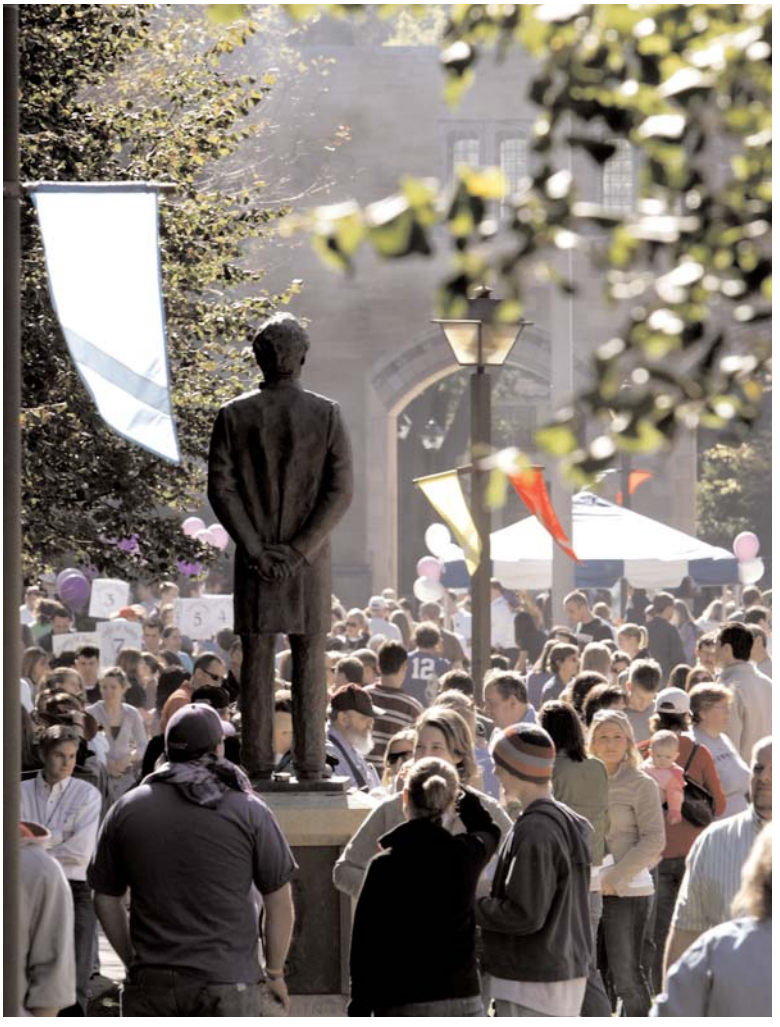

University of St. Thomas
Undergraduate Catalog

2006-2008

UNIVERSITY of ST. THOMAS

University of St. Thomas

2115 Summit Avenue
St. Paul, Minnesota 55105

Undergraduate Catalog

2006-2008

Telephone
651-962-5000 or 800-328-6819

Website
www.stthomas.edu

Notice

This catalog is accurate to the best of our knowledge and ability
at the time of publication, but is subject to change.
Additions and changes to the catalog are available on the Web.

It is the student's responsibility to know and meet graduation requirements and academic policy.

Affirmative Action Statement

The University of St. Thomas does not discriminate on the basis of race, color, creed, religion, ancestry, national origin, sexual orientation, disability, age, marital status, or status with regard to public assistance in the employment of faculty or staff, the admission or treatment of students, or in the operation of its educational programs and activities.

As permitted by applicable statutes and regulations, the university reserves the right to consider gender as one factor in its undergraduate admissions policy in order to effect a desired balance in the proportionate representation of sexes in the student body.

Academic Calendar 2006-2007

Fall Semester 2006

September 6	Classes begin
September 12	Last day to register or add a class without instructor permission
September 19	Last day to drop a class without notation on record
October 11	Last day to designate grading option (S-D-R)
October 27	Fall semester break
October 30	2nd half-semester classes begin
October 30	Mid-term & 1st half-semester grades due
Nov. 13 - Dec. 1	January term and spring semester registration
November 15	Last day to withdraw from a class without a grade of "F"
November 23 - 24	Thanksgiving recess
November 27	Classes resume
December 1	Incompletes due from spring semester and summer sessions
December 8	Last day of classes
December 11	Study Day
December 12 - 15	Final examinations
December 15	Winter commencements
January 2	Final grades due

January Term 2007

January 2	Classes begin
January 8	Last day to register or add a class without instructor permission
January 8	Last day to drop a class without notation on record
January 11	Last day to designate grading option (S-D-R)
January 15	Martin Luther King Holiday
January 18	Last day to withdraw from a class without a grade of "F"
January 25	Last day of classes/examinations
February 2	January term grades due

Spring Semester 2007

January 29	Classes begin
February 2	Last day to register or add a class without instructor permission
February 9	Last day to drop a class without notation on record
March 5	Last day to designate grading option (S-D-R)
March 19 - 23	Spring semester break
March 26	Classes resume
March 26	2nd half-semester classes begin
March 26	Mid-term & 1st half-semester grades due
April 6 - 9	Easter break
April 10	Classes resume
April 13	Last day to withdraw from a class without a grade of "F"
April 16 - 27	Early registration for summer sessions and fall semester
May 1	Incompletes due from fall semester and January term
May 11	Last day of classes
May 14	Study Day
May 15 - 18	Final examinations
May 18	Commencement Mass
May 19	Spring commencements
May 30	Final grades due

Summer Sessions 2007

May 23 - July 5	First summer session
May 23 - July 19	Extended session
May 23 - August 16	Double session
July 9 - August 16	Second summer session

Fall Semester 2007 (PRELIMINARY)

September 5	Classes begin
September 11	Last day to register or add a class without instructor permission
September 18	Last day to drop a class without notation on record
October 10	Last day to designate grading option (S-D-R)
October 26	Fall semester break
October 29	2nd half-semester classes begin
October 29	Mid-term & 1st half-semester grades due
November 14	Last day to withdraw from a class without a grade of "F"
November 12 - 30	January term and spring semester registration
November 22 - 23	Thanksgiving recess
November 26	Classes resume
December 3	Incompletes due from spring semester and summer sessions
December 14	Last day of classes
December 17	Study Day
December 18 - 21	Final examinations
December 21	Winter commencements
January 2	Final grades due

January Term 2008 (PRELIMINARY)

January 2	Classes begin
January 8	Last day to register or add a class without instructor permission
January 8	Last day to drop a class without notation on record
January 11	Last day to designate grading option (S-D-R)
January 17	Last day to withdraw from a class without a grade of "F"
January 21	Martin Luther King Holiday
January 24	Last day of classes/examinations
February 1	January term grades due

Spring Semester 2008 (PRELIMINARY)

January 28	Classes begin
February 1	Last day to register or add a class without instructor permission
February 8	Last day to drop a class without notation on record
February 29	Last day to designate grading option (S-D-R)
March 17 - 24	Easter/Spring semester break
March 25	Classes resume
March 25	2nd half-semester classes begin
March 25	Mid-term & 1st half-semester grades due
April 4	Last day to withdraw from a class without a grade of "F"
April 21 - May 02	Early registration for summer sessions and fall semester
May 1	Incompletes due from fall semester and January term
May 9	Last day of classes
May 12	Study Day
May 13 - 16	Final examinations
May 16	Commencement Mass
May 17	Spring commencements
May 28	Final grades due

Summer Sessions 2008 (PRELIMINARY)

May 22 - July 3	First summer session
May 22 - July 18	Extended session
May 22 - August 15	Double session
July 8 - August 15	Second summer session

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Frequently called phone numbers

Academic Affairs 651-962-6720
Academic Counseling 651-962-6300
Admissions 651-962-6150
Athletics 651-962-5900
Book Store
  St. Paul 651-962-6850
  Minneapolis 651-962-4340
Business Office 651-962-6600
Computer Help Desk (Tech Desk) 651-962-6230
Health Services 651-962-6750
Financial Services 651-962-6550
Information
  St. Paul (Undergraduate) 651-962-5000
  Minneapolis (Graduate) 651-962-4000
International Education Center 651-962-6450
Mass Line 651-962-6565
Public Safety & Parking
  St. Paul 651-962-5100
  Minneapolis 651-962-4100
Registrar (Records) 651-962-6700
Residence Life (Housing) 651-962-6470

Mission

Inspired by Catholic intellectual tradition, the University of St. Thomas educates students to be morally responsible leaders who think critically, act wisely, and work skillfully to advance the common good.

Convictions

As a community we are committed to:

1. Pursuit of Truth
   We value intellectual inquiry as a life-long habit, the unfettered and impartial pursuit of truth in all its forms, the integration of knowledge across disciplines, and the imaginative and creative exploration of new ideas.
2. Academic Excellence
   We create a culture among faculty, students and staff that recognizes the power of ideas and rewards rigorous thinking.
3. Faith and Reason
   We actively engage Catholic intellectual tradition, which values the fundamental compatibility of faith and reason and fosters meaningful dialogue directed toward the flourishing of human culture.
4. Dignity
   We respect the dignity of each person and value the unique contributions that each brings to the greater mosaic of the university community.
5. Diversity
   We strive to create a vibrant diverse community in which, together, we work for a more just and inclusive society.
6. Personal Attention
   We foster a caring culture that supports the well-being of each member.
7. Gratitude
   We celebrate the achievements of all members of our community in goals attained and obstacles overcome, and in all things give praise to God.

Undergraduate Vision Statement

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

The strengths of the undergraduate program 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 undergraduate program:

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.

As it looks to the future, the undergraduate program 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 in teaching, and the development of computer literacy for all students;
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 more than 11,000 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 preparatory, classical or theological departments. In 1894 the theological department moved to an adjacent campus where it became The Saint Paul Seminary. The preparatory and classical departments, 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 preparatory department 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 52 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 10,641 today. The undergraduate program currently enrolls approximately 5,600 students.

Long-standing graduate programs in business, education, professional psychology and social work offer degrees at the master's, specialist, and doctoral levels.

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. St. Thomas is home to the undergraduate St. John Vianney Seminary.

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.

Locations

The university's main, 78-acre campus anchors the western end of St. Paul's historic Summit Avenue.

In 1992 the university began a permanent campus in downtown Minneapolis, which is now the home of most of the graduate programs in the College of Business, the Graduate School of Professional Psychology, the School of Education, and the School of Law.

The university 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.

The Bernardi Residence in Rome, which opened in 2000, is a remodeled residential estate on the banks of the Tiber River. Serving as a home to students on the university's Center for Catholic Studies Rome Program and the Fall Semester in Rome Program, it is also available for conferences, study tours and housing for faculty, students, and visitors to Rome.

Organization of the University

Undergraduate

College of Arts and Sciences

The College of Arts and Sciences includes undergraduate departments in the arts, humanities, natural sciences, and social sciences, plus a number of interdisciplinary programs.

College of Business

The College of Business has six departments offering undergraduate curricula in an interdisciplinary setting. It is home to a variety of centers offering credit and noncredit seminars and continuing-education programs.

School of Education

The School of Education offers undergraduate courses and curricula for elementary and secondary teacher licensures.

School of Engineering

The School of Engineering offers graduate and undergraduate engineering degrees. Located on the St. Paul campus, programs in the college are committed to leadership in engineering and industry, in innovation, and in development of the whole person. They are built upon a firm foundation of values and global awareness, and embedded in the context of the liberal arts. The college offers bachelor of science degrees in mechanical engineering (B.S.M.E.) and electrical engineering (B.S.E.E.). The B.S.M.E. degree is Engineering Accreditation Commission of ABET accredited.

School of Social Work

The School of Social Work offers undergraduate courses and curricula for social work and chemical dependency counseling.

Graduate

College of Arts and Sciences

Master's-level programs are offered in Art History, Catholic Studies, English, and Music Education.

College of Business

The College of Business offers nine degree programs at the graduate level. It is home to a variety of centers offering credit and noncredit seminars and continuing-education programs.

St. Paul Seminary School of Divinity

The St. Paul Seminary School of Divinity offers master's- and doctoral-level degrees oriented to theological study and the practice of ministry. The school also offers a two-year pre-theology program for priesthood candidates who require additional preparation.

School of Education

The School of Education offers graduate study leading to certificates, master's, educational specialist, and doctoral degrees.

School of Engineering
The School of Engineering offers graduate and undergraduate engineering degrees. Located on the St. Paul campus, programs in the college are committed to leadership in engineering and industry, in innovation, and in development of the whole person. They are built upon a firm foundation of values and global awareness, and embedded in the context of the liberal arts. The college offers masters degrees in manufacturing systems engineering (M.M.S.E), manufacturing systems (M.S.M.S.) and technology management (M.S.T.M.) The M.M.S.E. degree is Engineering Accreditation Commission of ABET accredited.

School of Law
The School of Law was reopened in 1999 after a 66-year hiatus. The first class of 120 students was accepted in fall 2001. Full accreditation by the American Bar Association was granted in 2006.

School of Social Work
The Master of Social Work, offered as a joint degree program with the College of St. Catherine, is designed to provide advanced professional study in social work. Dual-degree programs are offered in cooperation with Luther Seminary, the Department of Theology at the College of St. Catherine, and the St. Paul Seminary School of Divinity.

Graduate School of Professional Psychology
Master's- and doctoral-level degrees are offered in counseling psychology. A certificate in family psychology also is offered.

Vital Statistics
The University of St. Thomas is a private, coeducational, Catholic, liberal arts university.

The university offers five bachelor's degrees, 95 major fields of study, and 59 minor fields of study. The university offers 46 graduate degree programs: 39 master's, two education specialist, one *juris doctor,* and four doctorates. It also offers six graduate-level joint- or dual-degree programs.

The university awards the B.A. in 80 fields; B.M. in 3 fields; B.S. in ten fields; B.S.E.E.; B.S.M.E.; D.Min.; Ed.S. in two fields; Ed.D. in three fields; J.D.; M.A. in 24 fields; M.B.A. in four fields; M.B.C.; M.Div.; M.M.S.E.; M.S. in five fields; M.S.S.; M.S.D.D.; M.S.W.; and Psy.D.

Enrollment in the undergraduate program for fall semester 2005 was 5,584. Graduate-level enrollment figures at the university were: College of Arts and Sciences, 146; College of Business, 1,984; St. Paul Seminary School of Divinity, 110; School of Education, 1,240; School of Law, 413; School of Social Work, 304; Graduate School of Professional Psychology, 203; Graduate Programs in Software Engineering, 425; Programs in Engineering, 232.

The total undergraduate and graduate enrollment for fall semester 2005 was 10,641.

There are 428 full-time faculty, 136 part-time faculty, and a support staff of 1,051.

Accreditation and Memberships
The University of St. Thomas is accredited by The Higher Learning Commission of the North Central Association of Colleges and Schools (800-621-7440), the Association of Theological Schools (412-788-6505), and is an affiliate member of the Teacher Education Accreditation Council.

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 master's programs in engineering are accredited by the Accreditation Board for Engineering and Technology (410-347-7700); the B.S.M.E. is accredited by the Engineering Accreditation Commission of ABET; the School of Law is accredited by the American Bar Association (202-662-1000); the music programs are approved by the National Association of Schools of Music (703-437-0700); the doctoral program in Professional Psychology is accredited by the American Psychological Association (800-374-2721); the Social Work program is accredited by the Council on Social Work Education (703-683-8080).

The university is a member of the:
- American Association of Colleges for Teacher Education
- American Council on Education
- Associated Colleges of the Twin Cities
- 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 on-going curricular development.

The Academic Assessment Coordinating Committee (AACC), which oversees the student outcomes assessment programs of the university, consists of six elected faculty and the director of Institutional Research. The committee is co-chaired by the associate vice president for academic affairs and the associate dean of the College of Arts and Sciences.

Currently, all curricula for major concentrations and the undergraduate core curriculum are routinely assessed. Thus, students are asked from time to time to participate in testing, surveys, interviews, or other methods of collecting data for assessment purposes.

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, color, creed, religion, ancestry, national origin, gender, sexual orientation, or disability.

Information and Visits

All correspondence and telephone calls concerning undergraduate day and evening admission should be directed to the Office of Admissions, Mail #32F, University of St. Thomas, St. Paul, Minnesota 55105-1096.

Phone: 651-962-6150 or
800-328-6819 ext. 2-6150
e-mail: admissions@stthomas.edu
Website: www.stthomas.edu

When writing, inquirers should be sure to include their full name, address with zip code and telephone 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. Admission counselors and scheduled tour times are available during those hours. 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 completed by the applicant and sent to the Office of Admissions. The application also may be completed via the Web at: www.stthomas.edu
2. The admissions committee considers each student's academic record, writing sample, and recommendations, if applicable. Applicants are then notified whether they have been accepted officially by the university.
3. Each accepted applicant should make a $200 confirming deposit to reserve a place in the class. This confirming deposit is refundable for the fall semester of admission when requested in writing by May 1.
4. A resident applicant must also make a $200 room deposit. The room deposit will be refunded for the fall semester of admission when requested in writing by May 1.
5. Each confirmed student is required to provide a final high school transcript after graduation.
6. Each confirmed student will receive a UST health form to complete and return to the Student Health Service. Any student participating in NCAA athletics will be required to have a current physical on file.

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 Student Health Service. A record of immunization form is available from the Office of Admissions or the Student Health Service or it may be downloaded at www.stthomas.edu/studenthealth.

Admission Credits

Students entering St. Thomas as first-time college students may have high school credits, Advanced Placement (AP) 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 grade point average, academic rank in their graduating class (if applicable), college preparatory course selection, 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 addition to their high school transcript.

Advanced Placement

Unless otherwise noted, a student earning a score of three or higher on an Advanced Placement (AP) 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 – A score of 3 or higher = ARTH 199 (may fulfill Fine Arts requirement; evaluation on individual course basis)

Biology – For students not intending to major in Biology or Biochemistry a score of 4 or higher = BIOL 101 (fulfills a Natural Science Lab requirement). For students intending to major in Biology or Biochemistry, score of 4 or higher may = BIOL 201 (students will normally be required to take the BIOL 201 lab at St. Thomas.)

Chemistry – A score of 3 or higher may = CHEM 100, depending on laboratory experience, at the discretion of the chair of the department. A score of 4 or higher may = CHEM 111, depending on laboratory experience, at the discretion of the chair of the department. Students will be required to present both coursework in class as well as lab work that includes, but not limited to lab notebook, lab reports, experiments and experimental procedures, exams taken and syllabi.

Computer Science – A score of 3 or higher in Computer Science A or B = QMCS 199

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

English – A score of 3 or higher in English Language/Composition = ENGL 199 (does not fulfill the Literature and Writing requirement);
A score of 3 or higher in English Literature/Composition = ENGL 104 (fulfills 4 credits towards the Literature and Writing requirement)

Environmental Science – A score of 3 or higher in Environmental Science = ENVR 151.

French – A score of 3 = FREN 211 (fulfills Language and Culture requirement);
A score of 4 = FREN 212
A score of 5 = FREN 300
A score of 3 or higher in French Literature = FREN 309 (this will count towards the major in French)

Geography – A score of 3 or higher in Human Geography = GEOG 111 (fulfills Social Analysis requirement)

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

History – A score of 4 or higher in European History = HIST 199 (with the discretion of the department chair, may fulfill Historical Studies requirement.) A score of 4 or higher in U.S. or World History = HIST 100 (fulfills the Historical Studies requirement.)

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

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

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

Physics – *Physics B:* A score of 3 = PHYS 101 (satisfies Natural Science Requirement); A score of 4 or 5 = PHYS 109-110 (satisfies Natural Science Requirement);
Physics C1—Mechanics: score of 3 = PHYS 101 (satisfies Natural Science Requirement); A score of 4 or 5 = PHYS 111 (satisfies Natural Science Requirement);
Physics C2—Electricity and Magnetism: A score of 3 or 4 = PHYS 199 (satisfies Natural Science Requirement); A score of 5 = PHYS 112 (satisfies Natural Science Requirement)

Political Science – A score of 3 or higher in Government & Politics: U.S. = POLS 101 (does not fulfill Social Analysis requirement) A score of 3 or higher in Comparative Government & Politics = POLS 105 (fulfills Social Analysis requirement.)

Psychology – A score of 4 or higher = PSYC 111 (fulfills Social Analysis requirement)

Quantitative Methods – see Computer Science above

Spanish – A score of 3 = SPAN 211 (fulfills Language and Culture requirement);
A score of 4 = SPAN 212
A score of 5 = SPAN 300
A score of 3 or higher in Spanish Literature = SPAN 335 (this will count towards the major in Spanish)

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

Studio Art – A score of 3 or higher in Studio Art = ARTS 199 (does not fulfill Fine Arts Requirement)

International Baccalaureate

Students who pass the International Baccalaureate (IB) 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 – Students receiving a 5-7 on the International Baccalaureate Exam will receive college credit for BIOL 101 (fulfills a natural science with laboratory course requirement), and may receive college credit for BIOL 201. Placement of IB students in the core sequence must be determined in consultation with the department chair and transcript evaluator.

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.

Economics – A score of 5 or higher on the Higher Level examination = ECON 251 (fulfills the Social Analysis requirement).

English – A score of 4 or higher usually equals one course, but students should consult with the department chair to determine exact course credit and placement.

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

History – A score of 4 or higher = one course. U.S. or World History fulfill the Historical Studies requirement.

Mathematics – A 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.
A score of 5 or higher gives credit for Math 113. Students are encouraged to take the departmental examination to receive credit for MATH 114.

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

Post-Secondary Enrollment Option (PSEO)

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 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 home schools to participate in the same program.

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, have scored well on the ACT, SAT or PSAT standardized tests, and have a strong academic record while pursuing a rigorous academic program including honors or accelerated coursework. Admission to the program is competitive and highly selective. Students seeking admission to the PSEO program should contact the Office of Admissions.

PSEO students are considered non-degree and may take a maximum of twenty-four credits through the program at St. Thomas. They may divide their coursework a variety of ways. Students in their junior year of high school may take four credits per semester. Students in their senior year may take twelve credits each semester, provided the total number of credits taken at St. Thomas does not exceed twenty-four.

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

With the consent of an academic adviser, students are allowed to enroll in almost any course for which they have adequate preparation, provided 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.

Students enrolled in the program receive University of St. Thomas I.D. cards and may participate in most 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 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 examination does not fulfill the Social Analysis requirement.
– The History examination in U.S. history fulfills the historical studies requirement. History exams in areas other than U.S. history need to be cleared with the department chair.

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.

Department Examinations

Certain departments in the undergraduate program 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 administering the examination.

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 may be given for certain courses. Each case will be considered individually by the chair of the department.

Biology – Examinations may be given for core courses (BIOL 201, 202, 204). Each case will be considered individually by the chair of the department.

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 205 Introduction to Accounting
BLAW 301 Legal Environment of Business
DSCI 345 Operations Management
FINC 321 Financial Management
MKTG 300 Principles of Marketing

Chemistry – Examinations may be given for CHEM 111 and/or CHEM 112, at the discretion of the chair of the department.

Economics – all courses, if circumstances warrant it, with the *exception* of:
ECON 315 Empirical Methods in Economics
ECON 470 Research

Engineering – all courses, if circumstances warrant it, with the *exception* of:
ENGR 480 Engineering Design Clinic I
ENGR 481 Engineering Design Clinic II
Each case will be considered individually by the department chair.

English – under extraordinary circumstances, 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: Fiction and Nonfiction Prose
ENGL 112 Critical Reading & Writing II: Drama and Poetry
ENGL 190 Critical Reading & Writing: Major Genres
ENGL 300 Theory and Practice of Writing
ENGL 480 Literary Magazine Practicum
ENGL 481 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

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 410 Advanced Reporting
JOUR 450 Advanced Public Relations
JOUR 480 Media Ethics

Mathematics – a departmental examination is available for MATH 113 Calculus I with the following qualifications:
A score of 0 - 59 = no credit;
A score of 60 -79 = no credit but MATH 113 will be waived as a prerequisite;
A 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.

Psychology – in special circumstances, and with approval of the department, credit by examination may be sought for PSYC 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

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.

Waiver of Credits

Unlike the other areas discussed above, a waiver of credits does not add any credits to the student's transcript. For example, if a student tests out of the third level of the foreign language requirement for the core curriculum, a waiver will be noted on the course audit, but no credits are awarded.

Transfer Students

In addition to following the general application procedures, students wishing to transfer from another college should submit official high school and college transcripts 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 from a regionally accredited college/university will be recognized for credit at St. Thomas. To determine if your college/university has regional accreditation, please see www.ncahigherlearningcommission.org

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

The priority deadline for application for the fall semester is August 1. The priority deadline for spring semester is 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 contact the Office of Admissions at 651-962-6150 or 1-800-328-6819 Ext 2-6150 and request a transfer brochure.

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 213 for the computer-based test or a total score of 80 for the internet based test (iBT) with a minimum score of 20 for both the writing and speaking sections of the iBT. 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 bi-national 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.

In lieu of a TOEFL test score, completion of Level 112 at any ELS Language Center facility will satisfy the English language requirement for admission. For more information on the ELS Language Center at St. Thomas, please contact the Center Director, ELS Language Center, University of St. Thomas, Mail# LOR 108, 2115 Summit Avenue, St. Paul, MN 55105.

In addition, other English proficiency tests accepted by the university are the Michigan English Language Assessment Battery (MELAB) with a minimum score of 80 and the International English Testing System (IELTS) with a minimum score of 6.0.

All international students must verify that they have sufficient funds to cover all educational costs for the first year of study and 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 *International Student Scholarship Application* no later than April 1.

For more information, please contact the Assistant Director, International Admissions, International Education Center, University of St. Thomas #44C-1, 2115 Summit Avenue, St. Paul, MN 55105-1096.

Web: www.stthomas.edu/international

e-mail: international@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 ensure 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.

Specific questions should be addressed to the university 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 University Registrar. As they are not seeking a degree, they are not obliged to present their previous academic work for evaluation. Registration is on a space available basis with priority given to degree-seeking students.

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

Non-degree students are limited to enrolling for eight credits in any given semester. A maximum of 24 credits taken at St. Thomas on non-degree status may be applied to a degree program. A non-degree student who wishes to change status and pursue a degree program must make a formal application for admission through the Office of Admissions.

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

Readmission Policies

A student who was formerly enrolled in the university, but is not currently attending, must request reinstatement by calling or writing to the Office of the University Registrar at St. Thomas. The student will be reinstated if the university 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 university 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 and financing options available to students seeking a college education. Whenever possible, students will want to take advantage of opportunities such as federal and state grants, loans, and student employment programs. It is important that proper application for aid be made by the deadlines noted.

Financial Aid

The primary responsibility of financing an education rests with the student and his/her parent(s). However, the university does recognize that there are students who need financial assistance.

For this reason, St. Thomas offers institutional aid (grants, *etc.*), loans and student employment. In addition, the university offers merit-based aid to those students who have excelled academically and/or made contributions to their school, community or church.

Applications

To be considered for aid, an applicant must complete the application for admission to the university and be accepted.

A student wishing to apply for financial aid must complete the Free Application for Federal Student Aid (FAFSA). The FAFSA collects information about the student and his/her family, considers that data in light of the federal financial aid formula and determines financial need.

Students are strongly encouraged to complete the FAFSA on-line at www.fafsa.ed.gov. A paper form may also be obtained from a high school guidance office, a counseling center or from the UST Financial Aid Office.

Awards and Renewals

Aid to a student is for one year only, unless specified otherwise. Students must reapply for financial aid 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 the student is taking less than a full-time load. A student must be in full compliance with the financial aid Satisfactory Academic Progress Policy 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. A student is eligible to receive financial aid for a maximum of 176 *attempted* credits.
2. A student must successfully complete 75 percent of all attempted credits.
3. A student must maintain a cumulative GPA of 2.00 after his/her second year of attendance.

A detailed copy of the Financial Aid Satisfactory Academic Progress policy is available from the Financial Aid Office.

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 receive academic, merit-based scholarships.

All incoming freshmen accepted for admission will be considered for academic scholarships. The awards are competitive based on the applicant pool.

Graduating high school students who are U.S. citizens or permanent residents who are accepted for admission as regular, degree-seeking students may be eligible for such awards. St. Thomas academic scholarships may be received for a maximum of four consecutive years or until graduation (or 132 credits, whichever comes first) provided the student maintains full-time attendance, is consecutively enrolled, and meets the necessary renewal criteria.

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 the eight neediest students who apply for the scholarship from each of the nine Minneapolis public high schools and one scholarship is awarded to the neediest applicant from all Minneapolis 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 Community College Students

This is a competitive scholarship that is awarded to the top students transferring from 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. Six $4,000 Recognition Scholarships will be awarded to new transfer students annually. For more information, contact the Office of Undergraduate Admissions.

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, Chamber Singers and Women's Choir.

Science, Mathematics and Engineering Scholarships

The University of St. Thomas Division of Natural Science and Mathematics awards two full-tuition and four $4,000 scholarships each year. These awards are renewable and may be received for four consecutive years or until graduation (or 132 credits, whichever comes first). Renewal criteria include maintaining a 3.50 GPA

in a major in the division.

High school seniors wishing to be considered for a Science, Mathematics and Engineering Scholarship must complete the science scholarship application by the established deadline. Selected applicants are tested at St. Thomas (usually in January of their senior year). Based on the application and the test evaluations, finalists are selected and asked to return to campus for personal interviews.

Recipients of the full-tuition Science, Mathematics and Engineering Scholarship have reduced eligibility for other St. Thomas scholarships. Please consult Admissions or the Financial Aid Office for details.

University of St. Thomas Scholarships for National Merit Finalists

Scholarships are awarded to students selected as National Merit Finalists who declare St. Thomas as their first-choice institution with the National Merit Scholarship Corporation, and who qualify for a college-sponsored award. Students are selected to compete in the National Merit Scholarship competition by the National Merit Scholarship Corporation based on their PSAT scores. National Merit awards range from $1000-$2000 and $4000-$5000 in UST Honors Scholarships for a maximum total of $6000. For more information regarding scholarship amounts, please contact the Financial Aid Office or the Office of Admissions.

Multicultural Excellence Program Scholarship

The St. Thomas Multicultural Excellence Program scholarship is available to eligible students from the St. Paul Public School Multicultural Excellence Program (MEP). The scholarship amount is $2,500 per year and may be received for four consecutive years or until graduation (or 132 credits, whichever comes first) if the student is consecutively enrolled as a full-time student at St. Thomas and is making satisfactory academic progress. Graduating high school seniors who are MEP participants should contact the Office of Admissions for details on how to apply for the scholarship.

Air Force ROTC Scholarships

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 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). Additional scholarships for college freshmen and sophomores are available for qualified students who have enrolled in AFROTC and have competed in the January or June selection cycle. Members not enrolled in AFROTC may compete in June for the summer walk-on scholarships.

High school juniors and seniors may obtain the college scholarship information and an application on line at www.afrotc.com.

The application deadline is December 1 of the year preceding college entrance.

St. Thomas offers its students who are recipients of Air Force ROTC scholarships up to full subsidy (room and board and remaining tuition) on almost every Air Force ROTC Scholarship awarded.

Contact the Department of Aerospace Studies for details on scholarship opportunities and the St. Thomas subsidy at 651-962-6329 or 800-328-6819 ext 26329.

Army ROTC Scholarships

Students who are awarded a full-tuition ROTC Scholarship through the Army are eligible to receive a room and board scholarship from St. Thomas

For more information, contact Army ROTC, Dept. of Military Services, 15 Church St. SE, Minneapolis, MN 55455. Phone: 612-626-1584; Website: www.umn.edu/arotc.

Navy/Marine Corps ROTC Scholarships

Students who are awarded a full-tuition ROTC scholarship through the Navy/Marine Corps are eligible to receive a full room and board scholarship from St. Thomas.

For more information, contact Navy/Marine Corps ROTC, 203 Armory, c/o University of Minnesota, 15 Church St, SE, Minneapolis, MN 5545, call 612-625-6677, or visit www.nrotc.umn.edu.

Grants

The University of St. Thomas participates in the following federal and state programs. To apply, students must complete the Free Application for Federal Student Aid (FAFSA) each year.

Federal Pell Grant

The Federal Pell Grant is a need-based federal program that currently offers up to $4,050 per year to meet educational expenses.

Minnesota State Grant

Currently, Minnesota residents may be eligible for up to $7,986 per year through this need-based grant program.

Federal Supplemental Education Opportunity Grant (SEOG)

Federal SEOGs are awarded to students who demonstrate exceptional need. Grants range from $200 to $4,000 each year and are awarded at the discretion of the UST Office of Student Financial Services, based on federal guidelines.

Loans

Federal Stafford Loan

Federal Stafford Loans are long-term low interest rate loans. Required federal guarantee and origination fees are deducted from the proceeds of the loan prior to disbursement. The maximum fees deducted will be 4 percent of the loan amount. Repayment of the Federal Stafford Loan begins after a six-month grace period. The grace period begins the day following the student's last date of at least half-time attendance (i.e., upon graduation, complete withdrawal from the university or withdrawal to less than half-time student status). The standard repayment term for the Federal Stafford Loan is ten years.

To be eligible to borrow a Federal Stafford Loan the student must complete the Free Application for Federal Student Aid (FAFSA) and must be enrolled on at least a half-time basis in a degree or certificate program. There are two types of Federal Stafford Loans – the Subsidized

and the Unsubsidized Stafford Loan. The results of the FAFSA determine the type of loan for which the student qualifies.

The Subsidized Federal Stafford Loan
To qualify for a subsidized loan the student must demonstrate financial need. The federal government provides an interest subsidy for students who qualify for this loan. The government pays the student's interest on the loan as long as he or she maintains at least half-time attendance and during the six-month grace period.

The Unsubsidized Federal Stafford Loan
Eligibility for the unsubsidized loan is not based on financial need. The student bears all interest costs of the loan, however, interest payments may be deferred while the student is attending school on at least a half-time basis and during the six-month grace period. If the student chooses to defer paying the accrued interest until the end of his or her grace period, the unpaid interest is capitalized (added to the principal balance of the loan).

Students may borrow a combination of Subsidized and Unsubsidized Federal Stafford Loans as long as the grade level annual and aggregate maximums are not exceeded. For example: The grade level annual maximum for a first-year student is $2,625. If a first-year student qualified for a $1,000 subsidized loan he or she could borrow the additional $1,625 in unsubsidized loan. Another first-year student may demonstrate at least $2,625 in need and therefore would qualify for the full loan amount to be subsidized. The combined subsidized and unsubsidized aggregate maximum for a dependent undergraduate in the Federal Stafford Loan program is $23,000. The aggregate maximum for an independent undergraduate is $46,000, of which not more than $23,000 may be subsidized.

Federal Perkins Loan Program

St. Thomas participates in the Federal 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 course of study, and be, in the opinion of the university, capable of maintaining good standing in their chosen course of study.)

Repayment of principal and interest begins nine months after graduation or when the borrower ceases to be enrolled on at least a half-time basis. No interest accrues while the student is enrolled on at least a half-time basis. The interest rate is fixed at 5 percent.

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. Students must be enrolled at least half-time to apply.

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.

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.

To apply, a student must complete the Free Application for Federal Student Aid (FAFSA).

Repayment begins within 60 days of disbursement of the PLUS loan. Payments are based on both interest and principal. 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.

Job openings are posted on the Human Resources Website: www.hr.stthomas.edu. Student wages are paid every two weeks by payroll check, direct deposit to a checking account, or direct payment to the UST bill.

Financial Aid Policy Regarding Withdrawal from the University

If a student withdraws from a course or from the university during a semester, January or summer term, there may be implications with his/her financial aid award. The policy may differ, depending upon the source of the aid, whether it be federal, state, institutional, or outside funds. Detailed information is available from the Office of Student Financial Services.

Return of Title IV (Federal) Aid

If a student withdraws from the University of St. Thomas during a semester, January or summer term, a calculation of "earned" versus "unearned" federal aid must be determined. This federal policy assumes the student earns aid based on how much time has elapsed in the term. If the student is a recipient of federal financial aid, that aid may be reduced as a result of the student's withdrawal.

There are three steps that the University of St. Thomas must complete to comply with the federal policy:

1. determine the withdrawal date;
2. determine the amount of earned federal aid; and
3. return unearned federal funds to the appropriate program(s).

However, in order to ensure the student is eligible to receive financial aid, the university must first verify with the student's instructor(s) that he/she has attended or participated in academic activities related to his/her classes for the term.

A student must withdraw officially through the Murphy On-line system or through the Office of the University Registrar. The withdrawal date is the date the withdrawal process began. If the student fails to officially withdraw, the withdrawal date will become the midpoint of the term, unless the university can document a later date. In certain circumstances, if an earlier date of last academic activity is determined, this date may be used in the calculation of "earned" federal aid.

If a student withdraws before completing 60% of the term, he/she "earns" federal funds in direct proportion to the length of time enrolled. The percentage of earned

aid is determined by dividing the total number of calendar days enrolled, including weekends and excluding breaks that are five days or longer, by the total number of calendar days in the term. If a student completes 60% of the term, all federal financial aid for that term is earned.

The responsibility to repay unearned aid is shared by the institution and the student. The institution's share is the lesser of unearned aid or unearned institutional charges. The institution's share must be repaid to the federal aid programs in the following order before the student's share is considered:

1. Unsubsidized Stafford Load
2. Subsidized Stafford Loan
3. Perkins Loan
4. PLUS Loan
5. Pell Grant
6. Supplemental Educational Opportunity Grant (SEOG)
7. Other Title IV (federal) Assistance

A student required to repay a portion of his/her loan through the student's share calculation will not be expected to return those funds immediately, but rather when repayment begins according to the terms and conditions of the promissory note. If the student's share includes grant funds, federal rules allow the grant to be reduced by 50% and the University of St. Thomas will repay these grant programs on the student's behalf. The student will then be responsible for repaying this money back to St. Thomas. If this causes an undue hardship, a satisfactory payment arrangement can be made with St. Thomas.

Institutional and State Refund Policy

The Return of Title IV Aid calculation, as cited above, only takes into consideration federal funds. It does not take into consideration institutional, state, or outside funding sources that may be included in a student's financial aid package. These other sources of aid also may be affected if a student withdraws from the University of St. Thomas.

The University of St. Thomas offers tuition refunds if a student withdraws from the university according to the following schedule for fall and spring semesters:

First 14 calendar days of the semester	100%
On the 15th through 21st calendar days	80%
On the 22nd through 28th calendar days	60%
On the 29th through 35th calendar days	40%
On the 36th through 42nd calendar days	20%
After the 42nd calendar day	0%

If a student withdraws during a period of time that allows for a tuition refund, a portion or all of the institutional, state, and/or outside funding may need to be reduced or cancelled. If a student receives a 100% tuition refund on all courses for a particular term, all institutional, state, and outside funding must be returned to the appropriate aid program(s). If the tuition refund was not used to fully repay the Return of Title IV Aid, then a proportional share of the remaining tuition refund must be returned to the appropriate aid program(s).

Baccalaureate Degrees

The University of St. Thomas grants the degrees Bachelor of Arts (B.A.), Bachelor of Music (B.M.), Bachelor of Science (B.S.), the Bachelor of Science in Electrical Engineering (B.S.E.E.) 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, moral and philosophical reasoning, natural science and mathematical and quantitative reasoning, faith and the Catholic tradition, social analysis, historical studies, 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 undergraduate program; 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.

If desired, a student 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 *Curricula* section in this catalog. Curricula involving other institutions in the ACTC are indicated by [ACTC]. Unless otherwise noted, the degree is a bachelor of arts (B.A.).

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 student must be accepted into the major by the appropriate department chair at the school where the major is offered and the proposed program of study must be submitted to the Committee on Studies at St. Thomas for its approval.

An individualized major also may be proposed to the Committee on Studies for acceptance. Guidelines for such a proposal are available from the Director of Undergraduate Academic Affairs.

