groups, communities and organizations. There is an emphasis on self-awareness, beginning assessment skills and diversity issues. An integrative approach to generalist social work practice provides the context for intervention on individual, environmental and societal levels.

Prerequisite or concurrent registration: 340 or consent of the instructor

### **375, 376, 378CT Junior Fieldwork in Social Work**

Junior fieldwork complements the student's academic work through practical experience in a social-work agency, institution or department. Under the supervision of an agency field instructor, the student learns beginning social-work tasks and functions while applying theory to actual social-work situations. Students participate in an on-campus seminar with other junior social-work majors while in placement. The placement is 10 hours per week during fall and spring semesters, totaling 200 hours. Fall 378 is only open to students going abroad spring semester. Also offered in Weekend College, with placement during fall and winter trimesters. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: 281 or consent of the instructor

### **380 Social Research: Designs and Statistical Applications**

The purpose of this course is to assist students in gaining knowledge and skill to understand the problems/persons generalist social workers encounter. The goals of the course are to have social-work students understand and be able to apply research methods, techniques, and tools to behavior and the social environment. Application of theory and research techniques, including statistical applications, for evaluating change, needs assessment, assessment of client-system functioning, program evaluation and practice effectiveness.

Prerequisites for majors: 281 and junior status or permission of the instructor. Listed at CSC as INDI 380.

### **385CT Working with Groups: Theory and Practice**

This course is the second of the four-course practice sequence. The primary focus of the course is on the study of human behavior in groups with emphasis on the use of groups in generalist social work practice to accomplish individual, family, organizational and/or community goals. Extensive opportunities to practice the skills necessary to be an effective group member and leader are provided. The effects of diversity on group interaction are stressed.

Prerequisite: 355 or consent of the instructor

### **391CT Social Policy for Social Change**

This course equips students to understand and critically analyze current and past social policies. Policy alternatives are explored with a focus on the values and attitudes as well as the societal, economic and political dynamics from which they originate. Roles and responsibilities of citizens and professionals in formulating and implementing policies responsive to actual social needs are addressed.

Prerequisite: 281 or consent of the instructor

### **401CT Generalist Practice with Individuals, Families and Groups**

This is the third course in the four-part practice sequence. This course prepares students for generalist social-work practice with individuals, families and groups in the context of their social environments with emphasis on aspects of diversity. A primary focus is the application of social-work knowledge through increased development of skills. The overall goal of the course is integration and application of the stages of the generalist social work method.

Prerequisites: 385; senior major status and concurrent registrations in 405 are required

### **402CT Generalist Practice for Social Action**

This course is a continuation of 401 and the final of four courses in the practice sequence of the social work curriculum. The focus is on the development of intervention methods based on generalist social-work knowledge that can be applied to all client systems. A special emphasis is placed on effects of oppression and strategies for social action. A combination of lecture, discussion, experiential learning, and small-group activities provide student with knowledge and skills for client

advocacy and social change.

Prerequisites: 401; concurrent registration in 406 is required

#### **405CT Senior Fieldwork in Social Work**

Senior fieldwork complements the student's academic work through practical experiences in a social work agency, institution or department. Under the supervision of an agency field instructor, the student learns social-work tasks and functions while applying theory to actual social-work situations. Students participate in an on-campus seminar with other senior social work majors while in placement. The placement is 15-20 hours per week during fall and spring semesters, totaling 400 hours. Also offered in Weekend College, with placement in fall and winter trimester.

Prerequisite: Concurrent registration in 401

#### **406CT Senior Fieldwork in Social Work**

Prerequisite: Concurrent registration in 402

#### **475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

#### **483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

#### **487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

#### **491, 492, 493, 494 Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

#### **495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## **Sociology (SOC)**

Smith-Cunnien (chair), Ahler, Karraker, Kinney, Lybrand, Milner, Parilla, Sandifer, Schuth, Stewart, Bruton\*, Caldie\*, Fink\*, Nelson\*, Peterson\*

Sociology is the scientific study of society and social relations. A major in Sociology enables students to observe and analyze social life. It provides knowledge and skills applicable in both career and non-career settings.

The curriculum reflects the breadth of the discipline, its place in the liberal arts tradition, and the application of its theory, data and method to contemporary society.

The department offers majors for students interested in a career in the field of criminal justice, a career in applied sociology or preparation for graduate school. The choice of any of these majors is at the discretion of the student and should be declared at the time of admission to the major field.

Students may also select a minor in Sociology as a useful complement to their major. The Sociology department offers five minors, including the opportunity to design a course of study to meet the unique needs and interests of the individual.

Transfer students who major in applied sociology or criminal justice must take a minimum of 16 credits in sociology at the University of St. Thomas. Transfer students who minor in sociology must take a minimum of six credits in sociology at St. Thomas.

No more than one Experiential Learning course or one Internship will count toward applied sociology or criminal justice major field requirements.

### **Sociology Honor Society**

The Iota Chapter of Minnesota of Alpha Kappa Delta, the international sociology honor society, was chartered at the University of St. Thomas in 1991. The purpose of the society is to promote an interest in the study of sociology, research of social problems, and such other social and intellectual activities as will lead to improvement in the human condition. Membership is open to juniors and seniors who have completed at least sixteen credits in sociology registered through the university, who are officially declared majors or minors in applied sociology, criminal justice, the sociology concentration of social science, or social studies and who have a minimum grade point average of 3.00 (overall and in sociology courses taken at the University of St. Thomas.)

## Sociology

### Major in Sociology: Applied

100 Introduction to Sociology  
210 Research Methods in Sociology  
220 Sociological Analysis  
370 Sociological Theory  
404 Internship in Applied Sociology

*Plus one of:*

365 Social Psychology  
366 Self and Society

*Plus:*

Twelve additional credits in Sociology

*Strongly recommended:*

MATH 101 Finite Mathematics

In addition, it is recommended that students take the following courses in this order:

MATH 101 (or adequate substitute)  
SOC 210 Research Methods in Sociology  
SOC 220 Sociological Analysis

Finally, it is recommended that students begin the SOC 210/220 sequence during their sophomore year. This sequence must be completed by the end of the junior year. Students who have a double major in sociology and psychology and complete SOC 210, PSY 212, and QMCS 220 do not need to take SOC 220.

### Major in Sociology: Criminal Justice

Smith-Cunnien, director

The program in Criminal Justice provides students with an understanding of the entire criminal justice system while at the same time allowing them to take specific courses in a area of special interest.

The program emphasizes the interrelationships among the various components of the criminal justice system (i.e., law enforcement, prosecution, courts and corrections) and examines how they deal with adult offenders and juvenile delinquents.

The major reflects the interdisciplinary nature of criminal justice. It provides a concentration of courses which prepares students for careers in such areas as policing, private security, probation, parole and corrections. It also prepares students for advanced study in criminology, criminal justice and law.

The Criminal Justice program at St. Thomas, in conjunction with Alexandria and Hibbing Technical Colleges, is certified by the Board of Minnesota Peace Officers Standards and Training to prepare students for the peace officer licensing examination. Students who intend to take this examination must also complete SOC 251, PHED 250, and PSY 111. Please see the department's Law Enforcement Education Coordinator.

100 Introduction to Sociology  
200 Introduction to Criminal Justice  
210 Research Methods in Sociology  
220 Sociological Analysis  
310 Juvenile Delinquency  
320 Criminology  
479, 480 Topics: Seminar in Criminal Justice

*Plus:*

IDSC 340 Criminal Law and the Social Order  
POL 314 Constitutional Rights and Liberties

*Plus one of:*

POL 312 Judicial Process  
SOC 338 Law Enforcement  
SOC 340 Corrections

*Strongly recommended:*

MATH 101 Finite Mathematics  
SOC 251 Race and Ethnicity

In addition, it is recommended that students take the following courses in this order:

MATH 101 Finite Mathematics (or adequate substitute) in freshman year  
SOC 210 Research Methods in Sociology in first semester sophomore year  
SOC 220 Sociological Analysis in second semester sophomore year

(Students with a double major in sociology and psychology who have completed SOC 210, PSY 212 and QMCS 220 do not need to take SOC 220.)

**Minor in Criminal Justice**

100 Introduction to Sociology  
 200 Introduction to Criminal Justice  
 310 Juvenile Delinquency  
 320 Criminology

*Plus one of:*

POL 312 Judicial Process  
 SOC 338 Law Enforcement  
 SOC 340 Corrections

**Minor in Sociology: Human Work Systems**

100 Introduction to Sociology  
 341 Work and Occupations  
 386 Organizations in Society

*Plus one of:*

301 General Anthropology  
 303 Aging and Lifecourse  
 365 Social Psychology  
 384 Small Groups

**Minor in Sociology: Lifecourse Choices**

100 Introduction to Sociology  
 303 Aging and Lifecourse  
 321 Marriage and the Family  
 341 Work and Occupations

**Minor in Sociological Research Methods**

100 Introduction to Sociology  
 210 Research Methods in Sociology  
 220 Sociological Analysis  
 493 or 494 Research

**Minor in Sociology: Individualized**

100 Introduction to Sociology

*Plus:*

Three other sociology courses approved by the chair of the department in consultation with the student. These courses must relate to a theme not represented among the minors listed above.

**100 Introduction to Sociology**

Introduction to the concepts, theories, methods and applications of the scientific study of society and social concerns. Enables students to understand the connections between the individual and larger social and cultural forces. Heightens awareness of the diversity of American and other societies.

**110 Social Problems**

Contemporary American society is confronted with a number of serious problems. This course explores the causes, effects and proposed solutions to some of the major social problems currently facing Americans. Special attention is given to issues confronting core institutions such as poverty, racism, sexism, drug and alcohol abuse, crime, and sexual deviance. This course fulfills the Human Diversity requirement in the core curriculum.

**200 Introduction to Criminal Justice**

An introduction to the American criminal justice system. Studies the role of the police, courts and corrections in the administration of criminal justice.

**210 Research Methods in Sociology**

Consideration of alternative strategies for each stage of the research process. Emphasis is on the skills required to design and successfully perform research projects: selection of topics, development and testing of hypotheses, collection and analysis of data and reporting of findings.

Prerequisite: 100

**220 Sociological Analysis**

Methods of data analysis and conclusion formation through application of statistical techniques. Introduction to applied statistics as employed in sociology with emphasis on skill development in the use of data processing techniques and SPSS, the computer statistical package commonly employed by contemporary sociologists in the full range of research settings.

Prerequisite: 210

### **251 Race and Ethnicity**

Race and ethnicity as significant components of U.S. social structure; the cognitive and normative aspects of culture which maintain and effect varying manifestations of social distance, tension, prejudice and discrimination between majority and minorities at both micro and macro levels, nationally and internationally. This course fulfills the Human Diversity requirement in the core curriculum. Prerequisite: 100 or sophomore standing

### **255 Gender in American Society**

Description of gender roles and sex stratification in American society today. Includes examination of socialization and social psychological influences on gender identity, the impact of gender in relationships, the importance of sex and gender in institutions and organizations, and the impact of recent social movements and social policies. This course will examine how our assumptions about gender are specific to cultural and social contexts. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 100 or sophomore standing

### **295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **301 General Anthropology**

Systematic survey of the components and dynamics of human societies throughout the world, focusing on categories such as foraging (hunter and gatherer), horticultural, pastoral, agricultural and industrial cultures. Key topics include kinship patterns, language, religion, artistic expression, technology and economic/political organization. Major consideration is given to the practical significance of expanding intercultural awareness. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 100 or sophomore standing

### **303 Aging and the Lifecourse**

A sociological and social-psychological examination of movement through the life-course from adolescence to old age. Major focus is on changes in age-related status, roles and social problems. Topics include the aging process, age stratification and age grading, age norms and behavioral regularities, the problem of generations, socialization, critical life periods in the aging process and theories of life stages.

Prerequisite: 100 or sophomore standing

### **304 Adolescence in Society**

The transition between childhood and adulthood is examined using a general sociological framework and including life course, socioeconomic, and systems theories. Particular attention is given to the social construction of adolescence; institutional contexts (family, education, employment) of adolescent relationships with parents, peers, and others; gender and sexual socialization in society; cultures of achievement and risk; social diversity.

Prerequisite: 100 or 110

### **310 Juvenile Delinquency**

An examination of juvenile delinquency and society's response to delinquent youth. Major topics include the historical foundations of delinquency, sociological and social psychological causes of delinquency, and the legal response to delinquents.

Prerequisite: 100 or 120 or sophomore standing

### **320 Criminology**

The nature and extent of crime and victimization in American society. Theories of crime from a sociological and social psychological perspective. An examination of specific types of criminal behavior.

Prerequisite: 210 and 310 or permission of instructor

### **321 Marriage and the Family**

Survey of the characteristics, trends and issues affecting families in a changing society. Applications of the sociological perspective, with an emphasis on empirical research and theory, to the dynamics underlying courtship, marriage, parenting and alternative forms of the family.

Prerequisite: 100

### **330 Religion and Society**

Theoretical and empirical examination of the sociological dimensions of religion, with a special emphasis on the religious situation in America. Topics include cultural contexts, affiliation patterns, organizational structures, individual religiosity and the emergence of new forms.

Prerequisite: 100 or sophomore standing

**332 Urban Sociology**

The study of the social organization of urban areas. Topics include the historical development of cities, interaction patterns in neighborhoods, cities and metropolitan areas, community power structures, and urban problems.

Prerequisite: 100 or sophomore standing

**338 Law Enforcement**

Examination of the role of law enforcement organizations and agents in contemporary society. Explores the limitations imposed on law enforcement in a democratic society. Other issues included are the ability of police to control crime, the growth of the private security industry and the occurrence of police corruption.

Prerequisite: 120

**340 Corrections**

An overview of various types of penal and correctional programs and their function in society. Examines the social organization of prisons and the effects of imprisonment on individuals. Provides a critical evaluation of research on community corrections, rehabilitation and deterrence.

Prerequisite: 120.

**341 Work and Occupations**

The work experience in American life. Application of sociological theory, data, methods and perspective to the full range of occupational and career roles, and to the structure and processes of work in the United States. Topics include social conditions affecting career choice, occupational segregation, labor unions, occupational prestige and work organizations.

Prerequisite: 100 or sophomore standing

**360 Health Care and Medicine**

An examination of the social nature of disease and illness and the social organization of health care and the medical professions. Topics include medical education, access to health care, the growth of alternative health care systems and comparative issues in health and medical care.

Prerequisite: 100 or sophomore standing

**365 Social Psychology**

A general survey of major social psychological theories and research, with a strong emphasis on the sociological perspective. Topics include selfhood, socialization, conformity/deviance, attitudes, gender roles, and intergroup/intragroup dynamics. Practical applications are a central focus.

Prerequisite: 100 or sophomore standing

**366 Self and Society**

An examination of the various social forces that shape societies and the individuals in them. Includes the influence of "micro" elements of social structure (such as socialization processes and small groups), "macro" elements of social structure (organizations, communities and society), and important sociological concepts (inequality, power, conflict, social control, etc.).

Prerequisite: 100 or sophomore standing

**370 Sociological Theory**

Study of the place of sociological theory in understanding interaction and society. Examination of both classical theorists and contemporary theories, including conflict, functionalism, and interactionism. Application of theories to contemporary social concerns. Normally offered in the fall semester.

Prerequisite: 100

**384 Small Groups**

Theoretical orientations and research findings relative to small groups; the reciprocity of influence between the participant and the group; leadership and followership; communication within a group, between and among groups; development of participational and relational skills.

Prerequisite: 100 or sophomore standing

**386 Organizations in Society**

An overview of the main sociological aspects of formal organizations and bureaucracy. Key topics include structural dimensions, communications, decision-making processes and strategies for planning and implementing organizational change. Applications will center on solutions to organizational problems in real-life settings.

Prerequisite: 100 or sophomore standing

**388 Deviant Behavior**

Study of different types of deviant behavior. Examines the prevalence of deviance, the reasons why it exists and the relationship between deviance and social control.

Prerequisite: 100 or sophomore standing

## Study Abroad Programs

### **404 Internship in Applied Sociology**

This course is designed to provide the sociology major with an opportunity to apply academic training in an applied sociology setting. Students will spend a minimum of 10 hours per week engaged in research or some other aspect of applied sociology in an organization. Students will be directed by a sociology faculty member and supervised by an on-site professional. Students also will participate in weekly seminars with other interns and the sociology faculty member. Normally offered in spring semester.

Prerequisite: 220, 370 and permission of the instructor

### **405 Internship in Criminal Justice**

This course is designed to provide the student with an opportunity to apply academic training in a criminal justice setting. Students will spend a minimum of 10 hours per week in an agency or organization directly involved in some aspect of criminal justice. Students will be supervised by an on-site supervisor. They also will participate in a weekly meeting with other interns and a St. Thomas faculty member.

Prerequisite: 200, 210, 320, and permission of the instructor

### **475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **479, 480 Seminar in Criminal Justice**

Criminal justice seminars provide majors with the opportunity to engage in advanced sociological and critical analysis of some aspect of the criminal justice system. This course number may be repeated, since focus of seminar changes.

Prerequisite: 200, 320 or permission of instructor

### **483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **491, 492, 493, 494 Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## **Spanish**

*See Department of Modern and Classical Languages.*

## **Study Abroad Programs (SABD)**

Stevenson (International Education Center), director

The University of St. Thomas encourages its students to incorporate international experience into their academic plans and offers a wide variety of overseas opportunities that serve as an integral part of a student's degree program. These opportunities encompass a wide range of options, including length of stay (semester, academic year, January or summer), course selection and geographic locale. The staff of the International Education Center assists students in identifying study, work or travel programs appropriate to the individual's desires and goals.

Students may not apply for nor participate in an International Education program while on academic or disciplinary probation.

### **Year/Semester Abroad**

#### **London Business Semester**

The University of St. Thomas sponsors a special fall semester program in London, for business majors and minors. Students, accompanied by a St. Thomas business faculty member, take regular St. Thomas business and liberal arts courses, as well as complete the BUS 200 Community Service requirement.

**Exchanges with other universities**

The university sponsors exchanges with the following institutions.

Australia:	Curtin University, Perth
England:	Lancaster University, London School of Economics
Egypt:	American University in Cairo
Germany:	University of Trier, Fachhochschule Trier
Ireland:	University College, Cork
Japan:	Osaka Gakuin University, Sophia University, Tokyo
Scotland:	University of Glasgow

In addition, the university participates in consortia and affiliations offering programs in the following locations:

Austria:	Vienna
China:	Beijing
Colombia:	Bogota
Denmark:	Copenhagen
England:	London Durham
France:	Aix-en-Provence Avignon Dijon Nantes Paris Toulon
Germany:	Berlin Freiburg
Italy:	Milan Rome
Japan:	Nagoya
Netherlands:	Leiden
Norway:	Oslo
Spain:	Granada Madrid Salamanca Seville
Wales:	Carmarthen

**SPAN Programs**

Through the Student Project for Amity Among Nations (SPAN), students may choose to study in one of three countries during the summer. The countries are selected each year. Students prepare with an American professor prior to departure and complete research during the summer overseas under the guidance of this professor.

*Participation in Year/Semester Programs*

To participate in the University of St. Thomas study abroad programs, students must have a 2.5 minimum grade point average, be in good academic and disciplinary standing at St. Thomas, and have at least sophomore standing. All students must apply to the International Education Center for program approval by October 15 for spring semester participation, and by March 15 for fall semester or year-long programs. The overseas study program must include study of the native language in non-English-speaking countries.

**Financial Aid**

Financial aid in the form of grants, loans, and scholarships applies to the cost of semester and year of study abroad programs. Students should discuss their eligibility with the Study Abroad Coordinator and the Study Abroad Liaison in the Office of Student Financial Services.

**Short-term Study Abroad**

The University of St. Thomas offers a number of two-four week, faculty-led programs during January or summer term. A majority of the January Term Abroad programs are sponsored by UMAIE, an eleven-member consortium that offers courses to Africa, Asia, Europe, South America and Hawaii each January.

**January Term Abroad**

All courses for the following January are announced at the end of February. Enrollment period extends from April 15 through October 21. Students must be in good academic and disciplinary standing with the university in order to apply or participate. Individual programs may have additional criteria for acceptance.

## Teacher Education

### **Spanish in Cuernavaca, Mexico**

A January Term Abroad intensive program in intermediate and Advanced Spanish in Cuernavaca, Mexico, directed by St. Thomas faculty.

### **Summer Term Abroad**

Students may study abroad during the summer through an affiliate or approved program, by participating in a faculty-led course (similar to January Term Abroad). Students must apply by March 15 for all programs.

### **Spanish in Zacatecus, Mexico**

A Summer Term Abroad course for Spanish majors and minors offered in June. Civilization or culture credit will be given. Directed by St. Thomas faculty.

### **300 Study Abroad**

Students participating in the University of St. Thomas overseas study program register for this interdisciplinary listing for the first semester they are abroad. For program information see the Special Programs section of this catalog. Permission of the Director of International Education required.

### **301 Study Abroad**

A continuation of 300. Permission of the Director of International Education required.

## Teacher Education (EDUC)

Huber (Chair), Cady, Payne, Reif, Warring

*As a result of pending license revisions for Minnesota teachers, the programs listed below for elementary and secondary teachers are being revised. Please contact the Department of Teacher Education for the current program requirements.*

The University of St. Thomas offers both elementary and secondary teacher preparation programs. The university is accredited by the National Council for the Accreditation of Teacher Education (NCATE) and the North Central Association of Colleges and Secondary Schools.

The University of St. Thomas teacher education programs prepare educators who are:

1. reflective, continuing learners;
2. effective communicators;
3. global citizens;
4. scholarly professionals;
5. instructional leaders;
6. curriculum specialists; and
7. collaborative agents of change.

### **Admission to the Program**

Students normally apply for admission to the program when they are in Block II (EDUC 320 or EDUC 340). Because of the number of required courses and the options available, it is suggested that students considering an education degree contact a department adviser as early as possible in their college career.

Criteria for admission to the education program are a cumulative grade point of 2.75 or above; positive recommendations from major/co-major adviser, education adviser, and interview team; evidence of positive initial clinical experience; and evidence of PPST completion and completion of Block I.

All persons seeking licensure to teach in the state of Minnesota must complete all three components of the Pre-Professional Basic Skills Test (PPST) prior to program admission. The test includes reading, writing, and mathematics components. Students must pass all three components in order to apply for licensure in the State of Minnesota. Contact the department office for information about test dates and fees.

All courses completed in fulfillment of licensure requirements must have an earned grade of C or better.

### **Major in Elementary Education**

In addition to earning a major in Elementary Education, persons seeking elementary licensure will earn a second major in a field outside of education. Contact the department office for information regarding applicable co-majors for elementary education students.

MATH 100 or MATH 121 is recommended to fulfill the core curriculum mathematics requirement for elementary education majors.

**Program Sequence**

*(Contact the Department of Teacher Education for current program requirements.)*

*Block I*

- 210 Education's Place in Society (and clinical)
- 212 Human Relations and Multicultural Education

*Block II*

- 340 The Teacher as Instructor

*Block III*

- 352 The Teacher as Curriculum Specialist (and clinical)

*Block IV*

- 323 Personal and Community Health, Alcohol and Drugs
- 448 Teacher as Agent of Change
- 451 Student Teaching
  - 01 – Elementary
  - 02 – Kindergarten and Elementary

**Secondary Teacher Education**

The program is designed to provide professional preparation for teaching licensure for the following subjects in middle and secondary schools.

**15 Majors**

- broad area science for middle school
- communication arts/literature (English)
- earth science (geology)
- French
- German
- health
- life science (biology)
- mathematics
- music: vocal
- music: instrumental
- physical education
- physical science (chemistry or physics)
- social studies
- Spanish
- theater/dance (theater specialization)

**10 Minors**

- chemistry
- communication arts/literature (English)
- earth science (geology)
- French
- German
- health
- life science (biology)
- mathematics
- physics
- Spanish

Students may wish to add a teaching license in their minor field. However, they must take the methods course and student teach in that minor.

All secondary teachers licensed in an approved minor may teach that subject up to a maximum of 50 percent of their academic assignment. They have seven years from the date of initial licensure to upgrade to a major or lose the minor license.

## Teacher Education

### Program Sequence

(Contact the Department of Teacher Education for current program requirements.)

#### Block I

- 210 Education's Place in Society (and clinical)
- 212 Human Relations and Multicultural Education

#### Block II

- 320 Psychology of Instruction for a Continuum of Learners

#### Block III

- 400 Curriculum and Instruction for Specific Discipline (and clinical)

#### Block IV

- 323 Personal and Community Health, Alcohol and Drugs
- 448 Teacher as Agent of Change
- 451 Student Teaching
  - 03 – Secondary
  - 04 – K-12

### Program Options

#### Plan A

Elementary and secondary education students who graduate within four years follow *Plan A*, the program sequence listed above.

#### Plan B

Elementary and secondary education students who find it difficult to complete their education course work in four years may opt for *Plan B*. This allows students to complete their final semester of education work at the graduate level after completing their undergraduate degree. Students who seek the *Plan B* option should consult with the department chair at least one semester prior to graduation. Students must be fully admitted to the undergraduate Department of Teacher Education prior to application for *Plan B*. Physical Education, Social Studies and SMEE majors may not apply for *Plan B*.

### 210 Education's Place in Society (and clinical)

Designed to critically analyze the place of education in today's rapidly changing society. Assists students in recognizing the similarities and differences in the major philosophical positions and evaluating their impact on current educational practice. Focuses on understanding the historic and social perspectives of education as well. The course includes a guided, reflective, in-school field experience of 30 hours.

Prerequisite: sophomore standing

### 212 Human Relations and Multicultural Education

Designed to engage teachers in a dialogue concerning the issues of cultural diversity in schools, its impact on the learning process and the construction of human relations. Emphasis will be placed on an education that is multicultural, gender fair, and disability aware. It examines issues such as racism, sexism, oppression, prejudice, and discrimination. The course aims to equip the participants with pedagogic practices and instructional techniques that respond to social conflicts and stresses within the classroom and that will enable them to create productive learning situations for all students. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: sophomore standing

### 214 Teaching Techniques for Woodwind Instruments I

2 credits

The teaching-techniques courses are designed to acquaint the prospective instrumental teacher with the fundamental principles underlying the correct playing of wind, percussion and string instruments. Basic concepts important in teaching others to play these instruments are stressed. The uses and merits of a variety of method books are discussed as they pertain to lesson and unit planning. Solo and ensemble literature also are covered. Students will learn how to select instruments, mouthpieces and other equipment appropriate for elementary and secondary instrumental pupils. Includes six hours of clinical experience for the six-course sequence. Offered fall semester in odd-numbered years.

### 216 Teaching Techniques for Woodwind Instruments II

2 credits

Offered spring semester in even-numbered years.

### 218 Teaching Techniques for Brass & Percussion Instruments I

2 credits

Offered fall semester in even-numbered years.

### 220 Teaching Techniques for Brass & Percussion Instruments II

2 credits

Offered spring semester in odd-numbered years.