Actuarial Science (B.S.)
Art History
Biochemistry (B.S.)
Biology
Biology (B.S.)
Business Administration – Accounting
Business Administration – Communication
Business Administration – Entrepreneurship
Business Administration – Ethics and Business Law
Business Administration – Financial Management

Business Administration – General Business Management
Business Administration – Human Resource Management
Business Administration – International Business
Business Administration – Leadership and Management
Business Administration – Marketing Management
Business Administration – Operations Management
Business Administration – Real Estate Studies (B.S.)
Catholic Studies
Chemistry
Chemistry (B.S.)
Classical Civilization
Classical Languages
Communication Studies
Community Health Education
Criminal Justice
Economics
Economics (B.S.)
Electrical Engineering (B.S.E.E.)
Elementary Education (K-6) with a 5-8 Specialty in Communication Arts and Literature
Elementary Education (K-6) with a 5-8 Specialty in General Science
Elementary Education (K-6) with a 5-8 Specialty in Mathematics
Elementary Education (K-6) with a 5-8 Specialty in Social Studies
Elementary Education (K-6) with a K-8 Specialty in World Languages and Cultures (French, German, and Spanish)
English
English – Education (5-12 teacher licensure)
English – Writing
Environmental Studies (Business, Humanities, Natural Sciences, & Social Science)
French
Geography
Geography – Geographic Information Systems (GIS)
Geology
Geology (B.S.)
German
Health Education (5-12 teacher licensure)
Health Education – non-licensure
Health Promotion (B.S.)
Health Promotion – Science Emphasis (B.S.)
History
International Business – French Intensive
International Business – German Intensive
International Business – Spanish Intensive
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
Literary Studies
Mathematics
Mathematics – Education (5-12 teacher licensure)
Mechanical Engineering (B.S.M.E.)
Music
Music Business
Music Education – Vocal (K-12 teacher licensure) (B.M.)
Music Education – Instrumental (K-12 teacher licensure) (B.M.)
Music – Liturgical Music
Music – Performance (B.M.)
Philosophy
Physical Education (K-12 teacher licensure)
Physical Education – non-licensure
Physics
Physics (B.S.)
Political Science
Psychology
Psychology – Behavioral Neuroscience
Quantitative Methods and Computer Science
Russian
Social Sciences (Economics, History, Political Science, & Sociology and Criminal Justice)
Social Work
Sociology
Spanish
Theater
Theater Arts & Dance – Education (K-12 teacher licensure)
Theology
Theology – Lay Ministry
Women's Studies [ACTC]

Co-Majors

The following sets of majors constitute a double major when taken together. They cannot be "stand-alone" majors.

Science and Mathematics for Elementary Education (taken in conjunction with Elementary Education)
Secondary Education and Communication Arts and Literature
Secondary Education and Science – Chemistry
Secondary Education and Science – Earth and Space Science
Secondary Education and Science – Life Science
Secondary Education and Science – Physics
Secondary Education and Social Studies

Minors

Students may choose to complete a minor in addition to a major. A student may declare more than one minor.

A student may propose an individualized minor to meet a specific need or interest, subject to the approval of the Committee on Studies. Guidelines for such a proposal are available from the Director of Undergraduate Academic Affairs.

The following is a list of minor concentrations or programs of study. Details are provided in the *Curricula* section in this catalog. Curricula involving other institutions in the ACTC are indicated by [ACTC].

Actuarial Science
Aerospace Studies
American Cultural Studies
Art History
Biology
Business Administration
Catholic Studies
Chemistry
Classical Languages

Communication Studies
Community Health Education
Criminal Justice
Economics
Electronic Music Production
Electrical Engineering
English
Environmental Studies
Family Studies
Film
French
General Engineering
Geography
Geography – Geographic Information Systems (GIS)
Geology
German
Greek
History
Japanese
Jazz 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
Journalism & Mass Communication – Visual Communication
Justice & Peace Studies
Latin
Legal Studies
Mathematics
Mechanical Engineering
Middle Eastern Studies (ACTC)
Music
Philosophy
Physics
Political Science
Psychology
Quantitative Methods and Computer Science – Business
Quantitative Methods and Computer Science – Mathematics
Quantitative Methods and Computer Science – Science
Renaissance Program
Russian
Social Welfare
Sociology
Spanish
Theater History - Theory-Criticism
Theater Performance
Theology
Urban Studies
Women's Studies [ACTC]

The 4-1-4 Calendar

The undergraduate program 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.

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 a given session, with a maximum of sixteen credits for the summer.

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 3.4 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 101 John Roach Center.

Special Curricula

The undergraduate program offers several programs that a student may pursue in addition to a major concentration. These include:
Air Force, Army, and Navy ROTC
Certificate In Lay Ministry
Higher Education Consortium for Urban Affairs (HECUA)
Pre-Engineering
Pre-Health Professions
- Pre-Dentistry
- Pre-Medicine
- Pre-Pharmacy
- Pre-Physical Therapy
- Pre-Veterinary

Pre-Law
School Social Work licensure
Social Work licensure
Study Abroad Programs
Washington Semester

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 intercampus 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.

Full-time, degree-seeking undergraduate students in the day division are eligible to register for exchange courses in the fall and spring semesters. Students are limited to one exchange course each semester. An exception to this are students majoring in Social Work or Theater, each of which is a joint program with the College of St. Catherine, and students with approval to pursue an ACTC major or minor.

Exchange courses are not transfer courses, and thus courses taken through the ACTC are considered UST courses and do not impact the senior residency requirement. *Note:* For courses during the summer sessions, students register and pay tuition at the college offering the courses and have a transcript of the completed work sent to St. Thomas.

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 student must be accepted into the major or minor by the appropriate department chair at the school where the program is offered. The proposed program must be approved by the Committee on Studies at St. Thomas. For information consult the Director of Undergraduate Academic Affairs in AQU 110-F.

For more information on the ACTC visit: http://www.associatedcolleges-tc.org/.

Parents-on-Campus Program

Effective fall semester 2005, parents of full-time students in the undergraduate day program are eligible to take up to two undergraduate courses (or eight credits) on a space-available basis in fall and spring semesters without tuition charge. Parents enrolled in the program prior to that date are governed by the pre-existing rules.

The dependent daughter/son must be a full-time day student taking at least twelve credits.

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.

Not included in this program are: Graduate courses, courses at ACTC schools, courses taught in January term or summer sessions, and courses in the HECUA program.

Further information on the program can be obtained from the Office of the University Registrar.

International and Off-Campus Programs

Study Abroad Programs (SABD)

Cross-College Program
Hubbard & Spencer (International Education)

The University of St. Thomas encourages its students to incorporate intercultural experiences into their degree plans. Through International Education, students of all majors can find a program that fits their schedule at some time during their St. Thomas experience. The International Education staff facilitates the process for students to identify study abroad or off-campus programs appropriate to the individual's desires and goals. Visit the Study Abroad Web site for current year program listing: www.stthomas.edu/studyabroad.

Students may choose from more than 130 programs in over 40 countries around the world. Short-term program locations may vary annually, so visit the Study Abroad Web site for a current list:

Africa
Ghana
Kenya
Morocco
Namibia
South Africa
Tanzania

Asia
Bangladesh
China
India
Japan

Europe
Austria
Belgium
Czech Republic
Denmark
England
France
Germany
Greece
Iceland
Ireland
Italy
Netherlands
Northern Ireland
Norway
Poland
Russia
Scotland
Spain
Ukraine
Wales

Middle East
Egypt
Israel

Oceania
Australia
New Zealand

The Americas and the Caribbean
Argentina
British West Indies
Chile
Costa Rica
Ecuador
Guatemala
Mexico

United States
Hawaii
Nevada

Note: Students may seek approval for other countries and/or programs from the Study Abroad Advisory Committee.

Short-term Off-Campus Programs

The University of St. Thomas offers a number of two-to-six week, faculty-directed programs during January, spring break or June/summer term. January Term programs are sponsored by the University of St. Thomas, HECUA or UMAIE, a seven-member consortium which provides a broad disciplinary and geographic January curriculum.

Students may not apply for nor participate in a study abroad or off-campus program while on academic or conduct probation.

January Term Programs
All courses for the following January are announced in February. Enrollment period extends from early April through early October. Topics and locations vary each year. 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.

Spring-Embedded Programs
A limited number of spring courses have an off-campus component 'embedded' in the semester, usually traveling during spring break.

June/Summer Programs
Students may study abroad during the summer through a co-sponsored program, or by participating in a faculty-directed course (similar to January Term). Students must apply by March 1 for all programs.

Semester and Year-Long Programs

St. Thomas offers a wide variety of semester and year-long programs around the world, including programs sponsored by St. Thomas, co-sponsored programs or direct enrollment in a university abroad.

Students may not apply for nor participate in a study abroad or off-campus program while on academic or conduct probation.

London Business Semester
Business majors and minors study abroad during this annual fall semester program in London. Students take regular St. Thomas business and liberal arts courses, as well as complete the 40-hour Community Service requirement. Priority deadline is early December, and March 1, 2007 if any spaces remain.

Catholic Studies in Rome
Students may apply for fall, spring or the academic year, and live at the St. Thomas Bernardi Residence. Catholic Studies majors and minors may study Catholic social thought, theology, and social justice, as well as introductory Italian language. Check the Web site for information on priority deadlines.

Glasgow English Semester
English majors and minors study at the University of Glasgow each spring. Students take two courses in English Literature and one or two courses in another subject area (typically history, theology, or fine arts). Apply by Oct. 1.

Rome Liberal Arts Semester
This program, in cooperation with St. Mary's College, offers students a wide range of liberal arts courses, including Italian. Accommodation is at the St. Thomas Bernardi Residence. Apply by March 15.

London Education Semester
Education majors have the opportunity to take the first block of required Education courses in London. This program allows students to fulfill Education requirements, complete their classroom practicum and historical studies and fine arts core requirements. Apply by March 1.

Partnerships with Universities Abroad
St. Thomas sponsors study at and welcomes students from the following universities:

- Australia: Curtin University and Australian Catholic University
- China: University of International Business and Economics
- Egypt: American University of Cairo
- Germany: University of Trier and University of Paderborn
- Ireland: University of Limerick
- Japan: Osaka Gakuin University and Sophia University.

In addition, the university co-sponsors over 100 programs in nearly 40 countries around the world. Students can find programs in the following locations:

Participation in Semester and Year-Long Programs
To study abroad for a semester or year, 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 International Education 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 a Study Abroad Advisor and their Financial Aid counselor in the Office of Student Financial Services.

SABD 300 Study Abroad (16 credits)
Students participating in the University of St. Thomas overseas study program register for this interdisciplinary listing for the first semester they are abroad. Permission from International Education staff required.

SABD 301 Study Abroad (16 credits)
A continuation of SABD 300. Permission from International Education staff required.

Higher Education Consortium for Urban Affairs (HECUA)

Cross-College Program
Toffolo (POLS), adviser; International Education staff co-adviser

The Higher Education Consortium for Urban Affairs offers off-campus educational experiences focused on social justice issues. HECUA provides experiential learning opportunities that link academic study with hands-on work for social change. Students earn sixteen credits in the semester-long programs and four credits in

January term programs. Open to all majors. All financial aid applies to semester programs. See Web site: www.hecua.org.

Development and Community in Bangladesh (January term)
Learn about the actions and intentions of development agencies and witness the realities of a moderate Islamic culture. Through lectures, discussions, and group field study (with Bangladeshi students), you will explore the policies, practices, and ideologies of socioeconomic development in one of the world's poorest countries.

Democracy and Social Change in Northern Ireland (spring semester)
Examine the historical, political, and religious roots of the conflict in Northern Ireland, the prospects for peace, and the progress being made toward it. You learn through readings, lectures, discussions, internships, group study projects, and field experiences that invite interaction with people involved in social change.

Courses:
- Northern Ireland: Building a Sustainable Democracy (4 credits)
- Politics of Conflict and Transformation (4 credits)
- Internship Seminar and Internship (8 credits)

Scandinavian Urban Studies Term (SUST) (fall semester)
Gain a deep understanding of contemporary Norway, using the welfare state and the notion of citizenship as the focus for investigation. Three interrelated seminars give you an understanding of how the welfare state works in the context of a social democracy facing challenges posed by immigration. An option for either an independent study project or language classes rounds out the course load for the semester.

Courses:
- Scandinavian International Relations (4 credits)
- Urbanization and Immigration (4 credits)
- Scandinavian Literature: Immigration and National Identity (4 credits)
- Norwegian Language
  or
  Independent Study Project (4 credits)

Community Internships in Latin America (CILA) (fall semester)
CILA offers a semester of study and experience with a focus on community participation and social change. The program, centered in Quito, Ecuador, combines rigorous seminar work and independent study with a home stay and a hands-on internship to give an in-depth experience of community participation and social movements in Ecuador.

Courses:
- Community Participation for Social Change (4 credits)
- Independent Study Project (4 credits)
- Internship Seminar and Internship (8 credits)

Civil Rights Movement: History and Consequences (January term)
Critically examine the events of the Civil Rights Movement by visiting important sites and interviewing leaders of the movement. After several days in the Twin Cities, students embark on a two-week field study tour through the South. A final week of integration seminars in the Twin Cities helps students bring their experiences back to bear on their own lives.

City Arts (spring semester)
City Arts is a semester-long, off-campus study experience. In the program, students explore the relationships among art, culture, and social change. Field study and professional internships provide direct access to the arts community in the Twin Cities.
- IDSC 466 City Arts: Reading Seminar (Creating Social Change: Art and Culture in Political, Social, and
  Historical Context) (4 credits)
- IDSC 467 City Arts: Field Seminar (Arts Praxis: Social Justice Theory and Practice in the Field) (4 credits)
- IDSC 468 City Arts: Internship (4 credits)
  and
  IDSC 469 City Arts: Internship Seminar (8 Credits)

Metro Urban Studies Term (MUST) (fall or spring semesters)
MUST is a semester-long, off-campus study experience. In the program, students examine the causes of and solutions to poverty and inequality in the urban United States. Field study and professional internships provide direct access to the non-profit sector.
- IDSC 471 MUST Seminar: Research on Urban Issues (4 credits)
- IDSC 472 MUST Seminar: Field Studies in the Twin Cities (4 credits)
- IDSC 473 MUST: Urban Studies Internship (4 credits)
- IDSC 474 MUST: Urban Studies Internship Seminar (4 credits)

Environmental Sustainability: Science, Public Policy, and Community Action (fall semester)
The program focuses on processes of ecosystem degradation and rehabilitation, the social and economic underpinnings of conflict over environmental change, and public policy and community-based strategies to achieve sustainability. Through lectures, discussions, group field experiences and internships, students explore the relationships between patterns of environmental resource use and current social inequities, analyze the effects of future environmental trends, and asses strategies for sustainability.

Courses:
- Adaptive Ecosystem Management (4 credits)
- Social Dimensions of Environmental Change (4 credits)
- Field Methods (2 credits)
- Environmental Internship (6 credits)

Washington Semester

Cross-College Program
Hoffman (POLS), adviser

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

Students selected from across the nation to partici-

pate in the program have the option of studying one of several subjects: American Politics, Economic Policy, Foreign Policy, Gender and Politics, Information Technology and Telecom, International Business and Trade, International Environment and Development, Journalism, Justice, Law Enforcement vs. Liberty, Peace and Conflict Resolution, Public Law, and Transforming Communities.

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 (16 credits)

Requirements for a Degree

To receive a bachelor's degree, a student must successfully complete a minimum of 132 credits and 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 (College of Business for business majors) of the major field (including transfer credits)
- all credits in the department (College of Business for business majors) of the major field earned at St. Thomas.

If the student has elected to declare a minor field, all credits in the department (College of Business for business majors) of the minor (including transfer credits) and all credits in the department (College of Business for business majors) 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 outside the major field (for majors in areas of business, these credits must be outside the College 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 or a cross-listed course in another department. 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 in the core curriculum and in 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.

Senior residency requires that a graduate have completed thirty-two of the final thirty-six credits at St. Thomas, at one of the other four ACTC colleges, or through an affiliated program.

The Core Curriculum

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

St. Thomas, as a Catholic university, seeks to foster in its students a deeper understanding of the totality of life and its purposes and to instill in its graduates an appreciation for the life of the mind and the joy of learning.

Undergraduate education at the University of St. Thomas is committed to three overarching objectives: liberal learning, moral and ethical development, and career preparation.

The university intends that its students value what

it means to be an educated person and that they be lifelong learners who derive meaning and satisfaction from integrating the knowledge they have acquired, using it as a basis for future growth. The university also intends that students possess those elements of liberal learning that enhance their lives and help them to become useful and concerned members of society. The university further seeks to impart to students the knowledge that serves as preparation for entrance into their chosen occupations or fields of graduate study and which will assist them in responding intelligently to the personal, social and spiritual changes that will occur during their lifetimes.

To further these overarching objectives, graduates of St. Thomas should have developed:

- the ability to think analytically, critically, creatively, and to solve problems by applying knowledge in appropriate circumstances
- the ability to write and speak clearly, to read demanding works with comprehension, to listen and observe carefully, and to respond appreciatively to the precise and imaginative use of language and other forms of artistic expression
- the ability to reason quantitatively and to evaluate basic mathematical and statistical arguments
- the ability to participate in a democratic society, to respect the value of informed debate and tolerate differing ideas
- an understanding of the responsibility of educated persons to contribute to the communities and the environment in which they live
- knowledge of the natural world and of their own and others' cultures and traditions, including non-Western and non-majority cultures, and respect for the diversity of peoples and cultures within the fundamental unity of humankind
- an understanding of the nature and function of faith and the Catholic tradition in the modern world
- the ability to articulate and support moral and ethical judgments about what constitutes good actions and a good society
- the ability to use knowledge from various fields and to integrate ideas across disciplinary boundaries
- knowledge in depth in at least one field of study, including an understanding of the route to acquiring knowledge and demonstration of some ability to do research or learn independently in that field.

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.

Overview of requirements:

Literature and Writing - 8 credits
Moral and Philosophical Reasoning - 8 credits
Natural Science and Mathematical and Quantitative Reasoning - 12 credits
Faith and the Catholic Tradition - 12 credits
Social Analysis - 4 credits
Historical Studies - 4 credits
Fine Arts - 4 credits
Language and Culture - 12 credits
Human Diversity - 4 credits
Computer Competency - *see page 28*
Health and Fitness - 0 credit

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: Fiction and Nonfiction Prose
ENGL 112 Critical Reading and Writing II: Drama and Poetry

b) students with qualifying ACT scores enroll in:
ENGL 190 Critical Reading and Writing: Major Genres
plus
one additional core-area literature course in English numbered above 200 with the exception of ENGL 251, 252, 253, 300, 305, 321, 322, 326, 380, 401, 402, 403, 421, and 422.

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.

The two core courses are:
PHIL 115 Philosophy of the Human Person
PHIL 214 or 215 Introductory Ethics

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 (with a laboratory component), mathematics (MATH 114 or higher), 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 presen-

tation of conclusions orally or in writing. (Normally, Web-based courses are not accepted as lab sciences that satisfy this lab science requirement. Any exceptions to this rule must be pre-approved by the Core Area Curriculum Review Committee in the Natural Sciences and Mathematics Division.)

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

BIOL 101 General Biology *or* BIOL 105 Human Biology *or* BIOL 106 Women, Medicine and Biology
BIOL 102 Conservation 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
CHEM 115 Accelerated General Chemistry
GEOL 102 Origins and Methods
GEOL 110 Geology of the National Parks *or* GEOL 111 Introductory Physical Geology *or* GEOL 114 The Science of Natural Disasters *or* GEOL 115 Environmental Geology
GEOL 113 The Earth's Record of Climate
GEOL 130 Earth History
GEOL 211 Mineralogy
GEOL 220 Oceanography
GEOL 252 Geomorphology
GEOL 260 Regional Geology and Field Methods
IDSC 150 Development of the Natural World
PHYS 101 Physics as a Liberal Art I
PHYS 102 Physics as a Liberal Art II
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 220 Statistics I
or
a second natural science course (with laboratory) from the first group (note the restrictions involving BIOL 101 or 105, and GEOL 110, 111, 114 or 115).

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
or
THEO 102 The Christian Theological Tradition: The Bible and the Early Church (2 credits) *and* THEO 103 The Christian Theological Tradition: St. Augustine to the Present (2 credits)

plus:

THEO 200-level course
THEO 300-level course

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
POLS 105 Politics and Government in Comparative Perspective
PSYC 111 General Psychology
SOCI 100 Introduction to Sociology
SOCI 110 Social Problems

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 History of the Modern World since 1550
HIST 113 Early America in Global Perspective
HIST 114 The Modern U.S. in Global Perspective
HIST 115 The World Since 1900

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.

Students may choose one of the following core-area courses:
ARTH 110 Introduction to Art History
ARTH 159 Principles of Art History (2 credits)
ARTH 280 Sacred Architecture and Space
ARTH 285 Arts of Africa and the African Diaspora
ARTH 286 Women's Art in Cross-Cultural Perspective
ARTH 289 Asian Art
ARTH 291 Topics in Non-Western Art
ARTH 297 Topics
ARTH 300 Ancient Near East and Egypt
ARTH 305 Greek Art and Archaeology
ARTH 310 Roman Art and Archaeology
ARTH 320 Art and Culture of Colonial Mexico
ARTH 330 Churches and Mosques in the First Millennium
ARTH 335 Cathedrals, Monasteries, and Caliphates
ARTH 340 Southern Renaissance Art and Society
ARTH 345 Baroque and Rococo Art
ARTH 347 Golden Age of Spain
ARTH 350 19th Century: Neoclassicism to Symbolism
ARTH 355 20th Century: Cubism to Installation
ARTH 391 Native American Art
ARTH 392 American Art
MUSC 115 Understanding Music & Culture
MUSC 118 Understanding Music & Culture to 1850 (2 credits)
MUSC 119 Understanding Music & Culture 1850 to Present (2 credits)
MUSC 120 Orchestral Literature
MUSC 130 Introduction to World Music
MUSC 216 Jazz in America
MUSC 217 Music of the Americas
MUSC 218 Black American Music: An Historical Survey
MUSC 219 Music in the United States
MUSC 222 Theology of American Popular Music
MUSC 412 History & Literature of Music II
THTR 111 Introduction to the Theater
THTR 221 History of Theater I: Classical through 17th Century
THTR 222 History of Theater II: 18th Century to Contemporary
THTR 223 History of Theater III: American
THTR 259 Film I: Introduction to Narrative and Non-Narrative World Cinema
THTR 260 History of Film: The Silent Era
THTR 261 History of Film: Sound Era, 1926 to Present Day
THTR 297 Topics
THTR 359 Film II: Film Theory and Criticism
THTR 412 Drama: Theory and Criticism

Students may choose to participate for four semesters in one of the following music ensembles:
MUSN 140 Women's Choir
MUSN 142 Chamber Singers
MUSN 143 Liturgical Choir
MUSN 160 Concert Choir
MUSN 185 Symphonic Band
MUSN 186 Symphonic Wind Ensemble
(a combination of four semesters in 142 and 160 or 185 and 186 will fulfill the requirement)

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.

Students must complete the 111, 112, and 211 sequence in a particular language. All students with previous language experience must take a placement 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 with sufficient proficiency in a language may test out of 211 and receive a waiver of the requirement. A waiver does *not* add credits on the student's transcript.

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 the human diversity requirement focus on one or more of the following areas of inquiry: racial and ethnic minorities; class; gender; marginalized groups; non-Western culture.

These courses assist students in understanding the perspectives, values, experiences, works and achievements of the peoples and cultures being studied, recognizing that the experiences, beliefs, and values of any group being studied are not monolithic, but may vary widely within the group. Whenever possible they include materials (*e.g.,* writings, films, narratives, oral histories, artwork) which are produced by the population or culture under study.

Courses consider ways in which individual preconceptions, stereotypes, and assumptions affect understanding of issues related to diversity or consider ways in which position and privilege affect understanding of issues related to diversity. In addition, these courses address ways in which power and privilege operate at the institutional/systemic level.

Courses fulfilling the human diversity requirement explicitly address the ways in which the study of diversity is valuable to a liberal arts education and fosters respect for the diversity of peoples and cultures within the fundamental unity of humankind. These courses also address how the discipline involved contributes to an understanding of the groups or culture under study and how the perspectives of the groups or culture might expand understanding of the discipline itself.

Courses available to fulfill the requirement are:

ACST 200 Introduction to American Cultural Studies
ARTH 110 Introduction to Art History
ARTH 285 Arts of Africa and the African Diaspora
ARTH 286 Women's Art in Cross-cultural Perspective
ARTH 289 Asian Art
ARTH 291 Topics in Non-Western Art
ARTH 320 Art and Architecture of Colonial Mexico
ARTH 391 Native American Art
BLAW 352 Gender Issues and the Law
CATH 308 Woman and Man
CATH 326 Church in Latin America (THEO 326)
COMM 322 Intercultural Communication
COMM 340 Rhetoric of Race, Class, and Gender
ECON 345 Economics of Development and Growth
ECON 346 Country and Area Studies in Economics (dependent upon country involved)
EDUC 212 Human Relations and Multicultural Education
ENGL 217 Multicultural Literature
ENGL 218 Literature by Women: Critical History
ENGL 337 The Literature of Human Diversity
ENGL 341 Literature by Women: Critical Questions
ENTR 390 Diversity Issues in Entrepreneurship
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 340 Foundations of Modern China
HIST 341 The History of Modern China
HIST 345 Family and Women in Chinese History
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
IDSC 312 Gender and Science
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
MUSC 218 Black American Music: An Historical Survey
MUSC 222 The Theology of American Popular Music
PHIL 208 Indian Philosophy
PHIL 210 Chinese Philosophy
PHIL 215 Ethics East and West
POLS 105 Politics and Government in Comparative Perspective
POLS 352 Third World Politics and Government
PSYC 151 Cross-Cultural Psychology
PSYC 205 Psychology of Women
SABD *See the Office of International Studies for courses that have been approved.*
SOCI 100 Introduction to Sociology
SOCI 110 Social Problems
SOCI 251 Race and Ethnicity
SOCI 255 Gender in American Society
SOCI 301 General Anthropology
SOCI 330 Religion and Society
SOCI 351 Immigration, Fear and Hate
SOWK 340 Human Behavior and the Social Environment
THEO 305 Theologies of Justice and Peace
THEO 331 Christianity and World Religions
THEO 332 Judaism
THEO 334 Islam
THEO 353 Women and the Old Testament
THEO 354 Women and the Christian Tradition
THEO 359 Women in the Early Church
THEO 361 Black Religious Experience
UMAIE *See the Office of International Studies for courses that have been approved.*
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.

The Computer Competency requirement includes two first-year requirements and a second-level requirement. The first-year requirements correspond to goal number 1 above and are intended to verify that students have the basic technological skills that instructors will expect for completing coursework. The second-level requirement corresponds to goals 2 and 3 and is intended to provide an opportunity for students to learn and demonstrate a computer-related competency more directly related to each student's chosen major field and future career.

Reflecting the constantly changing nature of the computer world, the detailed requirements of the competency also change. The current process may be found in *The Computer Competency Requirement at the University of St. Thomas: A Guide for Students* available from the office of Academic Counseling.

The following sampling of courses contain computer components beyond the basic skills, and will satisfy the second-level Computer Competency.
BIOL 102 Conservation Biology
BIOL 210 Introduction to Laboratory Research
BIOL 315 Biology of Plants
BIOL 333 Ecology
BIOL 354 Neurobiology
BIOL 415 Plant Physiology and Adaptation to Stress
CHEM 300 Quantitative Analysis
CHEM 331 Chemical Thermodynamics and Reaction Dynamics
CHEM 332 Quantum Chemistry and Molecular Spectroscopy
COMM 160 Electronic Media Production
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
ENGL 380 Issues in English Studies
ENGL 421 Literary Magazine Practicum, Part I (2 credits) *and* ENGL 422 Literary Magazine Practicum, Part II (2 credits)
ENVR 151 Humans and the Environment
GEOG 112 Physical Geography
GEOG 221 Computer Skills in Geography
GEOG 222 Geographical Analysis
GEOG 223 Remote Sensing
GEOG 321 Geographic Information Systems
GEOG 421 Advanced Geographic Information Systems
GEOL 113 The Earth's Record of Climate
GEOL 252 Earth Surface Processes and Geomorphology
HLTH 440 Health Education: 5-12 Curriculum, Assessment and Administration
HLTH 464 Critical Issues in Health Education
JOUR 220 Design Concepts of Communication
JOUR 225 Writing and Designing for the Web
JOUR 350 Public Relations Writing
JOUR 410 Advanced Reporting
MATH 108 Calculus with Review I
MATH 109 Calculus with Review II
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 (2 credits)
MUSC 180 Multi-track Recording (2 credits)
MUSC 220 Digital Recording and Sampling (2 credits)
MUSC 240 Music/Audio Post Production (2 credits)
MUSC 303 Music Notation on Computer (2 credits)
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
POLS 205 Introduction to the American Public Policy Process
QMCS 110 Introduction to Information Processing
QMCS 120 Computers in Elementary Education and LOGO
QMCS 201 Introductory Statistics II
QMCS 215 Rapid Application Development
QMCS 220 Statistics I
QMCS 230 Software Design Using the JAVA Language
QMCS 238 Software Design using Business Programming Languages
QMCS 281 Object-oriented Design and Programming
QMCS 300 Computer Organization
QMCS 342 Computer Applications in Experimental Sciences
QMCS 410 Operations Research I
SOCI 220 Sociological Analysis
SOWK 380 Social Research: Designs and Statistical Applications

Health and Fitness

(0 credit)
This course in health and fitness provides students with the knowledge, skill, and technique 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 requirement, 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.

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.

Students enroll in the following core course:
PHED 100 Foundations for Fitness

Major Requirements

Regular Majors

After a student has completed 48 semester credits, a student must apply to be admitted to a major in his or her chosen field. Admission to a major field is necessary to allow the student the opportunity to continue registering with his/her class.

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

A major in a Bachelor of Arts degree program consists of 28 to 44 credits in the area of concentration plus allied courses as specified by the department in which the major is offered. No more than 48 semester credits in the department of the major field or 48 credits in the College of Business for majors in the area of business may be counted toward the 132 credits required for a degree.

A major in a Bachelor of Science degree program (or

an Engineering program) may require more than 48 semester credits in the field of the major.

At least 84 credits must be presented that are not in the department of the major for all baccalaureate degrees. For majors in the areas of business, these credits must be outside the College of Business.

Students with transfer courses in the major must also attain a 2.00 grade point average for the courses taken in the department (College of Business for business majors) of the major 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.

Procedures for applying to a major are available from the Office of the University Registrar.

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 prerequisites for courses in the major program offered at St. Thomas will be taken on the home campus.

Individualized Majors

A student may pursue a major other than one of the regular majors described in the section on Curricula.

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.

Minor Requirements

Regular Minors

A student is not required to complete a minor. A minor consists of 20 to 26 credits in the area of concentration including all prerequisites 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.

A student may earn more than one minor.

Minors at other ACTC Institutions

A student wishing to complete a minor 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 minor by the chair of the department at the other institution, and the list of courses that need to be completed.

Individualized Minors

A faculty adviser should be chosen for the minor. Individualized minors must be approved by the Committee on Studies.

Senior Residency Requirement

Thirty-two of the final 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 affiliated programs are considered exchange credits and count toward the residency requirement.

Addition of major, minor, or degree after graduation

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.

A student who has been graduated from the University of St. Thomas may add a second degree (such as a B.S. added to the original B.A.) by fulfilling all the remaining requirements of the degree. The 32-credit senior residency requirement need not be met a second time. The second degree may not be in the same discipline as the original degree.

The Undergraduate Program

All matters pertaining to the undergraduate curriculum are under the jurisdiction of the faculty.

Courses

A "full" course is equivalent to four semester credits. Each course is assigned a subject area code consisting of 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 lower division courses, and those having 3 or 4 as the first digit are 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 permission from the Associate Dean of Academic Counseling.

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.

Final Examinations

Each semester 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 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 times for January term and summer session courses.

Registration

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

Students must 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 if the student was not in attendance on the first day of the session. **Students must not assume they have been dropped if they did not attend the first day of class. To officially withdraw from the class, the student must file a Change in Registration form with the Office of the University Registrar or drop the course using the Murphy On-line Web registration system.**

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

There are two concurrent registration periods – summer sessions and fall semester in April; January term and spring semester in November. Each student is scheduled to register after a specific date and time, based on his/her number of earned credit hours and an alphabetical rotation of surnames. Failure to meet certain core requirement competencies will result in loss of registration priority.

Each student is required to meet with his/her adviser to begin the registration process each semester.

New Student Scheduling

Registration for new freshmen and entering 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 credit evaluation and select appropriate courses related to their interests.

At this meeting, transfer students should identify any transfer courses they think should count as fulfilling particular core requirements. The academic counselor will assist the transfer student with a petition form used to request consideration of one or more transfer courses for fulfillment of core requirements. The petition form should be submitted to the Director of Undergraduate Academic Affairs (AQU 110G) during the first semester of enrollment at UST.

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 University Registrar 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 Website for additional restrictions:

www.associatedcolleges-tc.org

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 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. These summer courses are considered transfer courses.

Exchange courses may be used to fulfill 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.

Students who are seeking admission to the University of St. Thomas must have transcripts of all previous college work sent to the Office of Admissions.

Current St. Thomas students must have transcripts of work at other schools sent to the Office of the University Registrar if they are seeking transfer credit.

The university registrar, using official transcripts provided by the student's previous schools, will assist the faculty to determine which courses may be used to fulfill St. Thomas degree requirements. Students may be asked to provide additional materials supporting the use of transfer courses. The university may require transcripts from foreign schools to be submitted to an evaluation service for processing before considering them. A fee may be charged for this service.

Students who wish to enroll in courses at another institution after matriculation at St. Thomas must receive approval from the chair of the department if these courses are to be included in the major or minor field.

When a transfer student matriculates at St. Thomas, all transfer courses accepted for credit at St. Thomas will be posted to the students academic history for the first term of enrollment at St. Thomas. When any St. Thomas student transfers credits to St. Thomas after the student's first term of enrollment, the transfer courses will be posted to academic history for the term in which it was taken at the transfer institution.

Generic Courses

A series of courses with numbers common to all departments and programs are called generic courses. These include Topics courses, Experiential Learning (which is usually an internship), Seminars, Research, and Individual Study. These course numbers may be taken more than once provided the title and content are different. See the beginning of the Curricula section of this catalog for a description of these courses.

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 determined 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 course at the discretion of the instructor. If, for some emergency situation, attendance on the first day is not possible, the student should notify the instructor of the situation by e-mail or telephone.

Students should not assume that non-attendance of a class on the first day of the session will automatically result in their being dropped from the class. Students who wish to drop a course must do so by officially withdrawing from the class.

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.

Students may not switch from credit status to audit status after the last day to withdraw from a class without a grade of F. Students may not switch from audit status to credit status after the last day to register or add a class.

The tuition charged for an audited courses is equivalent to one credit of tuition.

Changes in Registration

Changes in registration can be made on the Murphy Online Web registration system until the published deadline to "add a class without instructor permission." After the published deadline, additional classes are added by submitting a Change in Registration (Add/Drop) form, which must be signed by the instructor, to the Office of the University Registrar. This form is available at the Office of the University Registrar, or online at http://www.stthomas.edu/registrar/student/forms/adddrop.html. Classes may be dropped at any time during the semester using the Murphy On-line Web registration system. Students should consult the university calendar in this catalog for the specific deadlines for making these changes.

Courses added after the published deadline must have permission of the instructor.

First-semester freshmen must have the approval of their faculty adviser for all changes in registration.

All students are required to meet with their faculty advisers before beginning registration for any semester.

Full refund of tuition and fees is made for courses dropped up to the "last day to drop a course without notation on record" indicated in the academic calendar for each term. The refund schedule for courses dropped after this period is available from the university business office.

Withdrawal from a Course

Courses dropped between the "last day to drop a course without notation on record" and the "last day to withdraw from a course without a grade of F or R" listed in the academic calendar will receive a notation of W.

A grade of W is an official grade and is posted on the permanent record. Since there is no credit and no quality points for a W, the notation does not affect the GPA.

Retaking of Courses

A student may repeat a course if her or his grade or mark is F, R, W, D-, D or D+. Only the higher grade will be 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 University Registrar to do so.

Withdrawal from the University

Students my withdraw from the university at any time by contacting the Office of the University 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 adviser.

Institutional refunds and financial aid adjustments are determined by the date on which the student initially contacts the Office of the University 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 an associated grade point value. These values are listed below:

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 undergraduate program may be taken on the S-D-R grading option.
3. A student must complete a form at the Office of the University Registrar for any course to be taken on this basis. The published deadline date is in the academic calendar for each term.
4. If the course is part of the major or minor program (including allied requirements), the signature of the department chair is required.
5. 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- becoming the grade of record 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) and Not Recorded (NR) 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 may not 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.

The student must complete the designated work and submit it to the instructor by May 1 for an I received in fall semester or January term; by December 1 for an I received in spring semester or a summer session (unless an earlier deadline has been required by the instructor).

In the absence of a final grade report on or before the deadline, the mark of I will be changed by the university registrar to a grade of F or R. The deadline may not be extended. The instructor may change a resulting F or R by means of university grade change policies and procedures.

In an instance where a grade has not been assigned at the end of the term, a designation of Not Recorded (NR) will be assigned to the student's academic record. The NR must be changed to a grade by May 1 for the fall semester or January term; by December 1 for the spring semester or summer session. In the absence of a final grade on or before the deadline, the mark of NR will be changed to a grade of F or R. This deadline may not be extended. The instructor may change a resulting F or R by means of university grade change policies and procedures.

Change of Grade

An instructor may change a grade if there has been an error in the computation, transcription, or reporting of the grade. Instructors may also change grades of F which resulted from the lapse of Incomplete notations. 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. After the grading deadline for a term, the instructor must submit the changes to the Office of the University Registrar using the *Official Change of Grade Form.*

Grade Reports

Final grades can be accessed by the student through the UST student Web system. Final grade reports are printed only upon request, using the student Web system.

Grade Point Total and Grade Point Average

Grade points are assigned as indicated above. Note that marks of W, I, 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 courses 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 considered a full-time student. A degree student who takes fewer than 12 credits for credit is considered a part-time student.

A degree-seeking student is ranked by credits successfully completed:

fewer than 28 credits = freshman
between 28 and 59 credits = sophomore
between 60 and 91 credits = junior
92 credits or more = senior

Catalog of Record

The catalog of record may be a catalog that appears only online if changes occur between printed versions of the catalog. The catalog in effect at the time of matriculation is usually considered the catalog of record and determines the student's graduation requirements. However, a student may wish to choose a later catalog issued before being graduated to take advantage of a revision of a major, for example.

Choosing the new catalog means accepting *all* changes in that catalog from the former one. If there is a change in core curriculum requirements, for example, the student will be responsible for those changes or will need to petition for a waiver. Generally speaking, the student may choose any catalog in force during the time the student is enrolled for a degree.

Students should contact the office of Academic Counseling if they wish to change their catalog of record.

Date of Graduation

Degrees are awarded at the end of Fall, January, Spring and Summer terms. The date of graduation will be the last day of the last term of registration for the course or courses needed to complete the student's degree requirements. To be considered completed, all courses must have final grades. An Incomplete (I) or a Not Reported (NR) grade is not considered a final grade and must be changed before the degree will be awarded.

Diploma

One diploma is awarded for each degree earned. Diplomas are distributed to graduates after the university has verified that all requirements for graduation have been settled. This may be several weeks after commencement. Diplomas will be sent to the graduate's permanent address by mail.

The size of all diplomas is 8.5 x 11 inches. Information on the diploma includes the name of the university, the university seal, the graduate's name, the degree represented by the diploma, and the date of graduation.

Transcripts

A transcript of a student's academic record will be issued only upon receipt of a written request from the student. A form is available on the Website at http://www.stthomas.edu/registrar/transcript/default.html. Forward a completed and signed copy along with the transcript fee to the address on the form. Transcripts will not be issued to students who have a hold placed on their records.

Academic Probation

A student who has attempted twelve credits or more at the University of St. Thomas and has not achieved a University of St. Thomas cumulative grade point average of 2.00 or better is put on academic probation.

Each student who is placed on probation will receive a letter from the Office of Academic Counseling 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 Office of Academic Counseling identifying the nature of the suspension and the events leading up to it. Students who are suspended may petition the Committee on Studies for readmission after consulting with either the Director of Academic Counseling or the Associate Dean for Academic Advising and Special Programs. A suspended student may not register for summer school, or any other term. A student may re-enroll following a semester of suspension, but must make an appointment with an academic counselor to do so.

Academic Dismissal

A student is dismissed from the undergraduate program 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 Office of Academic Counseling 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 after consulting with either the Director of Academic Counseling or the Associate Dean for Academic Advising and Special Programs. 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 counselor in the Office of Academic Counseling. 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 program and has the authority to grant exceptions and waivers when warranted. It is composed of five elected faculty members and two students appointed by the All College Council.

Requests should be made in writing and presented to the chair. The student should also fill out a *Committee on Studies Petition Form* available from the Office of the Director of Undergraduate Academic Affairs. 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.