- 222 Teaching Techniques for String Instruments I** **2 credits**  
Offered fall semester in odd-numbered years.
- 224 Teaching Techniques for String Instruments II** **2 credits**  
Offered spring semester in even-numbered years.
- 226 The Woodwind Family in Classroom Teaching** **2 credits**  
The families courses are designed to acquaint the student with the general principles involved in playing and caring for the various instruments. Emphasis is on the application of this information to classroom and choral situations. Students are expected to achieve an elementary level of competence in playing selected instruments. Offered spring semester in odd-numbered years.
- 228 The Brass & Percussion Families in Classroom Teaching** **2 credits**  
Offered spring semester in even-numbered years.
- 230 The String Family in Classroom Teaching** **2 credits**  
Offered fall semester in even-numbered years.
- 260 Elementary Classroom Music Pedagogy**  
This course introduces contemporary elementary music pedagogy to prospective music educators. Both content and method will be addressed in this course as students learn to design a curriculum that includes specific objectives and teaching strategies to help students master those goals. Specific media including the child voice, movement, recorder, and Orff instruments are used to address the diversity of cultures as well as learning styles and developmental stages present in each class. Artistic teaching and learning of culturally sensitive material are stressed at all levels by faculty members who themselves teach children. Fulfills the Block II requirement. Offered fall semester in odd-numbered years.
- 295, 296, 297, 298 Topics**  
The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.
- 320 Psychology of Instruction for a Continuum of Learners**  
This course integrates principles of learning with strategies for effective instruction. It addresses developmental stages of learning, pupil variability, student behavior, cognitive and behavioral learning theories, and measurement and evaluation of classroom learning. Prospective secondary-education teachers also participate in a micro-teaching simulation activity.  
Prerequisite: PPST, 210, and 212, junior standing
- 323 Personal and Community Health, Alcohol and Drugs** **2 credits**  
Includes an investigation of drug and alcohol use in historic and contemporary perspective; patterns of chemical dependency; effects of chemical dependency on the individual and on society; review of current federal and state regulations; directed field experience; and an introduction to scientific and socio-cultural aspects of communicable health hazards, with special emphasis on the role of classroom education in health conservation in disease control.  
Prerequisite: PPST. This course fulfills the Minnesota state requirement in this area
- 340 The Teacher as Instructor**  
This course is designed to help the prospective elementary teacher work effectively with a continuum of learners encompassing diverse learner styles and developmental stages. The focus is on a systematic approach to understanding child growth and development, learner preferences and academic progress. The course also addresses the issue of teacher as a decision maker, diagnostician, planner, evaluator, and classroom manager. Includes application of large-group, individualized, and cooperative learning strategies.  
Prerequisite: PPST, 210, and 212
- 345 Adolescent Literature** **2 credits**  
Survey of contemporary literature for adolescents; exploration of ways in which this literature meets the reading interests and needs of adolescents; emphasis on developing familiarity with literature read by adolescents; methods and programs to stimulate reading interests and practices.
- 352 The Teacher as Curriculum Specialist (and clinical)** **16 credits**  
This course is designed to introduce the pre-service teacher to the theory and practice of elementary curriculum and instruction. Campus and school experiences will focus on the content, methods and materials of elementary curriculum – reading, communication skills, children's literature, mathematics, science, social studies, music, art, physical education and health. However, a major focus of the course will be on approaches for integrating subject areas throughout the curriculum. The course will emphasize developmentally appropriate practice for kindergarten, primary, and intermediate grades; the current knowledge base of research and recommendations from professional organiza-

tions, and the infusion of technology and children's literature throughout the curriculum.

Prerequisite: Math 100, Lab Science, PPST, 210, 212, 340 and authorization of chair

### **360 Secondary Classroom Music Pedagogy**

Students in this course will learn to design middle- and senior-high-school curricula that include, but are not limited to, performance opportunities. Participation in small ensembles for voices and instruments will be augmented by guitar study as means for developing music literacy. Music literature, history, and theory will be approached from a participatory perspective; students will learn how to use the material as a resource for individual creative work that speaks to the diversity of environments and cultures represented in today's classrooms. Fulfills the Block III requirement. Offered spring semester in even-numbered years.

### **362 Teaching Techniques for Voice**

**2 credits**

Students will study the structure and function of the mouth, the nasopharyngeal cavity, the larynx and the breathing mechanism as these relate to the acoustical principles governing the human voice, including the psychology and the aesthetics involved in singing. The uses and merits of a variety of methods and exercises are discussed as they pertain to studio and classroom use. Solo and ensemble literature appropriate for young singers also are covered. Includes six hours of clinical experience (teaching individuals and groups, observation of master teachers, and journaling). Offered fall semester in even-numbered years.

### **364 Introduction to Contemporary Music Education**

**2 credits**

Students will explore the theory and practice of the Kodály, Orff, and Dalcroze approaches to music education, which are revitalizing the profession. The philosophical bases, application, and specific techniques of each methodology teach students to create an enriching, eclectic, and exciting classroom. Students will learn from master teachers who are nationally known practitioners of each approach. Offered summers only – one week of all-day sessions.

### **400 Curriculum and Instruction for Specific Discipline (and clinical)**

Includes the analysis and the development of teaching strategies and contemporary curriculum materials in each specific licensure area. Prospective teachers will develop techniques of instruction useful in inquiry, implement strategies of analysis based on current practices and recent research, focus on classroom behavior and evaluation as it relates to classroom instruction with an emphasis on teaching students from a variety of environments and cultures.

Prerequisite: acceptance into education program, PPST, 210, 212, 320 and completion of specific, major-field courses, and authorization of chair

01 English

02 Modern Languages (7-12)

03 Mathematics (fulfills the second-level computer competency in the core curriculum)

05 Broad Area Sciences

06 Social Studies

07 Speech and Theater

08 Modern Languages (K-12)

### **448 Teacher as Agent of Change**

Utilizing a topical approach, prospective teachers will receive instruction and practice in understanding the potential for positive change within institutions and individuals. The course addresses topics such as classroom management, alternative assessment, and site-based management, in addition to skill development in communication, decision making and leadership. Student teachers will reflect and discuss issues of their classroom and school experiences.

Prerequisite: acceptance into education program; completion of courses in Blocks I, II, and III; and concurrent registration with 451

**Deadlines to apply for student teaching are: Oct. 1 for spring and March 1 for fall.**

### **451 (01) Student Teaching – Elementary**

**6 credits**

Prospective teachers will observe and facilitate learning at the elementary level under the supervision of university and elementary-school personnel. Student teaching is a full-day commitment for an entire semester.

Prerequisite: acceptance into education program, 210, 212, 340, 352, admission for student teaching, concurrent registration with 448, and senior status

### **451 (02) Student Teaching – Kindergarten and Elementary**

**6 credits**

Prospective teachers will observe and facilitate learning at the kindergarten and elementary levels under the supervision of university and elementary school personnel. Student teaching is a full-day commitment for half the semester at the kindergarten level and for half the semester at the elementary level.

Prerequisite: acceptance into education program, 210, 212, 340, 352, admission for student teaching, concurrent registration with 448, and senior status.

**451 (03) Student Teaching – Secondary****6 credits**

Prospective teachers will observe and facilitate learning at the secondary level under the supervision of university and secondary-school personnel. Student teaching is a full-day commitment for an entire semester.

Prerequisite: acceptance into education program, 210, 212, 320, 400, successful completion of all required courses in major field, admission for student teaching, concurrent registration with 448, and senior status

**451 (04) Student Teaching – K-12****6 credits**

Prospective teachers will observe and facilitate learning at the elementary and secondary levels under the supervision of university and K-12 school personnel. Student teaching is a full-day commitment for half the semester at the elementary level and for half the semester at the secondary level. This section is reserved for students seeking a license in health music, physical education or foreign language.

Prerequisite: acceptance into education program, 210, 212, 320 or 340, and 400, successful completion of all required courses in major field, admission for student teaching, concurrent registration with 448, and senior status

**475, 476, 477, 478 Experiential Learning**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**480 Behavior Management (SPED 785) (formerly 483)**

Examines the etiology of problem behaviors in the home and in the classroom; explores the relationship between behavior and environmental antecedents and consequences; examines how environmental variables may be manipulated in order to increase appropriate behavior and decrease inappropriate behavior. Also, parent-child and teacher-student interaction patterns, data collection techniques, and legal and moral guidelines for the use of behavior change procedures are reviewed.

Prerequisite: Permission of the chair.

**481 Basic Skills Instruction: Mild/Moderate Handicaps (SPED 705)**

Research supported instructional interventions and progress monitoring strategies emphasizing practical knowledge, theoretical foundations and classroom skills for the instruction of students with mild/moderate handicaps in the basic skills: reading, written expression, spelling and mathematics.

Prerequisite: Permission of the chair.

**482 Survey of Exceptionality (SPED 750)**

Provides an overview of special education and specific categories of exceptionality. Examines the theories, legal mandates, definitions, and terminology related to special education. Characteristics of exceptional children who are in the following categories will be studied: gifted and talented, learning disorders, behavioral disorders, mental disabilities, visual impairments, auditory impairments, early childhood, physical impairments, health impairments, and communication disorders.

Prerequisite: Permission of the chair.

**483, 484, 485, 486 Seminar**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**487, 488, 489, 490 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**491, 492, 493, 494 Research**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

**495, 496, 497, 498 Individual Study**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

## Teacher Education — Teacher Licensure Programs

### Teacher Licensure Programs

Students undertaking these programs should have an adviser from their major field and an adviser in the Department of Teacher Education.

#### Major in Health Education K-12

HLTH	345	Nutrition
HLTH	350	Personal Health and Wellness
HLTH	353	Consumer, Community and Environmental Health
HLTH	375	Lifelong Stress Management (2 credits)
HLTH	440	Health Education: K-12 Curriculum, Assessment, and Administration
HLTH	450	Health Education: K-12 Methods, Resources, & Partnerships
HLTH	462	Human Sexuality
HLTH	464	Critical Issues in Health Education

#### Allied requirements:

BIOL	101	General Biology
BIOL		A course in Epidemiology or Microbiology
PHED	410	Human Anatomy and Physiology
PSY	111	General Psychology
SOC	100	Introduction to Sociology
SOWK	290	Death, Dying and Bereavement

#### Plus one of:

CHEM	100	Chemistry in our World
CHEM	101	Environmental Chemistry

#### Plus one of:

COMM	100	Public Speaking
COMM	105	Communication in the Workplace

#### Recommended:

##### One of:

PSY	200	Psychology of Infancy and Childhood
PSY	203	Psychology of Adolescence

#### Plus licensure courses:

EDUC	210	Education's Place in Society
EDUC	212	Human Relations and Multicultural Education
EDUC	320	Psychology of Instruction for a Continuum of Learners
EDUC	323	Personal and Community Health, Alcohol, and Drugs (2 credits)
EDUC	448	Teacher as Agent of Change
EDUC	451	Student Teaching (6 credits)

### B.A. in Music Education K-12

Licensure for music teachers in the state of Minnesota is in one of the following categories:

- Vocal and Classroom Music K-12
- Instrumental and Classroom Music K-12

#### Vocal and Classroom Music K-12

112	Introduction to Music
113	Theory I
212	Theory II
213	Theory III
312	Theory IV
351	Introduction to Conducting (2 credits)
352	Choral Conducting
411	History and Literature of Music I
412	History and Literature of Music II

#### Plus performance studies:

Six semesters of performance studies at 200-level in the same performance medium  
(2 credits per semester)

Four credits of 133 (1/2 hour lesson) if voice is not principal instrument

#### Plus:

MUSP	102 or 103	Skills for Piano Proficiency
MUSR	200	Piano Proficiency
MUSR	270	Level I Recital
MUSR	350	Level II Recital

*Plus ensemble participation:*

See ensemble (MUSN) participation under Major in Music

*Allied requirements:*

EDUC	210	Education's Place in Society
EDUC	212	Human Relations and Multicultural Education
EDUC	226	Woodwinds in Classroom Teaching (2 credits)
EDUC	228	Brass and Percussion in Classroom Teaching (2 credits)
EDUC	230	Strings in Classroom Teaching (2 credits)
EDUC	260	Elementary Classroom Music Pedagogy*
EDUC	320	Psychology of Instruction for a Continuum of Learners
EDUC	323	Personal and Community Health, Alcohol, and Drugs
EDUC	360	Secondary Classroom Music Pedagogy*
EDUC	362	Teaching Techniques for Voice
PHYS	105	Musical Acoustics

\*Fulfills Block III requirement (EDUC 400)

An additional ten credits taken in Graduate Education complete licensure. These credits may apply towards a master's degree (Plan B).

EDUC	520	Student Teaching and Seminar (3 credits)
EDUC	670	Teacher as Agent of Change (3 credits)
MUS	516	Developing the Child Voice (2 credits)
MUS	561	Teaching World Music (2 credits)

**Instrumental and Classroom Music K-12**

112	Introduction to Music
113	Theory I
212	Theory II
213	Theory III
312	Theory IV
351	Introduction to Conducting (2 credits)
353	Instrumental Conducting
411	History and Literature of Music I
412	History and Literature of Music II

*Plus performance studies:*

Six semesters of performance studies at 200-level in the same performance medium (2 credits per semester)

*Plus:*

MUSP	102 or 103	Skills for Piano Proficiency
MUSR	200	Piano Proficiency
MUSR	270	Level I Recital
MUSR	350	Level II Recital

*Plus ensemble participation:*

See ensemble (MUSN) participation under Major in Music

*Allied requirements:*

EDUC	210	Education's Place in Society
EDUC	212	Human Relations and Multicultural Education
EDUC	214	Teaching Techniques Woodwinds I (2 credits)
EDUC	216	Teaching Techniques Woodwinds II (2 credits)
EDUC	218	Teaching Techniques Brass and Percussion I (2 credits)
EDUC	220	Teaching Techniques Brass and Percussion II (2 credits)
EDUC	222	Teaching Techniques Strings I (2 credits)
EDUC	224	Teaching Techniques Strings II (2 credits)
EDUC	260	Elementary Classroom Music Pedagogy*
EDUC	320	Psychology of Instruction for a Continuum of Learners
EDUC	323	Personal and Community Health, Alcohol and Drugs
EDUC	360	Secondary Classroom Music Pedagogy**
PHYS	105	Musical Acoustics

\*Fulfills Block III requirement (EDUC 400)

An additional 10 credits taken in Graduate Education complete licensure. These credits may apply towards a master's degree (Plan B).