Student Records Privacy – FERPA

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights include:

1. The right to inspect and review the student's education records within 45 days of the day the university receives a written request for access.
2. The right to request the amendment of the student's education records that the student believes are inaccurate or misleading.
3. The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.
4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the university to comply with the requirements of FERPA.
5. Directory information may be released with-out the written consent from the student, unless the student specifies to the contrary as described below.

To withhold directory information from the public, the student normally must file a form available in the Office of the University Registrar within one week from the beginning of the fall semester (or the semester in which the students enters). The order for withholding will remain in effect until the student rescinds it in writing. The form for withholding directory information will inform the student of some possible consequences. For example, if the student's name is withheld, he or she cannot participate in intercollegiate athletics where team rosters are published, or commencement ceremonies.

The complete FERPA policy is available at http://www.stthomas.edu/registrar/student/ferpa/nondisclosure/annualnotice.html.

Aquinas Scholars

The Aquinas Scholars Program is the honors program of the undergraduate program. It is designed to assist students in developing their intellectual talents, character, and interests while pursuing an education of considerable depth and breadth.

See the Academic Information section of this catalog for a description of the program.

Deans' Honor Lists

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 twelve credits for regular grades (A, B, C) will be placed on a Dean's Honor List if there are no grades of D or F or marks of I or R. (Evening program students must have taken at least eight credits in a semester and under the same requirements.)

The list is made public and the student receives a letter of commendation from the appropriate dean's office. Freshmen and first-semester sophomores will be listed by the Dean of Arts and Sciences. Second-semester sophomores, and juniors and seniors will appear on lists depending on their major – from the College of Arts and Sciences, the College of Business, the School of Education, the School of Engineering, or the School of Social Work.

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. In the case of transfer credits, the St. Thomas grade point average must also satisfy the minimum requirement, with a minimum of twelve St. Thomas credits taken for letter grade. 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 (although course-related fees are to be paid); and attendance as guests of the university at special academic functions.

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 Curricula section of this catalog.

Biology – *Gamma Tau* chapter of *Beta Beta Beta*
Communication – Beta Chi chapter of *Lambda Pi Eta*
Drama – *Pi Epsilon Delta*
Economics – *Omicron Delta Epsilon*
English – *Sigma Tau Delta*
Foreign Language – *Alpha Mu Gamma*
Geography – *Mu Alpha Pi*
History – *Phi Alpha Theta*
Political Science – *Chi Theta* chapter of *Pi Sigma Alpha*
Psychology – *Psi Chi*
Religious Studies and Theology – *Theta Alpha Kappa*
Social Work – *Beta Epsilon* chapter of *Alpha Delta Mu*
Sociology and Criminal Justice – *Iota* chapter of *Alpha Kappa Delta*

Latin Honors

Three types of academic honors are conferred upon graduates of the undergraduate program.

All students considered for graduation with Latin honors 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 Office of Director of Undergraduate Academic Affairs 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 or director of the interdisciplinary program.

The chair/director, 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 or program. The examiners shall represent at least three departments and at least two academic divisions or schools of the undergraduate program.

The faculty member from the student's major department or program shall act as chair of the examination committee. A student will multiple majors shall designate one of the majors as the major department or program 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, takes 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 Director of Undergraduate Academic Affairs.

If a student's performance is judged not out-standing 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 members. 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 or schools of the undergraduate program 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.

If the student who is eligible for graduation *summa cum laude* chooses not to take the Honors Oral Examination, the student will be graduated *magna cum laude.*

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.

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. Faculty advisers assist students in their freshman and sophomore years in planning their class schedules each semester.

Major field advisers guide their advisees' progress toward a degree by reviewing grade reports and degree evaluations, 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 twelve or sixteen credits in fall semester: ENGL 110 Intensive Writing; a companion course covering one of the core curriculum requirements; and one or two additional courses of the student's choice.

ADP students are required to participate in seminars offered by the Academic Support Center.

Mathematics Resource Center

The Mathematics Resource Center (MaRC) provides a variety of resources including a tutoring staff, placement testing, self-study/review programs, math CDs, 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 by appointment.

Students whose MPC is NONE can prepare for Math 100 or Math 101 by taking the Basic Math Skills self-study review course (MATH 005). The course has a nominal registration fee.

Consult the Website for more information and the link to practice problems for the Math Placement Exam or for the Calculus II Readiness Assessment:

www.stthomas.edu/mathematics/MaRC

Academic Support Center

The Academic Support Center (ASC) 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 Center also provides support for students whose first language in not English.

All services are confidential and free of charge.

Enhancement Program – Disability Services

The University of St. Thomas offers services for students with disabilities. Services are offered under the philosophical premise that qualified students with disabilities can succeed academically if given appropriate programming and adequate support. All accommodations, auxiliary aids, and services are offered through the Enhancement Program.

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

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

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.

For more information, please contact the Enhancement Program Office, located in OEC 119 or consult the Website:

www.stthomas.edu/enhancementprog/

Center for Writing

Undergraduate and graduate students at all levels of experience from across the university use the Center for Writing. In intensive one-on-one conferences, students work with peer consultants to develop their ideas, create a focus, organize their papers, and clarify their sentences. Most bring course assignments, but many are revising graduate school applications, extensive research papers, master's theses, or dissertations.

The Center is staffed by peer consultants selected each spring semester through a rigorous application and interview process. The consultants do not edit nor proofread, but model critical reading, thinking, and writing as important facets of learning.

Conferences with peer consultants are free. For more information, please contact the Center for Writing in JRC 361 or through our website at www.stthomas.edu/writing.

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 pre-major adviser to a departmental major field adviser.

Information Resources and Technologies

Information Resources & Technologies encompasses five service and support departments: Client Services, Information Technology, UST Libraries, Networks & Telecom Services, and Web & Media Services. Our mission is to integrate people, processes, information resources and technologies in support of teaching, learning and strategic goals at the University of St. Thomas.

Client Services provides a single point of presence for accessing academic and administrative technology support services - in person, online, or by phone - and the complex coordination, cross-training, support, and knowledge management essential to success.

The Information Technology (IT) division manages centralized networks, servers, application software and database management software.

The University Libraries provide support for research, writing and information literacy. The libraries enrich scholarship and teaching by providing information resources, services, and instruction that support the curriculum and the intellectual development of St. Thomas students, faculty, and staff.

Networking & Telecommunication Services (NTS) is the central nervous system on which all facets of technology at UST depend on for their existence. NTS provides highly reliable, secure, and capacious voice and data service to the university community.

Web and Media Services (WMS) manages the university Web environment and offers services supporting effective uses of Web and media technology for instruction and promotion.

Student Life

Students will find that there are many cultural, social, and educational events to attend and many activities in which they may participate. Students can further develop their leadership skills by being an active member in one of over 90 clubs and organizations on campus.

All College Council

The All College Council (ACC) is the student government of the undergraduate program, representing undergraduate students. The All College Council, as a representative of the University of St. Thomas undergraduate student body, is dedicated to advocating student concerns by working with faculty, staff, the administration, community leaders, and fellow students to promote positive change while staying true to the Catholic identity of this institution.

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.

The All College Council is comprised of 36 representatives who act as the voice of the students at the University of St. Thomas. Members of the ACC serve their constituents by working with faculty, staff, administration, and other students to promote positive change and foster tradition in an effort to provide students with an exceptional college experience both inside and outside of the classroom. Membership in the All College Council consists of six executive officers, two neighborhood and two residential senators, one legislative affairs and one commuter senator, two student athlete representatives, one commuter representative, one elections and credentials chair, one transfer student senator, one Residence Hall Association representative, the class president and two representatives from each class, one International Student representative, one HANA student representative, one STAR representative, one St. John Vianney representative, one student organization's representative, one Student Alumni Council representative, and two co-advisers, including the executive director for the Department of Campus and Residence Life and Director for the Office of Campus Life.

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

Participation in Faculty Committees

Students of the undergraduate program work cooperatively with the faculty and administration on seven committees: the Student Life Committee, the Grievance Committee, the Committee on Discipline, the Undergraduate Planning and Policy Committee, the College of Arts and Sciences Curriculum Committee, the Undergraduate Committee on Studies, and the Budget Advisory Committee.

The function and authority of these commit-tees may be found in the *Student Policy Book.*

Student Organizations and Clubs

There are approximately 90 clubs and organizations at the University of St. Thomas. Clubs and organizations are available in a range of interests, including academics, sports, honors and service. Choosing to be involved is a great way to develop and build relationships with your peers and the university community. Most importantly, getting involved at St. Thomas is an excellent way to enhance social, interpersonal, problem solving, leadership and other important skills.

The All College Council and the Office of Campus Life oversee all student organization recognition and funding processes. 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.

A description of all the clubs, organizations, and other types of involvement on campus is available online. 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-two varsity sports.

Men's varsity sports are soccer, cross country, football, hockey, basketball, swimming, baseball, golf, tennis and indoor and outdoor track and field.

Women's varsity sports are volleyball, hockey, cross country, basketball, swimming, soccer, softball, tennis, golf and indoor and outdoor track and field.

Intramural Activities

Numerous intramural activities are offered throughout the academic year for men and women.

During the fall semester activities include: flag football, whiffle ball, 4-on-4 basketball, racquetball, coed soccer and volleyball.

During the spring semester the offerings include 5-on-5 and 3-on-3 basketball, floor hockey, sand volleyball, dodgeball, and kickball. Several aerobic classes are also offered and students are encouraged to use the recreational facilities for leisure enjoyment. All leagues are free and open to students, faculty and staff. Sign-up forms are available at the cage in O'Shaughnessy Hall.

Student Publications

Each student publication has a faculty adviser, or a managing editor, 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 the publications. The staff is supervised by student editors and publication advisers.

The *Aquin*

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. Applications for *Aquin* photographers and editors are made to the Department of Journalism and Mass Communication.

The *Aquinas*

The *Aquinas* is the university yearbook, and its student staff captures the school year's events through words, pictures, and graphic theme. The yearbook is distributed at no cost in the fall of each year. Applications for *Aquinas* student staff positions are made available through the *Aquinas* yearbook managing editor's office in Murray Herrick Center 112D.

Summit Avenue Review

Summit Avenue Review is the literary and visual arts magazine at St. Thomas. Designed and edited by students, the magazine publishes poetry, fiction, literary nonfiction, photography, and other visual art from the St. Thomas community. Work on the magazine begins in early fall, with a first submissions deadline in December and an April publication date. Inquiries should be sent to the Department of English. The magazine's Web address is:

www.stthomas.edu/summitavenuereview

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 www.stthomas.edu/music.

Theater

Four productions per year are presented by the joint Department of Theater of the University of St. Thomas and College of St. Catherine. Alternating between the two campuses, the productions are presented at UST's Foley Theater and at CSC's Frey Theater, with the occasional use of the O'Shaughnessy Auditorium at CSC. The season of plays each year includes a variety of time periods and styles, from classical Greece to contemporary American. A musical is presented every year. Admission is free to all students with ACTC identification.

All students are eligible to take part in theater productions, regardless of major. Casting is by open audition. Audition notices are posted throughout campus and on the Department of Theater's website. To work backstage, students may sign up at the annual Theater Open House in the fall, or by contacting the department's technical director.

In addition to its production season, the Department of Theater sponsors a slam poetry team, PSST. This team performs on campus and in local venues. To join, sign up at the annual Theater Open House or contact the chair of the department.

Film Club

The Film Club, sponsored by the joint Department of Theater of the University of St. Thomas and College of St. Catherine, meets weekly to view and discuss outstanding current film. Admission is free, and refreshments are served. For a schedule, contact the chair of theater or check the department's Website.

Dean of Students Office

The Dean of Students Office assists and supports students in achieving their academic and personal goals. They are available to answer questions, to help resolve issues or concerns, and to refer students to the appropriate department, office or community resource.

The staff members of the Dean of Students Office provide a variety of programs and services for undergraduate and graduate students. These include new student orientation, student advocacy services, students' rights and responsibilities information, judicial services, emergency loans, and the publication of the on-line *Student Policy Book.*

The On-Line *Student Policy Book*

The *Student Policy Book* is published by the Dean of Students Office. It contains information regarding the Student Code of Conduct and all expectations, guidelines and policies that govern student life. All students are responsible for familiarizing themselves with the expectations outlined in the on-line *Student Policy Book* and will be held accountable for upholding the university's policies. It can be found at www.stthomas.edu/policies.

Student Affairs Life/Work Center

The Life/Work Center in 110 Terrence Murphy Hall on the Minneapolis campus, a department within the Division of Student Affairs, provides special services and resources to meet the unique needs of graduate students, education students (both graduate and undergraduate), and alumni/ae. Our core services include career counseling, personal counseling services, and the resources of the International Student Services and Multicultural Student Services staff. Legal services are provided periodically. Staff in the Life/Work Center can provide consulting services for career development, and personal life management concerns. Staff are available for in-class presentations and can provide resources and support for standardized self assessments which complement the curriculum goals. Contact the Life/Work Center at 651-962-4763 or lifework@stthomas.edu.

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 six full-time professionals, Campus Ministry employs a team of residence hall chaplains and twenty student employees. The staff coordinates the religious life of the campus and offers a variety of programs.

In the area of worship, there are daily, Sunday 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 and VISION J-term and spring break volunteer service trips.

To inspire personal growth, Campus Ministry has a number of programs, including prayer groups, retreats, pastoral counseling and referral, marriage preparation, crisis intervention, special groups for support (*e.g.,* Faith in Action – a chapter of Courage ministry for those dealing with sexual orientation issues), and Common Ground – a house of hospitality where students gather to relax, pray, study, and meet new people.

Campus Ministry also offers the Rite of Christian Initiation for Adults (RCIA) to those who are preparing for baptism, eucharist and confirmation in the Catholic Church.

The Center for Campus Ministry 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 concerns of daily living to problems of a more serious nature. In addition to the licensed 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 Daily Bulletin. Complete confidentiality is maintained in accordance with legal requirements and the professional code of ethics. The Personal Counseling Website has an extensive self-help section including anonymous screening for depression, anxiety, alcohol and eating disorders: www.stthomas.edu/personalcounseling.

Testing Services

Testing Services located in the Personal Counseling Office offers a full range of services including personality assessment, career testing, and group tests such as the Law School Admissions Test and the Miller Analogies Test.

Career Development Services

The Career Development Center provides expertise and information to students and alumni. This includes assistance with the tools and methods necessary for finding jobs and internships. The department provides individual assistance and convenient access to quality resources.

Individual counseling, seminars and a variety of resources are offered to assist in:

- Self-assessment and vocational testing
- Career choice
- Major field choice and change
- Researching specific careers and employers
- Seeking internships, full-time, part-time and summer employment
- On-campus interviewing
- Utilizing technology in career development

Career Coaching and Counseling

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

Web Services

Our services can be accessed on the Web from campus, work, home, or anywhere with an Internet connection. Our Website is an invaluable asset, acting as a technological enhancement to broaden the reach of our services. It features seminars, handouts and information produced by our office, as well as suggested links to career resources on the Web.

www.stthomas.edu/careerdevelopment

Commuter Center and Off-Campus Services

The Commuter Center provides hospitality, information, programs, resources, and services to all students with an emphasis on commuters, non-traditional students, and students that live in the immediate neighborhood. Services include: off-campus housing listings; renter education materials; free legal advice; locker rentals; commuter e-mail updates; a student parent lending library; and lounge space with a microwave, refrigerators and computers. The Center is located in the lower level of Murray Herrick Campus Center. Phone: 651-962-6138; Website:

www.stthomas.edu/commutercenter

Multicultural Student Services

Multicultural Student Services (MSS), consistent with St. Thomas/ Catholic tradition, is concerned with providing a comprehensive system of advocacy and support for immigrant and U.S. students of color. The goal is to improve retention and the quality of the UST experience. We strive to prepare all students to think and act responsibly when confronted with the myriad diverse and changing needs of their local community and the world at large. Initiatives addressing academic support, developing partnerships and educational programming complement the academic mission of the university.

Multicultural Student Services also provides scholarships for undergraduate U.S. students of color. Information about these and other funding opportunities may be obtained from Student Financial Services.

International Student Services

International Student Services provides advising and programming to support international students as they pursue their educational, career, and personal goals. This includes promoting the full integration of international students into the university community and intercultural training for students, faculty and staff.

International Student Services provides the following services and programs:

- Orientation programs (2-4 days) for new students about academic, cultural, legal, and practical life at a U.S. university
- Immigration advising for all nonimmigrant students and documentation for F-1 and J-1 students
- Counseling and advising on academic, cultural, financial, health, practical and personal matters
- Mentor Program: US and international students are hired and trained to serve as guides and helpers to new students
- Weekly International Student Electronic Newsletter
- A Website with information on programs and services, immigration rules, activities and programs, and the newsletter:
  www.stthomas.edu/oiss
  OISS@stthomas.edu
- Coordinate the International Education Week activities at St. Thomas each Fall Semester in collaboration with the International Matrix
- Close cooperation with the Globally-Minded Student Association, with U.S. and international members, which promotes interaction and interchange of ideas through social and cultural activities
- Cultural and educational programming such as the CultureLink, Communication Partners, and Friendship Family programs
- Career and job-search workshops in cooperation with the UST Career Resource Center

Box Office & Expeditions

The Box Office & Expeditions offers the university community the opportunity to purchase tickets to many UST campus-sponsored events (including campus dances and concerts), as well as discounted tickets to many local Twin Cities cultural, theatrical and athletic events. A sampling of tickets includes local theater productions, museums, athletic events, movie theaters, and specialty entertainment.

Expeditions is the campus outdoors programming and educational center. Expeditions offers a wide variety of outdoor camping, sporting and athletic equipment for a minimal fee.

Housing

The University of St. Thomas houses approximately 2,400 students in its residence halls, apartments, and other university-owned housing.

Living on campus provides students the opportunity to become part of a dynamic community. This community includes students with all kinds of backgrounds, lifestyles, and interests. Participating in such a community enhances the opportunity to establish a healthy balance of academic study and relaxation.

The University of St. Thomas offers traditional residence halls and apartment style living on the St. Paul campus. St. John Vianney Hall is the college seminary residence.

Living on campus provides the convenience of living close to classes and faculty along with extra amenities like wireless internet access, free laundry, study areas, computer labs, and recreation space. Koch Commons, which connects Morrison, Dowling and Brady halls, has a fitness center and the Pit Stop, which sells smoothies, sandwiches and other snacks.

Nestled in a residential neighborhood in the city, students find St. Thomas to be a safe campus. The department of campus and residence life works to enhance the safety of students on campus through ground level security screens, ID card access, sprinkler systems, and night access staff. UST Public Safety is available 24 hours a day and a professional residence life staff member is on call each night.

Upon admission to the undergraduate program, each student will receive an *Application for On Campus Student Housing* along with instructions for completing the process online. New students desiring space in the residence halls must pay a $200 housing deposit to the Office of Admissions either with a paper application or through the online process. The $200 housing deposit is credited to the student's room and board charges during the first semester of residence. Priority for housing is based on the date the housing deposit is received.

Continuing students apply for housing for the coming academic year in the spring semester. The application process and deadlines are published in the Bulletin and on the residence life website during the spring semester. On-campus dining offers the most convenient options. Resident students (except upper-class students living in on-campus apartments in Morrison, Selby & Grand Ave) are required to purchase a meal plan.

All of the residence halls are described in detail on the residence life website including building amenities, room furnishings, floor plans, and 360 degree photos. Information on what to bring and what not to bring is provided on the website and included when housing assignments are mailed to new students.

Information and policies for residence life are found in the *Housing and Food Service Agreement* and the *Resident Student Handbook*. Both are available from the Office of Residence Life in Koch Commons or on the residence life website.

Visit www.stthomas.edu/residencelife for additional and updated information about living on campus.

Dining Facilities

All food locations accept Flex or Express dollars and cash.

St. Paul 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 and catered events. 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, features pizza,

gourmet burgers, Dunn Brothers coffee, espresso, various snack and beverage items. It has a dance floor, a stage for live entertainment, a large screen TV and special sound equipment.

The *C-Store* is located adjacent to Scooter's on the lower level. Assorted snacks and sundries are available.

The *Pit Stop,* is located on the lower level Koch Commons between Brady and Dowling Residences. It provides deli sandwiches, Freshëns® smoothies, frozen yogurt, Pretzel Logic large fresh baked pretzels with various toppings, and snack items.

The *Binz Refectory* is located on the south cam-pus adjacent to the soccer field. Students who have a food service contract, commuter students and guests may dine in the West dining room.

Beakers is located on the second floor in the Owens Science building. It features Dunn Brothers coffee and espresso, Deli Express Sandwiches, and various snack and beverage items.

Minneapolis campus

Food for Thought restaurant is located on the second floor of the 1000 LaSalle building, offering several different display cooking stations including Asian, Mexican, Grill, Deli, Pennini's, Pizza, salad bar, soups and a variety of other food, snacks, and beverage selections. W e also feature Starbucks coffee in the Food Court.

Student Health Service & Travel Clinic

Student Health Service is an acute health care clinic and Travel Clinic, located in the lower level of Brady Residence Hall. The clinic is designed to meet students' individual medical, travel, and preventative health needs in a compassionate, culturally sensitive, and confidential manner. Health care needs are addressed by either a physician, nurse practitioner or a registered nurse.

Regular clinic hours are Monday through Friday 8:00 a.m. to 4:30 p.m. Same-day appointments are usually available. Please call 651-962-6750 to schedule appointments.

Most services of the center are provided free of charge except travel visit, immunizations, prescription drugs, and certain laboratory tests.

In cases of a serious illness, students will be transferred to one of the area hospitals where they will be treated with charges billed to the student's insurance company.

Urgent Care centers and Emergency resources are listed on the Student Health Service Website www.stthomas.edu/studenthealth. The university offers an optional health and medical care insurance plan to all UST students. International students are required to participate in this insurance plan unless they can demonstrate comparable coverage. The policy is a low-cost accident and sickness insurance plan underwritten by a national insurance company. Information on these policies is sent to returning students and incoming freshmen every year.

All students must submit a health history and immunization record. A physical exam is required for any student wishing to participate in sports.

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. Questions should be addressed to the Student Health Service. A Record of Immunization form is available on the Student Health Service Website listed above.

Travel Clinic

Student Health Travel Clinic is now available for UST students.

The ideal time for a consultation is six to eight weeks before your trip. Consultations cannot be conducted over the phone. Travel experts are available 8 a.m. to 4 p.m., Wednesday and Thursday. Call 651-962-6750 to schedule an appointment.

At the Student Health Travel Clinic, health care professionals individualize care to one's specific medical history, itinerary and planned activities abroad to help minimize risk of exposure to infection. The Student Health Travel Clinic is a yellow fever vaccination center approved by the Minnesota Department of Health and the Center for Disease Control.

The travel clinic specialists will conduct a complete evaluation and provide you with:

- a thorough assessment of your medical history as it pertains to the risks of travel and prevention from infection
- general information on how to minimize exposure to insects and water-borne infections and sexually transmitted diseases, and other travel tips
- immunizations appropriate to your destination(s), your planned activities while there and your current medical condition
- medication to prevent malaria, where appropriate
- educational materials regarding the countries you will be visiting including infectious disease risks
- follow-up care upon your return if necessary

Wellness Center

The Wellness Center is dedicated to assisting students, staff, and faculty in developing healthy lifestyle choices and promoting behaviors that result in enhanced well-being. The center embraces the concept of wellness in developing the whole person.

The center offers programs, resources, and educational material on health promotion and illness prevention. The center is designed to increase the overall health of the university community and promote healthy lifestyle choices that will serve individuals throughout their lives.

The center is located in the lower level of Koch Commons.

Public Safety and Parking Services

The Department of Public Safety and Parking Services is located on the first floor of Morrison Hall 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.

Parking

Parking lots on University of St. Thomas property are open to vehicles with the appropriate UST parking permit. Faculty, staff and students must have a permit to park on campus.

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.

Visitors to the University of St. Thomas St. Paul campus may park in the Morrison Hall ramp, the parking meters, or in Lot T with a south campus visitor permit.

Resident students are required to enter a permit lottery in order to be eligible to purchase a parking permit. Lottery forms for the following fall are included in the Residence Life contract mailed out in the Summer.

In order to purchase a parking permit, a UST identification card is required. Resident students are required to provide an accurate license plate number of the car. Persons purchasing a parking permit will receive a parking map indicating the lots available for the type of permit purchased, and a book or Web address of rules and regulations regarding parking.

Chapels

Chapel of St. Thomas Aquinas

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 Capecchi 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, was installed.

St. Mary's Chapel

St. Mary's Chapel of The Saint Paul Seminary was begun in 1901 and consecrated in 1905. Designed by Minnesota architect Clarence H. Johnston in the basilica style, it blends Romanesque and Byzantine architecture. Artist Bancel LaFarge of New Haven, Connecticut, completed the installation of the stained glass and murals in the 1930s.

The chapel was renovated in 1973, and more extensively in 1988. This project was undertaken with the assistance of liturgical consultant Frank Kacmarcik. A new sanctuary area was created in the north end of the chapel allowing the apse area to become the environment of the baptismal font and new access to the chapel.

In the spring of 2000 a two-manual, 27-rank mechanical action pipe organ designed by Noack Organ Company of Georgetown, Massachusetts, was installed.

St. John Vianney Chapel

The university seminary chapel was redesigned in 1998 by the Rev. Peter Christensen, the rector at that time. 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. The seminary has become a focal point for contemporary religious art, including the iconic triptych in the foyer and the mosaic behind the altar.

A small one-manual Van Daalen organ was moved to the chapel in 2000.

Florance Chapel

The Florance Chapel is the lower chapel in the Chapel of St. Thomas Aquinas. 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.

St. Thomas More Chapel

Located in the School of Law on the Minneapolis campus, the two-story St. Thomas More Chapel features colored art-glass windows, seating for more than 100 and a striking bronze crucifix. A meditation room overlooking the chapel on the second floor provides a quiet respite and a place for reflection.

University Libraries

The University of St. Thomas libraries contain more than 465,000 book volumes, 2,295 print periodical subscriptions, 5300 videos, and access to over 28,000 electronic journals. In addition, the libraries provide students and faculty with access to nearly 150 electronic databases. The O'Shaughnessy-Frey and Keffer Libraries integrate technology, electronic resources, and print resources together with user support from librarians and technical staff in their "Information Commons" making them favorite campus locations for research and studying.

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. The development of the Information Commons with the addition of 125 public access computers has made the OSF Library a favorite campus location for research and studying.

Charles J. Keffer Library

The Charles J. Keffer Library, located in Opus Hall on the Minneapolis campus, is the library for the School of Education, graduate programs in the College of Business, and the Graduate School of Professional Psychology. The Keffer Library is the principle library serving the special needs of the graduate student population of the University of St. Thomas

Archbishop Ireland Memorial Library

The Archbishop Ireland Memorial Library, located on the south campus, is the graduate theological library which primarily serves The Saint Paul Seminary School of Divinity. The Ireland Library collection is highly regarded by theological scholars.

CLIC/MINITEX

Relationships with two local library networks benefit UST users by providing access to the collections of regional libraries. Cooperating Libraries in Consortium (CLIC) allows students to obtain books and periodical articles from other Twin Cities private academic libraries (Augsburg College, Bethel College, Concordia College, Hamline University, Hamline Law School, Macalester College, Northwestern College, the College of St. Catherine, as well as the University of St. Thomas.) Interlibrary loans for materials not owned by the university are available within the CLIC institutions.

Another cooperative venture, MINITEX (Minnesota Interlibrary Telecommunications Exchange) links the university with more than 200 libraries throughout Minnesota, Wisconsin, and North and South Dakota, including the University of Minnesota.

Interlibrary loan is available and makes possible the borrowing of materials from libraries around the nation and the world.

Library Services

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. Group study rooms are available throughout the libraries.

Website: www.stthomas.edu/libraries.

Computing Resources

There are a wide variety of computing resources available for student use at the University. There are general-purpose labs, which any student can use for coursework or personal use. The Information Commons in O'Shaughnessy-Frey Library on the St Paul Campus and the Charles J. Keffer Library on the Minneapolis Campus house the largest general purpose computing facilities on each campus. The Information Commons brings together support for research, writing, information literacy, and computer application support to assist students in developing papers, presentations, and projects. The Information Commons provide both PC and Macintosh computers, printers, scanners and access to the UST wireless network.

There are also specialized departmental labs which are reserved for students who are enrolled in classes or working on course specific assignments. In addition, there are a number of Residence Hall labs that are open to St. Thomas students who live in the Residence Halls.

The University also provides a wireless network. The wireless network is available in the following locations.

In St Paul: OSF Library, MHC in the Grill, Scooters, Commuter Center, Campus Square, Student Dining, Koch Commons, Ireland Library, OSS Fourth Floor, 2nd floor commons, and LL, OWS - 2nd floor, Binz Refectory in the Student Dining Room, the Brady Educational Center and all of the Residence Halls

The wireless network is also accessible outdoors on the St Paul campus in the following areas (Note: weather conditions may affect access to the wireless network outdoors):

- Foley Theatre (between Murray-Herrick & Foley), Sabo Plaza (South Campus outside of O'Shaughnessy Science Hall and Owens Science Hall), the Lower Quad (O'Shaughnessy Hall across to O'Shaughnessy-Frey Library), and the Upper Quad (outside of the Residence Halls)
- In Minneapolis: Charles J. Keffer Library, the Law School and the Schulze School of Entrepreneurship

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 a number of grants to support students, faculty and staff. These include a scholarship for a Women's Studies major, research grants for under-

graduate and graduate students, professional development grants for staff and faculty, a curriculum development grant, and a leadership award to undergraduate students for participation in programs that will enhance their leadership skills, especially in programs which are directed toward public service.

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.

Theater and Auditoriums

Productions by the UST/CSC Joint Department of Theater are presented in Foley Theater.

The O'Shaughnessy Educational Center (OEC) auditorium has 330 seats on the main level and 292 seats in the balcony level and hosts a number of guest lectures, teleconferences, and student assemblies.

The auditorium in the John R. Roach Center (room 126 JRC) has 194 seats and contains state-of-the-art technology. It is used for course lectures, meetings, conferences and is the site for many student activities including film viewings.

The Baumgaertner Auditorium in Brady Educational Center (BEC), located on the south campus, has 348 seats and is used for musical performances and community events. Musical concerts are also presented in the St. Thomas Aquinas Chapel.

The 3M Auditorium, located in Owens Hall of the Frey Science and Engineering Center, has 143 seats, is technologically advanced, and hosts a number of course lectures, teleconferences, and community events.

The Thornton Auditorium, located in the 1000 LaSalle Building 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 and aerobic-training facilities are housed in O'Shaughnessy Hall in addition to a pool, a squash court, a multi-purpose gymnasium, and an athletic medicine training room. An aerobic-training fitness center is located in the Koch Commons.

Outdoor facilities include a 5,000-seat stadium for football and track. The track is an eight-lane poured polyurethane surface.

A 200-seat baseball field is located on the north field.

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, 651-962-5926, 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 the Murray-Herrick Campus Center. The store sells new and used textbooks, school and office supplies, computers and computer supplies, insignia clothing and gifts, candy, class rings, cards, gifts and magazines.

The Minneapolis campus Bookstore, located in Terence Murphy Hall, sells textbooks for classes taught on that campus and most off-campus graduate classes. It also carries all of the same items mentioned above.

Call each store for hours of service: 651-962-6850 (St. Paul), 651-962-4340 (Minneapolis)

The bookstores maintain a web site at stthomas.edu/bookstore where you can order textbooks and merchandise online. Hours and phone numbers are listed for each store.

Curricula

Programs and courses in this section are available to undergraduate students in all colleges and schools of the university.

Course Offerings

The courses listed in this section of the catalog are arranged alphabetically by discipline. Each listing includes a description of the course, the number of credits, and an indication of any prerequisites. Numbers which appear in parentheses next to a course title refer to courses whose content overlaps with the course described. 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.

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. Generic courses include Topics, Experiential Learning, Seminars, Research, and Individual Study.

Topics Courses

The subject matter of the course will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

295, 296 Topics (2 credits)
The even number is normally used by the department. The odd number is used if the course has been approved to fulfill a core curriculum requirement.

297, 298 Topics (4 credits)
The even number is normally used by the department. The odd number is used if the course has been approved to fulfill a core curriculum requirement.

487, 488 Topics (2 credits)
The even number is normally used by the department. The odd number is used if the course has been approved to fulfill a core curriculum requirement.

489, 490 Topics (4 credits)
The even number is normally used by the department. The odd number is used if the course has been approved to fulfill a core curriculum requirement.

Experiential Learning

The university 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 is 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.

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, 476 Experiential Learning (2 credits)
The even number is normally used by the department. The odd number is used if the course has been approved to fulfill a core curriculum requirement.

477, 488 Experiential Learning (4 credits)
The even number is normally used by the department. The odd number is used if the course has been approved to fulfill a core curriculum requirement.

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, 484 Seminar (2 credits)
The even number is normally used by the department. The odd number is used if the course has been approved to fulfill a core curriculum requirement.

485, 486 Seminar (4 credits)
The even number is normally used by the department. The odd number is used if the course has been approved to fulfill a core curriculum requirement.

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. Regular tuition is charged.

491, 492 Research (2 credits)
The even number is normally used by the department. The odd number is used if the course has been approved to fulfill a core curriculum requirement.

493, 494 Research (4 credits)
The even number is normally used by the department. The odd number is used if the course has been approved to fulfill a core curriculum requirement.

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, 496 Individual Study (2 credits)
The even number is normally used by the department. The odd number is used if the course has been approved to fulfill a core curriculum requirement.

497, 498 Individual Study (4 credits)
The even number is normally used by the department. The odd number is used if the course has been approved to fulfill a core curriculum requirement.

Accounting

See Business Administration

Actuarial Science (ACSC)

College of Arts and Sciences
Interdisciplinary Program
Youn (MATH), director, Dayananda (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.

Students graduating with a major in Actuarial Science will become proficient in basic mathematics through multi-variate calculus and probability together with basic notions of insurance and risk management. They will demonstrate the ability to think clearly and critically in solving problems related to the analysis and management of risk. They will be able to effectively communicate technical and non-technical information to their peers and to non-specialists in their work environment.

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 the 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.

Admission Guideline: Due to the demanding nature of the Actuarial Science Program and the difficulty of the examinations required for professional designation, it is strongly suggested that prospective majors have a minimum Math GPA of 3.0. Most students who have been successful in this program and actuarial examinations have had GPA's considerably higher than 3.0.

Major in Actuarial Science (B.S.)

ACCT 205 Introduction to Accounting (4 credits)
ACSC 264 Theory of Interest (4 credits)
ACSC 320 Risk Management and Insurance (4 credits)
ACSC 351 Foundations of Actuarial Mathematics (4 credits)
ACSC 352 Actuarial Contingencies (4 credits)
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
FINC 321 Financial Management (4 credits)
MATH 113 Calculus I (4 credits)
MATH 114 Calculus II (4 credits)
MATH 200 Multi-Variable Calculus (4 credits)
MATH 210 Linear Algebra and Differential Equations (4 credits)
MATH 313 Probability (4 credits)
MATH 314 Mathematical Statistics (4 credits)
QMCS 230 Software Design Using the JAVA Language (4 credits)

Plus four credits from the following:
ACSC 464 Mathematical Finance (4 credits)
MATH 333 Applied Statistical Methods: Regression, Time Series, Forecasting (4 credits)
MATH 385 Mathematical Methods of Numerical Analysis (4 credits)

Plus four credits from the following:
COMM 100 Public Speaking (4 credits)
COMM 105 Communication in the Workplace (4 credits)
ENGL 200 or above
JOUR 215 Journalistic Writing in the Workplace (4 credits)
JOUR 311 Persuasion in Writing (4 credits)

Suggested Electives:
BLAW 301 Legal Environment of Business (4 credits)
ECON 251 Principles of Macroeconomics (4 credits)
ECON 351 Macroeconomic Theory (4 credits)
ECON 352 Microeconomic Theory (4 credits)
ECON 355 Game Theory (4 credits)
FINC 324 Advanced Financial Management (4 credits)
FINC 400-level Investment Courses (4 credits)
MBIS 701 Insurance Seminar (3 credits)
MKTG 300 Principles of Marketing (4 credits)
QMCS 281 Object-Oriented Design and Programming (4 credits)
QMCS 450 Database Design (4 credits)

Minor in Actuarial Science

ACSC 264 Theory of Interest (4 credits)
ACSC 320 Risk Management and Insurance (4 credits)
MATH 113 Calculus I (4 credits)
MATH 114 Calculus II (4 credits)

Plus eight credits from the following:
Note: At least four credits must not satisfy the student's major field requirement (including allied requirements)
ACCT 205 Introduction to Accounting (4 credits)
ACSC 351 Foundations of Actuarial Mathematics (4 credits)
ACSC 464 Mathematical Finance (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
FINC 321 Financial Management (4 credits) *or* FINC 300 Finance for non-Business Majors (4 credits)
MATH 200 Multi-Variable Calculus (4 credits)
MATH 313 Probability (4 credits) *or* MATH 303 Statistics for the Applied Sciences (4 credits)

ACSC 264 Theory of Interest (4 credits)
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.

ACSC 320 Risk Management and Insurance (4 credits)
This course introduces students to the subjects of insurance—theory and practice—and corporate risk management. In addressing these subjects, students will receive exposure to risk theory, insurance pricing, contract analysis, insurance company operations, reinsurance, regulation and the concepts and principles of business risk management.
Prerequisite: Junior standing or MATH 114

ACSC 351 Foundations of Actuarial Mathematics (4 credits)
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: ACSC 264 and MATH 313.

ACSC 352 Actuarial Contingencies (4 credits)
Extension of the analysis of ACSC 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: ACSC 351

ACSC 464 Mathematical Finance (4 credits)
The focus of this course is on applications of probability, stochastic processes, and other mathematical tools to problems in finance. Both discrete and continuous models, including binomial, Brownian motion, and geometric Brownian motion models will be used to investigate the effects of randomness in financial markets and the behavior of financial instruments. The mathematical realization of arbitrage and hedging strategies will be examined, including the Arbitrage Theorem and the concept of risk-neutral pricing. Applications will include the pricing of equity options, currency transactions, and the use of duration and covexity in fixed income analysis. The course will be of interest to students of actuarial science, mathematics, finance and economics who want to develop a better quantitative understanding of financial risk.
Prerequisites: MATH 313, or MATH 303 and ACSC 264, or a course in FINC approved by the instructor

Aerospace Studies (AERO)

College of Arts and Sciences
Department of Aerospace Studies
Sick (chair), Pekarek, Gruber

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 opportunity 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 the University of 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 cross-town agreements, students at Bethel, Concordia, North Central University, 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. Currently, all POC cadets are obligated to serve as an officer for a minimum of four years on active duty after commissioning, depending on the career field to which they are assigned.

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-, two- and one-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 in the junior year, and can compete for a scholarship.

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 on Air Force scholarships, 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:
AERO 111 Foundations of the United States Air Force I (1 credit)
AERO 112 Foundations of the United States Air Force II (1 credit)
AERO 211 Evolution of USAF Air and Space Power I (1 credit)
AERO 212 Evolution of USAF Air and Space Power II (1 credit)
or
AERO 250 Six-Week Field Training (4 credits)*
*Open only to students enrolled in Air Force ROTC

Plus:
AERO 321 Air Force Leadership Studies I (4 credits)
AERO 322 Air Force Leadership Studies II (4 credits)
AERO 421 National Security Affairs I (4 credits)
AERO 422 National Security Affairs II (4 credits)

AERO 111 Foundations of the United States Air Force I (1 credit)
This course introduces students to the United States Air Force and Air Force Reserve Officer Training Corps. Featured topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, and an introduction to communication skills. Leadership Laboratory is mandatory for AFROTC cadets and complements this course by providing cadets with followership experiences.