EDUC	520	Student Teaching and Seminar (3 credits)
EDUC	670	Teacher as Agent of Change (3 credits)

## Teacher Education — Teacher Licensure Programs

MUS	516	Developing the Child Voice (2 credits)
MUS	561	Teaching World Music (2 credits)

### Major in Science Middle School Education (SMSE)

*Concentration in broad area science*

GEOL	111	Introductory Geology I
GEOL	112	Introductory Geology II
GEOL	252	Geomorphology (includes climate and weather)
PHYS	104	Astronomy
CHEM	111	General Chemistry I
CHEM	112	General Chemistry II
BIOL	201	Ecology, Adaptation and Diversity
BIOL	202	Genetics and Evolution
BIOL	204	Cellular and Molecular Biology
SMSE	181	Science Seminar
SMSE	182	Science Seminar

*Plus:*

One upper-division biology or biochemistry course.

*Plus either:*

PHYS	109	General Physics I
PHYS	110	General Physics II
	<i>or</i>	
PHYS	111	Introduction to Classical Physics I
PHYS	112	Introduction to Classical Physics II

*Plus:*

A concentration of an additional course in one of the science areas: life science, earth science, or physical science.

*Plus:*

EDUC Plan A or Plan B for licensure

This program does fulfill the requirements of the SMSE major. Two other options are:

1. Take additional courses to fulfill biology major (and so also fulfill requirements for licensure of life science teacher);
2. Take additional courses to fulfill geology major (and so also fulfill requirements for licensure of earth science teacher).

#### 181 Science Seminar

**0 credit**

A non-credit science seminar consisting of five, one-hour meetings per semester offered for SMSE students enrolled in the laboratory science courses. Two semesters of the seminar are required.

#### 182 Science Seminar

**0 credit**

Same as 181. This number is used for the second semester of the seminar.

### Major in English with Secondary Education Emphasis

111	Critical Reading and Writing I
112	Critical Reading and Writing II

Qualified students may substitute 190 for 111 and 112.

*Plus:*

211	British Authors I
212	British Authors II
214	American Authors to 1914
300	Advanced Writing: Theory and Practice
305	Linguistics: The English Language
485	Senior Seminar

*Plus one of the following with a non-Western component:*

331	The Modern Tradition
340	Literature by Women: Critical History
397	Non-Western Literature

Some sections of 325 and other courses meet the non-Western literature requirement. Please consult with the department chair.

*Plus one of:*

350	Shakespeare
360	Age of Chaucer

363 Milton  
390 Major Literary Figures

*Plus:*

One or one and one-half additional courses as required to complete nine courses (36 semester credits) at the 200 level or above.

*Allied requirements*

In order to meet state guidelines, students must also complete the following allied requirements:

EDUC 357 Communication Skills in the English Classroom  
*or both*

COMM 100 Public Speaking  
*and*

COMM 215 Oral Interpretation

*Plus:*

EDUC 359 Teaching Mass Media

*Plus:*

One course in literature for adolescents/young adults.

*Plus:*

EDUC Plan A or Plan B

### **French, German, Spanish**

Students wishing to be licensed grades 7-12 in Foreign Language Education in the State of Minnesota must achieve a rating of Good or Superior by the Language Department of the Teacher Preparation institution in four of the seven competencies defined in the MLA "Qualifications for Secondary School Teachers of Modern Foreign Languages" and at least a minimal rating in the remaining three competencies.

Students wishing to be licensed grades K-12 in Foreign Language Education in the State of Minnesota must achieve a rating of Good or Superior by the Language Department of the Teacher Preparation institution in five of the seven competencies defined in the MLA "Qualifications for Secondary School Teachers of Modern Foreign Languages" and at least a minimal rating in the remaining two competencies.

The MLA competencies include aural understanding, speaking, reading, writing, linguistic analysis, culture and pedagogy.

### **French**

Four years high school French or completion of FREN 212 or its equivalent

FREN 311, 312 French Civilization I, II

Eight credits in French (grammar/oral intense) beyond FREN 212

Four credits in upper-division French beyond FREN 300

Two tracks are allowed: literary *or* cultural and communication skills.

*Recommended:* Courses in a second foreign language and study in a francophonic setting.

### **German**

Four years of high school German or the completion of GER 211

GER 310 Advanced German

Twenty-four additional credits in German courses numbered above 300

(At least two of these courses must be literature courses. No more than three courses in advanced language study may count toward the major. At least one of the courses above 300 must focus on a German-speaking country in the twentieth century.)

Completion of one course in modern European history.

### **Spanish**

Students must have a command of Spanish and a knowledge of Hispanic culture

Twenty-eight credits in Spanish courses numbered 300 or higher with a minimum of six credits in each of the following areas: Oral and Written Spanish; Culture/Civilization; Literature

Four credits in linguistics

### **Major in Mathematics with Secondary Education Emphasis**

Students may obtain a major in mathematics and simultaneously complete licensure requirements for certification as a secondary mathematics teacher in Minnesota, described in the Department of Teacher Education section of this catalog. Courses in geometry (325) and probability/statistics (233 or 313) are required for certification.

113 Calculus I (or 108-109)

114 Calculus II

## Teacher Education — Teacher Licensure Programs

- 200 Multi-Variable Calculus
- 210 Linear Algebra and Differential Equations
- 301 Abstract Algebra I
- 317 Real Analysis
- 325 Geometry
- 450 Advanced mathematics from an Elementary Point of View

*Plus at least one of:*

- 302 Abstract Algebra II
- 309 Discrete Mathematical Structures
- 385 Mathematical methods of Numerical Analysis
- 400 Dynamical Systems and Chaos
- 419 Complex Variables
- 420 Topology

*Plus either:*

- 303 Statistics for the Applied Sciences
- or*
- 313 Probability
- and*
- 314 Mathematical Statistics

*Allied requirements:*

*One of:*

- QMCS 130 Problem Solving in the Natural Sciences
- or*
- QMCS 237 Software Design Using Scientific Languages

*Plus one of the following sequences:*

- ECON 351-352-418
- PHYS 111-112
- QMCS 410-411

*or a total of 44 credits in mathematics including one of the following sequences:*

- MATH 313-314
- MATH 315-316
- MATH 325-450

*Plus:*

- EDUC Plan A or Plan B for licensure

### **Teaching Major in Physical Education**

- PHED 110 Foundations and Skills for Majors I
- PHED 111 Foundations and Skills for Majors II
- PHED 200 Activities and Techniques

*Plus two of:*

- PHED 210 Outdoor Education I
- PHED 211 Outdoor Education II
- PHED 212 Outdoor Education III

*Plus:*

- HLTH 350 Personal Health and Wellness
- PHED 215 Rhythms and Dance
- PHED 310 History, Principles and Philosophy of Physical Education
- PHED 311 Motor Development
- PHED 340 Physical Education at the Elementary Level
- PHED 351 Teaching of the Special Needs Student
- PHED 360 Curriculum Organization and Administration
- PHED 402 Principles, Theory and Techniques of Athletic Coaching
- PHED 410 Human Anatomy and Physiology
- PHED 420 Kinesiology
- PHED 421 Athletic Training Techniques
- PHED 430 Measurement and Evaluation
- PHED 431 Exercise Physiology

*Allied requirements:*

- BIOL 101 General Biology
- PSY 111 General Psychology
- SOC 100 Introduction to Sociology

*Recommended:*

COMM 100 Public Speaking  
 or  
 COMM 105 Communication in the Workplace

*Plus:*

EDUC Plan A or Plan B for licensure

**Life Science with a Concentration in Biology**

This program constitutes an alternative major in biology tailored to the needs of prospective secondary teachers in this area. Completion of this program satisfies both the graduation requirements for an academic major and the state's content-area requirements for teaching licensure.

BIOL 201 Ecology, Adaptation, and Diversity  
 BIOL 202 Genetics and Evolution  
 BIOL 204 Cellular and Molecular Biology

*Plus:*

Sixteen additional credits in courses numbered 300 or above, chosen from the electives listed in this catalog, in consultation with the department's Life Science-Education adviser.

*Plus:*

CHEM 111 General Chemistry I  
 CHEM 112 General Chemistry II  
 CHEM 201 Organic Chemistry I  
 CHEM 202 Organic Chemistry II  
 GEOL 111 Introductory Geology I  
 PHYS 104 Astronomy

*Plus:*

EDUC Plan A or Plan B for licensure.

**Physical Science with a Concentration in Chemistry**

This program fulfills the specialized chemistry (education) major.

CHEM 111 General Chemistry I  
 CHEM 112 General Chemistry II  
 CHEM 201 Organic Chemistry I  
 CHEM 202 Organic Chemistry II  
 CHEM 300 Quantitative Analysis  
 CHEM 320 Instrumental Methods  
 CHEM 331 Physical Chemistry I  
 CHEM 481 Seminar  
 CHEM 482 Seminar  
 CHEM 483 Seminar  
 CHEM 484 Seminar

*Plus 4 credits from:*

CHEM 332 Physical Chemistry II  
 CHEM 430 Organic Spectroscopy  
 CHEM 440 Biochemistry I  
 CHEM 442 Biochemistry II  
 CHEM Research

*Plus:*

MATH 113 Calculus I  
 MATH 114 Calculus II  
 PHYS 104 Astronomy  
 PHYS 111 Introduction to Classical Physics I  
 PHYS 112 Introduction to Classical Physics II

*Plus:*

One approved additional PHYS course other than 101

*Plus:*

EDUC Plan A or Plan B for licensure

**Earth Science with a Concentration in Geology**

This program fulfills the geology major with MATH (Calculus I and II) requirement.

GEOL 111 Introductory Geology I  
 GEOL 112 Introductory Geology II

## Teacher Education — Teacher Licensure Programs

GEOL	211	Mineralogy
GEOL	252	Geomorphology (includes climate and weather)
GEOL	311	Petrology
GEOL	322	Structural Geology
GEOL	421	Geophysics
GEOL	15M	Oceanography (Macalester College)

*Plus:*

BIOL	201	Ecology, Adaptation and Diversity
BIOL	202	Genetics and Evolution
CHEM	111	General Chemistry I

*Plus one of:*

PHYS	109	General Physics I
PHYS	111	Introduction to Classical Physics I

*Plus:*

EDUC	Plan A or Plan B for licensure	
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### Physical Science with a Concentration in Physics

This program fulfills the physics (education) major.

PHYS	104	Astronomy
PHYS	111	Introduction to Classical Physics I
PHYS	112	Introduction to Classical Physics II
PHYS	225	Introduction to Modern Physics I
PHYS	226	Introduction to Modern Physics II
PHYS	261	Principles of Electronic Instrumentation: Analog Electronics
PHYS	262	Principles of Electronic Instrumentation: Digital Electronics

*Plus:*

Two additional physics courses other than 101

CHEM	111	General Chemistry I
CHEM	112	General Chemistry II
CHEM	201	Organic Chemistry I
CHEM	202	Organic Chemistry II
MATH	113	Calculus I
MATH	114	Calculus II
MATH	200	Multi-variable Calculus
MATH	210	Linear Algebra and Differential Equations
EDUC	Plan A or Plan B for licensure	

### Major in Social Studies

This is the licensure program for students planning to teach in this area in the secondary schools. This major does *not* exist independently of its purpose in providing teacher licensure and must include the required education courses.

POL	105	Politics and Government in Comparative Perspective
PSY	111	General Psychology
SOC	100	Introduction to Sociology
SOC	301	General Anthropology

*Plus one of:*

ECON	101	The American Economy
ECON	251	Principles of Macroeconomics

*Plus one of:*

HIST	111	Origins of the Modern World to 1550
HIST	112	The Modern World Since 1550

*Plus one of:*

HIST	113	Early America in Global Perspective
HIST	114	The Modern U.S. in Global Perspective

*Plus one of:*

HIST	210	Modern Latin America, 1800 to the Present
HIST	220	Introduction to Japanese History and Culture
HIST	340	Foundations of Chinese Civilization
HIST	341	The History of Modern China
HIST	345	Family and Women in Chinese History
HIST	347	The Modernization of Taiwan, Hong Kong, and China

*Plus one of:*

- GEOG 111 Human Geography
- GEOG 113 World Regional Geography

*Plus:*

Twenty-four additional credits in courses in any one of the above-listed departments. Choice of these courses subject to the approval of the department involved.

*Plus:*

- EDUC Plan A for licensure

**Major in Social Studies with a Concentration in History**

- HIST 111 Origins of the Modern World to 1550
- HIST 112 The Modern World since 1550
- HIST 113 Early America in Global Perspective
- HIST 114 The Modern U.S. in Global Perspective

*Plus at least one non-Western course from:*

- HIST 210 Modern Latin America: 1800 to the Present
- HIST 220 Introduction to Japanese History and Culture
- HIST 340 The Foundations of Chinese Civilization
- HIST 341 The History of Modern China
- HIST 345 Family and Women in Chinese History
- HIST 347 The Modernization of Taiwan, Hong Kong, and China

*Plus:*

Twelve additional credits in 300-level history courses chosen in consultation with the student's adviser

*Plus one of:*

- HIST 485, 486 Senior Seminar

*Plus one of:*

- ECON 101 The American Economy
- ECON 251 Principles of Macroeconomics

*Plus:*

- POL 105 Politics and Government in Comparative Perspective
- PSY 111 General Psychology
- SOC 100 Introduction to Sociology
- SOC 301 General Anthropology

*Plus one of:*

- GEOG 111 Human Geography
- GEOG 113 World Regional Geography

*Plus:*

- EDUC Plan A for licensure

At least 20 of the 36 history credits, including the Senior Seminar, must be taken at the University of St. Thomas.

**Teaching Minors**

**Teaching Minor in Biology**

A minor in biology in conjunction with any Secondary Teacher Licensure allows one to teach biology half-time for seven years, during which time a student can take the needed chemistry and physics courses to secure licensure for teaching biology.

- BIOL 201 Diversity and Adaptation
- BIOL 202 Genetics and Population Biology
- BIOL 204 Cellular and Molecular Biology
- CHEM 111 General Chemistry I
- GEOL 111 Introductory Geology I
- PHYS 104 Astronomy

*Plus one of:*

- PHYS 109 General Physics I
- PHYS 111 Introduction to Classical Physics I

*Plus two of:*

- BIOL courses numbered 300 or higher

## Teacher Education – Teaching Minors

### Teaching Minor in Chemistry

A minor in chemistry in conjunction with any Secondary Teacher Licensure allows a student to teach chemistry half-time for seven years, during which time the needed chemistry courses can be taken to secure licensure for teaching chemistry.

CHEM	111	General Chemistry I
CHEM	112	General Chemistry II
CHEM	201	Organic Chemistry
CHEM	300	Quantitative Analysis

*Plus:*

One elective course in CHEM

### Teaching Minor in English

ENGL	111	Critical Reading and Writing I
ENGL	112	Critical Reading and Writing II

Qualified students may substitute 190 for 111 and 112.

*Plus:*

ENGL	214	American Authors to 1914
ENGL	300	Advanced Writing: Theory and Practice
ENGL	305	Linguistics: The English Language

*Plus:*

Six additional credits in English courses numbered 200 or higher. Credit total must be at least 18 semester hours at the 200 level or above.

### Teaching Minor in Geology

A minor in geology in conjunction with any Secondary Teacher Licensure allows a person to teach geology half-time for seven years, during which time the student can take the needed physics and chemistry courses to secure licensure for teaching geology.

BIOL	201	Ecology, Adaptation and Diversity
BIOL	202	Genetics and Evolution
CHEM	111	General Chemistry I
GEOL	111	Introductory Geology I
GEOL	112	Introductory Geology II
GEOL	252	Geomorphology (includes climate and weather)

*Plus one of:*

PHYS	109	General Physics I
PHYS	111	Introduction to Classical Physics I

*Plus:*

Two additional geology courses

### Teaching Minor in Health Education

HLTH	345	Nutrition for Health and Fitness
HLTH	350	Personal Health and Wellness
HLTH	440	Health Curriculum and Administration
HLTH	455	Elementary Health Education: Methods, Resources, and Partnerships
		<i>or</i>
HLTH	460	Middle School and Secondary Health Education: Methods, Resources, and Partnerships
HLTH	462	Human Sexuality Education
PHED	356	First Aid and Safety and CPR Certifications (American Red Cross)

Instructor's certification in first aid and CPR must be valid when applying for teaching license.

### Teaching Minor in Language

#### French

FREN	212	Intermediate French II
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Twelve additional credits in French courses numbered 300 or higher, of which one course must be in each of the following areas: French language or composition; French literature; French civilization

(A total of 20 credits is required; four credits may be from prerequisites for FREN 212)

**German**

GER 212 Intermediate German II

GER 310 Advanced German

Eight additional credits in German courses, one of which must be in German literature

(A total of 20 credits is required; four credits may be from prerequisites for GER 212)

**Spanish**

SPAN 300 Oral and Written Spanish

A total of 20 credits in Spanish courses, including a minimum of 3 credits in each of: culture/

civilization; literature; grammar; linguistics (or SPAN 212)

**Teaching Minor in Physics**

A minor in physics in conjunction with any Secondary Teacher Licensure allows a student to teach physics half-time for seven years, during which time the needed physics and chemistry courses can be taken to secure licensure for teaching physical science.

*Either:*

PHYS 111 Introduction to Classical Physics I

PHYS 112 Introduction to Classical Physics II

*or*

PHYS 109 General Physics I

PHYS 110 General Physics II

*Plus:*

PHYS 104 Astronomy

PHYS 225 Introduction to Modern Physics

One approved course other than 101

**Theater (THR)**

Poletes (chair), Holonbek

The Department of Theater is administered jointly by the University of St. Thomas and The College of St. Catherine. Students from both campuses enroll in a variety of courses and participate in the year-round production of plays, films, and video. Courses enable students to gain a knowledge of history, theory, aesthetics and production of theater and film.

Three well-equipped theaters and an audio and television studio at St. Thomas and St. Catherine enable students to cooperate in the creation of musical and dramatic performances for college and metropolitan audiences. Producing an annual summer play for children provides outdoor theater experience.

Students major in theater concentrating their courses in one of these areas: Performance Arts – acting and directing, theater history and theory; Music/Theater – Opera; Theater Education.

Minors are available in Theater Performance and Theater History/Theory, and in Film (history/theory/production).

Special topics classes also are offered. These vary from theater make-up, movement and voice production to film courses concentrating on major film-makers/performers and ethical, political, and gender issues.

Students are encouraged to take advantage of the nationally respected professional arts community of the Twin Cities by engaging in experiential learning courses.

**Drama Honor Society**

Pi Epsilon Delta (since 1942 locally) recognizes scholarship and talent in directing, performance, writing, design and technical areas of dramatic art in theater, film, television. Candidates for membership in this national society must have demonstrated their abilities through classwork and in the field and have a GPA of 3.0 or higher.

**Major in Theater**

For students seeking careers in professional or academic theater who wish to concentrate in performance, direction, and design.

105 Stagecraft

215 Beginning Directing

315 Advanced Directing

412 Drama: Theory and Criticism

## Theater

### *Plus eight credits from:*

- 321 History of Theater I: Classical Through 17th Century
- 322 History of Theater II: 18th Century to Contemporary
- 323 History of Theater: American

### *Plus eight credits from:*

- 214 Beginning Acting
- 218 Acting for the Camera
- 314 Advanced Acting

### *Plus:*

Twelve additional credits in Theater courses

### **Teacher Licensure**

Students who wish to be licensed to teach speech/theater in the secondary schools, see Department of Teacher Education. Consult an adviser in Teacher Education and in Theater.

### **Minor in Theater Performance**

- 105 Stagecraft
- 214 Beginning Acting
- 215 Beginning Directing

### *Plus four credits from:*

- 321 History of Theater I: Classical Through 17th Century
- 322 History of Theater II: 18th Century to Contemporary

### *Plus four credits from:*

- 204 Oral Interpretation
- 253 Creative Dramatics and Children's Theater

### **Minor in Theater History/Theory-Criticism**

- 321 History of Theater I
- 322 History of Theater II
- 412 Drama: Theory and Criticism

### *Plus eight credits from:*

- COMM 170 Electronic Media and Society
- COMM 440 Classical Rhetoric
- THR 323 History of Theater: American
- THR 359 Film II: Textual Analysis

### **Minor in Film**

- 259 Introduction to Narrative and Non-Narrative World Cinema
- 260 History of Film: The Silent Era
- 261 History of Film: Sound Era, 1926 to Present Day
- 359 Textual Analysis of Film
- 360 Super 8 Film-making

### **105 Stagecraft**

An introduction to the technical aspects of theatrical production: how they relate to design interpretations, use of tools and equipment, building materials, construction and painting techniques, stage lighting equipment and procedures. Theoretical class work supplemented by weekly crew assignments on a stage production.

### **111 Introduction to the Theater**

Foundation in theater and drama for the non-major beginning student; orientation to the dramatic tradition through consideration of plays and playwrights from the Greeks to the present; history of theatrical customs, traditions and conventions as they affect modern stage design, acting, directing, costumes, make-up and criticism. Experience in seeing and analyzing CSC/UST and Twin City play productions and in producing a play. This course does not count towards a theater major. Open to all students.

### **204 Oral Interpretation**

Content and style of literature; analysis of selected works and projection of their meaning to an audience. Includes public performance. Attention to Reader's Theater.

### **214 Beginning Acting**

Provides a foundation for acting through examination of the research process essential to achieving physical and psychological characterization. Emphasis is on theory and the practical application of performance.

**215 Beginning Directing**

Introduction to the theory and craft of directing a production; areas of emphasis include play selection, analysis of script, casting, blocking, characterization, and rehearsal techniques.

**217 Production Design**

Interpreting the play for understanding of design in the theater; translation of written and verbal concepts into elements of line, mass, form and color as they relate to the problems of proscenium and non-proscenium staging. Emphasis variable.

**218 Acting for the Camera**

Acting for the camera is a laboratory course. The course illustrates the differences between stage acting and acting for the camera. Emphasis upon theory and the practical application of working with monologues, commercials, soap operas and scenes for the camera. Students will gain knowledge and experience of operating the cameras and working within a TV studio.

**253 Creative Dramatics and Children's Theater**

The combination of creative dramatics and children's theater enables students to investigate techniques of teaching drama to children; the course provides an understanding of children's needs and the psychology of play. The second half of the course will be devoted to producing a children's play or several final production projects.

**259 Film I: Introduction to Narrative and Non-Narrative World Cinema**

Analysis of the structure and social impact of film as an art form; extensive use of films in class; concentration on the fiction, documentary and animated film.

**260 History of Film: The Silent Era**

Examines the growth of popular film from the 16th century Italian camera obscura to the rise of Hollywood and the first talkies. Selected films will be studied in class and independently.

**261 History of Film: Sound Era, 1926 to Present Day**

Studies the ways in which such innovations as sound, color, wide-screen and present day computer technology continue to change world cinema. The impact of war and peace, economic conditions, nuclear age politics and the emergence of third world and feminist cinema will be examined as well. Selected films will be studied in class and independently.

**295, 296, 297, 298 Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

**314 Advanced Acting**

Study and practice in the art of developing characterization through research and performance of scenes. Examination of conventional acting styles. Work with properties and costuming, methods of rehearsals that lead to a final acting project.

Prerequisite: 214 or permission of instructor

**315 Advanced Directing**

Study of directing theory and practice from Stanislavsky to contemporary; practical directing experience through preparation of scenes and one-acts.

Prerequisite: 215 or permission of instructor

**321 History of Theater I: Classical through 17th Century**

The history and analysis of theater forms, Western and Asiatic, from ancient rituals to the 18th century with attention to the relationships between the plays and the audience, performers, and production methods of various periods.

**322 History of Theater II: 18th Century to Contemporary**

Examination of 18th, 19th and 20th century world theater with special attention to both the contemporary and historic perspectives.

**323 History of Theater III: American**

Development of theater in the United States from its 17th century roots to the present.

**334 Voice: Musical Theater Emphasis****1 credit**

Designed for students participating in the music/theater program. Repertoire emphasizes literature from operetta and musical comedy. One 50-minute lesson per week. Jury examination is required.

**359 Film II: Textual Analysis**

An approach to film as text – as a constructed weave of images, sounds, speech, music and writing tracing the patterns and forces by which film produces its meanings and effect for spectators. Study of the impulses of the structuralist and semiotic movements which have combined since 1970 with those of feminism, Marxism and psychoanalysis.

Prerequisite: any beginning film course or permission of instructor

## Theology

### 360 **Film III: Super 8 Film-making**

The course makes available to each class member all necessary Super 8 equipment, but assumes no prior knowledge of camera use, editing, sound recording, animation or projection. These areas are covered in the class through specific assignments, class discussions and special workshops conducted by professional filmmakers.

Prerequisite: 259 or equivalent is recommended but not required

### 412 **Drama: Theory and Criticism**

Study in abstract and applied dramatic theory. Selected playwrights and bodies of criticism that surround their work are examined closely in relation to various theoretical systems. Aristotle through post-modern.

### 475, 476, 477, 478 **Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 483, 484, 485, 486 **Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 487, 488, 489, 490 **Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 491, 492, 493, 494 **Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 495, 496, 497, 498 **Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

## Theology (THEO)

Cory (chair), Boyle, Brady, Briel, Cavanaugh, Cunningham, Hallman, Harrington, Hollerich, Hunter, Joncas, Jordon, Kennedy, King-Lenzmeier, Landry, Naughton, Nichols, Patton, Penchansky, Posey, Smith, Snyder, Spencer, Stevenson, Thompson, Windley, Wojda, Yee, Cytron\*, Foley\*

In every historical period and cultural context, there are certain questions which continue to be of pervasive concern for human beings: the nature of the universe, the existence and nature of God, the nature of human beings, the proper relationship of a human being to his or her world, the source of evil and the possibility of redemption.

The Department of Theology has designed a sequence of three courses which acquaints students with the nature and importance of these questions and assists students in articulating for themselves responses formulated in light of their knowledge of the Catholic tradition and the Christian faith. These courses contribute in a coherent and cumulative way to the students' liberal arts education in the development of skills in writing, reading and critical thinking.

The first course, "The Christian Theological Tradition," provides students with a theological framework within which individuals and groups have addressed questions of faith and human existence throughout Christian history. Therefore, the core readings for the course are drawn from the Bible and from classical writers of the Christian tradition. The course also provides students with an opportunity to begin to reflect critically on the content of the Catholic tradition in the diversity of its cultural expressions and in the broader context of other Christian traditions and faiths. Finally, it provides students with a basic level of theological literacy as a prerequisite for their second and third level courses.

The second-level courses all focus on the themes of revelation, the theology of the human person, relationships between the believing community and the wider culture, and worship and spirituality. On this level, courses differ from each other on the basis of particular theological areas of inquiry and are tied together through the four themes. Students will have the opportunity to deepen and expand in content and skill, the theological literacy developed on the first level. In addition, they do so in view of the new methodological achievements of the modern period.

Third-level courses are seminars designed for interactive learning, allowing students the opportunity to engage in questions which relate to faith and culture. From within a larger selection of courses, students learn how cultures shape faith and how faith informs cultures. Emphasis on this level is given to those issues which connect theology to other disciplines in the liberal arts tradition, and students will be expected to make more sustained use of analytical skills.

Beyond the three levels which introduce and develop the skills of all students in theological

inquiry the department offers a way to study theology further through its major and minor. The major in theology is an intensive investigation of theological questions in biblical, historical, systematic, and moral theologies. The minor provides students majoring in other disciplines a certain core of theological questions and analyses. Students also may choose to double-major in theology and another discipline.

### **National Honor Society for Religious Studies and Theology**

Theta Alpha Kappa seeks to bring together, both intellectually and socially, students, teachers, and writers on topics related to Religious Studies and Theology.

The Society also fosters excellence in learning, teaching and research. It supports such scholarship in the context of a community of friendship and loyalty. Students are eligible for membership upon completion of 12 credits in either Religious Studies or Theology, and if they meet the academic requirements of the Society.