AERO 112 Foundations of the United States Air Force II (1 credit)
Continuation of AERO 111
Prerequisite: AERO 111 or permission of instructor

AERO 211 Evolution of USAF Air and Space Power I (1 credit)
This course examines general aspects of air and space power through a historical perspective. Utilizing this perspective, the course covers a time period from the first balloons and dirigibles to the space-age global positioning systems of the Persian Gulf War. Historical examples are provided to extrapolate the development of Air Force capabilities (competencies), and missions (functions) to demonstrate the evolution of what has become today's USAF air and space power. The course also examines several fundamental truths associated with war in the third dimension: e.g. Principles of War and Tenets of Air and Space Power. As a whole, this course provides the students with a knowledge level understanding for the general element and employment of air and space power, from an institutional, doctrinal and historical perspective. In addition, the students will continue to discuss the importance of the Air Force Core Values with the use of operational examples and historical Air Force leaders, and will continue to develop their communication skills. One class-hour per week, plus a weekly 1.5 hour Leadership Laboratory consisting of Air Force customs and courtesies, Air Force environment, drill and ceremonies, and field training orientation.
Prerequisite: AERO 112 or permission of instructor

AERO 212 Evolution of USAF Air and Space Power II (1 credit)
Continuation of AERO 211
Prerequisite: AERO 211 or permission of instructor

AERO 250 Six-Week Field Training (4 credits) (AERO 111, 112, 211, 212)
Training and evaluation on an Air Force base during the summer. Training is designed to 1) fulfill the course goals of the General Military Course (GMC) normally taken during the regular school year; 2) 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 370 hours of scheduled activities – 170 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 AERO 321.
NOTE: Students who receive credit for AERO 250 may not receive credit for AERO 111, 112, 211, or 212.

AERO 321 Air Force Leadership and Management Studies I (4 credits)
This course is a study of leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, leadership ethics, and communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. A mandatory Leadership Laboratory complements this course by providing advanced leadership experiences in officer-type activities, giving students the opportunity to apply leadership and management principles of this course.
Prerequisite: AERO 212 or 250

AERO 322 Air Force Leadership and Management Studies II (4 credits)
Continuation of AERO 321.
Prerequisite: AERO 321 or permission of instructor

AERO 421 National Security Affairs I (4 credits)
This course provides future Air Force officers with a background in the national security process, regional studies, advanced leadership ethics, and Air Force doctrine. Special topics of interest focus on the military as a profession, officership, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Within this structure, continued emphasis is given to refining communication skills. A mandatory Leadership Laboratory complements this course by providing advanced leadership experiences, giving students the opportunity to apply the leadership and management principles of this course.
Prerequisite: AERO 322 or permission of instructor

AERO 422 National Security Affairs II (4 credits)
Continuation of AERO 421.
Prerequisite: AERO 421

Cadet Internship Program
Offered during the AERO 422 semester, students can participate in an internship program with the 934th Airlift Wing, Air Force Reserve Command. This internship program's purpose is to demonstrate leadership and management skills through advanced leadership experiences. The students are matched with mentors from the 934th Airlift Wing and assigned specific projects, usually in career fields the students are most interested in pursuing in the active duty Air Force. This is a 40-hour program that replaces Leadership Laboratory credit for the semester; participation is limited and strictly voluntary.

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 AERO 450 Four-Week Field Training (FT), except for cadets participating in AERO 451 Cadet Training Assistant (CTA), who are able to accrue a maximum of five credits of non-classroom experiences toward the 132 credits required for graduation. Graded on S-R basis.

AERO 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: AERO 212

AERO 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.

AERO 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.

American Cultural Studies (ACST)

College of Arts and Sciences
Interdisciplinary Program
Contact: David T. Lawrence

American Cultural Studies is an interdisciplinary minor in which students will have the opportunity to develop a critical perspective on the rich and multiple meanings of two crucial terms: "American" and "culture." Drawing on perspectives from a number of participating departments and programs (e.g. communication, English, history, art history, sociology, music, theology, philosophy, theater, journalism and mass communication, and modern and Classical languages), the American Cultural Studies minor examines the symbols, practices, and histories which contribute to the complexity and variety of the "American" experience, including North America and South America. In addition to making connections among disciplines, students will be encouraged to engage in analysis that discovers linkages and tensions between vernacular and elite culture, as well as among diverse and multiple cultural identities and affiliations. Although the emphasis will be on the analysis of culture as a system, the program may where appropriate offer courses that address the relationship between contemporary cultural phenomena and their historical origins.

The American Cultural Studies minor will appeal to any student who wishes to acquire a critical intellectual framework for:

1. thinking and acting in a diverse and increasingly fragmented society;
2. developing a political, economic, artistic, and spiritual consciousness that is informed by and expressed through popular culture and the technology of mass media and communication.

Given its emphasis on the diversity and multiplicity of cultural experience and its interdisciplinary focus on the various strands that comprise the fabric of a given culture, the minor in American cultural Studies is particularly suited to provide students with the awareness and critical framework necessary to be effective and ethical participants in an increasingly globalized civic and economic environment.

Minor in American Cultural Studies
ACST 200 Foundations of American Cultural Studies (4 credits)

Plus:
Twenty additional credits (at least four credits from each of the categories below and no more than eight credits from a single department):

American Cultures: History, Society, Politics
GEOG 340 Geography of the U.S. and Canada (4 credits)
HIST 210 Modern Latin America 1800 to the Present (4 credits)
HIST 361 American Thought and Culture since the Civil War (4 credits)
HIST 369 African-American History (4 credits)
POLS 301 American Political Behavior (4 credits)
SOCI 251 Race and Ethnicity (4 credits)
SPAN 332 Survey of Latin American Culture and Civilization (4 credits)

American Cultures: Literature and the Arts
ARTH 320 Art and Culture of Colonial Mexico (4 credits)
ARTH 391 Native American Art (4 credits)
ARTH 392 American Art (4 credits)
ENGL 215 American Authors II (4 credits)
ENGL 373 Contemporary American Literature (4 credits)
ENGL 395 Issues in Literature and Culture (4 credits)
MUSC 216 Jazz in America (4 credits)
MUSC 217 Music of the Americas (4 credits)
MUSC 218 Black American Music: A Historical Survey (4 credits)
THTR 223 History of Theater III: American (4 credits)

American Cultures: Mass Culture, Popular Culture, and Communication Media
COMM 340 Rhetoric of Race, Class and Gender (4 credits)
COMM 350 Modern American Rhetoric (4 credits)
COMM 360 Television Criticism (4 credits)
COMM 455 Political Communication and Television (4 credits)
JOUR 302 Literary Journalism (4 credits)
JOUR 305 Gender, Race, and Mass Media (4 credits)
JOUR 402 Society, Culture, and the Media (4 credits)
JOUR 404 Media Structure and Power (4 credits)

ACST 200 Introduction to American Cultural Studies (4 credits)
Students will explore in an interdisciplinary fashion some of the central ideas, myths, and perspectives that have shaped the American cultural experience Although primarily focused on the culture of the United States, examination of the historical/cultural phenomena of North, Central, and South American will be considered. Through a critical analysis of various forms of culture expression, students will gain an understanding of how different groups of Americans define themselves and each other; how cultural identity and meaning have been constructed; and how power has been established, maintained, and, at times, diffused and shared. Students will also be exposed to the theoretical and methodological issues current in the field. This course fulfills the Human Diversity requirement of the core curriculum.

Art History (ARTH)

College of Arts and Sciences
Department of Art History
Stansbury-O'Donnell (chair), Brooks-Shirey, Eliason, Nordtorp-Madson, Webster, Young

The arts and architecture shape the way that we see and understand the world. Looking at art means more than looking at pretty pictures; it means that one is looking at a person's and a culture's vision of the spiritual, of the everyday world, and of the society that link us together. Art history truly embodies the study of the liberal arts by considering the work of art and architecture within its broader cultural context, including religion, economic production, politics, gender and social identification, literature.

The Art History Department at St. Thomas seeks to explore the many dimensions of art in a broad range of periods and worldwide cultures. The courses and faculty of the department encourage students to become investigators, learning to ask and answer questions about art, from pottery to painting, from bronzes to buildings. Students are

encouraged to conduct independent research and to present their findings to a broader audience and to make art accessible inside and outside of the classroom.

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.

Students graduating with a major in art history have a general knowledge of the history of art, including western and non-western cultures, and how to analyze the style, meaning, and context of a work of art or architecture. They are able to define and carry out a major research project and to present an art historical topic in an oral format. 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, and communication.

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.

The department offers a number of courses for the non-major to fulfill the Fine Arts component of the core curriculum.

Major in Art History

ARTH 110 Introduction to Art History (4 credits)
ARTH 211 Methods, Approaches, and Problems in Art History (4 credits)
ARTH 481 Senior Paper and Presentation (4 credits)

Plus four credits from each of the following areas:

Ancient Art
- ARTH 300 The Ancient Near East and Egypt (4 credits)
- ARTH 305 Greek Art and Archaeology (4 credits)
- ARTH 310 Roman Art and Archaeology (4 credits)
- or equivalent

Medieval Art
- ARTH 330 Churches and Mosques in the First Millennium (4 credits)
- ARTH 335 Cathedrals, Monasteries, and Caliphates (4 credits)
- or equivalent

Renaissance & Baroque Art
- ARTH 320 Churches and Mosques in the First Millennium (4 credits)
- ARTH 340 Southern Renaissance Art and Society (4 credits)
- ARTH 342 Renaissance and Reformation in Northern Europe (4 credits)
- ARTH 345 Baroque and Rococo Art (4 credits)
- ARTH 347 Golden Age of Spain (4 credits)
- or equivalent

Modern Art
- ARTH 351 Romanticism to Impressionism (4 credits)
- ARTH 352 Art in the United States (4 credits)
- ARTH 356 Modernism in European Art (4 credits)
- ARTH 361 Contemporary Art (4 credits)
- ARTH 450 Modern Scandinavian Art History (4 credits)
- or equivalent

Non-Western Art
- ARTH 285 Arts of Africa and the African Diaspora (4 credits)
- ARTH 286 Women's Art in Cross-cultural Perspective (4 credits)
- ARTH 289 Asian Art (4 credits)
- ARTH 291 Topics in Non-Western Art (4 credits)
- ARTH 320 Art and Culture of Colonial Mexico (4 credits)
- ARTH 391 Native American Art (4 credits)
- or equivalent

Media Studies (architecture and media other than painting and sculpture)
- ARTH 280 Sacred Architecture and Space (4 credits)
- ARTH 282 The History of American Architecture (4 credits)
- ARTH 285 Arts of Africa and the African Diaspora (4 credits)
- ARTH 286 Women's Art in Cross-cultural Perspective (4 credits)
- ARTH 391 Native American Art (4 credits)
- or equivalent

Note: 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
Four credits, chosen from the following options:
A fourth course in one foreign language
COMM 160 Electronic Media Production (4 credits)
JOUR 220 Design Concepts of Communication (4 credits)

Minor in Art History

ARTH 110 Introduction to Art History (4 credits)

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

ARTH 110 Introduction to Art History (4 credits)
Through a series of case studies, this course examines the importance of art as cultural expression across time and from a global perspective. In each course section, students will analyze the style, subject, and patronage of works of art, and will explore art's relationship to religion, ideology, society and economy, gender roles, and the interaction of cultures. Case studies will include architecture, sculpture, painting, and other arts, such as ceramics, textiles, and photography. This course fulfills the Fine Arts and Human Diversity core requirements. Consult the department website for details about the specific sections offered.

ARTH 159 Principles of Art History (2 credits)
This course will introduce and familiarize students with the stylistic and formal qualities of art through lecture, discussion, and field trips. The course will cover certain themes such as the human figure from a historical and contextual perspective. Students will be required to analyze art in these terms in discussions, tests, and papers in the class. This course partially fulfills the Fine Arts requirement in the core curriculum.

ARTH 211 Methods, Approaches, and Problems in Art History (4 credits)
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: ARTH 110 (or 151 or 152 from earlier catalogs) or permission of chair

ARTH 280 Sacred Architecture and Space (4 credits)
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. This course fulfills the Fine Arts requirement in the core curriculum.

ARTH 282 The History of American Architecture (4 credits)
A survey of high style and vernacular architecture in the United States from the Native Americans to the present day. Upon completion of this course, the student will be able to: identify the major themes and styles in American architecture; recognize major monuments and their designers; and understand how an American identity was projected in architecture. This includes understanding American architecture and its relationship to corresponding developments in art, landscape, and the urban fabric. Emphasis will be placed on structures in Minnesota and the upper Midwest. This course fulfills the Fine Arts requirement in the core curriculum.

ARTH 285 Arts of Africa and the African Diaspora (4 credits)
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 Fine Arts and Human Diversity requirements in the core curriculum.

ARTH 286 Women's Art in Cross-cultural Perspective (4 credits)
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. This course fulfills the Fine Arts and Human Diversity requirements in the core curriculum.

ARTH 289 Asian Art (4 credits)
This course is a survey of South and East Asian art, from its beginnings in the Bronze Age until the present. The course will emphasize regional characteristics as well as cross-cultural influences of Asian art in a variety of media, including architecture, painting, calligraphy, sculpture, and pottery. The course will also examine the impact of social class on artists and patronage and upon the influence of Hinduism, Buddhism, Confucianism, Taoism, and Shintoism play in the form and function of Asian art. This course fulfills the Fine Arts and Human Diversity requirements in the core curriculum.

ARTH 291 Topics in Non-Western Art (4 credits)
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 Fine Arts and Human Diversity requirements in the core curriculum.

ARTH 295, 296 Topics (2 credits)
ARTH 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/. Topics listed under 297 fulfill the Fine Arts requirement in the core curriculum.

ARTH 300 The Ancient Near East and Egypt (4 credits)
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. This course fulfills the Fine Arts requirement in the core curriculum.

ARTH 305 Greek Art and Archaeology (4 credits)
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. This course fulfills the Fine Arts requirement in the core curriculum.

ARTH 310 Roman Art and Archaeology (4 credits)
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. This course fulfills the Fine Arts requirement in the core curriculum.

ARTH 320 Art and Culture of Colonial Mexico (4 credits)
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 Fine Arts and Human Diversity requirements in the core curriculum.

ARTH 330 Churches and Mosques in the First Millennium (4 credits)
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. This course fulfills the Fine Arts requirement in the core curriculum.

ARTH 335 Cathedrals, Monasteries, and Caliphates (4 credits)
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. This course fulfills the Fine Arts requirement in the core curriculum.

ARTH 340 Southern Renaissance Art and Society (4 credits)
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. This course fulfills the Fine Arts requirement in the core curriculum.

ARTH 342 Renaissance and Reformation in Northern Europe (4 credits)
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.

ARTH 345 Baroque and Rococo Art (4 credits)
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. This course fulfills the Fine Arts requirement in the core curriculum.

ARTH 347 Golden Age of Spain (4 credits)
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. This course fulfills the Fine Arts requirement in the core curriculum.

ARTH 351 Romanticism to Impressionism (4 credits)
This course will investigate the history of European painting and sculpture from 1800 to 1880. It will consider the major trends of Neoclassicism, Romanticism, Realism, and Impressionism. It will also address art's response to and role in a European society marked by colonialism, industrialization, and the rise of urban mass culture. This course fulfills the Fine Arts requirement in the core curriculum.

ARTH 352 Art in the United States (4 credits)
This course will investigate the history of the visual arts (primarily painting and sculpture) in the United States from 1776 to 1960. Artists to be considered include colonial portraitists; Romantic landscape painters; Neoclassical sculptors; Realist, Luminist, and Impressionist painters; artists associated with New York Dada and the Harlem Renaissance; Precisionists, Regionalists and Social Realists; and Abstract Expressionists. Participants will consider artists' responses to key historical developments such as the founding of the nation, westward expansion, the Civil War, industrialization, and emergence as a superpower. Several issues will run throughout the course: What is the relationship between the art of Euro-Americans and that of Europe? and that of Native Americans? Is there something "American" about American art? How do the visual arts reinforce or challenge our sense of American history and identity? This course fulfills the Fine Arts requirement in the core curriculum.

ARTH 356 Modernism in European Art (4 credits)
Modernist artists strove to find a visual language of expression appropriate to their time; yet many contemporaries found their works incomprehensible, as do many people today. An open-minded and historically informed investigation of modern art helps to make sense of it. This course will explore the history of European painting and sculpture from 1880 to 1940. It will consider the many movements that characterized modernism, such as Post-Impressionism, Symbolism, Fauvism, Cubism, Futurism, Expressionism, Dada, Surrealism, and Constructivism. Issues to be addressed include the rejection of tradition, the development of abstraction, the impact of World War I and its aftermath, the influence of science and technology on art, and the fate of modernism under Hitler's and Stalin's regimes. Particular attention will be paid to the theoretical underpinnings of modern art. This course fulfills the Fine Arts requirement in the core curriculum.

ARTH 361 Contemporary Art (4 credits)
This course will investigate the history of the visual arts since 1960, from Pop Art and Minimalism through recent trends. Art from around the globe will be considered, but primary emphasis will be placed on art in the United States. In addition to surveying the most significant artists, works, and trends, participants will consider issues such as: the commodification of art; the dematerialization of the art object; art's role in sociopolitical discourse; definitions of postmodernism; the legitimating institutions that comprise the "artworld;" and the relationship of aesthetic or critical theory to artistic creation. This course fulfills the Fine Arts requirement in the core curriculum.

ARTH 391 Native American Art (4 credits)
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 Fine Arts and Human Diversity requirements of the core curriculum.

ARTH 450 Modern Scandinavian Art History (4 credits)
The golden age of Scandinavian art history witnessed the establishment of national art academies and museums in the nineteenth century and the amassing of avant garde collections of European masters and non-Western art in the twentieth, along with the emergence of prize-winning Nordic designers in industrial settings. Although on the periphery of Europe, Scandinavian masters' art reflected contemporary styles but also displayed the austerity and fantasy of traditional folk designs which evolved out of the poverty and isolation of its largely rural population in the centuries before the modern era. The art of the five Nordic countries provides a model for examining the integration of ethnic folk art motifs with mainstream European styles as well as the acceptance of both fine and applied arts as equal in importance. In additional, indigenous art of the Sami and the Greenlandic Inuit enriched folk and international design motifs. The art of those artists who participated in the great emigration of Scandinavian peoples to North America in the late nineteenth into twentieth centuries will also be examined in relation to the influences of mother country and the American artistic mainstream.
Prerequisite: one ARTH course or permission of instructor

ARTH 475, 476 Experiential Learning (2 credits)
ARTH 477, 478 Experiential Learning (4 credits)
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 "Curricula" section of this catalog.
Prerequisite: previous course or courses in art history

ARTH 481 Senior Paper and Presentation (4 credits)
During the senior year, art history majors are expected to write a major research paper with an abstract and to describe the results of their research in an oral presentation to a departmental symposium to be held prior to graduation. The purpose of this paper and presentation is to allow the student to demonstrate competency in art historical methodology and to gain experience from presenting the results to a group of peers and faculty. The topic and instructor must be chosen in consultation with the department chair during the semester prior to writing the senior paper.
Prerequisite: ARTH 110 (or 151 and 152 from previous catalog) and 211

ARTH 483, 484 Seminar (2 credits)
ARTH 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

ARTH 487, 488 Topics (2 credits)
ARTH 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

ARTH 491, 492 Research (2 credits)
ARTH 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

ARTH 495, 496 Individual Study (2 credits)
ARTH 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.
Prerequisite: permission of the instructor or supervisor and previous work in art history

Biochemistry

College of Arts and Sciences
Interdisciplinary Program
Verhoeven (BIOL) committee chair; Advisory committee: Boyd (CHEM), Ditty (BIOL), Emms (BIOL), Glorivgen (CHEM), Marsh (CHEM)

Biochemistry is an interdisciplinary major that draws upon faculty and courses in the departments of Biology and Chemistry. The major is administered by a committee of representatives from both departments and is designed to meet the needs of students interested in gaining an understanding of the chemistry of life processes. Students who fulfill the requirements will receive a Bachelor of Science (B.S.) degree in Biochemistry. The program is appropriate for students pursuing graduate studies in biochemistry, medicine, or related fields. The major is also suitable for students interested in positions in biotechnology after graduation.

Entering students interested in this major should inform Academic Counseling. Students are advised to begin their introductory biology, chemistry, and mathematics coursework in their freshman year. The biochemistry committee will coordinate advising. Students should talk with an adviser as soon as possible following their freshman year in order to select the elective courses that will be most appropriate to their interests. A research course in either biology or chemistry can be counted as one of the electives and is highly encouraged if the student will be seeking admission to a graduate program in biochemistry or molecular biology.

All graduating seniors are required to take achievement exams in both biology and chemistry for purposes of assessment of the major and College accreditation. Students choosing this major may not take a second major or a minor in either Biology or Chemistry.

Graduation with Honors in Biochemistry

Students graduating with a B.S. in Biochemistry may also qualify for honors. Students interested in this designation must consult with the chair of the Biochemistry Committee one year or more prior to graduation.

Requirements include:

- An overall minimum cumulative GPA of 3.25.
- A cumulative GPA of 3.50 in the courses in both biology and chemistry combined.
- Completion of four credits in research. This may consist of a 4-credit course or two 2-credit courses in either biology or chemistry.
- Preparation of a written thesis in the form of the primary literature.
- Successful defense of the thesis before an examining panel which includes the thesis director, a representative from each of the departments of biology and chemistry, a faculty member from outside the departments of chemistry and biology and a faculty member from another institution. The panel members should be selected in consultation with the thesis adviser.
- Presentation of the research at an off-campus meeting.

Note: All requirements should be completed by April 20 for a spring graduation, or by November 15 for a fall graduation.

Major in Biochemistry (B.S.)

BIOL 201 Diversity and Adaptation (4 credits)
BIOL 202 Genetics, Evolution, and Ecology (4 credits)
BIOL 204 Cellular and Molecular Biology (4 credits)

Plus:
CHEM 111 General Chemistry I (4 credits) *and* CHEM 112 General Chemistry II (4 credits)
or
CHEM 115 Accelerated General Chemistry (4 credits)

Plus:
CHEM 201 Organic Chemistry I (4 credits)
CHEM 202 Organic Chemistry II (4 credits)
CHEM 440 Biochemistry I (4 credits)
CHEM 442 Biochemistry II (4 credits)

Plus four credits from the following:
CHEM 331 Chemical Thermodynamics and Reaction Dynamics (4 credits)
CHEM 332 Quantum Chemistry and Molecular Spectroscopy (4 credits)

Plus:
Twelve additional credits numbered BIOL 295 or higher.
Note: Four credits must be at the BIOL 400-level, excluding Research. Four credits may be in Research at the BIOL 300-level.
Four additional credits in CHEM, selected in consultation with the adviser.
Note: CHEM 300 is strongly recommended for this elective.

Allied requirements

MATH 113 Calculus I (4 credits) (or equivalent)
MATH 114 Calculus II (4 credits)
PHYS 111 Introduction to Classical Physics I (4 credits)
PHYS 112 Introduction to Classical Physics II (4 credits)

Biology (BIOL)

College of Arts and Sciences
Department of Biology
Emms (chair), Chaplin, Cruise, Ditty, Hartung, Kay, Manske, Nelson, Sherer, Steyermark, Verhoeven, Zimmer; Lewno, Schroeder, Trost, Wilson

Modern biology encompasses an extraordinary range of disciplines, from molecular genetics at one end of the spectrum to global ecology at the other. The biology curriculum at St. Thomas reflects this diversity, providing the breadth of experience that students need in their freshman and sophomore years with the depth that they value as juniors and seniors. Courses at all levels of the curriculum emphasize two fundamentals: mastering the essential material of each discipline and developing the intellectual skills needed to do science – asking the right questions, developing methods to answer these questions and critically evaluating the results of these investigations. As well as providing a broad-based liberal arts education in the biological sciences, the biology program serves as an excellent basis for students planning careers in academia, agricultural and forest science, bioinformatics and genomic research, biotechnology, biomedical research, conservation biology, environmental science, forestry and wildlife management, medicine, dentistry, and other health professions, and veterinary medicine.

A principle objective of the Department of Biology is to provide students with an excellent preparation for postgraduate pursuits. Graduates of the program command an understanding of core concepts in biology as well as an ability to design and implement studies of biological questions. The department evaluates its success in achieving these objectives using several tools, including assessments of seniors and alumni.

The curriculum for a major in biology is divided into three tiers, offering increasing levels of challenge, greater emphasis on independent work, and more extensive use of the primary literature. All biology majors take an introductory series of fourteen credits (BIOL 201, 202, 204 and 206) in the first of these tiers. These core courses cover the central concepts of modern biology and provide a foundation for more specialized study at higher levels of the curriculum.

The second-tier courses (BIOL 301-399) build on this foundation and offer a broad range of topics at an intermediate level, including research (BIOL 391-392). Some second-tier courses may be taken by students prior to completion of BIOL 204 and/or 206.

All third-tier courses (BIOL 401-498) require the completion of specific second-tier courses and involve advanced scholarship, independent research projects, and extensive use of the primary literature. Research courses (BIOL 491-494) are available to students wishing to pursue in-depth studies in laboratory and/or field situations. Individual Study courses (BIOL 495-498) allow for tutorial study in a specialized subject area of the student's choosing that is not otherwise available. Additional offerings in the form of Seminar (BIOL 483-486) or Topics (BIOL 487-490) courses are available from time to time. Courses numbered between BIOL 483-498 may, with approval of the department chair, be used to fulfill the 400-level requirement for the major.

Courses numbered BIOL 101-199 are intended for non-biology majors and cannot be used to fulfill either the major or minor requirements in biology. All of these courses fulfill the laboratory science requirement in the core curriculum.

Students planning to enter graduate school or a professional program after leaving St. Thomas should consult the entrance requirements of these programs while planning their choice of undergraduate courses. Students are strongly encouraged to consult with their biology adviser while making these plans.

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 departmental 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 University Registrar before seeking departmental approval.

Students receiving a 4 or 5 on the Biology Advanced Placement Exam or 5-7 on the International Baccalaureate exam will receive college credit for BIOL 101 (fulfills a natural science with laboratory course requirement), and may receive college credit for BIOL 201. Placement of AP or IB students in the core sequence must be determined in consultation with the chair and the department transcript evaluator.

Extracurricular Expectations
All students are expected to participate in departmental assessment activities. In particular, graduating seniors are expected to take the Major Field Test in Biology and complete the departmental Senior Survey in the spring of their final year. All students are also strongly encouraged to attend the Biology Seminar Program on a regular basis.

Departmental Participation
Students are encouraged to further engage the discipline of biology by participating in various departmental activities. Valuable experiences in the department include both paid and volunteer roles as research assistants (with ongoing faculty projects), teaching assistants, lab preparators, biology tutors and summer research or teaching assistants. Together with off-campus internships, membership in the Biology Club and the Beta Beta Beta National Biology Honor Society, as well as the Biology Seminar Program and various special events, these opportunities offer many ways to explore the vast discipline of biology and become better acquainted with faculty members and other students.

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 full membership when they have completed twelve credits in the department, with at least four credits at the 300-level, and have a grade point average of 3.0 or better in biology department courses. Associate membership in the chapter is available to all interested students.

Biology Honors Program
Candidates for graduation with honors in biology must complete four credits in 400-level biology Research (491-494), present and defend a thesis based on their work; achieve a final cumulative grade point average of at least 3.50 in biology department courses, 3.25 in biology and allied courses and 3.00 overall; and present their research at a scientific meeting beyond the St. Thomas community.

Interdisciplinary Programs
The Departments of Biology and Chemistry jointly offer a biochemistry major leading to a Bachelor of Science degree that draws upon the faculty and courses of both departments.

Students interested in concentrating in biology in an Environmental Studies major listed in this catalog should consult with a Department of Biology adviser to select appropriate courses.

Pre-Health Professions Programs
Students interested in a career in the health professions should consult the university's pre-health professions adviser in the Owens Science building. See Pre-Professional Programs in this catalog for coursework suggestions, internships, and other information.

Life Science Education
For information on the teaching licensure program in Life Sciences, see the School of Education Teacher Education section in this catalog. Students interested in specializing in biology at the elementary school level should consider the integrated major in Science and mathematics for Elementary Education (SMEE) described in the School of Education section of this catalog.

Major in Biology (B.A.)

BIOL 201 Diversity and Adaptation (4 credits)
BIOL 202 Genetics, Evolution, and Ecology (4 credits)
BIOL 204 Cellular and Molecular Biology (4 credits)
BIOL 206 Global Ecology (2 credits)

Note: The normal expectation is that students will complete BIOL 201, 202, 204, and 206 by the end of their sophomore year.

Plus twenty-two credits, at least four of which must be in courses numbered 400-498, from:
BIOL 210 Introduction to Laboratory Research (2 credits)
BIOL 211 Introduction to Field Research (4 credits)
BIOL 298 Topics (4 credits)
BIOL 302 Animal Diversity (4 credits)
BIOL 315 Biology of Plants (4 credits)
BIOL 330 Animal Behavior (4 credits)
BIOL 333 Ecology (4 credits)
BIOL 349 Comparative Anatomy and Physiology: Locomotion and Systems Regulation (4 credits)
BIOL 350 Comparative Anatomy and Physiology: Energy Acquisition and Processing (4 credits)
BIOL 353 Microscopic Anatomy (4 credits)
BIOL 354 Neurobiology (4 credits)
BIOL 356 Microbiology (4 credits)
BIOL 360 Genetics (4 credits)
BIOL 365 Developmental Biology (4 credits)
BIOL 371 Cell Biology (4 credits)
BIOL 391, 392 Research (2 credits each)*
BIOL 415 Plant Physiology and Adaptations to Stress (4 credits)
BIOL 430 Evolutionary Ecology (4 credits)
BIOL 435 Aquatic Biology (4 credits)
BIOL 462 Molecular Biology (4 credits)
BIOL 463 Immunology (4 credits)
BIOL 471 Evolution (4 credits)
BIOL 483, 484 Seminar (2 credits each)
BIOL 485, 486 Seminar (4 credits each)
BIOL 487, 488 Topics (2 credits each)

BIOL 489, 490 Topics (4 credits each)
BIOL 491, 492 Research (2 credits each)*
BIOL 493, 494 Research (4 credits each)*
BIOL 495, 496 Individual Study (2 credits each)*
BIOL 497, 498 Individual Study (4 credits each)*
CHEM 440 Biochemistry I (4 credits)**

*A maximum of eight 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 (4 credits)
CHEM 112 General Chemistry II (4 credits)
CHEM 201 Organic Chemistry I (4 credits)

Plus four credits from the following:
MATH 303 Statistics for the Applied Sciences (4 credits)
QMCS 220 Statistics I (4 credits)

Note: The normal expectation is that students will complete the above allied requirements by the end of the sophomore year.

Plus at least two of the following selected in consultation with the departmental adviser:
CHEM 202 Organic Chemistry II (4 credits)
MATH 109 Calculus with Review II (4 credits) *or* MATH 113 Calculus I (4 credits)
PHYS 109 General Physics I (4 credits) *or* PHYS 111 Introduction to Classical Physics I (4 credits)

Note: Alternative course combinations to satisfy elective allied requirements may be proposed by majors for approval by the departmental curriculum committee.

Major in Biology (B.S.)

BIOL 201 Diversity and Adaptation (4 credits)
BIOL 202 Genetics, Evolution, and Ecology (4 credits)
BIOL 204 Cellular and Molecular Biology (4 credits)
BIOL 206 Global Ecology (2 credits)

Note: The normal expectation is that students will complete BIOL 201, 202, 204 and 206 by the end of their sophomore year.

Plus twenty six credits from (at least four of which must be in courses numbered 400-498):
BIOL 210 Introduction to Laboratory Research (2 credits)
BIOL 211 Introduction to Field Research (4 credits)
BIOL 298 Topics (4 credits)
BIOL 302 Animal Diversity (4 credits)
BIOL 315 Biology of Plants (4 credits)
BIOL 330 Animal Behavior (4 credits)
BIOL 333 Ecology (4 credits)
BIOL 349 Comparative Anatomy and Physiology: Locomotion and Systems Regulation (4 credits)
BIOL 350 Comparative Anatomy and Physiology: Energy Acquisition and Processing (4 credits)
BIOL 353 Microscopic Anatomy (4 credits)
BIOL 354 Neurobiology (4 credits)
BIOL 356 Microbiology (4 credits)
BIOL 360 Genetics (4 credits)
BIOL 365 Developmental Biology (4 credits)
BIOL 371 Cell Biology (4 credits)
BIOL 391, 392 Research (2 credits each)*
BIOL 415 Plant Physiology and Adaptations to Stress (4 credits)
BIOL 430 Evolutionary Ecology (4 credits)
BIOL 435 Aquatic Biology (4 credits)
BIOL 462 Molecular Biology (4 credits)
BIOL 463 Immunology (4 credits)
BIOL 471 Evolution (4 credits)
BIOL 483, 484 Seminar (2 credits each)
BIOL 485, 486 Seminar (4 credits each)
BIOL 487, 488 Topics (2 credits each)
BIOL 489, 490 Topics (4 credits each)
BIOL 491, 492 Research (2 credits each)*
BIOL 493, 494 Research (4 credits each)*
BIOL 495, 496 Individual Study (2 credits each)*
BIOL 497, 498 Individual Study (4 credits each)*

CHEM 440 Biochemistry I (4 credits)**

*A maximum of eight credits in Research and/or Individual Study will be credited towards the requirements of the major.

**CHEM 440 may be counted towards the major as a 300-level elective course.

Allied requirements

CHEM 111 General Chemistry I (4 credits) *and* CHEM 112 General Chemistry II (4 credits)
or CHEM 115 Accelerated General Chemistry (4 credits)
CHEM 201 Organic Chemistry I (4 credits)
MATH 109 Calculus with Review II (4 credits) *or* MATH 113 Calculus I (4 credits)
MATH 303 Statistics for the Applied Sciences (4 credits) *or* QMCS 220 Statistics I (4 credits)

Note: The normal expectation is that students will complete the above allied requirements by the end of the sophomore year.

PHYS 109 General Physics I (4 credits) *or* PHYS 111 Introduction to Classical Physics I (4 credits)

Other requirements

Eight credits from the following, selected in consultation with the departmental advisor. Alternative course combinations to satisfy this requirement may be proposed by majors for approval by the department chair:

Any Biology courses numbered above 206
CHEM 202 Organic Chemistry II (4 credits)
CHEM 300 Quantitative Analysis (4 credits)
ENGR 350 Introduction to Electronics (4 credits)
GEOL 113 The Earth's Record of Climate (4 credits)
GEOL 115 Environmental Geology (4 credits)
GEOL 130 Earth History (4 credits)
GEOG 223 Remote Sensing (4 credits)
HLTH 400 Epidemiology (4 credits)
IDSC 312 Gender and Science (4 credits)
MATH 114 Calculus II (4 credits)
MATH 315 Applied Mathematics and Modeling I (4 credits)
MATH 316 Applied Mathematics and Modeling II (4 credits)
PHYS 110 General Physics II (4 credits) *or* PHYS 112 Introduction to Classical Physics II (4 credits)
PSYC 206 The Brain and Human Behavior (4 credits)
PSYC 207 Alcohol, Other Drugs and Behavior (4 credits)
PSYC 401 Physiological Psychology (4 credits)
QMCS 230 Software Design Using the JAVA Language (4 credits)
QMCS 320 Statistics II (4 credits)
QMCS 342 Computer Applications in Experimental Sciences (4 credits)

Major in Biochemistry (B.S.)

See College of Arts and Sciences Interdisciplinary Programs

Teacher Licensure

Elementary Education with a Co-major in Science and Mathematics for Elementary Education
Elementary Education with a Specialty in Science (5-8)
Co-major in Science (5-8) – Life Science (9-12) and a Co-major in Secondary Education

See Education

Minor in Biology

BIOL 201 Diversity and Adaptation (4 credits)
BIOL 202 Genetics, Evolution, and Ecology (4 credits)

Plus:

Twelve additional credits in biology courses numbered 200 or above, selected in consultation with a biology faculty member.

Note: CHEM 440 Biochemistry I cannot be counted towards the Biology minor.

BIOL 101 General Biology (4 credits)

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.

BIOL 102 Conservation Biology (4 credits)

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.

BIOL 105 Human Biology (4 credits)
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 needs of social work and psychology majors. Two laboratory hours per week. Not open to biology majors, or students who have completed BIOL 101.

BIOL 106 Women, Medicine and Biology (4 credits)
This course addresses issues of biology from the perspective of women. The focus of the course will be to learn basic principles of biology in areas such as anatomy, physiology, genetics, cell biology, and microbiology in the context of issues relevant to women and women's health. Two laboratory hours per week. Not open to Biology majors or students who have completed BIOL 101 or BIOL 105.

BIOL 201 Diversity and Adaptation (4 credits)
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 or CHEM 101 strongly recommended.

BIOL 202 Genetics, Evolution, and Ecology (4 credits)
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, macroevolution and phylogenetics, 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: BIOL 201; concurrent registration in CHEM 112 strongly recommended.

BIOL 204 Cellular and Molecular Biology (4 credits)
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: A minimum grade of C- in BIOL 202; CHEM 112, and concurrent registration in CHEM 201

BIOL 206 Global Ecology (2 credits)
A study of ecological processes operating at the community, ecosystem, and global level. Case studies will be used to integrate cellular, organismal, and ecological approaches to understanding these processes, and to explore the effects of human activities on the global environment. Classes will meet weekly and will combine lecture material with student presentations and discussion of reading assignments. Assessment will be based on the quality of these presentations, contribution to class discussions, and written assignments chosen by the faculty members teaching each section.
Prerequisites: BIOL 201 and 202; BIOL 204 and CHEM 101 or 111 strongly recommended

BIOL 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. First-year or sophomore status or permission of instructor

BIOL 211 Introduction to Field Research (4 credits)
An introductory experience in field-based research problems in biology. Students will work individually or in small teams to define appropriate questions, design research methods, collect and analyze data, and present oral and written reports. Emphasis is on the application of the scientific method to biological problem solving and the communication of findings to others as the end product of science. Areas of investigation vary with the interests of the students and instructors and with the availability of research organisms. Generally offered in January term. Field trip of 2-3 weeks to a tropical site (Mexico, Belize, Ecuador, Jamaica, or Costa Rica) and additional fees required.
Prerequisites: Open to biology majors or prospective majors; BIOL 201. Preference given to students in their first or second year of study in the discipline.

BIOL 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.

BIOL 216 Basic Nursing Skills 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: A minimum grade of C- in BIOL 215

BIOL 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. Offered in January term.
Prerequisite: A minimum grade of C- in BIOL 216

BIOL 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.*

BIOL 291, 292 Topics without laboratory (4 credits)
Same as 295-298 except that these courses do not have a laboratory component.
Prerequisite: Permission of the instructor

BIOL 295, 296 Topics (2 credits)
BIOL 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. 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. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.
Prerequisite: Permission of the instructor

BIOL 302 Animal Diversity (4 credits)
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: BIOL 202 and CHEM 111

BIOL 315 Biology of Plants (4 credits)
This course explores the biology of plants from several perspectives. Major topics include the evolution and diversity of plants, plant structure and physiology, as well as an introduction to local flora. Special topics may include such areas as the history of agriculture and the impact of genetic engineering on modern agriculture. 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 BIOL 202; completion of or concurrent registration in CHEM 101 or CHEM 111 or permission of instructor

BIOL 330 Animal Behavior (4 credits)
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. Three laboratory hours per week.
Prerequisite: A minimum grade of C- in BIOL 202; QMCS 220 or MATH 303 recommended

BIOL 333 Ecology (4 credits)
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. This course fulfills the second-level Computer Competency requirement in the core curriculum.
Prerequisite: A minimum grade of C- in BIOL 202; QMCS 220 or MATH 303 recommended

BIOL 349 Comparative Anatomy and Physiology: Locomotion and Systems Regulation (4 credits)
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: A minimum grade of C- in BIOL 204 or permission of instructor

BIOL 350 Comparative Anatomy and Physiology: Energy Acquisition and Processing (4 credits)
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.
Prerequisite: A minimum grade of C- in BIOL 204; QMCS 220 or Math 303 strongly recommended

BIOL 353 Microscopic Anatomy (Vertebrate Histology) (4 credits)
Microscopic structure and its relationship to physiological function among the basic tissue types and in selected organ systems. Focus includes levels of biological organization from subcellular to organismal, with emphasis on humans and other mammals. Special consideration is given to the organization and function of integrating systems, including glandular, vascular, and neural, and to the molecular structure of, and functional integration among, cellular junctions and transport mechanisms, cytoskeletal components, and extracellular matrices. Participation in an experimental or other investigative project is expected. Four laboratory hours per week.
Prerequisite: A minimum grade of C- in BIOL 204

BIOL 354 Neurobiology (4 credits)
An introduction to the study of neuroscience 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, sensory and motor systems, and the neural mechanisms 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: A minimum grade of C- in BIOL 204; completion or concurrent enrollment in CHEM 202, or permission of instructor

BIOL 356 Microbiology (4 credits)
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: A minimum grade of C- in BIOL 204; completion of or concurrent registration in CHEM 201

BIOL 360 Genetics (4 credits)
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: A minimum grade of C- in BIOL 204; CHEM 201

BIOL 365 Developmental Biology (4 credits)
This course examines current concepts regarding the mechanisms, both genetic and epigenetic, underlying embryogenesis and metamorphosis in a wide variety of animal model systems and the experimental basis for those concepts. Laboratory work comprises an experimental investigation culminating in a written report in scientific format based on that investigation and grounded in relevant primary literature. Four laboratory hours per week.
Prerequisite: A minimum grade of C- in BIOL 204, CHEM 201.