### **Major in Theology**

101 The Christian Theological Tradition  
215 Christian Morality  
301 Theological Methods and Resources

*Plus:*

Four credits in Old Testament  
Four credits in New Testament  
(one course must be 205 or 210)  
Four additional credits in systematic theology  
Four credits in historical theology

*Plus:*

Eight elective credits in theology courses

*Plus either:*

485, 486 Seminar

*or*

497, 498 Individual Study

### **Minor in Theology**

101 The Christian Theological Tradition  
215 Christian Morality

*Plus:*

Four credits in Sacred Scripture  
Eight additional credits in theology

*Plus either:*

Four credits in systematic theology

*or*

Four credits in historical theology

At least eight of the credits used to fulfill the minor must be at the 300-level or above. The department recommends either 301 or 485 be chosen as one of the two electives for the minor.

### **Courses in areas of theological study:**

#### *Sacred Scripture*

205 (OT), 210 (NT), 316, 330 (OT), 335 (NT), 340 (NT), 342 (NT), 343 (OT & NT), 345 (NT), 350 (OT), 352 (OT), 353 (OT), 355 (OT), 365 (OT)

#### *Historical theology*

220, 308, 310, 312, 318, 319, 320, 354, 361, 362, 363

#### *Systematic theology*

200, 301, 302, 304, 305, 306, 309, 313, 314, 317, 331, 332, 333, 334, 337, 358, 360, 367, 368, 370, 373, 374, 375, 380, 385, 393

#### *Moral theology*

215, 303, 307, 309, 315, 325

### **101 The Christian Theological Tradition**

This course is designed to acquaint students with the contents of the Bible and with Christian history, especially in the context of the Catholic tradition. Through careful reading of a core of common texts and a variety of written assignments, students are expected to attain a basic understanding of human experience in the light of major areas of theology, including revelation, God, creation, Jesus and the Church.

### **200 Christian Belief Today**

This course explores both traditional and contemporary interpretations of the most significant doctrines of the Catholic, Orthodox and Reformed traditions. It emphasizes the importance and relationship of scripture, tradition, experience, and reason as sources for Christian theology. It will focus on the ongoing formation of doctrines, with special emphasis on the role of grace in history and human experience. Particular topics, which vary from year to year, may include: the nature of God; the person and mission of Jesus, the Holy Spirit, the Church, the sacraments and the "end" of the world.

Prerequisite: 101

### **205 Old Testament**

An intensive reading and discussion of the Old Testament, also known as the Hebrew scriptures. The course investigates methods of biblical interpretation and the literature and theologies of the Israelite people in their ancient Near Eastern context. In addition, this course explores the Old Testament as a foundational document for the Jewish and Christian traditions (both ancient and modern) in the development of doctrine, in the expressions of worship and in the articulation of moral principles.

Prerequisite: 101

### **210 New Testament**

This course involves the student in an intensive historical, literary and theological reading of major portions of the New Testament in the Jewish and Greco-Roman contexts and from the perspective of modern methods of biblical interpretation. In addition, the course explores the New Testament as a foundational document for modern Christian traditions in the development of doctrine, in the expressions of worship and in the articulation of moral principles.

Prerequisite: 101

### **215 Christian Morality**

This course is an introduction to the principles, methods and topics of Christian theological ethics. The following themes will be addressed: the relation of Christian faith to moral reflection and decision making (both individual and social); the contribution of the Christian tradition to the understanding of the human person (including freedom, sin, conscience, character and grace); the role of the believing community in its relation to culture; and the connection of worship and spirituality to the Christian moral life. Some application will be made to selected issues in personal, professional and social ethics.

Prerequisite: 101

### **220 Early Christian Theology**

A theological and historical introduction to the origins and development of the Christian church from the first to the fifth centuries. Special attention will be given to the historical emergence of Christian doctrines, creeds and canon; the formation of Christian understandings of the human person; the development of liturgical and sacramental traditions; and the interaction of Christianity with other ancient cultures. Contemporary approaches to the study of Christian origins will be emphasized.

Prerequisite: 101

### **301 Theological Methods and Resources**

The role of scripture, history, tradition and common human experience in the understanding of religious mystery and the systematic expression of that mystery in the Christian tradition. Examination of both ancient and contemporary formulations of theological knowledge; requirements for theological scholarship and consideration of certain key theological questions.

Prerequisite: 101

### **302 The Second Vatican Council**

The roots of Vatican II in the unfinished work of Vatican I. Movements and events in the period between the councils. An analysis of the major documents of the Second Vatican Council with special attention to the dogmatic and pastoral constitutions on the Church.

Prerequisite: 101

### **303 Theology and the Biomedical Revolution**

Contributions of Christian faith to reflecting upon, understanding and resolving the issues and ethical questions raised by revolutionary developments in the life sciences, e.g. innovative birth technologies, genetic manipulation and control, human experimentation, prolonging life and allocation of scarce medical resources.

Prerequisite: 101

### **304 Faith**

The problem of religious belief in a secular society. Historical evolution of the problem. The religious dimension of human experience. Different understandings of God.

Prerequisite: 101

**305 Theologies of Justice, Peace, Prosperity and Security**

Various theological views of reality held by participants in the world-wide debate on justice and peace, and how their arguments are affected by presuppositions such as the nature of reality, human nature, revelation and sacred scriptures, sin, salvation, power and the purpose and destiny of human life. The variety of views will be emphasized with special attention to various Roman Catholic traditions (papal social teaching, just war theory, liberation theologies). Other examples will be chosen from among Christian traditions (peace churches, the religious right), non-Christian religions (Judaism, Islam, Far Eastern religions) and other traditions (Marxism, capitalism, secular humanism). This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 101

**306 Christian Faith and the Management of Wealth**

Managers of the modern organization (business, labor, education, health, government) are responsible for much of society's material and intellectual wealth. Managing such wealth well is of great human urgency. In the Christian theological tradition, managing wealth entails social responsibilities that must be managed toward human fulfillment and the common good. This course explores the Christian theological sources on this topic and examines the implications of this theology for contemporary organizational issues and problems.

Prerequisite: 101

**307 Human Sexuality: A Christian Perspective**

An introduction to the meanings and history of human sexuality across the Christian tradition, followed by an examination of selected specific sexual ethics issues (married sexuality, contraception, singleness, feminism, homosexuality and celibacy).

Prerequisite: 101

**308 Theology of the Protestant and Catholic Reformation**

An investigation of the origins of the Protestant tradition in the 16th century and the Roman Catholic response, especially as articulated at the Council of Trent. Attention will be given to the theological issues which emerged.

Prerequisite: 101

**309 The Virtues**

In current Roman Catholic and Protestant moral theology the tradition of the virtues has re-emerged as a significant focus of discussion. This seminar proposes to direct students to at least three aspects of this conversation: the warrant for retrieving the language of the virtues; the important historical contributions to that discussion; and the contemporary implications for current moral theology. Special attention is given to the cardinal virtues as well as the theological virtues of faith, hope and charity.

Prerequisite: 101

**310 Christian Worship**

A study of the history, nature and principles of worship and the chief forms in which it finds expression in Christianity.

Prerequisite: 101

**312 Classic Shapers of Christian Theology**

A study of one author who in a major way has affected the development of the Christian theological tradition. Primarily a close reading of key texts by this author. Some attention to the author's historical context and subsequent influence. This course may be taken twice.

Prerequisite: 101

**313 Christian Sacramentality**

The sacramental principle. Symbols and rites. Special emphasis on Baptism and the Eucharist in Christian life.

Prerequisite: 101

**314 Christian Spirituality**

This seminar explores the diverse expressions of Christian spirituality. Students will discuss the definitions given to the term "spirituality" and consider methodological issues in the academic study of spirituality whether these are historical, anthropological or theological in approach. Emphasis is placed on a wide reading in the Christian tradition of both primary and secondary literature in order to assist the student in grasping the integral link between the lived faith of Christians and the theological articulation of that faith. Spiritualities will be seen in the context of their historical emergence, the unique contributions each makes to Christianity, and the link they demonstrate between spiritual life and theological insight.

Prerequisite: 101

**315 Christian Marriage**

Marriage, sacrament of Christ's love and the sacramentality of human love; Christian attitudes toward sexuality; marriage and the family and related issues in the light of culture and Christian theology.

Prerequisite: 101

## Theology

### **316 Scriptural Interpretation**

Introduction in depth to responsible, scholarly interpretation and application of Sacred Scripture by study of a single book or small group of books of the Old and/or New Testament. The book or books selected for a particular semester will be specified in the class schedule.

Prerequisite: 101

### **317 North American Philosophical Theology**

An exploration of a continuous tradition of philosophical theology drawn especially from the works of Edwards, Brownson, Royce, Dewey, Pierce, James, Whitehead and Hartshorne for possible use in contemporary Catholic theology.

Prerequisite: 101

### **318 Theology from Augustine to Aquinas**

A study of the development of Christian theology from St. Augustine to St. Thomas Aquinas. Attention will be given to the formation of the classical Christian views of faith/reason, grace/nature, God/creation.

Prerequisite: 101

### **319 Creeds, Councils and Controversies of the Early Church**

A study of three theological controversies of the third, fourth, and fifth centuries which have given a definitive shape to the Christian tradition: (1) the development of the doctrine of the Trinity and the creeds of the councils of Nicaea and Constantinople I (325 and 381); (2) questions on human nature, sin, and grace in the dispute between Augustine and Pelagius; (3) the development of the doctrine of the "two natures" in Christ as defined by the Council of Chalcedon (451). Authors to be read include Origen of Alexandria, Athanasius, Gregory of Nyssa, Gregory Nazianzus, Cyril of Alexandria, and Augustine.

Prerequisite: 101

### **320 Readings from St. Thomas Aquinas**

An introduction to the theology of St. Thomas Aquinas, his influence and his contemporary significance.

Prerequisite: 101

### **325 The Catholic Social Traditions (CATH 310)**

This course examines Catholic reflection on social structures and patterns of moral behavior as they are expressed in economic, social and political contexts. Focus topics might include: social virtues, the role of religion in the public realm, understanding of the person in relation to society and the state, the defense of the dignity of the person, the promotion of the common good, the use of force and the meaning of justice within and between communities. Possible sources for this course might include selections from classic biblical, patristic and medieval texts; papal, conciliar and episcopal documents; writings of modern and contemporary Catholic social theorists; and social movements inspired by the tradition.

Prerequisite: 101

### **330 Wisdom Writings in the Biblical Tradition**

Old Testament Wisdom writings: their sources in Middle Eastern literature and place in Biblical thought. Treatment of wisdom themes in the Old and New Testaments.

Prerequisite: 101

### **331 Christianity and World Religions**

This course is a comparison of the teachings and practices of Christianity with the teachings and practices of selected non-Christian religions, for example American Indian (Lakota), Judaism, Islam, Hinduism and Buddhism. The aim of the course will be to clarify similarities and differences between Christianity and other religions, to reflect on the problem posed by religious pluralism in modern culture, and to develop a Christian theology of world religions. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 101

### **332 Judaism**

An examination of Judaism, its history, literature, religious concepts, practices and personalities. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 101

### **333 Contemporary Judaism**

During the last two centuries freedom of movement, new political rights and modern science have all changed the basis of Jewish religious life. The migration from the old world to the new, the devastation of the Holocaust and the creation of the State of Israel have helped pull this revolution along at a frenzied pace. The course focuses on the changes, both theological and social, of these past two centuries which have resulted in a multiplicity of Judaisms. Reading, lectures and discussions,

along with some film highlights, will enable the student to discover the many ways in which modern Jews live out their religious and communal lives with their fellow Jews and in the pluralistic setting of America. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 101

### **334 Islam**

This course is designed to familiarize students with the basic beliefs and practices of Islam in its diverse cultural expressions worldwide, including worship, family life and intellectual and artistic traditions. Through a close reading of Qur'anic and biblical texts, students will consider how Islam is both similar to and different from the other two major monotheistic faiths, Judaism and Christianity. Finally, the course will examine how both Islam and Christianity are meeting the challenges of modern culture. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 101

### **335 Epistles of St. Paul**

Identification of Paul's principal themes; their relation to the mystery of Christ and the Church.

Prerequisite: 101

### **337 Evil and the Suffering of God**

This seminar analyzes some of the most profound evils of the modern era, and attempts to relate them to traditional and contemporary theological discussions of divine responsibility. It is especially concerned with the unique features of modern evils, including their presence in certain social structures, political systems and scientific technologies. Specific subjects for study, which will vary from year to year, may include: the Holocaust; the slave trade; genocidal colonization in Africa, Asia and the Americas; and the threat of nuclear annihilation. The course investigates how religious faith might be re-interpreted in light of these evils, and whether the notion of a suffering deity is theologically appropriate for Christian faith.

Prerequisite: 101

### **340 The Gospel of John**

Background and development of the Johannine writings of the New Testament: the Gospel and letters. Recent trends of interpretation.

Prerequisite: 101

### **342 Greek Reading and Exegesis: John (GRK 342)**

Careful reading of the Gospel of John in Greek combined with theological commentary from the Greek text. Adapted to intermediate level Greek students. Same as GRK 299.

Prerequisite: 101; GRK 112 or equivalent

### **343 Apocalyptic Literature**

An investigation of the apocalyptic literature of the Bible as represented in such writings as Daniel and the Revelation of John. Focus on the origin and development of the apocalyptic tradition.

Prerequisite: 101

### **345 Gospels of Matthew, Mark and Luke**

Oral Gospel traditions, the synoptic problem, evangelists' community background and theological viewpoints. The Acts of the Apostles.

Prerequisite: 101

### **350 Historical Literature of the Old Testament**

Special concentration on the historical books of the Old Testament and their theological content in the context of ancient historiography.

Prerequisite: 101

### **352 The Pentateuch**

Critical and in-depth investigations of various Pentateuchal traditions: Primeval Stories; Patriarchs; Exodus; Sinai Covenant; Laws; Entry into Canaan. Particular emphasis will be focused on their origin, transmission, mutual relationships and final theological unity.

Prerequisite: 101

### **353 Women and the Old Testament**

This seminar will explore the topic of women and the Old Testament from several different vantage points. In the first place, it will try to reconstruct the status and roles of women during the biblical periods at various points in their ancient Near Eastern context. This reconstruction will involve an examination of the legal and narrative material of the Old Testament and cross-cultural studies on women and family life in non-industrial countries. Secondly, the seminar will investigate the conceptions of gender in the Old Testament, including key texts such as the creation stories, the stories about the ancestors, the stories about family honor, the female characters of the historical books of the Bible, the books named after women (Ruth, Esther, Judith), the texts symbolizing woman as evil

(e.g., the foreign woman, the adulterous wife, the whore of Babylon). Finally, the course will study the interpretive work of biblical scholars and how they utilize various historical and literary-critical methodologies in order to bring issues of gender, race, and class to bear upon the biblical text. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: THEO 101

### **354 Women and the Christian Tradition**

This course will explore the ways in which the Judeo-Christian religious tradition has profoundly influenced our society's definition of women. We will focus on what some of the major works of this tradition assert about the nature and place of women in their particular historical communities. We will also read religious literature by women in order to acquire a sense of women's religious experience both throughout history and in the present day. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: THEO 101

### **355 The Psalms**

An in-depth study of the Psalms as confessions of the worshipping community of Israel throughout its history. Particular attention will be focused on the literary expression, life setting and theological content of these Psalms.

Prerequisite: 101

### **358 The Church**

A study of past and present models of the Church; implications of these models for the status and functions of laity, forms of ministry and authority, and the relationship between the churches.

Prerequisite: 101

### **360 Contemporary Catholic Theologians**

Study of one or more contemporary Catholic theologians, emphasizing their special contribution to theological reflection and religious praxis.

Prerequisite: 101

### **361 Black Religious Experience**

This course explores Black theological development as a cultural functional and cognitive dimension of traditional Afro-American society, including belief, worship, expression, symbol, spirituality and God. Attention will be given to the meaning and roots of the notions of culture, nationalism and racism as they appear as questions in Black theological thought, including African religions, Islam and The Nation of Islam, along with Afro-American Christian theologies. African as well as Afro-American religious experience combined with the affirmation of the Christian creed are identified in order to evaluate the questions of Black Catholic theology in America today. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 101

### **362 Twentieth Century American Catholicism**

This course will emphasize the impact of cultures on one another in the growth of the Catholic community in today's United States. These world and theological views and their practical application in the piety, politics and everyday life of Catholics will be the primary focus. By summarizing significant events and characters in the history of the Catholic experience, the student will develop an understanding both of the different ethnic experiences and their theological concerns which created a pluralism among American Catholics that makes the Church of the United States truly catholic.

Prerequisite: THEO 101

### **363 Christianity and Politics**

A theological investigation of changing relationships between Christianity and the political order, principally in religious terms as understood by Christians themselves, but also from the vantage point of government. Emphasis in the first half of the course is on the foundational events of the New Testament and the early Christian era, and in the second half on Christianity's experience with secular and democratic modernity in America. The aim of the course is to measure the effect, in changing historical contexts, of persecution, establishment, and dis-establishment, on a religion which professes both to be rooted in transcendent reality, and to have direct implications for life in this world. Primary readings from scripture, ancient and modern theology, speeches, sermons, Supreme Court decisions, and political, sociological and religious reflections on the American experiment with democracy and freedom of religion.

Prerequisite: THEO 101

### **365 Prophetic Literature of the Old Testament**

Special concentration on the prophetic books of the Old Testament: ancient Near Eastern background, characteristics and teachings of the prophets, their relationship to the Israelite traditions.

Prerequisite: 101

**367 Protestant Theology: Sources and Influence**

A study of the origins and development of this major “way” of being Christian. An investigation of the theological bases of the Protestant Reformation of the 16th century (issues of grace, faith, scripture, church authority in the writings of Luther and Calvin); the development of Protestant “liberalism” in the 18th and 19th centuries (as Christianity confronts modernity); “neo-orthodoxy” as a 20th-century critical response to the moment within the liberal tradition; the plurality of contemporary Protestant theological options, with a focus on one author.

Prerequisite: 101

**368 Lutheran-Catholic Dialogue**

An historical and systematic study of the Reformation, the Counter-Reformation and the contemporary ecumenical discussions of theologians in both churches. These latter discussions include a study of the topics in the jointly published volumes of the Lutheran-Catholic Dialogue in the U.S.

Prerequisite: 101

**370 Ecology, Creation, and Providence**

An introduction to the Christian theology of ecology, creation and providence (i.e., God's governance and guidance of the universe and human history). These topics are studied in conjunction with modern scientific theories of evolution, and there is an attempt to harmonize the Christian view of creation with the modern scientific view. The course also focuses on the importance of human cooperation with God in the providential care of creation. This entails a study of ecology and the environment. Finally, the fulfillment of creation is related to the biblical notions of the Resurrection and the Kingdom of God.

Prerequisite: 101

**373 The Person and Mission of Jesus Christ**

New Testament understanding of some titles of Jesus such as Christ, Lord, Savior. Development of Christological doctrine in the early centuries. Consideration of some modern Christological questions.

Prerequisite: 101

**374 Atheists and Apologists**

This seminar explores the rise of modern atheism, from the 17th century to the present day. It employs primary texts and focuses on original thinkers of major significance. Students will undertake a close, detailed reading of texts which contributed to the rise of atheism, in tandem with texts providing an intellectual defense of religious belief. The texts chosen may include both philosophical and literary works, and are selected from writers such as Pascal, Voltaire, Hume, Newman, Nietzsche, Dostoyevsky, Sartre and Murdoch.

Prerequisites: 101 and PHIL 115

**375 Theology in the Enlightenment**

An analysis of the effects of the empirical and human sciences on the classical understanding of God. Concentration will focus on the theological formulations of Descartes, Kant, Hegel and Marx, with attention given to Darwin, Nietzsche and Freud. A study of theological responses to modernity: Denziger Theology, Schleiermacher, Blondel, de Chardin, Rahner and Lonergan.

Prerequisite: 101

**380 Grace, Hope and Eschatology**

This course explores the connections among the life of grace, Christian hope and the traditional “last things” – death, judgment and eternal life – using the death-resurrection of Jesus as the foundation and point of departure for study.

Prerequisite: 101

**385 Christian Mysticism**

An examination of the profound knowledge of God, called mystical or contemplative, capable of being experienced in the consciousness of Christians as a result of their union with God through grace, charity and faith. A brief examination of the history of Christian mysticism: authors, literature, biblical bases. A brief comparison with pagan Greek, Jewish Old Testament and Far Eastern mysticism.

Prerequisite: 101

**393 Newman and the Nineteenth Century Catholic Revival**

A study of some of the responses to the emerging questions of history, subjectivity and authority, including those of the first Vatican Council, but with special emphasis on the thought and works of Cardinal Newman.

Prerequisite: 101

**395, 396 Special Seminar**

**2 credits**

## Urban Studies

### 397, 398 Special Seminar

The subject matter of the seminar, announced in the annual *Class Schedule*, will vary but will not duplicate existing courses.

*400-level courses cannot be used to fulfill the general requirements in Faith and the Catholic tradition.*

### 415 Christian Ethicists, Classical and Modern

Study of a select number of Christian Ethicists – classical and/or modern, Catholic and/or Protestant – with a focus on their understanding of Christian moral life, elements of methodology and thinking about specific issues.

Prerequisite: 101

### 445 Theology and Education

A study of topics and procedures for teaching religion. Using previously acquired theological knowledge, the course will examine the tasks of translating and transmitting that knowledge as a series of insights to elementary and secondary students. The course will include supervised teaching experience.

Prerequisite: 101

### 475, 476, 477, 478 Experiential Learning

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### 483, 484, 485, 486 Seminar

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### 487, 488, 489, 490 Topics

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### 491, 492, 493, 494 Research

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

### 495, 496, 497, 498 Individual Study

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog. An independent research thesis under the direction of a theology faculty member. The results of this thesis, at the student’s option, may be presented at the annual Senior Forum, in which theology majors present their research work before theology students and theology faculty members.

## Urban Studies

Hoffman (POL), director

Urban Studies is an interdisciplinary field of inquiry which treats the city as responsible for the creation of unique patterns of social and physical organizations. The minor provides students with an opportunity to study the “urban way of life” using the insights generated by the traditional social science disciplines. By exposing themselves to such variety, students obtain a more comprehensive and integrated view of the city than is possible within a single discipline. The minor is recommended for those students interested in entering careers or fields of academic study relating to urban issues and problems. These include fields such as public administration, urban planning, transportation, and planning. The minor also is recommended for students with career interests in the non-profit sector as well as for those interested in private sector careers which require substantial interaction with the public sector. Students are also encouraged to participate in the HECUA (Higher Education Consortium for Urban Affairs) programs. Descriptions of the HECUA programs are located under that title in this catalog.

### Minor in Urban Studies

ECON	252	Principles of Microeconomics
ECON	333	Regional and Urban Economics
HIST	377	The History of the Twin Cities
POL	303	Urban and Metropolitan Politics and Government
SOC	332	Urban Sociology

**Visual Communication**

*See Department of Journalism and Mass Communication.*

**Washington Semester**

Farlow (POL), adviser

The University of St. Thomas is affiliated with the American University's Washington Semester Program, Washington, D.C.

Students selected from across the nation to participate in the program have the option of studying one of several subjects: American Government and Politics, Public Law, Foreign Policy, Peace and Conflict Resolution, International Business and Trade, International Environment and Development, Economic Policy, and Justice.

The Washington Semester involves seminars, research and internships drawing on governmental and private organization resources in the Washington area. Nominations to participate are made by the university, with final acceptance decided by American University.

Upon successful completion of four courses, 16 semester credits are earned and transferred to St. Thomas.

IDSC 310 Washington Semester

**Women's Studies (WMST)**

Johnson (PSY), director

The Associated Colleges of the Twin Cities (ACTC) offers a cooperative major in Women's Studies. The purpose of this inter-college (Augsburg, Hamline, St. Catherine, St. Thomas), inter-departmental major is to enable students to examine critically women's contributions and experiences in various historical and cultural contexts.

Students in the program deepen their understanding of the artistic, economic, domestic, spiritual, intellectual and political communities to which women of various ages, classes and societies belong. They also learn how to analyze the social forces and assumptions which have shaped women's lives on individual, national and global levels.

A flexible, interdisciplinary program which combines theoretical, practical and research components, it provides preparation both for advanced study and for professional work, for example, in organizations focusing on women and in human relations departments of corporations.

**Major in Women's Studies**

205 Foundations in Women's Studies

480 Women's Studies Seminar

*Plus:*

One Internship course (designated as Individual Study)

At least eight credits in Humanities

At least eight credits in the Social Sciences and Natural Sciences

Four credits in Multicultural or Ethnic Studies

Eight elective credits chosen from the Humanities and/or the Social Sciences and Natural Sciences

(At least twelve credits in Humanities, Social/Natural Sciences, and Multicultural Studies must be at the 300- or 400-level.)

**Minor in Women's Studies**

205 Foundations in Women's Studies

*Plus:*

Eight credits in Humanities

Eight credits in Social Sciences and Natural Sciences

*Recommended:*

480 Women's Studies Seminar

The seminar can count as one of the humanities, social science, or natural science courses.

**205 Foundations in Women's Studies**

This multi-disciplinary course is designed to raise awareness of women's status and women's diversity; to critically examine disciplines and social practices through the lens of feminist theory; to recover past achievements of women and survey the work that women do now; to expand perspectives; and to provide a basis for critical evaluation of future learning. Available each semester on at least one consorsial campus, usually offered at UST Spring semester. This course fulfills the Human Diversity requirement in the core curriculum.

### 475, 476, 477, 478 **Experiential Learning**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 480 **Women's Studies Seminar (formerly 485)**

This advanced capstone course for the Women's Studies major is a multi-disciplinary seminar usually taken during the student's senior year. The course will include student research and presentations that incorporate feminist theory. It will rotate among the different campuses of the ACTC and may be offered in collaboration with other disciplines.

Prerequisite: 205

### 483, 484, 485, 486 **Seminar**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 487, 488, 489, 490 **Topics**

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 491, 492, 493, 494 **Research**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### 495, 496, 497, 498 **Individual Study**

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

### **Courses available for this program**

Letter following the course number indicates the institution offering the course:

- A Augsburg College
- C The College of St. Catherine
- H Hamline University
- T University of St. Thomas

Courses having a potential for duplication of material are marked with an asterisk (\*). Students should consult with the director of the program to avoid duplicating courses. Credit will not be given toward the major for two courses that overlap substantially in content. Students cannot satisfy more than one distribution requirement within the program with any given course.

Topics courses in any of these categories may be selected with the approval of the program director.