BIOL 371 Cell Biology (4 credits)
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.
Prerequisites: A minimum grade of C- in BIOL 204; CHEM 201

BIOL 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: BIOL 201

BIOL 415 Plant Physiology and Adaptations to Stress (4 credits)
An examination of fundamental principles in plant physiology, such as photosynthesis and plant water transport. In addition, special focus will be given to understanding how plants survive and adapt to adverse environmental conditions, e.g. drought, nutrient limitation, and extreme temperatures. Four hours laboratory per week. The laboratory will include an independent research project. This course fulfills the second-level Computer Competency requirement in the core curriculum.
Prerequisite: A minimum grade of C- in BIOL 204; any 300-level BIOL course

BIOL 430 Evolutionary Ecology (4 credits)
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: A minimum grade of C- in BIOL 330 or 333; QMCS 220 or MATH 303 strongly recommended

BIOL 435 Aquatic Biology (4 credits)
Characteristics of lakes, streams and other aquatic habitats; including plant and animal communities, water chemistry and productivity. Use of recent primary literature to learn and evaluate field techniques, data collection and data analyses. Both individual and class research projects focus on aquatic systems. Four laboratory hours per week.
Prerequisite: A minimum grade of C- in BIOL 330 or 333; QMCS 220 or MATH 303 strongly recommended

BIOL 462 Molecular Biology (4 credits)
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: A minimum grade of C- in BIOL 360 or 371

BIOL 463 Immunology (4 credits)
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: A minimum grade of C- in BIOL 356, 360 or 371

BIOL 471 Evolution (4 credits)
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. Three laboratory/recitation hours per week.
Prerequisites: A minimum grade of C- in BIOL 204; any 300-level BIOL course

BIOL 475, 476 Experiential Learning (2 credits)
BIOL 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

BIOL 483, 484 Seminar (2 credits)
BIOL 485, 486 Seminar (4 credits)
Investigation of selected problems in biology at an advanced level, involving student presentations based on the primary literature. The subject will vary and will be announced in the annual Class Schedule.. These courses may, with approval of the department chair, be used to fulfill the 400-level requirement for the major.
Prerequisite: Upper-class standing and permission of the instructor

BIOL 487, 488 Topics (2 credits)
BIOL 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/. 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. These courses may also, with approval of the department chair, be used to fulfill the 400-level requirement for the major.
Prerequisite: Permission of the instructor

BIOL 491, 492 Research (2 credits)
Same as for BIOL 493 and 494, except that written research paper is not a formal research paper.

BIOL 493, 494 Research (4 credits)
Original laboratory, field, library, or other analytical investigation under the direction of a member of the faculty, culminating in the writing of a formal research paper in standard scientific format that incorporates a review of the appropriate literature. Oral presentation of the work at a research symposium required. These courses may, with approval of the department chair, be used to fulfill the 400-level requirement for the major.
Prerequisite: Upper-class standing and permission of the instructor and the department chair

BIOL 495, 496 Individual Study (2 credits)
BIOL 497, 498 Individual Study (4 credits)
These courses provide a means for obtaining credit on a tutorial basis for courses not otherwise available at UST or other institutions in the ACTC consortium, and are intended to satisfy unusual needs and circumstances. Students interested in Individual Study should discuss their plans with the faculty member most likely to be their tutor. Individual Study contract forms must be completed and approved by the faculty member, the department chair, and the dean of the College prior to registration. These courses may, with approval of the department chair, be used to fulfill the 400-level requirement for the major.
Prerequisite: Permission of the instructor and the department chair

Business Administration - College of Business

College of Business
Fisher, director, undergraduate business programs

The Undergraduate Business curriculum is currently undergoing an extensive curriculum review.

The programs in Business Administration offer the opportunity to acquire an excellent understanding of the processes, organizations, and decision-making inherent in today's business environment. Students begin by building a foundation of basic knowledge and skills with courses in economics, statistics, mathematics and communication. They then take a series of core courses that span the functional areas of business. These areas include accounting, entrepreneurship, finance, legal studies in business, management, and marketing. These courses form a foundation upon which students can build a greater knowledge in several different concentrations. These concentrations are listed below. Students who wish to combine a major in business administration with extensive work in another area (economics, music, foreign language, or computer science for example), may consider a general business concentration with either a major or minor in another field. There is a plan of study for students interested in both a B.A. in Business Administration and a B.S. in Mechanical Engineering or Electrical Engineering. See the Department of Engineering section of this catalog for the curriculum or contact the College of Business for further information.

The emphasis of St. Thomas business programs is on combining a thorough academic preparation with realistic practical experience. Significant numbers of students participate in consulting projects developed through the Small Business Institute. Many students also take advantage of internships and other opportunities to work with businesses in the Twin Cities during their time at St. Thomas.

The faculty in the College of Business combine excellent academic credentials with a wealth of practical experience in industry.

It is expected that students majoring in Business Administration will take their business courses at St. Thomas. Students must have prior approval before registering for a business course at another school. All students who major in Business Administration must take a minimum of 24 credits in College of Business courses at the University of St. Thomas; at least 16 of these 24 credits must be from courses in the department of the student's major concentration.

All College of Business courses taken by Business Administration majors and minors must be taken for a letter grade. These courses may not be taken on a pass/fail basis.

Credits for College of Business courses taken more than eight years ago (or more than five years ago for credits in a major concentration) will be accepted but may not fulfill current requirements.

Major in Business Administration (B.A.)

One of the business concentrations of:

- Accounting – *see description below under Department of Accounting*
- Business Communication – *see description below under Department of Management*
- Entrepreneurship – *see description below under Department of Entrepreneurship*
- Ethics and Business Law – *see description below under Department of Ethics and Business Law*
- Finance – *see description below under Department of Finance*
- General Business
- Human Resource Management – *see description below under Department of Management*
- International Business
- Leadership and Management – *see description below under Department of Management*
- Marketing – *see description below under Department of Marketing*
- Operations Management – *see description below under Department of Decision Sciences*
- Real Estate Studies (B.S.) – *see description below under Department of Finance*

Minor in Business Administration

BUSN 200 Community Service (0 credit)
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)

Plus four credits from the following:
ECON 251 Macroeconomics (4 credits)
ECON 252 Microeconomics (4 credits)

Plus sixteen credits from the following:
ACCT 205 Introduction to Accounting (4 credits)
BLAW 301 Legal Environment of Business (4 credits)
or
BLAW 302 Business Law for Accounting (4 credits)
or
BLAW 303 International Business Law (4 credits)
ENTR 300 Entrepreneurship for Non-Majors (4 credits)
FINC 300 Finance for Non-Business Majors (4 credits)
MGMT 300 Management for Non-Business Majors (4 credits)

MKTG 300 Principles of Marketing (4 credits)

Note: Students must complete a minimum of 12 credits in Business Administration beyond BUSN 201 at St. Thomas. Coursework transferred to St. Thomas must be equivalent to St. Thomas coursework. All prerequisites for courses selected for the minor must be satisfied.

Concentration in General Business Management

The General Business Management program consists of the core courses that all students majoring in business at the University of St. Thomas are required to take, regardless of their specialization. This program contains courses that will give the student an understanding of business fundamentals without emphasizing a particular area, such as accounting or marketing. With this concentration, the student will be described as a generalist, with a broad business base. Because fewer courses are required in this concentration, there is more room for elective courses. These elective courses may be taken in one department, giving a strong secondary academic concentration or a minor, or they can be related courses from different departments (*e.g.,* management marketing, finance). *Note:* a minimum of 84 credits outside the College of Business are required for graduation.

Job titles of recent graduates with a General Business concentration include business analyst, business consultant, account executive, service consultant, commodity manager, account analyst, customer service representative, merchandise coordinator, and marketing assistant.

Business Core Courses
ACCT 205 Introduction to Accounting (4 credits)
BUSN 200 Community Service (0 credit)
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)
DSCI 301 Management of Organizations and Processes (4 credits)
FINC 321 Financial Management (4 credits)
MGMT 480 Integrative Issues of Business and Organizations (4 credits)
MKTG 300 Principles of Marketing (4 credits)

Plus four credits from the following:
BLAW 301 Legal Environment of Business (4 credits)
BLAW 302 Business Law for Accounting (4 credits)
BLAW 303 International Business Law (4 credits)

Allied requirements
ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
QMCS 220 Statistics I (4 credits)

Note: QMCS 220 should be completed by the end of the sophomore year. Transfer students who have not had an equivalent course must complete this course by the end of their first semester, junior year.

Plus four credits from the following:
MATH 101 Finite Mathematics (4 credits)
MATH 109 Calculus with Review II (4 credits)
MATH 111 Calculus for Business and Social Science (4 credits)
MATH 113 Calculus I (4 credits)

Note: The math requirement must be completed by the end of the sophomore year.

Plus four credits from the following:
COMM 100 Public Speaking (4 credits)
COMM 105 Communication in the Workplace (4 credits)
COMM 322 Intercultural Communication (4 credits)
ENGL 200 or above
JOUR 215 Journalistic Writing in the Workplace (4 credits)
JOUR 311 Persuasion in Writing (4 credits)

Business (BUSN)

BUSN 200 Community Service (0 credit)
This co-curricular experience is required of all undergraduate students in the College of Business. The course enacts 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." The objectives include: 1) providing students the opportunity to witness the inter-connection of healthy, vital communities and healthy, vital businesses; 2) experiencing the business dynamics of non-profit organizations; 3) providing direct service to a non-profit while meeting individually established personal learning objectives; and 4) stretching beyond their current comfort zones.

Students begin their involvement with BUSN 200 by attending an Opening Learning Seminar (OLS), the schedule of which can be obtained from the undergraduate business office, or by visiting the BUSN 200 website: www.stthomas.edu/bus200. During the OLS students will receive information about registering for the course which is done only *after* attending an OLS, the requirements for completing the course, and how to secure a service site.

This course is graded S/R. Students are encouraged to complete BUSN 200 either during the second semester of their sophomore year or the first semester of their junior year. Students can complete BUSN 200 while studying abroad, or while away from campus during J-term or summer. *Note:* London Business students complete their BUSN 200 course while studying in London; students considering participation in this program should wait to complete BUSN 200 until that semester.

BUSN 201 Ethics and Practice: Foundations of Business (4 credits)
An introduction to the various functions, organizational structures, social responsibilities, and ethical and professional challenges of business in current practice and in history. Students are expected to fully integrate the business concepts discussed with basic themes in business ethics. The final exam for this course will be administered at a common time to all students enrolled. This time will be announced at the beginning of each term. The common final is an integral part of this course, and is mandatory for all students.

BUSN 295, 296 Topics (2 credits)
BUSN 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

BUSN 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

BUSN 475, 476 Experiential Learning (2 credits)
BUSN 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

BUSN 483, 484 Seminar (2 credits)
BUSN 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

BUSN 487, 488 Topics (2 credits)
BUSN 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

BUSN 491, 492 Research (2 credits)
BUSN 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

BUSN 495, 496 Individual Study (2 credits)
BUSN 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Concentration in International Business

International Business is an interdisciplinary major concentration dedicated to gaining an understanding of how to conduct business in foreign countries. To gain such an understanding requires study in courses taken in disciplines such as communication, economics and foreign language as well as business. 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.

Of particular importance to this concentration is an understanding of a second language. International Business students must spend at least one semester abroad in a country where the language matches the student's language emphasis. All coursework taken abroad must be in the language of the host country. Students who are not U.S. citizens may count their time at St. Thomas as their study abroad experience.

Specific courses taken in a foreign university may substitute for St. Thomas requirements. See undergraduate business advisers to discuss those possibilities.

Business Core Courses
ACCT 205 Introduction to Accounting (4 credits)
BLAW 303 International Business Law (4 credits)
BUSN 200 Community Service (0 credit)
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)
DSCI 301 Management of Organizations and Processes (4 credits)
FINC 321 Financial Management (4 credits)
MKTG 300 Principles of Marketing (4 credits)

Concentration Courses
MGMT 430 International Management (4 credits)
MGMT 480 Integrative Issues of Business and Organizations (4 credits)
MKTG 330 International Marketing (4 credits)

Plus:
Two courses (minimum of six credits) in international business courses taken abroad with the approval of the student's business adviser. The course content must address transnational business issues in accounting, finance, or international political science. (Three of the following core courses must be completed before taking IBUS courses: ACCT 205, FINC 321, MKTG 300, DSCI 301, BLAW 303.) These courses will transfer to St. Thomas as two of the following:
IBUS 450 Transnational Business Issues in Management, Marketing, or Business Law (4 credits)
IBUS 460 Transnational Business Issues in Finance or Accounting (4 credits)
IBUS 470 Transnational Issues in International Business (4 credits)

Allied requirements
COMM 322 Intercultural Communication (4 credits)
ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
ECON 348 International Economics (4 credits)
QMCS 220 Statistics I (4 credits)
Note: QMCS 220 should be completed by the end of the sophomore year. Transfer students who have not had an equivalent course must complete this course by the end of their first semester, junior year.

Plus three semesters of foreign language beyond 211
Note: Students for whom English is a second language will take three semesters of ENGL numbered 200 or higher.

Plus four credits from the following:
MATH 101 Finite Mathematics (4 credits)
MATH 109 Calculus with Review II (4 credits)
MATH 111 Calculus for Business and Social Science (4 credits)
MATH 113 Calculus I (4 credits)
Note: The math requirement must be completed by the end of the sophomore year.

Recommended:
If the student has available electives, ECON 346, POLS 105, or a country-specific GEOG course is strongly recommended.

International Business (IBUS)

IBUS 450 Transnational Business Issues in Management, Marketing, or Business Law (4 credits)
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 undergraduate business adviser

IBUS 460 Transnational Business Issues in Finance or Accounting (4 credits)
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 undergraduate business adviser

IBUS 470 Transnational Issues in International Business (4 credits)
This course is to be taken abroad and may include an internship. Students incorporating an internship experience in this course must have prior approval from 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 undergraduate business adviser

Accounting (ACCT)

College of Business
Department of Accounting
Saly (chair), Anctil, Coglitore, Gelardi, Matson, Polejewski, Porter, J. Raffield, Sathe, Shapiro, Stoffel

The University of St. Thomas accounting program meets the current education requirements set by the Minnesota Board of Accountancy to take the Certified Public Accountant (CPA) Examination, and for CPA licensure, in Minnesota. After July 1, 2006, CPA licensure in Minnesota will require the applicant to have completed 150 semester hours of college or university education, passed the CPA Examination, and completed relevant work experience.

(Most other states have similar requirements.) The University of St. Thomas offers alternatives by which students can meet the 150-hour requirement, including master's degrees (Master of Science in Accountancy or Master of Business Administration) and baccalaureate coursework. Questions should be directed to the chair of the Department of Accounting or to a department faculty member.

Concentration in Accounting

Business Core Courses
ACCT 205 Introduction to Accounting (4 credits)
BLAW 302 Business Law for Accounting (4 credits)
BUSN 200 Community Service (0 credit)
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)
DSCI 301 Management of Organizations and Processes (4 credits)
MKTG 300 Principles of Marketing (4 credits)

Concentration Courses
ACCT 311 Intermediate Accounting I (4 credits)
ACCT 312 Intermediate Accounting II (4 credits)
ACCT 314 Business Taxation (4 credits)
ACCT 316 Auditing (4 credits)
ACCT 317 Cost Accounting (4 credits)
ACCT 410 Advanced Accounting (4 credits)

Allied requirements
ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
QMCS 110 Introduction to Information Processing (4 credits)
QMCS 220 Statistics I (4 credits)
Note: QMCS 220 should be completed by the end of the sophomore year. Transfer students who have not had an equivalent course must complete this course by the end of their first semester, junior year.
QMCS 419 Accounting Information Systems (4 credits)

Plus four credits from the following:
MATH 101 Finite Mathematics (4 credits)
MATH 109 Calculus with Review II (4 credits)
MATH 111 Calculus for Business and Social Science (4 credits)
MATH 113 Calculus I (4 credits)
Note: The math requirement must be completed by the end of the sophomore year.

Plus four credits from the following:
COMM 100 Public Speaking (4 credits)
COMM 105 Communication in the Workplace (4 credits)
JOUR 215 Journalistic Writing in the Workplace (4 credits)

ACCT 205 Introduction to Accounting (4 credits)
An introduction to the uses of financial and managerial accounting information. Topics include the use of cost management, budgeting, and cost-volume-profit analysis for decision-making, as well as an emphasis on reading and understanding basic financial statements.
Prerequisite: BUSN 201 or concurrent registration with BUSN 201 upon completion of 36 credit hours; sophomore standing

ACCT 311 Intermediate Accounting I (4 credits)
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, valuation of most assets, and revenue recognition.
Prerequisite: A minimum grade of C- in ACCT 205

ACCT 312 Intermediate Accounting II (4 credits)
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: A minimum grade of C- in ACCT 311

ACCT 314 Business Taxation (4 credits)
A study of the principles of business taxation. This course will deal primarily with the federal tax laws as they apply to sole proprietorships, corporations, and partnerships. Additional topics will include MACRS, ACRS, property transactions, and the corporate AMT. Tax research will be integrated throughout the course.
Prerequisite: A minimum grade of C- in ACCT 205

ACCT 315 Individual Income Tax (4 credits)
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

ACCT 316 Auditing (4 credits)
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: A minimum grade of C- in ACCT 312

ACCT 317 Cost Accounting (4 credits)
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: A minimum grade of C- in ACCT 311

ACCT 410 Advanced Accounting (4 credits)
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: A minimum grade of C- in ACCT 312, Senior standing or permission of department chair

Decision Sciences (DSCI)

College of Business
Department of Decision Sciences
Lawton (chair), Cohen, Gaffney, Hays, Kumar, Mallick, McNamara, Olson, Owens, W. Raffield, Ressler

Operations Management (OM) is directly involved in the creation and delivery of an organization's goods and/or services. Operations Management is not specific to any one industry, nor is it restricted to manufacturing enterprises. In fact, all organizations in the private and public sector systems--including airlines, hospitals, hotels, restaurants, insurance companies, and government agencies need to manage their operations vigilantly. Operations managers work with their organizations to find faster, better, and more economical ways to server their customers. The operations management field offers a wide array of career paths from supply chain or service design analysis to manufacturing or service general management

Concentration in Operations Management

Business Core Courses
ACCT 205 Introduction to Accounting (4 credits)
BUSN 200 Community Service (0 credit)
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)
DSCI 301 Management of Organizations and Processes (4 credits)
FINC 321 Financial Management (4 credits)
MKTG 300 Principles of Marketing (4 credits)

Plus four credits from the following:
BLAW 301 Legal Environment of Business (4 credits)
BLAW 302 Business Law for Accounting (4 credits)
BLAW 303 International Business Law (4 credits)

Concentration Courses
DSCI 345 Operations Management (4 credits)
DSCI 346 Materials Management (4 credits)
DSCI 347 Systems and Theories in Operations Management (4 credits)
DSCI 445 Advanced Operations management (4 credits)
MGMT 480 Integrative Issues of Business and Organizations (4 credits)

Allied requirements
ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
QMCS 220 Statistics I (4 credits)

Note: QMCS 220 should be completed by the end of the sophomore year. Transfer students who have not had an equivalent course must complete this course by the end of their first semester, junior year.

Plus four credits from the following:
MATH 101 Finite Mathematics (4 credits)
MATH 109 Calculus with Review II (4 credits)
MATH 111 Calculus for Business and Social Science (4 credits)
MATH 113 Calculus I (4 credits)
Note: The math requirement must be completed by the end of the sophomore year.

Plus four credits from the following:
COMM 100 Public Speaking (4 credits)
COMM 105 Communication in the Workplace (4 credits)
COMM 322 Intercultural Communication (4 credits)
ENGL 200 or above
JOUR 215 Journalistic Writing in the Workplace (4 credits)
JOUR 311 Persuasion in Writing (4 credits)

DSCI 301 Management of Organizations and Processes (4 credits)
The objectives of this course are to develop the analysis skills, perspectives and techniques useful for managing organizations in today's competitive environment. The course provides students the opportunity to practice and develop skills in the following: formal group reports, group process skills, project management, and the analysis of an actual organization. This course includes lectures, significant group work done outside class and a strong fieldwork component. A significant amount of preparation and work is expected to be done outside the classroom.
Prerequisites: BUSN 201, ACCT 205, and junior standing

DSCI 345 Operations Management (4 credits)
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: DSCI 301 (or MGMT 301 from previous semesters)

DSCI 346 Materials and Supply Chain Management (4 credits)
This course will develop a basic understanding of supply chain management both within and beyond organizational boundaries. It will provide the conceptual and analytic framework for the materials management function of businesses including purchasing, inventory management (MRP), capacity planning, scheduling, and manufacturing planning and control systems; as well as a broader supply chain view. Offered in the fall semester.
Prerequisite: DSCI 301 (or MGMT 301 from previous semesters)

DSCI 347 Systems and Theories in Operations Management (4 credits)
This course emphasizes operation's philosophies, theories and techniques found in today's businesses. It provides the conceptual frameworks related to these programs and enables students to experience real world examples via plant tours and on-site visits. Topics include Total Quality Management (TQM) and/or six sigma; Just-In-Time (JIT) and/or lean/agile/flexible systems; Theory of Constraints (TOC); and other current operations management techniques. Offered in spring semester.
Prerequisite: DSCI 301 (or MGMT 301 from previous semesters)

DSCI 445 Advanced Operations Management (4 credits)
This course focuses on the current issues that are salient to the operations function. It examines current views as to the analysis and synthesis of complete operations systems. It includes recent theories and experiments aimed at improving long/short run productivity and competitiveness. It serves as an integrator for the courses that have preceded it by giving the students the opportunity to integrate and refine the knowledge, skills, and attitudes obtained from their previous courses. It stresses the practical application of operations management concepts and theories. Offered in spring semester.
Prerequisites: DSCI 345 (or MGMT 345 from previous semesters) and senior standing

Entrepreneurship (ENTR)

College of Business
Department of Entrepreneurship
Spriggs (chair), Carter, Dunham, Ebben, Johnson, McVea

The study of entrepreneurship prepares students for a variety of career and life experiences. Being an entrepreneur may mean starting your own business, or it may mean working in an existing business. The key is you learn to think like an entrepreneur. You will learn to identify and analyze new opportunities, to think creatively, and to be action oriented in order to seize opportunities that create real value. These skills are important in all types of organizations, from small start-ups to large corporate settings.

Students completing a concentration in entrepreneurship will have the skills to start a business venture, to contribute to an existing company, and to be business leaders in their local communities.

Concentration in Entrepreneurship

Business Core Courses
ACCT 205 Introduction to Accounting (4 credits)
BUSN 200 Community Service (0 credit)
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)
DSCI 301 Management of Organizations and Processes (4 credits)
FINC 321 Financial Management (4 credits)
MKTG 300 Principles of Marketing (4 credits)

Plus four credits from the following:
BLAW 301 Legal Environment of Business (4 credits)
BLAW 302 Business Law for Accounting (4 credits)
BLAW 303 International Business Law (4 credits)
BLAW 304 Real Estate Law (4 credits)

Concentration Courses
ENTR 200 Foundations in Entrepreneurship (4 credits)
ENTR 450 Entrepreneurship: Management and Strategy (4 credits)

Plus twelve credits from the following:
ENTR 348 Franchising Management (4 credits)
ENTR 349 Family Business Management (4 credits)
ENTR 360 Creativity and Change (4 credits)
ENTR 370 Entrepreneurial Financial Resource Management (4 credits)
ENTR 380 Entrepreneurship in Practice (4 credits)
ENTR 390 Diversity in Entrepreneurship (4 credits)
ENTR 490 Topics (4 credits)

Allied requirements
ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
QMCS 220 Statistics I (4 credits)
Note: QMCS 220 should be completed by the end of the sophomore year. Transfer students who have not had an equivalent course must complete this course by the end of their first semester, junior year.

Plus four credits from the following:
MATH 101 Finite Mathematics (4 credits)
MATH 109 Calculus with Review II (4 credits)
MATH 111 Calculus for Business and Social Science (4 credits)
MATH 113 Calculus I (4 credits)
Note: The math requirement must be completed by the end of the sophomore year.

Plus four credits from the following:
COMM 100 Public Speaking (4 credits)
COMM 105 Communication in the Workplace (4 credits)
COMM 322 Intercultural Communication (4 credits)
ENGL 200 or above
JOUR 215 Journalistic Writing in the Workplace (4 credits)
JOUR 311 Persuasion in Writing (4 credits)

ENTR 200 Foundations of Entrepreneurship (4 credits)
Introduces the basic elements of cash flow management and the business plan. Prepares students for the more advanced presentation of these concepts offered in the General Business core, Entrepreneurship electives, and the capstone Entrepreneurship course. Students will learn the concepts of opportunity scanning and opportunity recognition. Students will conduct a self-assessment to help them better understand their personal values and aspirations to help guide their entrepreneurial career. Students will be exposed to the variety of types of entrepreneurial ventures.
Prerequisite: sophomore standing, ENTR majors only

ENTR 300 Entrepreneurship for Non-majors (4 credits)
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. Not open to entrepreneurship majors.
Prerequisite: junior standing

ENTR 348 Franchising Management (4 credits)
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.
Prerequisites: ENTR 200 and junior standing

ENTR 349 Family Business Management (4 credits)
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.
Prerequisites: ENTR 200 and junior standing

ENTR 360 Creativity and Change (4 credits)
This course will acquaint students with theories and strategies for exercising the creative process. Leadership and change will also be examined to help the student understand how to effectively introduce and implement new and creative ideas.
Prerequisites: ENTR 200 and junior standing

ENTR 370 Entrepreneurial Financial Resource Management (4 credits)
Students will learn a broad array of tools to more efficiently manage scarce resources in a new venture. Bootstrapping techniques in marketing, administration, fixed assets, and many other areas will be examined. Students will learn applied approaches to current asset and liability management. Students planning to start their own business within the first year or two of graduation will benefit most from this course. Students are expected to have a proficiency in computer spreadsheet programming.
Prerequisites: ENTR 200, ACCT 205, and junior standing

ENTR 380 Entrepreneurship in Practice (4 credits)
Students will integrate experiences from placements in entrepreneurial companies with required readings, class discussion, and class assignments related to their placement experience. Students will complete 100 hours of work in the placement. They will perform appropriate, significant and relevant tasks directly under the supervision of either the lead entrepreneur or a key member of the entrepreneurial team. In addition, students will meet regularly during the semester in a classroom setting to share their experiences and learn from classmates in other placements. Finally, the instructor will also hold regular one-on-one sessions with students to provide overall supervision for the placement experience and to assure that the student is integrating classroom learning with the placement experience.
Prerequisites: ENTR 200 and junior standing

ENTR 390 Diversity Issues in Entrepreneurship (4 credits)
Women and minority entrepreneurs face specific issues relating to access and equity in their efforts to establish new ventures. This course will examine these issues from both a public policy perspective and from an applied management perspective.
Prerequisites: ENTR 200 and junior standing

ENTR 450 Entrepreneurship: Management and Strategy (4 credits)
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. Students are expected to have a proficiency in computer spreadsheet programming.
Prerequisites: One ENTR elective, FINC 321, DSCI 301 (or MGMT 301 from previous semesters), and MKTG 300

Ethics and Business Law (BLAW)

College of Business
Department of Ethics and Business Law
Marsnik (chair), Buckeye, Elm, Garrison, Goodpaster, R. Kennedy, Kunkel, Swink, Wendt

Business law plays an increasingly prominent role in the workplace and in our personal lives. The proliferation of laws, regulations, and legal decisions determining the limits of appropriate business behavior makes an understanding of law and legal process vital to the business professional.

Students graduating with a concentration in Ethics and Business Law will have explored in depth the nature of the legal environment of business and the ways in which legal rules and processes affect business decision making. Students will have developed critical-thinking and problem-solving skills by fostering an awareness of legal reasoning and legal analysis.

This concentration is relevant to all business administration students, but it is particularly appealing to those students interested in the more highly regulated fields of business and/or the role and nature of the legal process. The concentration is not designed to be a pre-law program, but may be of interest to students considering graduate study in law, business, or public administration.

The concentration is structured to ensure that students receive both a solid grounding needed for the B.A. in Business Administration and an additional focus in business law.

Concentration in Ethics and Business Law

Business Core Courses
ACCT 205 Introduction to Accounting (4 credits)
BUSN 200 Community Service (0 credit)
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)
DSCI 301 Management of Organizations and Processes (4 credits)
FINC 321 Financial Management (4 credits)
MGMT 480 Strategic Management (4 credits)
MKTG 300 Principles of Marketing (4 credits)

Concentration Course
BLAW 401 Legal Research, Advocacy, and Dispute Resolution (4 credits)

Plus four credits from the following:
BLAW 301 Legal Environment of Business (4 credits)
BLAW 302 Business Law for Accounting (4 credits)
BLAW 303 International Business Law (4 credits)

Plus twelve credits from the following:
One of BLAW 301, 302, or 303 not taken previously
BLAW 304 Real Estate Law (4 credits)
BLAW 351 Environmental Law (4 credits)
BLAW 352 Gender Issues and the Law (4 credits)
BLAW 402 Law of Electronic Commerce (4 credits)
One course numbered 300 or above (not previously taken) in ACCT, ENTR, FINC, MGMT, MKTG

Allied requirements
ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
QMCS 220 Statistics I (4 credits)
Note: QMCS 220 should be completed by the end of the sophomore year. Transfer students who have not had an equivalent course must complete this course by the end of their first semester, junior year.

Plus four credits from the following:
MATH 101 Finite Mathematics (4 credits)
MATH 109 Calculus with Review II (4 credits)
MATH 111 Calculus for Business and Social Science (4 credits)
MATH 113 Calculus I (4 credits)
Note: The math requirement must be completed by the end of the sophomore year.

Plus four credits from the following:
COMM 100 Public Speaking (4 credits)
COMM 105 Communication in the Workplace (4 credits)
COMM 322 Intercultural Communication (4 credits)
ENGL 200 or above
JOUR 215 Journalistic Writing in the Workplace (4 credits)
JOUR 311 Persuasion in Writing (4 credits)

BLAW 301 Legal Environment of Business (4 credits)
An examination of the business law rules and principles of particular relevance to entrepreneurship, finance, management, and marketing. Subjects include contracts, negligence, products liability, and warranty, intellectual property, employment law, securities regulation, as well as general notions of legal reasoning and legal process.
Prerequisite: Junior standing

BLAW 302 Business Law for Accounting (4 credits)
An examination of the business rules and principles of particular relevance to the accounting profession. Subjects include the law of contracts, the Uniform Commercial Code, the law of debtor-creditor relations, the legal structure governing the formation and operation of business organizations (agency, partnership, and corporations), as well as general notions of legal reasoning and legal process.
Prerequisites: Junior standing and ACCT 205

BLAW 303 International Business Law (4 credits)
An exploration of the international legal environments 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

BLAW 304 Real Estate Law (4 credits)
Principles of law regarding real property with emphasis on contracts, sales and secured transactions regarding transfer of ownership, mortgages, land use, development, rental and professional liability. Offered in spring semester.
Prerequisites: Junior standing

BLAW 351 Environmental Law (4 credits)
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

BLAW 352 Gender Issues and the Law (4 credits)
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

BLAW 401 Legal Research, Advocacy, and Dispute Resolution (4 credits)
An examination of the nature of legal process and of the means the legal system adopts to resolve business disputes. The course will follow a problem-solving approach emphasizing critical thinking and oral and written legal advocacy skills. Topics include an overview of jurisprudence, the sources of law, business and the Constitution, the regulatory process, judicial and alternative dispute resolution, and the basics of legal research and written and oral advocacy.
Prerequisite: BLAW 301, 302, or 303 or consent of instructor

BLAW 402 Law of Electronic Commerce (4 credits)
An exploration of the evolving legal environment that shapes business strategy for conducting business online. Topics include global e-commerce regulatory schemes, issues of privacy, security and data protection, online payment and banking regulation, intellectual property considerations, and censorship and defamation concerns.
Prerequisite: BLAW 301, 302, or 303

Finance (FINC)

College of Business
Department of Finance
Vang (chair), Barabanov, Beckmann, Cha, Combs, Daugherty, Gray, Hamilton, Jaiswal-Dale, Jithendranathan, Mohanty, Samarakoon, Shovein, Spry, M. Sullivan, Young

Students who concentrate in finance receive preparation for the financial service industries or for financial departments of non-financial corporations. Financial service industries include banks, insurance companies, and investment firms. In addition to meeting needs for specific preparation, the study of finance is really applied microeconomics.

Students completing this concentration will have a knowledge of the time value of money, the use of a financial calculator, the use of a spreadsheet for modeling, and will possess good writing skills.

Concentration in Financial Management

Business Core Courses
ACCT 205 Introduction to Accounting (4 credits)
BUSN 200 Community Service (0 credit)
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)
DSCI 301 Management of Organizations and Processes (4 credits)
FINC 321 Financial Management (4 credits)
MKTG 300 Principles of Marketing (4 credits)

Plus four credits from the following:
BLAW 301 Legal Environment of Business (4 credits)
BLAW 302 Business Law for Accounting (4 credits)
BLAW 303 International Business Law (4 credits)

Concentration Courses
FINC 324 Corporate Finance (4 credits)
FINC 325 Investments (4 credits)

Plus eight credits from the following:
FINC 410 Derivatives (4 credits)
FINC 430 Financial Intermediaries (4 credits)

FINC 440 Advanced Investments (4 credits)
FINC 450 International Financial Management (4 credits)
FINC 480 The Chief Financial Officer (4 credits)

Plus:
Four additional credits at the 300-level or above in the College of Business (may be a FINC course)

Allied requirements
ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
QMCS 220 Statistics I (4 credits)
Note: QMCS 220 should be completed by the end of the sophomore year. Transfer students who have not had an equivalent course must complete this course by the end of their first semester, junior year.

Plus four credits from the following:
MATH 109 Calculus with Review II (4 credits)
MATH 111 Calculus for Business and Social Science (4 credits)
MATH 113 Calculus I (4 credits)
Note: The math requirement must be completed by the end of the sophomore year.

Plus four credits from the following:
COMM 100 Public Speaking (4 credits)
COMM 105 Communication in the Workplace (4 credits)
ENGL 200 or above
JOUR 215 Journalistic Writing in the Workplace (4 credits)
JOUR 311 Persuasion in Writing (4 credits)

Major in Real Estate Studies (B.S.)

The Bachelor of Science degree in the multidisciplinary field called real estate finds an ideal foundation in a liberal arts education. It provides a quality real estate program with a core in the general functional and operational areas of business. The program is designed to develop students as better citizens able to make responsible decisions benefiting society. Employers prefer to hire students who are knowledgeable of their discipline and operate within a moral and ethical framework of values. Graduates of the program can find employment as mortgage loan officers, appraisers, commercial/investment brokers and property managers.

Business Core Courses
ACCT 205 Introduction to Accounting (4 credits)
BLAW 304 Real Estate Law (4 credits)
BUSN 200 Community Service (0 credit)
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)
DSCI 301 Management of Organizations and Processes (4 credits)
FINC 321 Financial Management (4 credits)
MKTG 300 Principles of Marketing (4 credits)

Concentration Courses
FINC 200 Real Estate Principles (4 credits)
FINC 360 Real Estate Property Management (4 credits)
FINC 460 Real Estate Finance and Investments (4 credits)
FINC 461 Real Estate Appraisal (4 credits)
FINC 470 Real Estate Development (4 credits)

Allied requirements
ECON 251 Principles of Macro-Economics (4 credits)
ECON 252 Principles of Micro-Economics (4 credits)
ECON 333 Regional and Urban Economics (4 credits)
QMCS 220 Statistics I (4 credits)
Note: QMCS 220 should be completed by the end of the sophomore year. Transfer students who have not had an equivalent course must complete this course by the end of their first semester, junior year.

Plus four credits from the following:
COMM 100 Public Speaking (4 credits)
COMM 105 Communication in the Workplace (4 credits)

Plus four credits from the following:
MATH 109 Calculus with Review II (4 credits)
MATH 111 Calculus for Business and Social Science (4 credits)
MATH 113 Calculus I (4 credits)
Note: The math requirement must be completed by the end of the sophomore year.

Plus:
Eight credits chosen from the following lists chosen with the approval of the Real Estate adviser.

General Real Estate (apply to all areas)
COMM 220 Small Group Communication (4 credits)
COMM 222 Interpersonal Communication (4 credits)
COMM 240 Persuasion (4 credits)
COMM 325 Nonverbal Communication (4 credits)
ENTR 200 Foundations of Entrepreneurship (4 credits)
ENTR 360 Creativity and Change (4 credits)
MKTG 310 Professional Selling (4 credits)

Brokerage/Investment
QMCS 215 Rapid Application Development (4 credits)

Mortgage Finance
FINC 430 Financial Intermediaries (4 credits)

Appraisal
ECON 311 Forecasting (4 credits)
MKTG 340 Marketing Research (4 credits)
QMCS 215 Rapid Application Development (4 credits)

Property Management
ECON 311 Forecasting (4 credits)
GEOG 221 Computer Skills in Geography (4 credits)
GEOG 321 Geographic Information Systems (4 credits)
GEOG 330 Geography for Business and Planning (4 credits)
MKTG 360 Retailing and Retailing Services (4 credits)

Development
ECON 311 Forecasting (4 credits)
GEOG 221 Computer Skills in Geography (4 credits)
GEOG 321 Geographic Information Systems (4 credits)
GEOG 330 Geography for Business and Planning (4 credits)
MKTG 340 Marketing Research (4 credits)
MKTG 360 Retailing and Retailing Services (4 credits)
SOCI 332 Urban Sociology (4 credits)

FINC 200 Real Estate Principles (4 credits)
Explores the theories and practices of real estate with emphasis on the "why" and "how" of buying, financing, owning and selling real estate. Real estate brokerage, property management, mortgage finance, appraisal, investment and development are examined within a legal, economic and social context. Open to non-majors.

FINC 300 Finance for Non-Business Majors (4 credits)
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. Not open to business majors.
Prerequisite: Junior standing

FINC 321 Financial Management (4 credits)
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 205, BUSN 201, QMCS 220 (or MATH 314 for actuarial majors), ECON 251, 252, and junior standing

FINC 324 Corporate Finance (4 credits)
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: FINC 321, and MATH 109 or 111 or 113 (may be taken concurrently)

FINC 325 Investments (4 credits)
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.
Prerequisites: FINC 321

FINC 360 Real Estate Property Management (4 credits)
Owner, management and tenant relations within context budgeting, marketing and management planning is examined. Management for multi-family, office, retail and industrial property differentiated. Entrepreneurial roles of managers for finding tenants and conducting lease negotiations is explored. Offered in fall semester.
Prerequisites: FINC 200 and junior standing

FINC 410 Derivatives (4 credits)
This is a mathematically-oriented course which gives an 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. The course will include elements of stochastic calculus and other mathematical techniques needed for understanding the derivative pricing. Among the applications to be explored are uncertainty in commodity prices, stock prices, exchange rates and interest rates.
Prerequisites: FINC 324 or 325, MATH 109 or 111 or 113

FINC 430 Financial Intermediaries (4 credits)
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.
Prerequisites: FINC 324 or 325, MATH 109 or 111 or 113

FINC 440 Advanced Investments (4 credits)
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.
Prerequisites: FINC 325, MATH 109 or 111 or 113

FINC 442 Fixed Income Securities (4 credits)
This mathematically-oriented course provides extensive coverage of a wide range of fixed income securities, investment strategies and the interest rate environment. General determinants of value on standard instruments and analysis of the newer instruments including zeroes, mortgages derivatives, interest rate swaps, and structured notes will be covered. Necessary mathematical concepts covered in this course will include stochastic calculus and differential calculus.
Prerequisites: FINC 325, MATH 109 or 111 or 113

FINC 450 International Financial Management (4 credits)
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.
Prerequisites: FINC 324, MATH 109 or 111 or 113

FINC 460 Real Estate Finance and Investment (4 credits)
Examines mortgage, lease, contract and construction financing with related underwriting standards and analytical techniques. Integrates the role of banks, pension funds, insurance companies with government, secondary mortgage markets, and purpose, function and operation of the U.S. financial and federal reserve systems. Acquisition and disposition analysis of income producing real property including tax liability and strategy. Market, feasibility and income analysis integrated with profitability and rate of return measures pertaining to investments with optimal financing. Offered in spring semester.
Prerequisites: FINC 200 and 321

FINC 461 Real Estate Appraisal (4 credits)
Valuation of residential and commercial real estate using the cost, market and income approaches to value. Professional ethics and standards of professional appraisal practice explored. Professional quality narrative appraisal with comparable sales, depreciated cost and discounted cash flow analysis required. Offered in fall semester.
Prerequisites: FINC 200 and 321

FINC 470 Real Estate Development (4 credits)
Capstone course integrating all functional areas of real estate for production of housing, commercial and industrial real estate. Use of market research, feasibility studies and market analysis in contract negotiation for project construction, marketing and management. Offered in spring semester.
Prerequisites: FINC 460 or 461, ECON 333

FINC 480 The Chief Financial Officer (4 credits)
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 and challenge their analytical ability.
Prerequisites: FINC 324, MATH 109 or 111 or 113

Management (MGMT)

College of Business
Department of Management
Anderson (chair), Evers, Hedberg, Maloney, Militello, Power, Ramlall, Ray, Rehn, Rothausen-Vange, Sheppeck, Wenzel

Students completing a concentration in the Department of Management will develop a systems thinking perspective as they view organizations; will develop a competitive perspective as they work with organizations; will become problem-solvers; will value diversity in all its forms; and will study managerial skills.