### **Humanities Courses**

- ART 352A\* Women and Art
- ENG 282A\* Women and Fiction
- REL 441A\* Feminism and Christianity
- SPC 414A\* Feminist Rhetoric
- ENG 290A\* Women and Literature
- HIS 356C\* Women in America
- PHIL 320C\* Business Ethics
- PHIL 390C\* Feminist Philosophy
- SPCM 207C\* Gender and Rhetoric
- SPCM 211C\* Leadership Communication
- THR 299C Women and Film
- THEO 338C\* Women and the Bible
- THEO 385C\* Sexuality and Spirituality
- THEO 390C\* Women Mystics
- ENG 357H\* Women and Literature
- PHI 120H\* Introduction to Feminist Theory
- REL 325H\* Women and Religion
- COMM 340T\* Rhetoric of Race, Class and Gender
- ENGL 340T\* Women's Literature: Critical History
- ENGL 341T\* Women's Literature: Critical Issues
- THEO 354T\* Women and the Christian Tradition

### **Social Science and Natural Science**

- INS 233A Women: A Cross Cultural Perspective
- INS 265A\* Women in American Culture
- PSY 371A\* Psychology of Gender

BIO	112C*	Biology of Women
IDSC	291C*	Anatomy of Violence
PSY	315C*	Psychology of Adulthood and Aging
SOWK	270C*	Emerging Workstyles for Women
SOC	321C*	Sociology of Marriage and the Family
SOC	345C*	Sociology of Women in Society
ANT	153H	Human Evolution
BIO	151H*	Human Biology, A Feminine Perspective
EDUC	375H	Herstory of Education
POL	343H	Gender Politics
SOC	333H	Sex Roles
SOC	337H*	Marriage and the Family
BLAW	369T	Gender Issues and the Law
HIST	368T*	Women in the United States
IDSC	291T*	Anatomy of Violence
JOUR	325T	Gender, Race and Mass Media
PSY	205T*	Psychology of Women
SOC	321T*	Marriage and the Family
SOC	355T*	Gender in American Society

**Multicultural or Ethnic Studies**

INS	231A	Religion in African-American History
INS	232A	Blacks in America: An Introduction to African-American Studies
INS	233A	Women: A Cross Cultural Perspective
INS	260A*	Contemporary American Indians
INS	320A	American Indian Women
SOC	325C*	Cultural Anthropology
SPCM	210C*	Intercultural Communication
ANT	333H*	North American Indians
SOC	335H*	Sociology of Race and Ethnicity
ARTH	285T	Art of Africa & the Diaspora
ARTH	291T	Asian Art
COMM	210T*	Intercultural Communication
SOC	301T*	General Anthropology
SOC	351T*	Race and Ethnicity

## Graduate Information

### Graduate Programs and Schools

An overview of the various graduate degrees, programs, and non-credit offerings is presented in the *Graduate Catalog* which may be requested from the office of the associate vice president for academic affairs.

All graduate programs publish detailed catalogs.

### Graduate School of Applied Sciences and Engineering

The Graduate School of Applied Sciences and Engineering has programs in manufacturing systems engineering and in software engineering.

#### Graduate Programs in Manufacturing Systems

The University of St. Thomas offers four master degree programs and a graduate credit certificate program in the manufacturing field. These offerings are: the ABET accredited Master of Manufacturing Systems Engineering, a Master of Science in Manufacturing Systems, a Master of Business Administration with a manufacturing concentration, a Master of Science in Technology Management, and a certificate in manufacturing systems.

The programs are designed for executives, managers and professionals in technology, engineering and manufacturing who desire to improve their skills and learn new engineering, manufacturing and technology management methods.

The department also offers short courses, seminars and mini-series for technical and non-technical professionals.

#### Graduate Programs in Software

Graduate Programs in Software offer four masters degrees and three graduate credit certificates. These offerings are: a Master of Software Design and Development, a Master of Software Systems, a Master of Science in Software Engineering, and a Master of Software Systems. The graduate credit certificates are in software design and development, advanced study, and information systems.

These programs are designed for systems as well as applications software engineers, analysts, specialists and user liaisons. This program emphasizes the application of theory to a workplace environment. The department also offers seminars and a miniseries (12 lectures for CEU credit) for technical persons and one for non-technical professionals.

### Graduate School of Arts and Sciences

The Graduate School of Arts and Sciences offers three degrees. These are Master of Arts degrees in Art History, English and Music Education.

### Graduate Program in Art History

The Master of Arts in Art History is a two-year course of advanced study designed to provide comprehensive and intensive training in the history of art and its methodologies as professional preparation for academic, museum, and teaching careers. The program combines in-depth research and theoretical scholarship with opportunities for practical training in museum studies and other arts-related fields. The broad-based curriculum reflects the interdisciplinarity and culturally diverse expertise of the faculty, and emphasizes the contextual exploration of visual and material culture. A total of 36 credits, a qualifying paper, an oral examination, and reading knowledge of one foreign language are required for the degree.

### Graduate Program in English

The Department of English offers the Master of Arts degree. The program is a flexible one that allows students to develop a concentration specific to their needs and interests. Possible concentrations include English and American literature, creative writing, expository writing, multicultural literature, rhetoric and writing pedagogy.

### Graduate Programs in Music Education

The Master of Arts in Music Education serves an international group of professional music educators with concentrations in the areas of general music (Orff and Kodály), instrumental and choral music. Courses are taught in summer and on Saturdays during fall and spring semesters by a distinguished guest faculty, many of whom regularly teach children.

The program's content highlights both theory and application; teaching practice is addressed through analysis of a required videotape of classroom work and courses in the field of concentration. Artistic musicianship is demonstrated in the required performance audition, entrance examination and core courses in music history, literature and theory. The final thesis is a research project guided by a faculty adviser with a public defense. A total of 33 credits are required for the degree.

### Graduate School of Business

The Graduate School of Business offers a variety of degree and certificate programs to help students enhance their careers. Programs are designed to meet the needs both of working adult students and full-time day students. For example, classes include a blend of theory and application, faculty members have academic credentials and business experience, registration policies and procedures are hassle-free,

and classes are offered weekdays, evenings and Saturdays at several locations.

### **Degree Programs**

Nine degree programs are offered: Master of Business Administration (MBA), Executive MBA, Master of International Management, Master of Business Communication, Accounting MBA, MBA in Medical Group Management, MBA in Human Resources Management, Day MBA, and an M.S. in Real Estate Appraisal. Students, advisers and faculty work in close conjunction to find a tailored program that meets individual student needs.

### **Centers**

The Graduate School of Business is also home to a variety of centers offering credit and non-credit seminars and continuing education programs. These include the Aspen Institute, the Management Center, the Minnesota Center for Corporate Responsibility, the Center for Health and Medical Affairs, the Center for Entrepreneurship, the Center for Family Enterprise, the Institute for Franchise Management, the Institute for Venture Management, the Center for Non-profit Management, the Institute for Health Policy, the Center for Real Estate Education, the Small Business Development Center, and the Institute for Creative Studies.

### **The School of Divinity**

The School of Divinity was established in 1986 through the affiliation of the seminary with the university, marking a reunion of the two institutions founded by Archbishop John Ireland in the 19th century. A singular factor that inspired this reunion of the university and seminary was Vatican Council II with its expanded vision of ministry and commitment to mission. The seminary, building on its record of excellence in preparing many of the region's priests, began to make its theological and spiritual resources available to the laity. The university already had established its leadership in programming for lay ministry and enrichment, especially through its Center for Religious Education and Graduate Program in Pastoral Studies.

### **Degree Programs**

The School of Divinity offers the following graduate degrees: Master of Arts degrees in Pastoral Studies, Theology, Religious Education, a Master of Divinity and Doctor of Ministry.

The School of Divinity also offers a two-year pre-theology program for priesthood candidates who require additional preparation in undergraduate philosophy and theology before beginning a masters

program of studies. This period of study also is designed carefully to give participants an opportunity to gain insight into the meaning of a vocation to the priesthood.

### **Graduate Department of Professional Psychology**

Degrees offered in the Graduate Department of Professional Psychology are a master of arts in counseling psychology and a doctor of psychology.

Completion of the master's program provides students with minimum qualifications for licensure in the state of Minnesota as a psychological practitioner. Completion of the doctorate in professional psychology provides students with academic qualifications for licensure as a "licensed psychologist."

A certificate in family psychology is also offered.

### **School of Education**

In conjunction with the undergraduate College, the School of Education offers the Bachelor of Arts degree with a major in elementary education and licensure in a variety of secondary and K-12 teaching fields.

Graduate study leading to master's, educational specialist, and Ed.D. degrees is also offered. Graduate majors include athletic administration, community education administration, curriculum and instruction, educational leadership, gifted, talented and creative education, human resource development, learning technology, reading, special education, and teacher education.

Graduate programs can be designed to provide licensure for teaching, administrative, and other education positions. Course work is open to degree and non-degree students.

### **School of Social Work**

In conjunction with the undergraduate College, the School of Social Work offers the Bachelor of Arts degree in Social Work.

The Master of Social Work program is designed to provide advanced professional study in social work. The program prepares social work practitioners for clinical social work practice and leadership with a focus on direct clinical services or clinical services supervision. The MSW program is offered jointly with The College of St. Catherine. Advanced standing is available for students with an undergraduate degree in social work from a CSWE accredited program. The program is accredited by the Council on Social Work Education.

### Personnel and Organization

The legal body that governs the university is the board of trustees. It is the final authority on setting our important policies, on the definition of major goals, and on the preservation of the academic mission. The financial health of the university is one of its chief responsibilities.

The board selects members who have demonstrated their understanding of the purpose of this institution, the commitment it has to higher education, and the unique contribution St. Thomas can make as a Catholic liberal arts university.

The chief administrative officer of the university is the president. He is responsible to the board of trustees for the functioning of the university and the administration of its policies. He presides at the meetings of the university faculty, university faculty senate, and the academic council.

Under the direction of the governing board, the president of the university must make sure that adequate means exist for communication, decision-making, and governance.

The president delegates appropriate authority and responsibilities to the faculty, as described in the faculty organization plan, and to various members of the university administration, among them: the executive vice president, who is responsible for the day-to-day operation of the university; the vice president for academic affairs; the vice president/rector, responsible for the administration of the Saint Paul Seminary School of Divinity; the vice president for business affairs, responsible for the fiscal and business matters of the university; the vice president for student affairs, responsible for non-academic student affairs; the senior vice president for external affairs, responsible for public relations and the fundraising efforts of the university; and the vice president for university and government relations.

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8th Circuit Court of Appeals  
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## Personnel and Organization

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*Executive Assistant to the President*

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*Rector/Vice President,*  
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*University Registrar*

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*Director, Instructional Support Services*

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*Director, International Education*

Elaine M. Lilly, Ph.D.  
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*Dean of the College*

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*Associate Academic Dean*

Brad J. Stewart  
*Associate Dean for Academic Advising and*  
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*Director, Division of Business*

*Director, Division of Education and Physical*  
*Education*

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*Director, Division of Humanities and Fine*  
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*Mathematics*

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*Counselor*

Elizabeth A. Dussol  
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### Student Affairs

Gregory Roberts  
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Alan L. Sickbert  
*Dean of Student Life*

Karen M. Lange  
*Associate Dean of Student Life*

Brian D. Dusbiber  
*Director, Residence Life*

Reverend Jeffrey H. Huard  
*Director, Campus Ministry*

Alice C. Grider  
*Director, Multicultural Student Services*

Mark F. Schneider  
*Coordinator, International Student Services*

Elaine C. Foell, R.N.  
*Director, Student Health Services*

Jeannine M. Harff  
*Coordinator, Specialized Services*

Dana M. Farley  
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Kevin G. Busko  
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## **Personnel and Organization**

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*Coordinator, Life Care Center*

Steven J. Fritz  
*Director, Intercollegiate Athletics*

### **Counseling and Career Services**

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### **Business Affairs**

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Bruce Van den Berghe  
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Todd D. Empanger  
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Tony Erickson  
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*Manager, Service Center*

Nina F. Lemón  
*Manager, Post Office*

*Payroll Manager*

Gary L. Thyen  
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## A

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- James G. Ahler  
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1967; B.A., M.A., Marquette University
- Susan L. Alexander  
*Associate Professor of Economics*  
1981; B.A., Arkansas Polytechnic College;  
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- Denis Allaire\*  
*Adjunct Instructor in Music*  
*Studio Instructor in Jazz Voice*  
1989; Studio Instructor in Jazz Voice  
A.A., Le Collège d'Enseignement Général et  
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B.M., M.M., University of Minnesota
- Elise L. Amel  
*Assistant Professor of Psychology*  
1997; B.A., St. Norbert College; M.A., Ph.D.,  
Purdue University
- Young-ok An  
*Assistant Professor of English*  
1997; B.A., M.A., Seoul National University,  
Korea; Ph.D., University of Southern  
California
- Philip H. Anderson  
*Professor of Management*  
1977; B.S.B., M.B.A., Ph.D., University of  
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*Adjunct Instructor in Physical Education*  
1978; B.A., M.A.,  
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1990; B.A., Augsburg; M.S.W., Washington  
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*Professor of Philosophy*  
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## B

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1990; B.S., M.B.A., University of Nebraska  
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1995; B.A., Hamilton College;  
M.A., Ph.D., Louisiana State University
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*Associate Professor of Spanish*  
1980; B.A., M.A., Eastern Kentucky  
University; Ph.D., University of Illinois  
(Champaign-Urbana)
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1991; B.A., Edinboro State University of  
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- Heino A. P. Beckmann  
*Associate Professor of Finance*  
1986; Cand. jur., Freie Universität Berlin;  
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M.A., Ph.D., University of Pennsylvania
- Michael O. Bellamy  
*Professor of English*  
1979; B.A., John Carroll University;  
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1986; B.S., University of Wisconsin (Eau  
Claire), M.S.Met.E., University of Minnesota;  
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1985; B.S., Southern Illinois University;  
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*Associate Professor of Philosophy*  
1965; B.A., University of St. Thomas;  
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*Professor of Economics*  
1984; A.B., University of Michigan; Ph.D.,  
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B.A., University of Michigan; Principal Bass,  
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1961; A.B., Hunter College;  
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## C

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*Instructor in Social Work*  
1996; B.A., The College of St. Catherine;  
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*Dean of the College*  
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- Kanishka Chowdhury  
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1993; B.A., St. Xavier's College, Calcutta;  
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1972; B.A., University of Minnesota;  
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1986; B.S., University of Minnesota;  
M.S.W., University of Minnesota
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*Assistant Professor of Theology*  
1991; B.A., College of St. Teresa;  
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- Vernon M. Cottles\*  
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University of St. Thomas (Houston)
- Catherine A. Craft-Fairchild  
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- Rabbi Barry D. Cytron\*  
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*President of the University*  
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1988-1991, 1998; J.D., William Mitchell  
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1985; B.S., Moorhead State University;  
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- Roger Dumas\*  
*Adjunct Instructor in Music*  
*Studio Instructor in Electronic Music*  
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### E

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### F

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Orff Institut (Salzburg)

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## G

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## H

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