Concentration in Business Communication

There is an increasingly widespread desire within the business community for people who can communicate well, both in face-to-face and in electronically-mediated forms of communication. The concentration in Business Communication is designed to provide students a basic understanding of business fundamentals, plus background knowledge and skills in human message exchange. This exchange can occur in many forms: one-on-one, in groups, across cultures, on tape, and over the airwaves.

In addition to the general business courses required of all business majors, students who elect to do concentrated study in Business Communication take four additional communication courses, selected with the guidance of their adviser. These courses can focus on working with people or with electronic media. Those communication courses that emphasize working with people, such as Organizational Communication or Small Group Communication, provide the foundation for effective interaction and discussion. Those courses that focus on electronic media, such as Electronic Media Production or Audio Production, provide the basics for working with technology in the workplace and can help prepare students for business-related careers in the electronic media and broadcasting industry.

Business Core Courses
ACCT 205 Introduction to Accounting (4 credits)
BUSN 200 Community Service (0 credit)
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)
DSCI 301 Management of Organizations and Processes (4 credits)
FINC 321 Financial Management (4 credits)
MKTG 300 Principles of Marketing (4 credits)

Plus four credits from the following:
BLAW 301 Legal Environment of Business (4 credits)
BLAW 302 Business Law for Accounting (4 credits)
BLAW 303 International Business Law (4 credits)

Concentration Courses
COMM 100 Public Speaking (4 credits) *or* COMM 105 Communication in the Workplace (4 credits)
COMM 220 Small Group Communication (4 credits) *or* COMM 320 Organizational Communication (4 credits)
MGMT 480 Integrative Issues of Business and Organizations (4 credits)

Plus eight additional credits:
COMM 200 or above

Allied requirements
ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
QMCS 220 Statistics I (4 credits)
Note: QMCS 220 should be completed by the end of the sophomore year. Transfer students who have not had an equivalent course must complete this course by the end of their first semester, junior year.

Plus four credits from the following:
MATH 101 Finite Mathematics (4 credits)
MATH 109 Calculus with Review II (4 credits)
MATH 111 Calculus for Business and Social Science (4 credits)
MATH 113 Calculus I (4 credits)
Note: The math requirement must be completed by the end of the sophomore year.

Concentration in Human Resource Management

It is often said that people are an organization's greatest resource. People who work in human resource management provide specialized methods, techniques and professional judgment geared toward fair and effective employee selection, rewards, training, placement, management and development. By making effective use of employees' skills, and helping employees find satisfaction in their jobs and working conditions, both the employees and employers benefit from enhanced productivity.

People who work in human resource management have a wide range of responsibilities within a company. These include forecasting the organization's employee needs such as hiring, developing appraisal, compensation and professional development systems; establishing and maintaining effective labor relations; analyzing and improving the

working environment; and interpreting employment regulations. Typical job titles found in human resource departments include benefits analyst, training services coordinator, HR administrator, employment and placement manager, job analyst, labor relations specialist, affirmative action manager, recruiter, and personnel development specialist.

Business Core Courses
ACCT 205 Introduction to Accounting (4 credits)
BUSN 200 Community Service (0 credit)
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)
DSCI 301 Management of Organizations and Processes (4 credits)
FINC 321 Financial Management (4 credits)
MKTG 300 Principles of Marketing (4 credits)

Plus four credits from the following:
BLAW 301 Legal Environment of Business (4 credits)
BLAW 302 Business Law for Accounting (4 credits)
BLAW 303 International Business Law (4 credits)

Concentration Courses
MGMT 380 Organizational Change and Development (4 credits)
MGMT 390 The Environment of Human Resources Management (4 credits)
MGMT 420 Performance Assessment, Development, and Career Management (4 credits)
MGMT 460 Current Issues in Human Resources Management (4 credits)
MGMT 480 Integrative Issues of Business and Organizations (4 credits)

Allied requirements
ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
QMCS 220 Statistics I (4 credits)
Note: QMCS 220 should be completed by the end of the sophomore year. Transfer students who have not had an equivalent course must complete this course by the end of their first semester, junior year.

Plus four credits from the following:
MATH 101 Finite Mathematics (4 credits)
MATH 109 Calculus with Review II (4 credits)
MATH 111 Calculus for Business and Social Science (4 credits)
MATH 113 Calculus I (4 credits)
Note: The math requirement must be completed by the end of the sophomore year.

Plus four credits from the following:
COMM 100 Public Speaking (4 credits)
COMM 105 Communication in the Workplace (4 credits)
COMM 322 Intercultural Communication (4 credits)
ENGL 200 or above
JOUR 215 Journalistic Writing in the Workplace (4 credits)
JOUR 311 Persuasion in Writing (4 credits)

Concentration in Leadership and Management

The Leadership and Management curriculum provides a broad look at the science and art of "getting things done." It will help the student develop philosophies and skills for leading people, processes, and projects across all aspects of an organization. It will provide the concepts and tools to establish long-term visions and goals for an organization and to effectively manage daily routines in a dynamic work environment – regardless of the type of organization or the particular area of a business.

The business world is changing quickly and current experience shows that university graduates can expect to change careers and employers many times before retiring. The Leadership and Management program will help the student initiate a course of action and take advantage of opportunities that arise within organizations. Leadership and Management will prepare the student for positions throughout an organization. This concentration is designed for students majoring in business administration who are not interested in concentrating their studies in a particular discipline of business (*e.g.,* accounting, finance, marketing), but want more focus than the General Business concentration provides.

Business Core Courses
ACCT 205 Introduction to Accounting (4 credits)
BUSN 200 Community Service (0 credit)
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)
DSCI 301 Management of Organizations and Processes (4 credits)
FINC 321 Financial Management (4 credits)
MKTG 300 Principles of Marketing (4 credits)

Plus four credits from the following:
BLAW 301 Legal Environment of Business (4 credits)
BLAW 302 Business Law for Accounting (4 credits)
BLAW 303 International Business Law (4 credits)

Concentration Courses
MGMT 380 Organizational Change and Development (4 credits)
MGMT 382 Management and Leadership (4 credits)
MGMT 384 Project Management (4 credits)
MGMT 480 Integrative Issues of Business and Organizations (4 credits)
MGMT 482 Managerial Applications of Leadership (4 credits)

Allied requirements
ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
QMCS 220 Statistics I (4 credits)
Note: QMCS 220 should be completed by the end of the sophomore year. Transfer students who have not had an equivalent course must complete this course by the end of their first semester, junior year.

Plus four credits from the following:
MATH 101 Finite Mathematics (4 credits)
MATH 109 Calculus with Review II (4 credits)
MATH 111 Calculus for Business and Social Science (4 credits)
MATH 113 Calculus I (4 credits)
Note: The math requirement must be completed by the end of the sophomore year.

Plus four credits from the following:
COMM 100 Public Speaking (4 credits)
COMM 105 Communication in the Workplace (4 credits)
COMM 322 Intercultural Communication (4 credits)
ENGL 200 or above
JOUR 215 Journalistic Writing in the Workplace (4 credits)
JOUR 311 Persuasion in Writing (4 credits)

MGMT 300 Management for Non-Business Majors (4 credits)
This course presents various theories 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. Not open to business majors. Offered in spring semester.
Prerequisite: Junior standing.

MGMT 380 Organizational Change and Development (4 credits)
Organizational change is a constant reality for any enterprise. Uncontrolled change often leaves the organization fighting for its continued existence. Well-managed change can enable a firm to adapt positively to internal and external threats, while maintaining its identity and benefiting its stakeholders. This course examines how to manage rapidly changing environments and technologies within an organizational setting. The focus is on how to lead change through an organization while managing the fears, apathy, and politics associated with the new system or requirements. Course methodology includes lectures and discussion, combined with application of concepts via case studies and activity-based exercises.
Prerequisites: BUSN 201 and junior standing

MGMT 382 Management and Leadership (4 credits)
This course explores the concepts and skills involved in exercising effective leadership from both an organizational and an individual perspective. The course covers the concepts of leadership in diverse cultures, how organizational conditions affect competent leadership, and the actual work of leadership in organizations. Concepts such as shared-leadership and rotating leadership are explored. Warren Bennis stated that managers do things right and leaders do the right things. The study of leadership and management in organizations is far more complex than this simple aphorism. This course examines the complexity of business leadership through a review of the key theories of leadership and their managerial applications using a combination of methods. These include self-assessment and feedback, case studies, role-plays and discussion of the application of concepts. Emphasis is placed on combining theoretical foundations and practical skills that develop more effective and ethical approaches to leadership in a variety of settings. Offered in fall semester.
Prerequisites: BUSN 201 and junior standing

MGMT 384 Project Management (4 credits)
Projects and dynamic teaming are the primary vehicles for managing work processes in organizations today. This course presents the concepts, techniques, software tools, and behavioral skills needed for managing projects effectively. It introduces the students to a project's life cycle (from project definition and goals to completion of the proj-

ect) and the behavioral dynamics that need to be managed to achieve success. The use of project management skills as applied to new product launches (*e.g.,* marketing) or installation of software information systems is explored. The multiple roles of the project manager are examined. These include being a team leader responsible for delivering the project on time, within budgets and to desired specifications while managing individuals with temporary allegiance to the project. The technical and human aspects of project management will receive approximately equal focus. Course methodology includes lectures and discussion, case studies, and activities designed to apply the concepts to management of a "live" project. Offered in spring semester.
Prerequisite: DSCI 301 (or MGMT 301 from previous semesters)

MGMT 390 The Environment of Human Resource Management (4 credits)
This course deals with concepts involved in human resource 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. Offered in fall semester.
Prerequisites: BUSN 201 and junior standing

MGMT 420 Performance Assessment, Development, and Career Management (4 credits)
This course focuses on theories, practices, and issues dealing with the management of human performance, potential, professional growth, and career development in various types of organizations. Offered in fall semester.
Prerequisites: DSCI 301 (or MGMT 301 from previous semesters)

MGMT 430 International Management (4 credits)
Managers operating in a global environment need to manage the differences in doing business with people from other cultures. This goes beyond knowing that people have different customs, goals, and thought patterns. Today's managers need to be able to understand the cross-cultural subtleties imbedded in any interpersonal working relationships, regardless of whether operating in a foreign location, interacting with foreign nationals from a distance, or working with a culturally diverse American workforce. A manager's ability to understand, accept, and embrace these differences is critical to his or her success. This course is designed to address the complexities of intercultural management and facilitate the student's ability to manage successfully in a cross-cultural environment. Topics include intercultural ethics, intercultural negotiations, and work values.
Prerequisites: DSCI 301 (or MGMT 301 from previous semesters), FINC 321, MKTG 300 or concurrent registration and prerequisite waived by instructor

MGMT 460 Current Issues in Human Resource Management (4 credits)
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 Resource concentration. Offered spring semester.
Prerequisites: MGMT 380 (may be taken concurrently), 390, 420 and senior standing

MGMT 480 Strategic Management (4 credits)
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. The focus of the course is to have you view the organization from the perspective of the president, rather than that of a manager of a particular function (*e.g.,* VP of marketing). It examines the development of core competence and a sustainable competitive advantage as part of an organization's strategic planning process.
Prerequisites: DSCI 301 (or MGMT 301 from previous semesters), FINC 321, MKTG 300, and senior standing. Absolutely no exceptions will be made to these prerequisites.

MGMT 482 Managerial Applications of Leadership (4 credits)
This course addresses the application of leadership principles in the context of business, political, and social organizations. It emphasizes how leadership affects the functions of the organization. The course reviews case studies of historical leaders such as Henry Ford, George Eastman, and Joseph Stalin. It also explores contemporary leaders such as Jack Welch, George Bush, and Pope John XXIII. These case studies are used to analyze how the personality, style, character, ethics, and strategy of each leader affect their organizations and their communities. The course will also examine multi-leader processes, such as the digging of the Panama Canal or the building of the transcontinental railroad, to highlight the interaction of varied leadership styles. Offered in spring semester.
Prerequisites: MGMT 380 or equivalent, MGMT 382, senior standing

Marketing (MKTG)

College of Business
Department of Marketing
Lundsten (chair), Al-Khatib, Brennan, Cavazos, Grzeskowiak, Heckler, Heyman, Liu, Malshe, Puto, Rexeisen, Sailors, Vollmers

Career options in marketing include marketing research and planning, advertising and public relations, business logistics and physical distribution, retailing, product management and new product development, and sales man-

agement.

Students completing the concentration in marketing will be able to critically evaluate the global marketing environment, identify opportunities and problems and be able to understand and apply appropriate concepts and terminology.

Concentration in Marketing Management

Business Core Courses
ACCT 205 Introduction to Accounting (4 credits)
BUSN 200 Community Service (0 credit)
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)
DSCI 301 Management of Organizations and Processes (4 credits)
FINC 321 Financial Management (4 credits)
MKTG 300 Principles of Marketing (4 credits)

Plus four credits from the following:
BLAW 301 Legal Environment of Business (4 credits)
BLAW 302 Business Law for Accounting (4 credits)
BLAW 303 International Business Law (4 credits)

Concentration Courses
MKTG 340 Marketing Research (4 credits)
MKTG 430 Marketing Management (4 credits)

Plus eight credits from the following:
MKTG 310 Professional Selling (4 credits)
MKTG 320 Promotion Management (4 credits)
MKTG 330 International Marketing (4 credits)
MKTG 345 Marketing Analysis (4 credits)
MKTG 350 Marketing Channels and Distribution (4 credits)
MKTG 360 Retailing (4 credits)
MKTG 370 Buyer Behavior (4 credits)
MKTG 490 Topics (4 credits)

Plus:
Four additional credits at 300-level or above (not previously taken) in the College of Business (may be a MKTG course)

Allied requirements
ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
QMCS 220 Statistics I (4 credits)
Note: QMCS 220 should be completed by the end of the sophomore year. Transfer students who have not had an equivalent course must complete this course by the end of their first semester, junior year.

Plus four credits from the following:
MATH 101 Finite Mathematics (4 credits)
MATH 109 Calculus with Review II (4 credits)
MATH 111 Calculus for Business and Social Science (4 credits)
MATH 113 Calculus I (4 credits)
Note: The math requirement must be completed by the end of the sophomore year.

Plus four credits from the following:
COMM 100 Public Speaking (4 credits)
COMM 105 Communication in the Workplace (4 credits)
ENGL 200 or above
JOUR 215 Journalistic Writing in the Workplace (4 credits)
JOUR 311 Persuasion in Writing (4 credits)

MKTG 300 Principles of Marketing (4 credits)
This course uses a managerial point of view. It focuses on understanding the needs and desires of customers in order to develop effective strategies for business. Students are taught to consider organizational, social, competitive, technological, economic, behavioral, and legal forces in crafting effective marketing programs.
Prerequisites: BUSN 201 and junior standing

MKTG 310 Professional Selling (4 credits)
In this course students learn how individuals interact with each other in a competitive environment. The course covers one-on-one selling techniques, persuasive communication, oral and verbal presentation skills useful for one-to-one presentations and when groups present to groups. The student will learn skills useful in both the industrial and consumer areas.
Prerequisite: MKTG 300

MKTG 320 Promotion Management (4 credits)
This course 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

MKTG 330 International Marketing (4 credits)
In this course students consider basic concepts, principles and theories of international marketing, as well as the essential and complex problems encountered in the international marketplace. The emphasis is on problem solving and decision-making within the international marketing environment.
Prerequisite: MKTG 300

MKTG 340 Marketing Research (4 credits)
In this course, students learn to develop surveys, observation, experiments, and other tools for learning about customer characteristics and requirements. They learn about analytical techniques, data sources, research planning and costs.
Prerequisites: MKTG 300, MATH 101 or 109 or 111 or 113, QMCS 220

MKTG 345 Marketing Analysis (4 credits)
In this course students learn to assemble, analyze and present information that is pertinent to marketing decisions. The focus in this course in on company strategies, competitive intelligence, and secondary sources. The course covers acquisition of pertinent secondary data from libraries, government, and commercial sources, the analysis of this data and its reduction and refinement to produce presentations that are helpful in marketing decision-making.
Prerequisites: MKTG 300, MATH 101 or 109 or 111 or 113, QMCS 220

MKTG 350 Marketing Channels and Distribution Systems (4 credits)
Students examine relevant theories, concepts, and practices related to the flow of goods and services in and between organizations from the point of view of the total distribution system. The goal of the course is to help business students think about and learn to create and integrate marketing and logistics strategy.
Prerequisites: MKTG 300 and QMCS 220

MKTG 360 Retailing (4 credits)
In this course students learn the principles and practices of retailing, non-store retailing services and direct marketing from a management perspective. Topics include roles-in-channel, demographics, consumer behavior, trends, strategy formulation, 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 issues, database management, and international retailing.
Prerequisite: MKTG 300.

MKTG 370 Buyer Behavior (4 credits)
In this course, students examine how consumers and organizations go about making purchase decisions. Major theoretical contributions and empirical research findings from marketing and the behavioral sciences are reviewed and attention is given to applying this information to practical business and marketing situations.
Prerequisite: MKTG 300

MKTG 430 Marketing Management (4 credits)
Small Business Institute clients present student teams with business problems that require solutions. Student teams diagnose the client's problem and craft and present a solution to the client. Time is divided between reviewing and integrating the students' marketing background, facilitating the student contact with the client, and providing consulting to the client.
Prerequisites: MKTG 340 or 345, one of MKTG 310, 320, 330, 350, 360, 370, and senior standing

Catholic Studies (CATH)

College of Arts and Sciences
Department of Catholic Studies
R Kennedy (chair), Briel, Joncas, Keating, Naughton, Reichardt, Ruddy, Thompson, Wojda; Boyle (THEO), A Kennedy (THEO), Lemmons (PHIL)

The Department of Catholic Studies allows students to encounter the broad and diverse expressions of Catholic culture. While grounded in Catholic philosophy and theology, the curriculum engages students with the imaginative and sacramental expressions of Catholic life in literature, the arts, social systems and personal experience. The interdisciplinary dimension gives students insight into Catholicism's dynamic interaction with and interpenetration of cultures, traditions, and intellectual life throughout history. By examining the role it 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 are united by a profound respect for Catholicism, and are committed to a high degree of interaction among themselves as well as with students. Students thus enter into a community at once faithful and intellectual.

The curriculum can 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.

Students graduating with a major in Catholic Studies will have a knowledge of the living Catholic tradition, and will be conversant with resources from the Catholic intellectual tradition that will permit them to explore critically the history and contemporary significance of Catholicism. They will be familiar with major Catholic figures from a variety of cultural and historical settings, and will be able to demonstrate a knowledge of the complex and broad history of the Catholic intellectual tradition.

The major consists of 36 credits: 16 credits in required core courses, 12 credits in required distribution area electives, and 8 credits in approved electives (4 credits in approved electives for double majors). No more than 12 credits, cross-listed or otherwise, in any one discipline outside of Catholic Studies may be applied toward the requirements for a major without permission of the chairs of both departments.

The minor consists of 20 credits: 8 credits in required core courses, 8 credits in required distribution area electives, and 4 credits in approved electives.

Major in Catholic Studies

Sixteen credits in core requirements:
CATH 101 The Search for Happiness (4 credits)
CATH 201 Paths and Practices of Catholic Spirituality (4 credits)
CATH 301 The Catholic Vision (4 credits)
CATH 401 The Church and Culture: Social Dimensions of Catholicism (4 credits)

Plus:
Twelve credits in approved electives chosen from the following three categories:
One philosophically-based course
One historically-based course
One aesthetically-based course

Plus:
Eight additional credits in approved electives (four additional credits for double majors)

Minor in Catholic Studies

Eights credits chosen from the core requirements above

Plus:
Eight credits in approved electives chosen from the following three categories:
One philosophically-based course
One historically-based course
One aesthetically-based course

Plus:
Four additional credits chosen from among any of the approved electives.

Approved electives include (but may not be limited to) the following courses. Please consult the office of the department chair for an up-to-date list of approved courses.

Philosophically Based courses:
CATH 240 Faith and Doubt (4 credits)
CATH 250 Christian Mysteries from a Philosophical Viewpoint (4 credits)
CATH 234 Love, Sex and Friendship (4 credits)
CATH 272 Evolution and Creation (4 credits)
CATH 297/397 Topics in Catholic Studies (4 credits each)

Literary or Aesthetics Based courses:
CATH 222 The Catholic Literary Tradition (4 credits)
CATH 334 Literature from a Christian Perspective (4 credits)
CATH 356 Music and the Bible (4 credits)
CATH 357 Sacred Music of the Catholic Heritage (4 credits)
CATH 297/397 Topics in Catholic Studies (4 credits each)
ARTH 280 Sacred Architecture and Space (4 credits)
ARTH 320 Art and Culture of Colonial Mexico (4 credits)
ARTH 330 Churches and Mosques in the First Millennium (4 credits)
ARTH 335 Cathedrals, Monasteries, and Caliphates (4 credits)
ARTH 340 Southern Renaissance Art and Society (4 credits)
ARTH 342 Renaissance and Reformation in Northern Europe (4 credits)
ARTH 345 Baroque and Rococo Art (4 credits)
ARTH 347 Golden Age of Spain (4 credits)

Historically Based courses
CATH 312 Catholic Social Thought (4 credits)
CATH 297/397 Topics in Catholic Studies (4 credits each)
HIST 306 The World of Late Antiquity: A.D. 284-641 (4 credits)
HIST 307 The Church in the Roman Empire to A.D. 395 (4 credits)
HIST 310 The Making of Europe: Middle Ages to 1000 (4 credits)
HIST 311 The Dawn of a New Era: Europe from 1000 to 1450 (4 credits)
HIST 312 Early Modern Europe: 1450-1750 (4 credits)
HIST 366 The History of the Catholic Church in the United States (4 credits)

Other Approved Electives:
CATH 306 Christian Faith and Management Professions (4 credits)
CATH 308 Woman and Man (4 credits)
CATH 346 Christian Faith and the Education Profession (4 credits)
CATH 364 Science and Christian Theology (4 credits)
CATH 366 Psychology and Moral Theology (4 credits)
CATH 378 Christian Faith and the Legal Profession (4 credits)
CATH 379 Christian Faith and the Medical Profession (4 credits)
CATH 297/397 Topics in Catholic Studies (4 credits each)
THEO 310 Christian Worship (4 credits)

CATH 101 The Search for Happiness (4 credits)
This course provides a critical investigation into the quest for meaning and happiness as found in the Catholic tradition. Beginning with fundamental Catholic claims about what it means to be a human being, this course explores the call to beatitude in materials from several disciplines, including theology, philosophy, literature, and art, as well as ancient, medieval, and contemporary sources. Topics explored include a consideration of human beings in relation to divine beings, the supernatural end to human life, the human being as experiencing desire and suffering, the Christian paradox that joy may be found in the giving of one's self, and the search for happiness through friendship and love. Through all these topics, the course particularly examines the question, "What is the specifically unique character of Christian happiness?"

CATH 201 Paths, Expressions and Practices in Catholic Spirituality (4 credits)
This course provides an investigation into the various forms and expressions of spirituality which derive their inspiration from a common origin in Christian Revelation and the teachings of the Catholic Church. We will examine in depth a selection of topics and themes having to do with differing expressions and practices of Catholic spirituality across a number of historical eras and cultures. Possible topics include prayer and contemplation; the varieties of lay and religious spiritualities in both their solitary and communal dimensions; virtue; and vocation and work. Interdisciplinary course materials will draw on sources in theology, philosophy, history, literature, and art or music.

CATH 222 The Catholic Literary Tradition: Medieval to Modern (4 credits) (equivalent to ENGL 222)
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.
Prerequisites: ENGL 111 and 112 or 190

CATH 234 Love, Sex and Friendship (4 credits) (equivalent to PHIL 234)
A philosophical examination of the nature of human love. Possible topics include reciprocity and permanence, fidelity, romantic love, human sexuality, kinds of friendship. Special attention will be given to the thought of John Paul II.
Prerequisite: PHIL 115

CATH 240 Faith and Doubt (4 credits) (equivalent to PHIL 240)
Philosophical arguments for and against the possibility of divine revelation. Special attention will be given to the claim that the faith of the Catholic Church is revealed. Possible topics include tests of alleged revelations and miracles, evil as a barrier to belief in revelatory claims, the compatibility of science and religion, the role of reason and faith in religious commitment, and personal decision-making in a state of doubt about evidence.
Prerequisite: PHIL 115

CATH 250 Christian Mysteries from a Philosophical Viewpoint (4 credits) (equivalent to PHIL 250)
A consideration of philosophical problems associated with Catholicism. Possible topics include divine providence, creation, the soul, freedom of the will, faith, the Eucharist, the Incarnation, and the variety of religious beliefs.
Prerequisite: PHIL 115

CATH 272 Evolution and Creation (4 credits) (equivalent to PHIL 272)
A philosophical examination of the relation between the doctrine of creation and theories in the evolutionary sciences. The course will consider arguments concerning evolution and creation from a variety of disciplines (including philosophy, theology, and natural science). The course will also examine historical and philosophical aspects of the rela-

tion between science and religion on the origins of the material world and the human race.
Prerequisite: PHIL 115

CATH 295, 296 Topics (2 credits)
CATH 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

CATH 301 The Catholic Vision (4 credits)
At the center of the Catholic vision are the two great works of divine love: creation and redemption. This course considers the implications of these divine works for a radical reconsideration of the world and the human person. Students will examine characteristic Catholic approaches to and emphases concerning creation, redemption and ecclesiology, and discuss how Catholic understandings of creation and redemption inform, respond to, and critique Catholic practices in various cultural settings. In addition, the course will compare and contrast contemporary Catholic cultural monuments with that produced in earlier eras, and compare and contrast Catholic Christianity with other forms of Christian and non-Christian belief and practices. In illustrating its themes, the course draws upon sources in art, literature, history, philosophy, and theology with special attention given to the intellectual, spiritual, and cultural consequences of Catholic doctrine.
Prerequisites: Junior standing and CATH 101 and CATH 201

CATH 306 Christian Faith and the Management Professions (4 credits) (equivalent to THEO 306)
What is a good manager and how does he or she contribute to the common good? This course pursues these questions within the Christian social tradition broadly understood through an exploration of the theological relationship between work as a vocation and leisure as contemplation. Within this theological context, the course examines the financial, organizational, technological, and cultural forces that managers and organizations encounter daily.
Prerequisites: THEO 101 (or 102 and 103) and one 200-level THEO course

CATH 308 Woman and Man (4 credits)
This course examines the definition of "woman" and "man" from both the historical and the philosophical perspective. Readings and discussion center on the question of (1) whether there are important philosophical differences between women and men and (2) whether such differences are natural or socially constructed. The implications of various answers to those questions are then examined, with special attention given to the Catholic tradition's reflections on the nature and ends of marriage, the character of priestly ordination, friendship between women and men, and human sexuality. This course fulfills the core curriculum requirement in Human Diversity.
Prerequisite: PHIL 115

CATH 312 Catholic Social Thought (4 credits)
Rooted in Scripture, Catholic thought on social questions has always constituted a challenge to communities to protect human dignity from the concrete threats of the day. As it matured, Catholic social thought developed both a theoretical framework as well as a set of principles and guidelines for structuring communities in ways that protect and advance human dignity. The purpose of this course will be to explore both dimensions of Catholic social thought in their historical origins and in their contemporary expressions. Although the course presupposes a theological context, the principal focus will be on the interdisciplinary contributions to and implications of Catholic social thought.
Prerequisites: THEO 101 (or 102 and 103) and PHIL 115

CATH 334 Literature from a Christian Perspective (4 credits) (equivalent to ENGL 334)
This course examines methods of reading and literary texts from a Christian perspective. The general question of the course is, "how does a reader engage works of imaginative literature from an intellectually serious Christian perspective?" The course studies works of criticism representing a variety of Christian viewpoints and applies them to literary texts that are explicitly Christian in themes as well as those which invite, or are enriched by, a Christian perspective.
Prerequisites: ENGL 111 and 112 or 190

CATH 346 Christian Faith and the Education Profession (4 credits) (equivalent to THEO 346)
This course explores education through its grounding in the Christian understanding of God and the human person. Theological topics relevant to education include: the nature of truth, the relationship between faith and reason, and freedom in moral and intellectual formation. We will also examine questions about faith-based education in a pluralistic context and the relevance of an interdisciplinary search for truth. In light of the growing trend toward academic specialization, this course aims to help students learn how various disciplines are integrated in the search for wisdom.
Prerequisites: THEO 101 (or 102 and 103) and one 200-level THEO course

CATH 356 Music and the Bible (4 credits) (equivalent to THEO 356)
This course explores the social, cultural and religious contexts for music-making among biblical peoples and the primitive Christian communities. Students will learn to do detailed analysis of psalm and canticle texts in the Old Testament and acclamations, infancy canticles, God-hymns, Christ-hymns and psalmody in the New Testament. Implications for present-day worship and spirituality will also be addressed.
Prerequisites: THEO 101 (or 102 and 103) and one 200-level THEO course

CATH 357 Sacred Music of the Catholic Heritage (4 credits) (equivalent to THEO 357)
Music both expresses and shapes religious experience. This course explores the practice and theory of music-making in Catholic worship and devotion. Special emphasis will be given to the study of Gregorian chant as foundational for Roman Rite worship music, the historical development of other forms of Catholic church music, and contemporary issues of music, culture and spirituality.
Prerequisites: THEO 101 (or 102 and 103) and one 200-level THEO course

CATH 364 Science and Christian Theology (4 credits) (equivalent to THEO 364)
This course is an introduction to the interrelationship between Christian theology (the understanding of the Christian faith), and the natural sciences. It explores the relationship between scientific and theological methods and modes of knowledge, and considers some of the central topics of Christian theology – God, creation, providence, resurrection, and afterlife – in the light of modern scientific evidence and theories.
Prerequisites: THEO 101 (or 102 and 103) and one 200-level THEO course, PHIL 115, some college-level background in science, preferably biology, physics, or chemistry

CATH 366 Psychology and Moral Theology (4 credits) (equivalent to THEO 366)
Although the fields of psychology and moral theology are in some ways similar in that they each address questions of human nature and human growth, they are also quite distinct in their conceptions of the human person. This course will explore some of the relationships between psychology and moral theology, especially in matters of human wellness and personal well-being. Areas of disparity between the disciplines as well as points of commonality and fruitful exchange will be discussed.
Prerequisites: THEO 101 (or 102 and 103) and one 200-level THEO course

CATH 378 Christian Faith and the Legal Profession (4 credits) (equivalent to THEO 378)
If to work is to share in the creative activity of God, then what specific challenge does this pose for an attorney given the grinding realities of the legal profession? If to be a professional is to live out a tripartite relationship between self, client, and a higher standard, then how does an attorney determine, much less respond to such a standard? Through a close reading of a variety of theological texts, treatises, case studies and rules of professional conduct, this course will address these questions and, in so doing, attempt to fashion a paradigm for the Christian practice of law. Within this paradigm, emphasis will be placed on the meaning of justice, law, rights and responsibilities. An ethic of care that fosters the development of a compassionate world and a common life will be emphasized.
Prerequisites: THEO 101 (or 102 and 103) and one 200-level THEO course

CATH 379 Christian Faith and the Medical Profession (4 credits) (equivalent to THEO 379)
What is a good doctor? This course pursues this question and possible answers to it, from a historical, moral, and theological point of view. Reading and discussion will be guided by a detailed investigation of the scientific/technological, economic, and cultural forces that are presently complicating our traditional understanding of medical practice. Emphasis throughout will be on the Christian tradition of moral inquiry as a resource for responding to this question.
Prerequisites: THEO 101 (or 102 and 103) and one 200-level THEO course

CATH 397, 398 Topics (4 credits)
This course will examine 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 but will not duplicate existing courses. The selection in any given semester will depend upon the interest of the students and instructors and on the availability of community resources (for example, guest lecturers). Some examples of subject matter 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? The odd number is used if the course fulfills a core curriculum requirement.
s economic systems? The odd number is used if the course fulfills a core curriculum requirement.

CATH 401 Church and Culture: Social Dimensions of Catholicism (4 credits)
This course provides an investigation into the ways in which Catholicism is inherently social and ecclesial. Its specific focus is on the Christian engagement with the world. The course's framework will be taken from the analysis of society into three spheres of action (culture, politics, and economics) as described in Centesimus annus. We will examine the ways that Revelation, the sacramental life, and the teachings of the Church call Catholics to seek holiness and to witness to their faith in the world. Specific topics may include social and economic justice, politics and public policy, lay and religious apostolates, education, and marriage and family. Course material may include sources from philosophy, theology, history, economics, and political science.
Prerequisite: CATH 101 and Junior standing

CATH 483, 484 Seminar (2 credits)
CATH 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

CATH 487, 488 Topics (2 credits)
CATH 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

CATH 491, 492 Research (2 credits)
CATH 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

CATH 495, 496 Individual Study (2 credits)
CATH 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Chemistry (CHEM)

College of Arts and Sciences
Department of Chemistry
Boyd (chair), Borgerding, Brom, Glorvigen, Hartshorn, Ippoliti, Mabbott, Marsh, Olson, Wammer; Cain, Krueger, Ojala, Ovechka

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 accredited 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 biochemistry 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.

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 providing the student with 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.

Students graduating with a major in chemistry will have the necessary knowledge to prepare them for a career in chemistry or for graduate school, and the confidence and skill to succeed. They will have the ability to read, comprehend, write, and speak with clarity and understanding in technical areas. They will constantly apply critical thinking to their readings in the technical literature. They will have developed good laboratory skills and be familiar with modern instrumentation and with the use of computers in technical fields. They will have developed the skills necessary to analyze their data and to draw conclusions from it.

Chemistry is an excellent major for students interested in biochemistry, food science, forensic science, medicine, medicinal chemistry, dentistry, pharmaceutical chemistry, pharmacology, pharmacy, 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.

Students interested in teacher licensure should consider the various combinations of science education in the Department of Teacher Education in this catalog.

The Departments of Chemistry and Biology jointly offer a B.S. degree in biochemistry. The curriculum for this degree may be found under "Interdisciplinary Programs" in this catalog.

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 two-credit seminar sequence.

The department offers a number of courses for non-majors to fulfill the laboratory science component of the core curriculum.

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 four credits in research (CHEM 491-494); (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 ACS 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 early enough to allow for notification of the registrar and academic dean when graduating in another term.

Major in Chemistry (B.S.) (ACS-certified)

CHEM 111 General Chemistry I (4 credits) *and* CHEM 112 General Chemistry II (4 credits)
or
CHEM 115 Accelerated General Chemistry (4 credits)

Plus:
CHEM 201 Organic Chemistry I (4 credits)
CHEM 202 Organic Chemistry II (4 credits)
CHEM 300 Quantitative Analysis (4 credits)
CHEM 320 Instrumental Analysis (4 credits)
CHEM 331 Chemical Thermodynamics and Reaction Dynamics (4 credits)
CHEM 332 Quantum Chemistry and Molecular Spectroscopy (4 credits)
CHEM 340 Organic Spectroscopy (2 credits)
CHEM 400 Advanced Inorganic Chemistry (4 credits)
CHEM 440 Biochemistry I (4 credits)
CHEM 481-484 Student Seminar Sequence (2 credits total)
CHEM 491 Research (2 credits) (or a summer research project sponsored by the department)

Plus four credits from:
CHEM 250 Organometallic Chemistry (2 credits)
CHEM 295 Topics (2 credits)
CHEM 296 Topics (2 credits)
CHEM 298 Topics (4 credits)
CHEM 391, 392 Research (1 credit each)
CHEM 420 Bioanalytical and Forensic Chemistry (2 credits)
CHEM 430 Polymer Chemistry (2 credits)
CHEM 442 Biochemistry II (4 credits)*
CHEM 488 Topics (2 credits)
CHEM 491, 492 Research (2 credits each)
CHEM 493, 494 Research (4 credits each)
*required for a B.S. in Chemistry with a biochemistry concentration, plus a research project in biochemistry

Allied requirements
MATH 113 Calculus I (4 credits) (or equivalent)
MATH 114 Calculus II (4 credits)
PHYS 111 Introduction to Classical Physics I (4 credits)
PHYS 112 Introduction to Classical Physics II (4 credits)

Strongly recommended:
MATH - an additional course numbered 200 or above (typically 200 or 210).

Course Sequence
All chemistry majors are advised to take General Chemistry (CHEM 111-112 or CHEM 115) and MATH 113-114 (Calculus) during the freshman year, then CHEM 201-202 and PHYS 111-112 (Introductory Physics) 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 Biochemistry (B.S.)

See College of Arts and Sciences Interdisciplinary Programs

Major in Chemistry (B.A.)

The minimum requirement for a major is 38 credits as specified below; 30 credits (including seminar) comprise the core.
CHEM 111 General Chemistry I (4 credits) *and* CHEM 112 General Chemistry II (4 credits)
or
CHEM 115 Accelerated General Chemistry (4 credits)

Plus:
CHEM 201 Organic Chemistry I (4 credits)
CHEM 202 Organic Chemistry II (4 credits)
CHEM 300 Quantitative Analysis (4 credits)
CHEM 320 Instrumental Analysis (4 credits)
CHEM 481-484 Seminar (2 credits total)

Plus four credits from the following:
CHEM 331 Chemical Thermodynamics and Reaction Dynamics (4 credits)
CHEM 332 Quantum Chemistry and Molecular Spectroscopy (4 credits)

Plus at least eight credits in courses chosen from the following list:
CHEM 250 Organometallic Chemistry (2 credits)
CHEM 295 Topics (2 credits)
CHEM 296 Topics (2 credits)
CHEM 331 Chemical Thermodynamics and Reaction Dynamics (4 credits)
CHEM 332 Quantum Chemistry and Molecular Spectroscopy (4 credits)
CHEM 340 Organic Spectroscopy (2 credits)
CHEM 391, 392 Research (1 credit)
CHEM 400 Advanced Inorganic Chemistry (4 credits)
Note: CHEM 332 is a prerequisite for 400
CHEM 420 Bioanalytical and Forensic Chemistry (2 credits)
CHEM 430 Polymer Chemistry (2 credits)
CHEM 440 Biochemistry I (4 credits)
CHEM 442 Biochemistry II (4 credits)
CHEM 491, 492 Research (2 credits each)
CHEM 493, 494 Research (4 credits each)
Note: Only 4 credits of research may be applied to the degree.

Allied requirements
MATH 113 Calculus I (4 credits) *and* MATH 114 Calculus II (4 credits)*
PHYS 111 Introductory Physics I (4 credits) *and* PHYS 112 Introductory Physics II (4 credits)
*Students not placing into MATH 113 must take MATH 108, 109 and 114 in order to satisfy the overall calculus requirement.
Note: Math and physics requirements are specified above. MATH 200 and/or 210 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.

Teacher Licensure

Elementary Education with a Co-major in Science and Mathematics for Elementary Education
Elementary Education with a Specialty in Science (5-8)
Co-major in Science (5-8) – Chemistry (9-12) and a Co-major in Secondary Education
See Education

Minor in Chemistry

A minimum of 8 credits in chemistry must be successfully completed at St. Thomas to earn a minor in the field.
CHEM 111 General Chemistry I (4 credits) *and* CHEM 112 General Chemistry II (4 credits)
or
CHEM 115 Accelerated General Chemistry (4 credits)

Plus:
CHEM 201 Organic Chemistry I (4 credits)

Plus sufficient credits from the following to yield a total of 24:
Note: Some of these courses have prerequisites beyond the core, or require permission of the instructor.
CHEM 202 Organic Chemistry II (4 credits)
CHEM 250 Organometallic Chemistry (2 credits)
CHEM 295 Topics (2 credits)
CHEM 296 Topics (2 credits)
CHEM 298 Topics (4 credits)
CHEM 300 Quantitative Analysis (4 credits)
CHEM 320 Instrumental Analysis (4 credits)
CHEM 331 Chemical Thermodynamics and Reaction Dynamics (4 credits)
CHEM 332 Quantum Chemistry and Molecular Spectroscopy (4 credits)
CHEM 340 Organic Spectroscopy (2 credits)
CHEM 420 Bioanalytical and Forensic Chemistry (2 credits)
CHEM 430 Polymer Chemistry (2 credits)
CHEM 440 Biochemistry I (4 credits)
CHEM 442 Biochemistry II (4 credits)
CHEM 491, 492 Research (2 credits each)
CHEM 493, 494 Research (4 credits each)*
*A student may take four credits of research for the minor with the approval of the department chair. No special approval is needed for CHEM 491 or 492 (2 credits).

CHEM 100 Chemistry in Our World (4 credits) (CHEM 101, 111, 115)
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 to 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. This course satisfies the laboratory science requirement in the core curriculum for non-majors. Offered fall semester.
NOTE: Students who receive credit for CHEM 100 may not receive credit for CHEM 101, 111, or 115.

CHEM 101 Environmental Chemistry (4 credits) (CHEM 100, 111, 115)
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 fundamentals lead to the study of currently relevant environmental problems and their proposed solutions, for example the depletion of ozone in the stratosphere, global warming, acid rain, smog, water pollution, and the study of energy resources. Lecture plus three laboratory hours per week. This course satisfies the laboratory science requirement in the core curriculum for non-majors. Offered spring semester.
NOTE: Students who receive credit for CHEM 101 may not receive credit for CHEM 100, 111, or 115.

CHEM 111 General Chemistry I (4 credits) (CHEM 100, 101, 115)
This course, together with CHEM 112, provides a two-semester introduction to chemistry. Topics include atomic structure, molecular structure, chemical bonding, the periodic table, states of matter, reaction types, stoichiometry, thermochemistry, intermolecular forces, and properties of the common elements and their ions in aqueous solution. Lecture plus four laboratory hours per week. Offered fall and spring semesters.
Prerequisite: Math placement at 108 or above
NOTE: Students who receive credit for CHEM 111 may not receive credit for CHEM 100, 101, or 115.

CHEM 112 General Chemistry II (4 credits) (CHEM 115)
This course continues the study of chemistry begun in 111. Topics include thermodynamics, kinetics, equilibrium, acid-base chemistry, electrochemistry, and nuclear chemistry. Lecture plus four laboratory hours per week. Offered spring semester and summer (when enrollment allows).
Prerequisite: A minimum grade of C- in CHEM 111
NOTE: Students who receive credit for CHEM 112 may not receive credit for CHEM 115.

CHEM 115 Accelerated General Chemistry (4 credits) (CHEM 100, 101, 111, 112)
A one semester general chemistry class that blends significant topics from CHEM 111 and 112 for very strong students interested in majoring in science or engineering. Approximately one-third of the course content is drawn from CHEM 111 with the balance coming from CHEM 112. Topics include atomic theory, stoichiometry, gas laws, phases of matter, atomic and molecular structure, bonding, kinetics, thermodynamics, equilibrium, electrochemistry, nuclear chemistry, and descriptive chemistry. Lecture plus four laboratory hours per week. Offered fall semester.
Prerequisite: Math placement at the 113 level, high school chemistry, and satisfactory performance on the chemistry placement examination.
NOTE: Students who receive credit for CHEM 115 may not receive credit for CHEM 100, 101, 111, or 112.

CHEM 201 Organic Chemistry I (4 credits)
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. Offered fall semester.
Prerequisite: A minimum grade of C- in CHEM 112 or 115

CHEM 202 Organic Chemistry II (4 credits)
Continuation of 201. Offered spring semester.
Prerequisite: A minimum grade of C- in CHEM 201

CHEM 250 Organometallic Chemistry (2 credits)
A study of the structure, bonding, and reactions of compounds that contain direct metal-carbon bonds. Emphasis is placed on the role these compounds play as stoichiometric and catalytic reagents in organic and inorganic synthesis. Additional topics include electronic and structural theory, reaction mechanisms, and the role of organometallics in biochemistry and material science. Offered alternate January terms.
Prerequisite: CHEM 201

CHEM 295, 296 Topics (2 credits)
CHEM 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

CHEM 300 Quantitative Analysis (4 credits)
An introduction to quantitative chemical analysis. Topics include sample treatment, the statistical handling of data, equilibria governing acid/base relationships and fundamentals underlying measurements using the following tech-

niques: titrimetry (using acid/base, complexation and redox reactions), spectrophotometry, and analytical separations (GC, HPLC, and capillary electrophoresis). Lecture plus four laboratory hours per week. This course fulfills the second-level Computer Competency requirement in the core curriculum. Offered fall and spring semesters.
Prerequisite: A minimum grade of C- in CHEM 112 or 115

CHEM 320 Instrumental Analysis (4 credits)
Principles and techniques of operation of modern chemical instrumentation not covered in CHEM 300. Topics include the capabilities, limitations and data interpretation of advanced optical spectroscopies (luminescence, Raman, etc.), voltammetry, potentiometry, and mass spectrometry. Fundamentals of signal processing, basic circuitry and optical components are 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. Offered spring semester.
Prerequisites: CHEM 202, 300

CHEM 331 Chemical Thermodynamics and Reaction Dynamics (4 credits)
Physical chemical introduction to the fundamentals of kinetic-molecular theory, statistical thermodynamics, classical thermodynamics, and chemical reaction dynamics. Emphasis on the in-depth study of chemical reaction equilibria, phase equilibria, and chemical reaction kinetics in gaseous, liquid and solid systems. Laboratory work involves modern computational methods in physical chemistry, as well as physicochemical measurements related to thermodynamics and reaction dynamics. Lecture plus six laboratory hours per week. This course fulfills the second level Computer Competency requirement in the core curriculum. Offered fall semester.
Prerequisites: CHEM 202, MATH 114 and PHYS 111

CHEM 332 Quantum Chemistry and Molecular Spectroscopy (4 credits)
Study of chemical systems from the point of view of molecular theory. Introduction to the fundamentals of quantum chemistry and atomic/molecular spectroscopy. Laboratory work involves computational methods in molecular quantum mechanics and spectroscopic measurements of atomic/molecular systems. Lecture plus six laboratory hours per week. This course fulfills the second level Computer Competency requirement in the core curriculum. Offered spring semester.
Prerequisites: CHEM 202, MATH 114 and PHYS 112

CHEM 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. Offered spring semester.
Prerequisite: A minimum grade of C- in CHEM 202

CHEM 391 Research (1 credit)
Work on a problem under the direction of the staff. Primarily literature work.
Prerequisite: Permission of the department chair

CHEM 392 Research (1 credit)
Work on a problem under the direction of the staff. Primarily laboratory work.
Prerequisite: CHEM 391

CHEM 400 Advanced Inorganic Chemistry (4 credits)
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. Offered fall semester.
Prerequisites: CHEM 202 and 332 or permission of the instructor

CHEM 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 alternate January terms.
Prerequisite: CHEM 201

CHEM 430 Polymer Chemistry (2 credits)
An introduction to the science associated with polymers accomplished by discussing some of the fundamental aspects of polymer science and engineering. Three general subject areas will be addressed: 1) polymer synthesis and characterization, 2) polymer structure including melt, glassy, semicrystalline, rubbery, and solution states, and 3) selected physical properties (e.g. viscoelasticity, toughness, failure, permeability) and processing characteristics. Offered spring semester every other year.
Prerequisite: CHEM 202

CHEM 440 Biochemistry I (4 credits)
The first course in a two-semester sequence examining the chemistry underlying biological processes. The topics addressed include a review of the properties of aqueous solutions and buffers; the structure and function of proteins, carbohydrates and lipids; an introduction to the properties, reaction kinetics and catalytic mechanism of enzymes; membrane structure and function; qualitative and quantitative models of bioenergetics; and an introduction to metabolic regulation and control featuring carbohydrate metabolism as well as the citric acid cycle. Lecture plus four laboratory hours per week. Offered fall semester.
Prerequisite: A minimum grade of C- in CHEM 202

CHEM 442 Biochemistry II (4 credits)
The second course in a two-semester sequence examining the chemistry underlying biological processes. Topics include a continued investigation of bioenergetics focusing on oxidative phosphorylation and photophosphorylation; fatty acid metabolism; amino acid metabolism; nucleotide synthesis; mechanisms and regulation of gene expression; protein synthesis; and methods in genetic engineering. Lecture plus four laboratory hours per week. Offered spring semester.
Prerequisite: A minimum grade of C- in CHEM 440

CHEM 475, 476 Experiential Learning (2 credits)
CHEM 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

CHEM 481, 484 Student Seminar (1 credit)
CHEM 482, 483 Student Seminar (0 credit)
This sequence of courses begins in the fall semester of the junior year and progresses for a total of four semesters. The first (CHEM 481) and last (CHEM 484) courses are each one credit and are graded on the usual letter grade scale. The interior two courses (CHEM 482, 483) are zero credit and are graded on a pass-fail basis (S/R). Seminars are presented by guest speakers, St. Thomas faculty, and St. Thomas students throughout all four courses. In CHEM 481, juniors are introduced to the chemical literature, literature search techniques including use of computer databases, and write a short paper based on literature research. In CHEM 483 seniors meet in small groups with faculty and discuss articles from the current literature. In CHEM 484, seniors research a topic from the chemical literature and present it in both written and oral formats. Information about career opportunities for students holding a chemistry degree is presented throughout the seminar sequence. Required of all chemistry majors. CHEM 481 and 483 offered fall semester. CHEM 482 and 484 offered spring semester.

CHEM 487, 488 Topics (2 credits)
CHEM 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

CHEM 491, 492 Research (2 credits)
CHEM 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

CHEM 495, 496 Individual Study (2 credits)
CHEM 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Classical Civilization (CLAS)

College of Arts and Sciences
Interdisciplinary Program
Quartarone, director

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 (4 credits)
CLAS 397 Topics (4 credits)
CLAS 480 Senior Paper (4 credits)

ENGL 220 The Classical Tradition (4 credits)
HIST 111 Origins of the Modern World to 1550 (4 credits)
HIST 300-level ancient history course approved by director
PHIL 200 Ancient Philosophy (4 credits)

Plus four credits from the following:
GREK 212 Intermediate Greek II (4 credits) (prerequisites may be necessary)
LATN 212 Intermediate Latin II (4 credits) (prerequisites may be necessary)
GREK or LATN - Four credits numbered above 212

Plus four credits from the following:
ARTH 305 Greek Art and Archaeology (4 credits)
ARTH 310 Roman Art and Archaeology (4 credits)

Plus eight credits from the following courses not already taken above:
ARTH 305 Greek Art and Archaeology (4 credits)
ARTH 310 Roman Art and Archaeology (4 credits)
COMM 440 Classical Rhetoric (4 credits)
GREK 342 Greek Reading and Exegesis: John (4 credits)
GREK - additional course
HIST 302 Classical and Early Hellenistic Greece (4 credits)
HIST 304 The Roman Republic and the Early Principate (4 credits)
HIST 306 The World of Late Antiquity: A.D. 284-641 (4 credits)
HIST 307 The Church in the Roman Empire to A.D. 395 (4 credits)
LATN 360 Philosophy in Latin Texts (4 credits)
LATN - additional course
PHIL 230 Greek Philosophers on the Foundations of Knowledge (4 credits)
PHIL 320 Aristotelian Logic (4 credits)
THEO 210 New Testament (4 credits)
THEO 220 Early Christian Theology (4 credits)

CLAS 245 Classical Mythology (4 credits)
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.

CLAS 397 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

CLAS 475, 476 Experiential Learning (2 credits)
CLAS 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

CLAS 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.

CLAS 483, 484 Seminar (2 credits)
CLAS 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

CLAS 487, 488 Topics (2 credits)
CLAS 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

CLAS 491, 492 Research (2 credits)
CLAS 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

CLAS 495, 496 Individual Study (2 credits)
CLAS 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Communication Studies (COMM)

College of Arts and Sciences
Department of Communication Studies
Armada (chair), Bruess, Cragan, Friedline, Petersen, Riordan, K. Sauter, Scully

The Department of Communication Studies 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 symbolic 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.

Majors must complete a minimum of eighteen credits in communication studies at St. Thomas.

Communication Studies Honor Society
Lambda Pi Eta, the National Communication Honor Society, chartered the St. Thomas *Beta Chi* chapter in 1994. The society recognizes communication studies majors who have demonstrated a commitment to the discipline. To be eligible, students must have completed 60 semester hours, 16 of those in communication studies; 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 Studies

COMM 100 Public Speaking (4 credits)
COMM 120 Communication Theories and Methods (4 credits)
COMM 140 Rhetorical Criticism (4 credits)
COMM 160 Electronic Media Production (4 credits)
Note: Two of the above four courses must be completed before taking additional courses within the major.
COMM 480 Capstone Course in Communication (4 credits)
Note: Thirty-two credits in the major must be completed prior to enrolling in COMM 480. With 28 credits completed, one concurrent registration is allowed.

Plus eight credits from the following:
Note: at least 8 of the 16 elective credits listed below must be at the 300- or 400-level
COMM 220 Small Group Communication (4 credits)
COMM 222 Interpersonal Communication (4 credits)
COMM 240 Persuasion (4 credits)
COMM 250 Argumentation and Advocacy (4 credits)
COMM 260 Audio Production (4 credits)
COMM 264 Electronic Media and Society (4 credits)
COMM 270 Videography: Television Production in the Field (4 credits)
COMM 320 Organizational Communication (4 credits)
COMM 322 Intercultural Communication (4 credits)
COMM 330 Investigating Communication (4 credits)
COMM 340 Rhetoric of Race, Class, and Gender (4 credits)
COMM 350 Modern American Rhetoric (4 credits)
COMM 360 Television Criticism (4 credits)
COMM 370 Advanced Video Production (4 credits)
COMM 440 Classical Rhetoric (4 credits)

Plus:
COMM - Eight additional COMM credits (COMM 105 is not an option for majors.)

Teacher Licensure

Elementary Education with a Specialty in Communication Arts and Literature (5-8)
Co-major in Communication Arts and Literature (5-12) and a Co-major in Secondary Education
See Education

Minor in Communication Studies

Twelve credits from the following:
COMM 100 Public Speaking (4 credits)
COMM 120 Communication Theories and Methods (4 credits)
COMM 140 Rhetorical Criticism (4 credits)
COMM 160 Electronic Media Production (4 credits)

Plus:
Eight additional credits in courses at the 200-level or higher, but not including COMM 480.

COMM 100 Public Speaking (4 credits)
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.

COMM 105 Communication in the Workplace (4 credits)
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 presentational skills, dyadic communication and interviewing, and group communication. This class is not open to Communication majors or minors.

COMM 120 Communication Theories and Methods (4 credits)
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.

COMM 140 Rhetorical Criticism (4 credits)
This course teaches students to become more critical consumers and producers of public messages. Students will examine a mix of historical and contemporary examples of persuasive communication in order to develop and awareness of the rhetorical power of messages in everyday life. Critical tools will be covered to help the student learn how to approach a communicative act systematically, identifying crucial interactions and suggesting ways of understanding how those interactions function. The emphasis on critical consumption also enables students to become more effective creators of public messages.

COMM 160 Electronic Media Production (4 credits)
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.

COMM 215 Oral Interpretation (4 credits) (equivalent to THTR 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: COMM 100 or sophomore standing

COMM 217 Survey of Communication Disorders (4 credits)
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.
Prerequisite: COMM 100 or sophomore standing

COMM 220 Small Group Communication (4 credits)
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: COMM 120 or sophomore standing

COMM 222 Interpersonal Communication (4 credits)
Theory and practice of interpersonal communication, including how self-concept, language, nonverbal 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.
Prerequisite: COMM 120 or sophomore standing

COMM 240 Persuasion (4 credits)
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: COMM 140 or sophomore standing

COMM 250 Argumentation and Advocacy (4 credits)
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.
Prerequisite: COMM 140 or sophomore standing

COMM 260 Audio Production (4 credits)
An introduction to radio production. Students will produce projects digitally that are designed to acquaint them with genres, styles and production techniques, with emphasis on the radio industry. Production planning, scripting, the use of sound effects, field production, multi-track recording, mixing and editing are covered. In addition, the students in this course will operate RadioCOMM, UST's cablecast radio station that is distributed on campus. Each student will learn how to operate live production techniques, as with radio DJs, announcers and interviewers. This course fulfills the second-level Computer Competency requirement.
Prerequisite: COMM 160 or sophomore standing

COMM 264 Electronic Media and Society (4 credits)
A survey of the electronic media industry, providing a fundamental grounding in the history, regulation, programming strategies, advertising and rating systems of television, radio, and new forms of electronic media. The course will develop an increased awareness of the social, economic, and political roles that the electronic media play in our society.
Prerequisite: COMM 160 or sophomore standing

COMM 270 Videography: Television Production in the Field (4 credits)
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: COMM 160 or permission of instructor

COMM 295, 296 Topics (2 credits)
COMM 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

COMM 315 Media Communication Skills (4 credits)
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 media. Particular attention is given to students' development of performance techniques, emphasizing the use of voice, interviewing, ad-libbing and TelePrompTer use. Application and evaluation of performance choices are achieved through the production of video and audio projects.
Prerequisite: COMM 100 or junior standing

COMM 320 Organizational Communication (4 credits)
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: COMM 120 or junior standing

COMM 322 Intercultural Communication (4 credits)
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: COMM 120 or sophomore standing

COMM 325 Nonverbal Communication (4 credits)
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 the application of nonverbal concepts to relational, workplace, and cultural contexts.
Prerequisite: COMM 120 or junior standing

COMM 330 Investigating Communication (4 credits)
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. 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 ethical research projects, how to develop and test hypotheses, and how to interpret and evaluate communication research.
Prerequisite: COMM 120 or junior standing

COMM 340 Rhetoric of Race, Class, and Gender (4 credits)
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 a requirement in American Cultural Studies, Justice and Peace Studies, Women's Studies, and the Human Diversity requirement in the core curriculum.
Prerequisite: COMM 140, junior standing, or permission of instructor

COMM 350 Modern American Rhetoric (4 credits)
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, music, memorials, architecture and other nonverbal strategies. Topics of study may include: The rhetoric of domination and resistance, national identity formation, and the rhetoric of public memory. This course fulfills a requirement in American Cultural Studies and the Human Diversity requirement in the core curriculum.
Prerequisite: COMM 140, junior standing, or permission of instructor

COMM 360 Television Criticism (4 credits)
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 perspectives, watch programs such as comedies, dramas, news, advertisements, miniseries, *etc.,* and write several critical analyses of the programs.
Prerequisite: COMM 160 or junior standing

COMM 365 Documentary in American Culture (4 credits)
This course provides an overview of documentary television and film as part of American culture. Class sessions will focus on how to analyze and interpret claims particular documentaries make, while providing a foundation for understanding aesthetic, rhetorical, and political economic conventions that help shape the meaning of each documentary. To this end, this course will center on current theoretical dilemmas and debates in documentary filmmaking, including questions of how to define documentary, what constitutes the ethical treatment of documentary subjects and subject matter, and how documentaries construct and position audiences. We will explore the concepts of reality, truth and authority, through a variety of readings and viewings.
Prerequisite: COMM 160 or junior standing

COMM 370 Advanced Video Production (4 credits)
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: COMM 160 and 270, or permission of instructor

COMM 425 Family Communication (4 credits)
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: COMM 120 or junior standing

COMM 440 Classical Rhetoric (4 credits)
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, Quintillian, St. Augustine, and modern commentators on classical ideals, emphasis on sharing oral and written presentations.
Prerequisite: COMM 140 or junior standing

COMM 455 Political Communication and Television (4 credits)
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: COMM 140 or junior standing

COMM 465 Current Issues in Electronic Media (4 credits)
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: COMM 264 or permission of instructor

COMM 475, 476 Experiential Learning (2 credits)
COMM 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

COMM 480 Capstone Course in Communication (4 credits)
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, in-class interviews, and assessment measures.
Prerequisites: Open to majors only who have taken the four COMM 100-level core courses and at least three other communication courses.

COMM 483, 484 Seminar (2 credits)
COMM 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

COMM 487, 488 Topics (2 credits)
COMM 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

COMM 491, 492 Research (2 credits)
COMM 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

COMM 495, 496 Individual Study (2 credits)
COMM 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Computer Science

See Quantitative Methods and Computer Science

Criminal Justice

See Sociology and Criminal Justice

Economics (ECON)

College of Arts and Sciences
Department of Economics
Papagapitos (chair), Alexander, Blumenthal, Fairchild, Hartmann, Langan, Marcott, Riley, Saavedra, Vincent, Walsh, Wilson, Wu

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.

Students graduating with a major in economics will be able to integrate the tools and concepts of the discipline in the analysis of an economic issue. The background provided by this major should prepare the student for a sound preparation for career advancement.

The core for each degree consists of five economics courses and two allied requirements. The B.A. requires three additional electives 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 3.40 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 3.50 or higher in the major and 3.25 or higher overall.

Major in Economics (B.A.)

ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
ECON 315 Empirical Methods in Economics (4 credits)
ECON 351 Macroeconomic Theory (4 credits)
ECON 352 Microeconomic Theory (4 credits)

Plus:
Twelve credits in courses numbered 300 and above.
Note: Students are strongly encouraged to take ECON 315, 351 and 352 by the end of the junior year.

Allied requirements
Four credits from the following:
MATH 109 Calculus with Review II (4 credits)
MATH 111 Calculus for Business and Social Science (4 credits)
MATH 113 Calculus I (4 credits)

Plus either:
QMCS 220 Statistics I (4 credits) *or* MATH 303 Statistics for the Applied Sciences (4 credits)
or
MATH 313 Probability (4 credits) *and* MATH 314 Mathematical Statistics (4 credits)

Major in Economics (B.S.)

ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
ECON 315 Empirical Methods in Economics (4 credits)
ECON 351 Macroeconomic Theory (4 credits)
ECON 352 Microeconomic Theory (4 credits)
Note: Students are strongly encouraged to take ECON 315, 351 and 352 by the end of the junior year.

Plus:
A set of courses in one of the three paths below: Business, International, or Mathematical.

Allied requirements
Four credits from the following:
MATH 109 Calculus with Review II (4 credits)
MATH 111 Calculus for Business and Social Science (4 credits)
MATH 113 Calculus I (4 credits)

Plus either:
QMCS 220 Statistics I (4 credits) *or* MATH 303 Statistics for the Applied Sciences (4 credits)
or
MATH 313 Probability (4 credits) *and* MATH 314 Mathematical Statistics (4 credits)

Business Economics
A path which emphasizes additional tools for analyzing business situations as well as incorporating a basic foundation in the field of business.
ECON 311 Forecasting (4 credits)
ECON 332 Industrial Organization (4 credits)
ECON 401 Managerial Decision Making (4 credits)

Plus:
Eight credits in elective economics courses numbered 300 or above

Plus:
ACCT 205 Introduction to Accounting (4 credits)
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)

Plus four credits from the following:
FINC 300 Finance for Non-Business Majors (4 credits)
FINC 321 Financial Management (4 credits)

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.
ECON 345 Economics of Development and Growth (4 credits)
ECON 346 Country and Area Studies in Economics (4 credits)
ECON 348 International Economics (4 credits)

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)

Plus:
A 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.
ECON 355 Game Theory (4 credits)
ECON 418 Mathematical Economics (4 credits)

Plus four credits from the following:
ECON 301 History of Economic Thought (4 credits)
ECON 337 Economics of the Public Sector (4 credits)
ECON 339 Labor Economics (4 credits)
ECON 348 International Economics (4 credits)

Plus:
Eight credits in elective economics courses numbered 300 or above

Plus:
MATH 114 Calculus II (4 credits)
MATH 200 Multi-Variable Calculus (4 credits)
MATH 210 Linear Algebra and Differential Equations (4 credits)
Note: MATH 333 Applied Statistical Methods may be substituted for ECON 315

Teacher Education

Elementary Education with a Specialty in Social Studies (5-8)
Co-major in Social Studies (5-12) and a Co-major in Secondary Education
See Education

Minor in Economics

ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)

Plus four credits from the following:
ECON 351 Macroeconomic Theory (4 credits)
ECON 352 Microeconomic Theory (4 credits)

Plus:
Twelve credits in elective economics courses numbered 300 and above.

ECON 101 The American Economy (4 credits) (ECON 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.
NOTE: Students who receive credit for ECON 101 may not receive credit for ECON 251.

ECON 211 Current Economic Issues (4 credits)
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. This course fulfills the Social Analysis requirement in the core curriculum.
NOTE: Not open to students who have completed ECON 251 or 252.

ECON 251 Principles of Macroeconomics (4 credits) (ECON 101)
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. This course fulfills the Social Analysis requirement in the core curriculum.
NOTE: Students who receive credit for ECON 251 may not receive credit for ECON 101.

ECON 252 Principles of Microeconomics (4 credits)
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. This course fulfills the Social Analysis requirement in the core curriculum.

ECON 295, 296 Topics (2 credits)
ECON 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

ECON 301 History of Economic Thought (4 credits)
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: ECON 251 and 252

ECON 311 Forecasting (4 credits)
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: ECON 251, 252 and QMCS 220

ECON 315 Empirical Methods in Economics (4 credits)
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.
Prerequisites: ECON 251 and 252, QMCS 220 or MATH 303

ECON 321 Law and Economics (4 credits)
The relationship between legal and economic aspects of selected issues: property rights, liability laws, product-safety legislation, discrimination, crime control, and related topics.
Prerequisites: ECON 251, 252 or permission of instructor

ECON 326 Industry Studies (4 credits)
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: ECON 251 and 252

ECON 332 Industrial Organization (4 credits)
Relationship between market structure, behavior and performance of business enterprises; government intervention and regulation; antitrust and other public-policy issues.
Prerequisites: ECON 251 and 252

ECON 333 Regional and Urban Economics (4 credits)
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: ECON 252

ECON 335 Money, Financial Markets, and the Economy (4 credits)
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: ECON 251 and 252

ECON 337 Economics of the Public Sector (4 credits)
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: ECON 252

ECON 339 Labor Economics (4 credits)
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: ECON 252

ECON 345 Economics of Development and Growth (4 credits)
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: ECON 251, 252

ECON 346 Country and Area Studies in Economics (4 credits)
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 government 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, China, and Australia. Students may take this course more than once provided the specific country/region is not duplicated. Some offerings of this course fulfill the Human Diversity requirement in the core curriculum.
Prerequisites: ECON 251 and 252

ECON 348 International Economics (4 credits)
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: ECON 251 and 252

ECON 349 Comparative Economic Systems (4 credits)
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: ECON 251 and 252

ECON 351 Macroeconomic Theory (4 credits)
Theories of money, interest, income and expenditure, employment, and inflation; monetary and fiscal policies; introduction to the theory of growth.
Prerequisites: 251 and 252

ECON 352 Microeconomic Theory (4 credits)
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: ECON 251, 252 and MATH 109 or 111 or 113 or equivalent.

ECON 355 Game Theory (4 credits)
Game theory seeks to explain how rational people make decisions when outcomes are mutually interdependent. This course introduces the methods of game theory from a historical perspective with primary emphasis on applications to economics. Applications to the other social sciences, business and biology are also considered. Topics covered include: normal and extensive forms of games, strict and weak dominance, sub-game perfections, pure and mixed strategies, Nash equilibrium, bargaining, oligopoly, New Keynesian and Classical Economics, trade policy, environmental economics and conflict resolution.
Prerequisites: ECON 251 and 252, plus completion of the core curriculum mathematics requirement.

ECON 360 Experimental Economics (4 credits)
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 goods and search theory.
Prerequisites: ECON 251, 252, and one additional ECON course numbered 300 or higher

ECON 370 Environmental and Natural Resource Economics (4 credits)
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: ECON 252

ECON 401 Managerial Decision Making (4 credits)
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: ECON 352, and QMCS 220 or MATH 303 or permission of the instructor

ECON 418 Mathematical Economics (4 credits)
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: ECON 352, and MATH 200 or MATH 114 with permission of instructor

ECON 470 Research in Economics (4 credits)
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.
Prerequisites: Senior standing and ECON 315, or permission of the instructor

ECON 475, 476 Experiential Learning (2 credits)
ECON 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

ECON 483, 484 Seminar (2 credits)
ECON 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

ECON 487, 488 Topics (2 credits)
ECON 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

ECON 491, 492 Research (2 credits)
ECON 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

ECON 495, 496 Individual Study (2 credits)
ECON 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Education (EDUC) - School of Education

School of Education
Department of Teacher Education
Rigoni (chair), Cady Brownstein, Hansen, Hunter, Nistler, Payne, Reif, Smith, Taylor, Warring

The Teacher Education program is in alignment with Minnesota state licensure requirements. This catalog is being prepared at the same time that all teacher education licensure programs are being prepared for state reaccredidation. This reaccredidation process coupled with the fact that state licensure requirements may quickly change means that your actual program may vary slightly from that cited in this catalog. Please maintain contact with a teacher education advisor for the most current information on your program.

Teacher Education programs at the University of St. Thomas develop knowledgeable, reflective practitioners committed to social justice.

The University of St. Thomas School of Education offers a full range of undergraduate and graduate elementary/middle level and secondary/middle level teacher licensure programs. These standards-based programs embrace the liberal arts, emphasize ethical practice, and prepare creative, reflective educators dedicated to the success of all learners. They prepare professional educators who can demonstrate appropriate knowledge, skills and dispositions related to:

1. subject matter
2. student learning
3. diverse learners
4. instructional strategies
5. learning environments
6. communication
7. planning for instruction
8. assessment of learning
9. reflection, scholarship, and continuous professional development
10. collaboration, ethics, and relationships

Students who are recommended for licensure through the St. Thomas Teacher Education Department are part of a tradition that goes back over three-quarters of a century. Programs are fully accredited by the North Central Association of Colleges and Secondary Schools and are designed to meet or exceed Minnesota State Board of Teaching licensure requirements. St. Thomas is an affiliate member of the Teacher Education Accreditation Council.

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. Ongoing state licensure rule changes make careful planning particularly important. Department and School of Education handbooks and information supplements outline specific departmental programs and policies and are available online and in the Teacher Education Department office in Minneapolis Opus Hall (MOH 302).

Admission to the Program

Students typically begin their application for admission to the teacher education program during their sophomore year, while enrolled in Block I. Candidates typically complete their application during Block II. Criteria for admission to the education program include:

GPA/Grade minimum requirements:

- Cumulative GPA of 2.75 for all credits earned at UST
- A grade of "C" or better for all Education department coursework
- A grade of "C-" or better for all content area and allied coursework
- Positive recommendations from major or co-major advisor, education advisor and interview team
- Demonstrated ability to consistently meet all program technical standards
- Demonstrated ability to consistently exhibit all program professional behavior standards
- Evidence of a positive introductory level field experience
- Completion of the Praxis I - Pre-Professional Basic Skills Test (PPST)

Students seeking licensure to teach in the state of Minnesota must complete (but not necessarily pass) all three components (reading, writing and mathematics) of the PPST prior to program admission. Students will need to pass all three components by the time of program completion in order to apply for licensure in the state of Minnesota.

Program Sequence

Elementary (K-6) and Specialist (5-8 or K-8) Licensure
Block I – EDUC 210 and 211, 212
Block II – EDUC 330 and 331, 350
Note: Allied Math and Science requirements must be completed as a prerequisite to Block III.
Block III – EDUC 369, 370, 371, 372, 373, 374 (concurrent registrations required)
Block IV – EDUC 456, 460, 461 (concurrent registrations required)

Secondary/Middle Level (5-12) Licensure
Block I – EDUC 210 and 211, 212
Block II – EDUC 330 and 331, and 355
Block III – EDUC 381, 382, and 383 (concurrent registration required)
Block IV – EDUC 456, 460, 461 (concurrent registrations required)

K-12 Licensure
Block I – EDUC 210 and 211, 212
Block II – EDUC 330 and 331
Block III – See specific K-12 program for Block 3 courses
Block IV – EDUC 456, 460, 461 (concurrent registration required)

Program Options
Plan A
Elementary and middle-level and secondary and middle-level education students who complete program requirements and graduate within four years follow Plan A.

Plan B
Teacher education students who find it difficult to complete their education program in four years may opt for Plan B. This allows students to complete licensure at the graduate level after earning their undergraduate degree. Students who seek the Plan B option should consult with a department advisor at least one semester prior to application for Plan B. Plan B is not an option for students with majors or co-majors that do not stand alone, such as physical education, social studies, and SMEE.

Retention in the Program
Students accepted into the program must continue to meet all minimum admission requirements cited above, and must demonstrate appropriate progress on all required licensure standards in order to be placed for student teaching and recommended for licensure. The department reserves the right to dismiss candidates from the licensure programs based on: inability to meet program technical standards, violations of the professional behaviors standards, or unsatisfactory progress toward meeting state mandated licensure standards.

Block IV and Student Teaching
In order to take Block IV courses and student teach, a student must have: senior status, unconditional admission to the teacher education program, satisfactory completion of all education courses in Blocks I, II, and III, satisfactory completion of all licensure-related content courses, plus admission to student teaching.

Program Completion
Following completion of all program requirements, a student may apply for Minnesota state licensure after passing all three sections of the Praxis I (PPST) exam, passing the required Praxis II Professional Knowledge Exam, passing the all required Praxis II Subject Matter Exams, and securing a Federal Criminal Background Check.

On the basis of our approved Minnesota licensure program and our accreditation from the National Association of Colleges of Teacher Education (NCATE), many other states offer reciprocal entry licenses for students completing our program requirements. Since all states requirements are unique, any student planning on teaching in another state is strongly advised to check with that state in advance in order to satisfy those unique requirements.

Teacher Licensure in Elementary (K-6) with a Specialty (5-8 or K-8)

Licensure at the elementary/middle level includes a generalist (K-6) component plus an accompanying middle level specialty (5-8 or K-8) in at least one of the following subject areas:

Middle Level Communication Arts and Literature (5-8)
Middle Level Mathematics (5-8)
Middle Level Science (5-8)
Middle Level Social Studies (5-8)
Middle Level World Languages and Cultures (K-8)

Major in Elementary Education with a 5-8 Specialty in Communication Arts and Literature

Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
EDUC 350 Language Development, Literacy, and Literature I (4 credits)
Block III
EDUC 369 Field Experience: Primary level (K-4) (0 credit)
EDUC 370 Language Development, Literacy, and Literature II (4 credits)
EDUC 371 Teaching Mathematics and Technology (4 credits)
EDUC 372 Teaching Science and Healthy, Active Living (4 credits)
EDUC 373 Teaching Social Studies and Fine Arts (4 credits)
EDUC 374 Seminar in Middle Level Specialty Area (0 credit)
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)

EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus Middle level Communication Arts & Literature Specialty:
ENGL 111 Critical Reading and Writing I: Fiction and Nonfiction Prose (4 credits)
ENGL 112 Critical Reading and Writing II: Drama and Poetry (4 credits)
Note: Qualified students may substitute ENGL 190 and an additional upper-level literature course for ENGL 111 and 112

Plus eight credits from two of the following categories:
ENGL 211 British Authors I (4 credits) *or* ENGL 212 British Authors II (4 credits)
ENGL 214 American Authors I (4 credits) *or* ENGL 215 American Authors II (4 credits)
ENGL 217 Multicultural Literature (4 credits) *or* ENGL 218 Literature by Women: Critical History (4 credits)
ENGL 220 The Classical Tradition (4 credits) *or* ENGL 221 The Modern Tradition (4 credits)

Plus:
A second major, which may incorporate courses from the middle level concentration requirements

Plus:
Demonstrated competence on all required state standards

Plus allied core curriculum math and science courses to meet state competencies:
MATH 100 Mathematical Sampler (4 credits)
MATH 121 Structures of Elementary Mathematics (4 credits)
Two laboratory sciences (one each chosen from two different fields)
or
IDSC 150 Development of the Natural World (4 credits) *and* one recommended additional lab science

Major in Elementary Education with a 5-8 Specialty in Mathematics
Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
EDUC 350 Language Development, Literacy, and Literature I (4 credits)
Block III
EDUC 369 Field Experience: Primary Level (K-4) (0 credit)
EDUC 370 Language Development, Literacy, and Literature II (4 credits)
EDUC 371 Teaching Mathematics and Technology (4 credits)
EDUC 372 Teaching Science and Healthy, Active Living (4 credits)
EDUC 373 Teaching Social Studies and Fine Arts (4 credits)
EDUC 374 Seminar in Middle Level Specialty Area (0 credit)
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus Middle Level Mathematics Specialty:
MATH 100 Mathematical Sampler (4 credits)
MATH 113 Calculus I (4 credits)
MATH 121 Structures of Elementary Mathematics (4 credits)
MATH 128 Introduction to Discrete Mathematics (4 credits)

Plus:
MATH 259 Elements of Geometry and Statistics (4 credits)
or
MATH 325 Geometry (4 credits) *and* QMCS 220 Statistics I (4 credits)

Plus:
A second major, which may incorporate courses from the middle level concentration requirements
Note: The co-major in Science and Mathematics for Elementary Education (SMEE) is designed to fill this need.

Plus:
Demonstrated competence on all required state standards

Plus allied core curriculum math and science courses to meet state competencies:
Two laboratory sciences (one each chosen from two different fields)
or
IDSC 150 Development of the Natural World (4 credits) *and* one recommended additional lab science

Co-Major in Science and Mathematics for Elementary Education (SMEE)

Werness (QMCS) (director), Chaplin (BIOL), Hartshorn (CHEM), George (ENGR), Lamb (GEOL), McLean (MATH) Shepard (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 students planning to pursue a degree in elementary education who wish to emphasize science and mathematics. Students should contact the program director, the Department of Teacher 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. The SMEE co-major fulfills the Middle Level Specialty (5-8) in Science.

Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle level (5-8) (0 credit)
EDUC 350 Language Development, Literacy, and Literature I (4 credits)
Block III
EDUC 369 Field Experience: Primary Level (K-4) (0 credit)
EDUC 370 Language Development, Literacy, and Literature II (4 credits)
EDUC 371 Teaching Mathematics and Technology (4 credits)
EDUC 372 Teaching Science and Healthy, Active Living (4 credits)
EDUC 373 Teaching Social Studies and Fine Arts (4 credits)
EDUC 374 Seminar in Middle Level Specialty Area (0 credit)
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus SMEE co-major requirements:
Four credits from the following:
GEOL 111 Introductory Physical Geology (4 credits)
GEOL 113 The Earth's Record of Climate (4 credits)
GEOL 114 The Science of natural Disasters (4 credits)
GEOG 115 Environmental Geology (4 credits)

Plus either:
BIOL 101 General Biology (4 credits)
or the course sequence:
BIOL 201 Diversity and Adaptation (4 credits)
BIOL 202 Genetics, Evolution, and Ecology (4 credits)
BIOL 204 Cellular and Molecular Biology (4 credits)

Plus either:
CHEM 100 Chemistry in Our World (4 credits)
or the course sequence:
CHEM 111 General Chemistry I (4 credits)
CHEM 112 General Chemistry II (4 credits)

Plus either:
PHYS 101 Physics as a Liberal Art I (4 credits)
or the course sequence:
PHYS 109 General Physics I (4 credits)
PHYS 110 General Physics II (4 credits)
or the course sequence
PHYS 111 Introduction to Classical Physics I (4 credits)
PHYS 112 Introduction to Classical Physics II (4 credits)

Plus:
A *specialization sequence* consists of eight or more additional credits 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.

Plus:
Demonstrated competence on all required state standards.

SMEE 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.

SMEE 182 Science Seminar (0 credit)
Same as SMEE 181. This number is used for the second semester of the seminar.

SMEE 359 Integrated Studies in Science and Mathematics (4 credits)
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 (or 110 or 113 or 114 or 115), MATH 100 and 121, PHYS 101, QMCS 120. (In certain cases, permission of the adviser may allow a substitution.)

Major in Elementary Education with a 5-8 Specialty in Science

Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
EDUC 350 Language Development, Literacy, and Literature I (4 credits)
Block III
EDUC 369 Field Experience: Primary Level (K-4) (0 credit)
EDUC 370 Language Development, Literacy, and Literature II (4 credits)
EDUC 371 Teaching Mathematics and Technology (4 credits)
EDUC 372 Teaching Science and Healthy, Active Living (4 credits)
EDUC 373 Teaching Social Studies and Fine Arts (4 credits)
EDUC 374 Seminar in Middle Level Specialty Area (0 credit)
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus Middle Level General Science Specialty:
GEOL 111 Introductory Physical Geology *or* one of GEOL 110, 113, 114, 115 (4 credits each)

Plus either:
BIOL 101 General Biology (4 credits)
or the course sequence:
BIOL 201 Diversity and Adaptation (4 credits)
BIOL 202 Genetics, Evolution, and Ecology (4 credits)
BIOL 204 Cellular and Molecular Biology (4 credits)

Plus either:
CHEM 100 Chemistry in Our World (4 credits)
or
CHEM 111 General Chemistry I (4 credits) *and* CHEM 112 General Chemistry II (4 credits)

Plus either:
PHYS 101 Physics as a Liberal Art I (4 credits)
or the course sequence:
PHYS 109 General Physics I (4 credits)
PHYS 110 General Physics II (4 credits)
or the course sequence:
PHYS 111 Introduction to Classical Physics I (4 credits)
PHYS 112 Introduction to Classical Physics II (4 credits)

Plus:
A second major, which may incorporate courses from the middle level concentration requirements
Note: The co-major in Science and Mathematics for Elementary Education (SMEE) is designed to fill this need.

Plus:
Demonstrated competence on all required state standards

Plus allied core curriculum math courses to meet state competencies:
MATH 100 Mathematical Sampler (4 credits)
MATH 121 Structures of Elementary Mathematics (4 credits)

Major in Elementary Education with a 5-8 Specialty in Social Studies
Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
EDUC 350 Language Development, Literacy, and Literature I (4 credits)
Block III
EDUC 369 Field Experience: Primary Level (K-4) (4 credits)
EDUC 370 Language Development, Literacy, and Literature II (4 credits)
EDUC 371 Teaching Mathematics and Technology (4 credits)
EDUC 372 Teaching Science and Healthy, Active Living (4 credits)
EDUC 373 Teaching Social Studies and Fine Arts (4 credits)
EDUC 374 Seminar in Middle Level Specialty Area (0 credit)
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus Middle Level Social Studies Specialty:
ECON 211 Current Economic Issues (4 credits)
GEOG 113 World Geography (4 credits)
HIST 113 Early America in Global Perspective (4 credits)
POLS 101 American Government and Politics (4 credits)

Plus:
A second major, which may incorporate courses from the middle level concentration requirements

Plus:
Demonstrated competence on all required state standards

Plus allied core curriculum math and science courses to meet state competencies:
MATH 100 Mathematical Sampler (4 credits)
MATH 121 Structures of Elementary Mathematics (4 credits)
Two laboratory sciences (one each chosen from two different fields)
or
IDSC 150 Development of the Natural World (4 credits) *and* one recommended additional lab science

Major in Elementary Education with a K-8 Specialty in World Languages and Cultures
Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
EDUC 350 Language Development, Literacy, and Literature I (4 credits)
Block III
EDUC 369 Field Experience: Primary Level (K-4) (0 credit)
EDUC 370 Language Development, Literacy, and Literature II (4 credits)
EDUC 371 Teaching Mathematics and Technology (4 credits)
EDUC 372 Teaching Science and Healthy, Active Living (4 credits)
EDUC 373 Teaching Social Studies and Fine Arts (4 credits)
EDUC 374 Seminar in Middle Level Specialty Area (0 credit)
Block IV (Praxis II PLT & Content Area Exams required for licensure)
Language Oral Proficiency Exam required for Student Teaching
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus Middle Level World languages and Cultures Specialty:
Successful completion of a minor or equivalent in one or more of the following languages:
French
German
Spanish

Plus:
A second major, which may incorporate courses from the middle level concentration requirements

Plus:
Demonstrated competence on all required state standards

Plus allied core curriculum math and science courses to meet state competencies:
MATH 100 Mathematical Sampler (4 credits)
MATH 121 Structures of Elementary Mathematics (4 credits)
Two laboratory sciences (one each chosen from two different fields)
or
IDSC 150 Development of the Natural World (4 credits) *and* one recommended additional lab science

Teacher Licensure in Secondary/Middle Level Education

Programs are designed to provide professional preparation for teaching in middle and secondary settings. Licensure is available in the following areas:

- Chemistry (9-12)
- Communication Arts and Literature (5-12)
- Dance and Theater Arts with a Theater Specialization (K-12)
- Earth and Space Science (9-12)
- Health (5-12)
- Life Science (9-12)
- Mathematics (5-12)
- Music Education
  - Instrumental and Classroom Music (K-12)
  - Vocal and Classroom Music (K-12)
- Physical Education (K-12)
- Physics (9-12)
- Science (5-8)
- Social Studies (5-12)
- World Languages and Cultures (K-12)
  - French
  - German
  - Spanish

Communication Arts and Literature (5-12)

Co-major in Communication Arts and Literature and a Co-major in Secondary Education

Note: A Co-major cannot be a stand-alone major. Students seeking licensure in this area who also want to complete an English major and a Communication minor should consult the English Department section of the catalog and follow the Major in English with a Teacher Education Emphasis.

Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
EDUC 345 Adolescent Literature (2 credits)
EDUC 355 Reading for the 5-12 Teacher (4 credits)
Block III
EDUC 381 Curriculum and Methods for Specific Discipline (5-8) (2 credits)
EDUC 382 Curriculum and Methods for Specific Discipline (9-12) (2 credits)
EDUC 383 Field Experience: Secondary (9-12) (0 credit)
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus:
COMM 100 Public Speaking (4 credits)
COMM 120 Communication Theories and Methods (4 credits)

COMM 140 Rhetorical Criticism (4 credits)
COMM 160 Electronic Media Production (4 credits)
COMM 217 Survey of Communication Disorders (4 credits)
ENGL 111 Critical Reading and Writing I: Fiction and Nonfiction Prose (4 credits)
ENGL 112 Critical Reading and Writing II: Drama and Poetry (4 credits)
Note: Qualified students may substitute ENGL 190 and an additional upper-level literature course for ENGL 111 and 112
ENGL 300 Theory and Practice of Writing (4 credits)
ENGL 305 Linguistics: English Language (4 credits)
ENGL 361 Shakespeare and the Early Modern Period (4 credits)
ENGL 380 Issues in English Studies (4 credits)

Plus four credits from each of the following areas:
ENGL 211British Authors I (4 credits) *or* ENGL 212 British Authors II (4 credits)
ENGL 214 American Authors I (4 credits) *or* ENGL 215 American Authors II (4 credits)
ENGL 220 The Classical Tradition (4 credits) *or* ENGL 221 The Modern Tradition (4 credits)
ENGL 217 Multicultural Literature (4 credits) *or* ENGL 218 Literature by Women: Critical History (4 credits)

Plus:
Demonstrated competence on all required state standards

To complete a major in Communication, the following courses are required:
Twelve additional upper division COMM credits
COMM 480 Capstone Course in Communication (4 credits)

Chemistry (9-12)

Co-major in Science – Chemistry and a Co-major in Secondary Education
Note: A Co-major cannot be a stand-alone major.
***Note* General Science 5-8:** Students have the option of adding the middle school General Science 5-8 licensure (See Education: General Science 5-8)

Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
EDUC 355 Reading for the 5-12 Teacher (4 credits)
Block III
EDUC 381 Curriculum and Methods for Specific Discipline (5-8) (2 credits)
EDUC 382 Curriculum and Methods for Specific Discipline (9-12) (2 credits)
EDUC 383 Field Experience: Secondary (9-12) (0 credit)
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus:
CHEM 111 General Chemistry I (4 credits) *and* CHEM 112 General Chemistry II (4 credits)
or
CHEM 115 Accelerated General Chemistry (4 credits)

Plus:
CHEM 201 Organic Chemistry I (4 credits)
CHEM 202 Organic Chemistry II (4 credits)
CHEM 300 Quantitative Analysis (4 credits)
CHEM 331 Chemical Thermodynamics and Reaction Dynamics (4 credits)
CHEM 391 Research (1 credit)
CHEM 392 Research (1 credit)
CHEM 481 Seminar (1 credit)
CHEM 484 Seminar (1 credit)
MATH 113 Calculus I (4 credits)
MATH 114 Calculus II (4 credits)
PHYS 111 Introduction to Classical Physics I (4 credits)
PHYS 112 Introduction to Classical Physics II (4 credits)

Plus:
Demonstrated competence on all required state standards

To complete a major in Chemistry (B.A.), the following courses are required:
CHEM 320 Instrumental Analysis (4 credits)
CHEM 482 Seminar (0 credit)
CHEM 483 Seminar (0 credit)

Plus:
Six credits from the list of elective chemistry courses found under Major in Chemistry (B.A.) (*see Chemistry*)

Earth and Space Science (9-12)

Co-Major in Science – Earth and Space Science and a Co-Major in Secondary Education
Note: A Co-major cannot be a stand-alone major.
***Note* General Science 5-8:** Students have the option of adding the middle school General Science 5-8 licensure (See Education: General Science 5-8)

Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
EDUC 355 Reading for the 5-12 Teacher (4 credits)
Block III
EDUC 381 Curriculum and Methods for Specific Discipline (5-8) (2 credits)
EDUC 382 Curriculum and Methods for Specific Discipline (9-12) (2 credits)
EDUC 383 Field Experience: Secondary (9-12) (0 credit)
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus four credits from the following:
GEOL 111 Introductory Physical Geology (4 credits)
GEOL 113 The Earth's Record of Climate (4 credits)
GEOL 114 The Science of Natural Disasters (4 credits)
GEOL 115 Environmental Geology (4 credits)

Plus:
BIOL 201 Diversity and Adaptation (4 credits)
CHEM 111 General Chemistry I (4 credits)
CHEM 112 General Chemistry II (4 credits)
GEOL 211 Earth Materials (4 credits)
GEOL 252 Earth Surface Processes and Geomorphology (4 credits)
GEOL 260 Regional Geology and Field Methods (4 credits)
GEOL 320 Sedimentology and Stratigraphy (4 credits)
GEOL 340 Fundamentals of the Lithosphere I (Petrology) (4 credits)
GEOL 360 Fundamentals of the Lithosphere II (Structural Geology) (4 credits)
GEOL 430 Advanced Earth History (4 credits)
PHYS 101 Physics as a Liberal Art (4 credits)
PHYS 104 Astronomy (4 credits)

Plus either:
MATH 113 Calculus I (4 credits)
or
MATH 108 Calculus with Review I (4 credits) *and* MATH 109 Calculus with Review II (4 credits)

Plus:
Demonstrated competence on all required state standards

To complete a major in Geology, the following is required:
Four additional GEOL credits numbered 200 or above

General Science (5-8)

Students have the option of adding the Middle School General Science Licensure to 9-12 Chemistry, Earth and Space Science, Life Science, or Physics by taking the following courses:
BIOL 101 General Biology (4 credits)
or the course sequence:
BIOL 201 Diversity and Adaptation (4 credits)
BIOL 202 Genetics, Evolution, and Ecology (4 credits)
BIOL 204 Cellular and Molecular Biology (4 credits)

Plus either:
PHYS 101 Physics as a Liberal Art I (4 credits)
or the course sequence:
PHYS 109 General Physics I (4 credits)
PHYS 110 General Physics II (4 credits)
or the course sequence:
PHYS 111 Introduction to Classical Physics I (4 credits)
PHYS 112 Introduction to Classical Physics II (4 credits)

Plus
GEOL 111 Introductory Physical Geology *or one of* GEOL 110, 113, 114, 115 (4 credits each)

Plus
PHYS 104 Astronomy (4 credits)

Health Education (5-12)

Major in Health Education 5-12
Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
Block III
EDUC 355 Reading for the 5-12 Teacher (4 credits)
EDUC 369 Field Experience: Primary Level (K-4) (0 credit)
HLTH 440[1] Health Education : 5-12 Curriculum Assessment and Administration (4 credits)
HLTH 450[1] Health Education: 5-12 Methods, Resources and Partnerships (4 credits)
[1]*Note:* These courses substitute for EDUC 381 and 382
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus:
HLTH 345 Nutrition for Health and Fitness (4 credits)
HLTH 350 Personal Health and Wellness (4 credits)
HLTH 353 Consumer, Community and Environmental Health (4 credits)
HLTH 375 Lifelong Stress Management (2 credits)
HLTH 400 Epidemiology (4 credits)
HLTH 462 Human Sexuality Education (4 credits)
HLTH 464 Critical Issues in Health Education (4 credits)
American Red Cross Certification in First Aid/CPR/AED

Plus four credits from the following:
BIOL 101 General Biology (4 credits)
BIOL 105 Human Biology (4 credits)

Plus four credits from the following:
BIOL 251C Human Anatomy and Physiology I (CSC) (4 credits)
PHED 410 Human Anatomy and Physiology (4 credits)

Plus four credits from the following:
CHEM 100 Chemistry in our World (4 credits)
CHEM 101 Environmental Chemistry (4 credits)
CHEM 111 General Chemistry (4 credits)

Plus four credits from the following:
COMM 100 Public Speaking (4 credits)
COMM 105 Communication in the Workplace (4 credits)

Plus four credits from the following:
PSYC 111 General Psychology (4 credits)
SOCI 100 Introduction to Sociology (4 credits)

Recommended:
PSYC 200 Psychology of Infancy and Childhood (4 credits)
PSYC 203 Psychology of Adolescence (4 credits)

Plus:
Demonstrated competence on all required state standards

Life Science (9-12)

Co-Major in Science – Life Science with Co-Major in Secondary Education
Note: A Co-major cannot be a stand-alone major.
***Note* General Science 5-8:** Students have the option of adding the middle school General Science 5-8 licensure (See Education: General Science 5-8)

Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
EDUC 355 Reading for the 5-12 Teacher (4 credits)
Block III
EDUC 381 Curriculum and Methods for Specific Discipline (5-8) (2 credits)
EDUC 382 Curriculum and Methods for Specific Discipline (9-12) (2 credits)
EDUC 383 Field Experience: Secondary (9-12) (0 credit)
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus:
BIOL 201 Diversity and Adaptation (4 credits)
BIOL 202 Genetics, Evolution, and Ecology (4 credits)
BIOL 204 Cellular and Molecular Biology (4 credits)
BIOL 206 Global Ecology (2 credits)
CHEM 111 General Chemistry I (4 credits)
CHEM 112 General Chemistry II (4 credits)
CHEM 201 Organic Chemistry I (4 credits)
GEOL 111 Introductory Physical Geology *or one of* GEOL 110, 113, 114, 115 (4 credits each)
PHYS 104 Astronomy (4 credits)

Plus:
Sixteen additional BIOL credits in courses numbered 200 or above, chosen in consultation with an adviser

Plus:
Demonstrated competence on all required state standards

To complete a major in Biology, the following courses are required:
Six additional BIOL credits numbered 200 or above

Plus four credits from the following:
MATH 303 Statistics for the Applied Sciences (4 credits)
QMCS 220 Statistics I (4 credits)

Plus at least two of the following, selected in consultation with the departmental adviser:
CHEM 202 Organic Chemistry II (4 credits)
MATH 109 Calculus with Review II (4 credits) *or* MATH 113 Calculus I (4 credits)
PHYS 109 General Physics I (4 credits) *or* PHYS 111 Introduction to Classical Physics I (4 credits)

Mathematics 5-12

Major in Mathematics and a Co-major in Secondary Education
Note: A Co-major cannot be a stand-alone major.

Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
EDUC 355 Reading for the 5-12 Teacher (4 credits)
Block III
EDUC 381 Curriculum and Methods for Specific Discipline (5-8) (2 credits)
EDUC 382 Curriculum and Methods for Specific Discipline (9-12) (2 credits)
EDUC 383 Field Experience: Secondary (9-12) (0 credit)

Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus:
MATH 113 Calculus I (or 108-109) (4 credits)
MATH 114 Calculus II (4 credits)
MATH 200 Multi-Variable Calculus (4 credits)
MATH 210 Linear Algebra and Differential Equations (4 credits)
MATH 301 Abstract Algebra I (4 credits)
MATH 317 Real Analysis (4 credits)
MATH 325 Geometry (4 credits)
MATH 450 Advanced Mathematics: Exploration and Exposition (4 credits)
QMCS 230 Software Design Using the JAVA Language (4 credits)

Plus at least four credits from the following:
MATH 302 Abstract Algebra II (4 credits)
MATH 385 Mathematical Methods of Numerical Analysis (4 credits)
MATH 400 Dynamical Systems and Chaos (4 credits)
MATH 419 Complex Variables (4 credits)
MATH 420 Topology (4 credits)

Plus either:
MATH 303 Statistics for the Applied Sciences (4 credits) *and* one additional MATH course numbered 300 or above
or
MATH 313 Probability (4 credits) *and* MATH 314 Mathematical Statistics (4 credits)

Plus:
Demonstrated competence on all required state standards

Music Education

Music Education: Instrumental and Classroom Music K-12
Bachelor of Music in Music Education
Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
Block III
EDUC 110 Introduction to Music Education I (0 credit)
EDUC 112 Introduction to Music Education II (0 credit)
EDUC 207 Music Education Methods I (4 credits)
EDUC 307 Music Education Methods II (4 credits)
EDUC 314 Music Education Methods III (4 credits)
EDUC 418 Music Education Methods IV (4 credits)
Note: These courses substitute for EDUC 381 and 382
EDUC 369 Field Experience: Primary Level (K-4) (0 credit)
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
See note below about completion of licensure in Plan B
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus the following Instrumental Concentrations:
EDUC 218 Teaching Techniques for the Brass Family (1 credit)
EDUC 220 Teaching Techniques for the Percussion family (1 credit)
EDUC 221 Teaching Techniques for the Woodwind Family (1 credit)
EDUC 324 Teaching Techniques for the String Family (1 credit)
EDUC 328 Vocal Pedagogy for the Music Educator (1 credit)
MUSC 354 Advanced Conducting and Materials: Instrumental Concentration (2 credits)

Plus:
MUSC 001 Student Convocation Hour (0 credits) (6 semesters)
MUSC 113 Music Theory I (4 credits)

MUSC 114 Music Theory II (4 credits)
MUSC 131 Eurhythmics I (1 credit)
MUSC 132 Eurhythmics II (1 credit)
MUSC 133 Music of the United States: Aural and Written Traditions (4 credits)
MUSC 140 Music Media (2 credits)
MUSC 213 Music Theory III (4 credits)
MUSC 214 Music Theory IV (4 credits)
MUSC 231 Introduction to Conducting I (1 credit)
MUSC 232 Introduction to Conducting II (1 credit)
MUSC 233 Music of the World: Aural and Written Traditions (4 credits)
MUSC 341 Theory Elective: Musicianship Pedagogy for Music Educators (2 credits)
MUSC 411 History and Literature of Music I (4 credits)
MUSC 412 History and Literature of Music II (4 credits)
MUSN 1xx Ensemble (6 semesters) (0 credits each semester)
MUSP 102 or 103 Skills for Piano Proficiency (0 credit)
MUSP 2xx Performance studies (6 semesters) (2 credits each semester)
MUSR 200 Piano Proficiency (0 credit)
MUSR 270 Level I Recital (0 credit)
MUSR 350 Level II Recital (0 credit)
Guidelines for choosing an ensemble:
Students must spend 6 semesters in a large instrumental ensemble.
Instrumental majors must spend at least 4 semesters in MUSN 185 or MUSN 186.

Allied Requirements:
PHYS 105 Musical Acoustics (4 credit hours)

Music Education: Vocal and Classroom Music K-12
Bachelor of Music in Music Education
Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
Block III
EDUC 110 Introduction to Music Education I (0 credit)
EDUC 112 Introduction to Music Education II (0 credit)
EDUC 207 Music Education Methods I (4 credits)
EDUC 307 Music Education Methods II (4 credits)
EDUC 314 Music Education Methods III (4 credits)
EDUC 418 Music Education Methods IV (4 credits)
Note: These courses substitute for EDUC 381 and 382
EDUC 369 Field Experience: Primary Level (K-4) (0 credit)
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate

Plus the following for Vocal Concentrations:
EDUC 328 Vocal Pedagogy for the Music Educator (1 credit)
EDUC 334 Vocal Diction (1 credit)
EDUC 424 Instrumental Techniques for Vocal Music Educators (1 credit)
MUSC 355 Advanced Conducting and Materials: Vocal Concentration (2 credits)

Plus:
MUSC 001 Student Convocation Hour (0 credits) (6 semesters)
MUSC 113 Music Theory I (4 credits)
MUSC 114 Music Theory II (4 credits)
MUSC 131 Eurhythmics I (1 credit)
MUSC 132 Eurhythmics II (1 credit)
MUSC 133 Music of the United States: Aural and Written Traditions (4 credits)
MUSC 140 Music Media (2 credits)
MUSC 213 Music Theory III (4 credits)
MUSC 214 Music Theory IV (4 credits)

MUSC 231 Introduction to Conducting I (1 credit)
MUSC 232 Introduction to Conducting II (1 credit)
MUSC 233 Music of the World: Aural and Written Traditions (4 credits)
MUSC 341 Theory Elective: Musicianship Pedagogy for Music Educators (2 credits)
MUSC 411 History and Literature of Music I (4 credits)
MUSC 412 History and Literature of Music II (4 credits)
MUSP 2xx Performance studies (6 semesters) (2 credits each semester))
MUSR 270 Level I Recital (0 credits)
MUSR 350 Level II Recital (0 credits)
MUSP 102 or 103 Skills for piano Proficiency (0 credits)
MUSR 200 Piano Proficiency (0 credits)
MUSN 1xx Ensemble (6 semesters) (0 credits each semester)
Guidelines for choosing an ensemble:
Students must spend 6 semesters in a large choral ensemble.
Voice majors must spend at least 4 semesters in MUSN 142 or MUSN 160.

Allied Requirements:
PHYS 105 Musical Acoustics (4 credit hours)

Physical Education (K-12)

Major in Physical Education
Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
Block III
EDUC 355 Reading for the 5-12 Teacher
EDUC 369 Field Experience: Primary Level (K-4) (0 credit)
PHED 204[1] Physical Education Methods for Elementary School (4 credits)
PHED 304[1] Physical Education Methods for Middle School (4 credits)
PHED 404[1] Physical Education Methods for Secondary School (4 credits)
PHED 405[1,2] Physical Education Methods for Teaching Aquatics/First Aid/CPR/AED (4 credits)
[1]*Note:* These courses substitute for EDUC 381 and 382
[2]Option to waive PHED 405 for those students who successfully complete American Red Cross Certifications in Water-Safety-Instruction, and First Aid/CPR/AED
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus:
HLTH 350 Personal Health and Wellness (4 credits)
PHED 104 Physical Education Curriculum, Instruction, and Assessment (4 credits)
PHED 215 Rhythms and Dance (2 credits)
PHED 311 Motor Development (2 credits)
PHED 351 Teaching of the Special Needs Student (2 credits)
PHED 410 Human Anatomy and Physiology (4 credits)
PHED 420 Kinesiology (4 credits)
PHED 431 Exercise Physiology (2 credits)
PSYC 111 General Psychology (4 credits)

Plus four credits from the following:
BIOL 101 General Biology (4 credits)
BIOL 105 Human Biology (4 credits)

Plus:
Demonstrated competence on all required state standards
Attendance at one professional conference

Physics (9-12)

Co-major in Science – Physics plus a Co-Major in Secondary Education

Note: A Co-major cannot be a stand-alone major.

***Note* General Science 5-8:** Students have the option of adding the middle school General Science 5-8 licensure (See Education: General Science 5-8)

Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
EDUC 355 Reading for the 5-12 Teacher (4 credits)
Block III
EDUC 381 Curriculum and Methods for Specific Discipline (5-8) (2 credits)
EDUC 382 Curriculum and Methods for Specific Discipline (9-12) (2 credits)
EDUC 383 Field Experience: Secondary (9-12) (0 credit)
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus:
CHEM 111 General Chemistry I (4 credits)
CHEM 112 General Chemistry II (4 credits)
ENGR 350 Introduction to Electronics (4 credits)
GEOL 111 Introductory Physical Geology *or one of* GEOL 110, 113, 114, 115 (4 credits each)
MATH 113 Calculus I (4 credits)
MATH 114 Calculus II (4 credits)
MATH 200 Multivariable Calculus (4 credits)
MATH 210 Linear Algebra and Differential Equations (4 credits)
PHYS 104 Astronomy (4 credits)
PHYS 111 Introduction to Classical Physics I (4 credits)
PHYS 112 Introduction to Classical Physics II (4 credits)
PHYS 225 Introduction to Modern Physics I (4 credits)
PHYS 226 Introduction to Modern Physics II (4 credits)
PHYS 300 Seminar I (1 credit)
PHYS 301 Seminar II (1 credit)
PHYS 323 Methods of Experimental Physics (4 credits)
QMCS 230 Software Design Using the Java Language (4 credits)

Plus:
Four additional credits in PHYS courses other than 101

Plus either:
BIOL 101 General Biology (4 credits)
or the three-course sequence
BIOL 201 Diversity and Adaptation (4 credits)
BIOL 202 Genetics, Evolution, and Ecology (4 credits)
BIOL 204 Cellular and Molecular Biology (4 credits)

Plus:
Demonstrated competence on all required state standards

To complete a major in Physics (B.A.), two of the following courses are required:
PHYS 105 Musical Acoustics (4 credits)
PHYS 331 Theoretical Mechanics (4 credits)
PHYS 341 Electricity and Magnetism (4 credits)
PHYS 342 Electromagnetic Waves (4 credits)
PHYS 347 Optics (4 credits)
PHYS 410 Statistical Mechanics and Thermodynamics (4 credits)
PHYS 431 Quantum Mechanics (4 credits)
PHYS 494 Research (4 credits)
PHYS 498 Individual Study (4 credits)

Social Studies (5-12)

Co-Major in Social Studies with a Co-Major in Secondary Education
Note: A Co-major cannot be a stand-alone major.
Mega (HIST), program coordinator

Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
EDUC 355 Reading for the 5-12 Teacher (4 credits)
Block III
EDUC 381 Curriculum and Methods for Specific Discipline (5-8) (2 credits)
EDUC 382 Curriculum and Methods for Specific Discipline (9-12) (2 credits)
EDUC 383 Field Experience: Secondary (9-12) (0 credit)
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus:
ENVR 151 Humans and the Environment (4 credits)
POLS 105 Politics and Government in Comparative Perspective (4 credits)
PSYC 111 General Psychology (4 credits)
SOCI 100 Introduction to Sociology (4 credits)
SOCI 301 Cultural Anthropology (4 credits)

Plus four credits from the following:
ECON 101 The American Economy (4 credits)
ECON 211 Current Economic Issues (4 credits)
ECON 251 Principles of Macroeconomics (4 credits)

Plus four credits from the following:
HIST 111 Origins of the Modern World to 1550 (4 credits)
HIST 112 The Modern World Since 1550 (4 credits)

Plus four credits from the following:
HIST 113 Early America in Global Perspective (4 credits)
HIST 114 The Modern U.S. in Global Perspective (4 credits)

Plus four credits from the following:
HIST 210 Modern Latin America, 1800 to the Present (4 credits)
HIST 220 Introduction to Japanese History and Culture (4 credits)
HIST 340 Foundations of Chinese Civilization (4 credits)
HIST 341 The History of Modern China (4 credits)
HIST 345 Family and Women in Chinese History (4 credits)

Plus four credits from the following:
GEOG 111 Human Geography (4 credits)
GEOG 113 World Regional Geography (4 credits)

Plus:
Twenty-four additional credits in courses in one of the social science disciplines (economics, geography, history, political science, psychology, or sociology). Choice of these courses are subject to the approval of the department involved.

Plus:
Demonstrated competence on all required state standards

To complete a major in one of the Social Science disciplines, contact the chair of the department.

Theater Arts and Dance (K-12)

Major in Theater and a Co-Major in Secondary Education
Note: A Co-major cannot be a stand-alone major.
Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)

Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
Block III
EDUC 355 Reading for the 5-12 Teacher (4 credits)
EDUC 383 Field Experience: Secondary (9-12) (4 credits)
THTR 375 Methods of Teaching Theater and Dance (4 credits)
Note: This course substitutes for EDUC 381 and 382
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus:
THTR 105 Stagecraft (4 credits)
THTR 214 Beginning Acting (4 credits)
THTR 215 Beginning Directing (4 credits)
THTR 221 History of Theater I: Classical trough 17th Century (4 credits)
THTR 222 History of Theater II: 18th Century through Contemporary (4 credits)
THTR 223 History of Theater III: American (4 credits)
THTR 231 Dance for Musical Theater (4 credits)
THTR 253 Creative Dramatics (4 credits)
THTR 412 Drama: Theory and Criticism (4 credits)

Plus:
Participation in at least two mainstage productions

World Language and Cultures Education (K-12)

Students wishing to be licensed grades K-12 in World Language and Cultures in the state of Minnesota must demonstrate advanced level speaking proficiency in English and the target language as defined in the American Council on the Teaching of Foreign Languages (ACTFL) Proficiency Guidelines.

Major in French, German, or Spanish with a Co-Major in Secondary Education
Note: A Co-major cannot be a stand-alone major.

Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
EDUC 355 Reading for the 5-12 Teacher (4 credits)
Block III
EDUC 369 Field Experience: Primary Level (K-4) (0 credit)
EDUC 380 Curriculum and Methods for Specific Discipline (K-12)
Block IV (Praxis II PLT & Content Area Exams required for licensure)
Language Oral Proficiency Exam required for Student Teaching
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus one of the languages:

French
28 credits numbered FREN 300 and above with a minimum of six credits in each of the following areas:
Oral and Written Language
Culture/Civilization
Literature

German
28 credits numbered GER 300 and above with a minimum of six credits in each of the following areas:
Oral and Written Language
Culture/Civilization
Literature

Plus:
HIST - Four credits in modern European history

Spanish
28 credits numbered SPAN 300 and above with a minimum of six credits in each of the following areas:
Oral and Written Language
Culture/Civilization
Literature

Plus:
SPAN - A course in Hispanic linguistics

Plus (for all languages):
Demonstrated competence on all required state standards

EDUC 110 Introduction to Music Education I (0 credit)
An orientation to the profession of music education. Overview of historical, philosophical, sociological, and psychological foundations of music education and related music professions. Exploration of the relationships of these foundations to individual and group instructional settings, vocational issues, and concerns of musicians working as performers, teachers, administrators and business owners. Field observations in a variety of instructional settings. Course is a prerequisite for Music Education Methods I-IV.

EDUC 112 Introduction to Music Education II (0 credit)
Continuation of Introduction to Music Education I. Continued overview of historical, philosophical, sociological, and psychological foundations of music education and related music professions. Advanced exploration of the relationships of these foundations to individual and group instructional settings, vocational issues, and concerns of musicians working as performers, teachers, administrators and business owners. Advanced field observations. Course is a prerequisite for Music Education Methods I-IV.

EDUC 207 Music Education Methods I (4 credits)
Contemporary music pedagogy for children in pre-Kindergarten through Grade 2. Examination of goals, objectives, diverse music repertoire, spiral curriculum content and skill development, strategies, materials, and methods. Study of learning styles, developmental stages, and culturally sensitive materials. Designing lessons and classroom environments for effective music teaching and learning. Techniques for classroom management and discipline. National and state standards for music education relative to Grades Pre K-2 music curricula. Emphasis on artistic teaching. Instrument lab meets one hr. per week: soprano recorder and dulcimer.
Prerequisites: EDUC112, MUSC 213, MUSC 341, and concurrent enrollment in EDUC 369.

EDUC 210 Education's Place in Society (4 credits)
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.
Prerequisite: Sophomore standing and concurrent registration with EDUC 211

EDUC 211 Field Experience: Introductory (K-12) (0 credit)
This is a Pass/No Pass 30-hour guided, reflective, in-school field experience intended to allow students to explore the professional realities of schools and education. Participation in this field experience requires a Minnesota Criminal Background check.

EDUC 212 Human Relations and Multicultural Education (4 credits)
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

EDUC 218 Teaching Techniques for Brass Instruments (2 credits)
This course will acquaint the prospective music teacher with the basic knowledge and skills of performance pedagogy of brass instruments which include proper embouchure, tone production, intonation, breathing, articulation, posture, and fingering patterns. Students will become familiar with the construction and operation of these instruments and be able to make minor repairs. The students will gain knowledge of representative beginning through grade 12 solo and ensemble repertoire from diverse periods and become acquainted with instructional materials for beginning, intermediate, and advance levels of students. Students will learn how to select instruments, mouthpieces, and other equipment appropriate for elementary and secondary instrumental pupils.

EDUC 220 Teaching Techniques for Percussion Instruments (2 credits)
This course will acquaint the prospective instrumental music teacher with the basic knowledge and skills of performance pedagogy of percussion instruments which include proper technique, tone production, intonation, articulation, posture, and patterns. Students will become familiar with the construction and operation of these instruments

and be able to make minor repairs. The students will gain knowledge of representative beginning through grade 12 solo and ensemble repertoire from diverse periods and become acquainted with instructional materials for beginning, intermediate, and advance levels of students. Students will learn how to select instruments and other equipment appropriate for elementary and secondary instrumental pupils.

EDUC 221 Teaching Techniques for Woodwinds (1 credit)
This course will acquaint the prospective instrumental music teacher with the basic knowledge and skills of performance pedagogy of woodwind instruments that include proper embouchure, tone production, intonation, breathing, articulation, posture, and fingering patterns. Students will become familiar with the construction and operation of these instruments and be able to make minor repairs. The students will gain knowledge of representative beginning through grade 12 solo and ensemble repertoire from diverse periods and become acquainted with instructional materials for beginning, intermediate, and advance levels of students. Students will learn how to select instruments, mouthpieces, and other equipment appropriate for elementary and secondary instrumental pupils.

EDUC 295, 296 Topics (2 credits)
EDUC 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

EDUC 307 Music Education Methods II (4 credits)
Contemporary music pedagogy for children in Grades 3-5. Examination of goals, objectives, diverse music repertoire, spiral curriculum content and skill development, strategies, materials, and methods. Study of learning styles, developmental stages, and culturally sensitive materials. Designing lessons and classroom environments for effective music teaching and learning. Techniques for classroom management and discipline. National and state standards for music education relative to Grades 3-5 music curricula. Emphasis on artistic teaching. Instrument lab meets one hour per week: autoharp; pitched and unpitched percussion.
Prerequisites: EDUC 207, MUSC 214, and concurrent enrollment in EDUC 369

EDUC 308 Pedagogy and Literature for Music Performers I (2 credits)
Cross-listed with MUSC 308:
Section 1: Voice
Section 2: Keyboard
Section 3: Guitar
Section 4: Winds/Percussion/Brass
All 4 sections will meet concurrently.
This class will survey methods and materials for performance studies. Discussions will include principles of technique, learning theories, musicianship, and performance based upon a wide and diverse body of literature. Students should sign up for section numbers that correspond with primary area of performance.

EDUC 309 Pedagogy and Literature for Music Performers II (2 credits)
Cross-listed with MUSC 309:
Section 1: Voice
Section 2: Keyboard
Section 3: Guitar
Section 4: Winds/Percussion/Brass
All 4 sections will meet concurrently.
A continuation of Pedagogy and Literature for Music Performers I, this class will survey methods and materials for performance studies. Discussions will include principles of technique, learning theories, musicianship, and performance based upon a wide and diverse body of literature. Students should sign up for section numbers that correspond with primary area of performance.
Prerequisite: EDUC 308/MUSC 308

EDUC 314 Music Education Methods III (4 credits)
Contemporary music pedagogy for children in Grades 6-8. Examination of goals, objectives, diverse music repertoire, spiral curriculum content and skill development, strategies, materials, and methods. Study of learning styles, developmental stages, and culturally sensitive materials. Designing lessons and classroom environments for effective music teaching and learning. Techniques for classroom management and discipline. National and state standards for music education relative to Grades 6-8 music curricula. Emphasis on artistic teaching. Instrument lab meets one hour per week: guitar, small ensembles, beginning arranging.
Prerequisites: EDUC 307

EDUC 324 Teaching Techniques for Strings (1 credit)
This course will acquaint the prospective instrumental music teacher with the basic knowledge and skills of performance pedagogy of string instruments which include proper technique, tone production, intonation, articulation, posture, and patterns. Students will become familiar with the construction and operation of these instruments and be able to make minor repairs. The students will gain knowledge of representative beginning through grade 12 solo and ensemble repertoire from diverse periods and become acquainted with instructional materials for beginning, inter-

mediate, and advance levels of students. Students will learn how to select instruments and other equipment appropriate for elementary and secondary instrumental pupils.

EDUC 328 Vocal Pedagogy for Music Educators (1 credit)
Study of the physical structure of the vocal mechanism. Development of teaching techniques to promote life-long healthy singing, including appropriate vocal exercises and choral and solo repertoire; Special attention to unchanged child voice, adolescent changing voice, and adult singer.
Prerequisite: EDUC 207

EDUC 330 Psychology for Teaching and Learning (4 credits)
This course integrates psychological principles with strategies for effective instruction. Prospective K-12 teachers explore the scientific knowledge base that underlies good teaching practices; they learn to apply the principles of educational psychology to their own learning and future teaching through reading, discussion, classroom simulations, school observations and micro-teaching demonstrations.
Prerequisite: EDUC 210 and concurrent registration with 331

EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
This is a Pass/No Pass 15 hour guided, reflective, in-school field experience intended to introduce students to middle level settings and level students. This experience introduces the middle level as a pedagogical bridge between the elementary and the secondary learner. Participation in this field experience requires a recent Minnesota Criminal Background check.

EDUC 334 Vocal Diction (1 credit)
Fundamentals of English, Italian, German, and French pronunciation utilizing the International Phonetic Alphabet. Special emphasis on common diction problems encountered in choral singing and corrective techniques; use of foreign language dictionaries.
Prerequisite: EDUC 307

EDUC 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.
Prerequisite: EDUC 210

EDUC 350 Language Development, Literacy, and Literature I (4 credits)
This course is Part I of a two-course literacy block designed to introduce the pre-service teacher to the theory and practice of elementary curriculum and instruction in the areas of reading, language arts, and children's literature. Campus and elementary school experiences will emphasize the importance of teaching in an integrated manner to students of diverse socio-economic backgrounds and cultures. The course will present developmentally appropriate practice for kindergarten, primary, and intermediate grades, the current knowledge base of research, and recommendations for professional development. As the introductory course in literacy, it will focus on language development and literacy processes as a foundation for understanding curricular development in and applications for literacy in the elementary classroom.
Prerequisites: EDUC 210 and 212

EDUC 355 Reading for the 5-12 Teacher (4 credits)
This course is designed to explore how teachers can assist students to more easily deal with content area reading materials to include textbooks, written directions, newspapers, graphs/charts/maps, and manuals; and at the same time to encourage positive attitudes toward reading and writing in content areas.

EDUC 369 Field Experience: Primary Level (K-4) (0 credit)
This is a Pass/No Pass a 100 hour guided, reflective, in-school field experience at the primary level. Intended to serve as a pre-student teaching experience, it includes lesson design, whole group instruction, classroom management, student assessment, and instructional reflection. Participation in this field experience requires a recent Minnesota Criminal Background check.

EDUC 370 Language Development, Literacy, and Literature II (4 credits)
This course is Part II of a two-course literacy block designed to introduce the pre-service teacher to the theory and practice of elementary curriculum and instruction in the areas of reading, language arts, and children's literature. Campus and elementary school experiences will emphasize the importance of teaching in an integrated manner to students of diverse socio-economic backgrounds and cultures. The course will present developmentally appropriate practice for kindergarten, primary, and intermediate grades, the current knowledge base of research and recommendations for professional development. This second course in the literacy block will extend the foundations in language, literacy and children's literature presented in the initial course to classroom applications in composing processes (writer's workshop), assessment/evaluation, content area reading, and interdisciplinary instruction. The course includes field-based experiences.
Prerequisites: EDUC 210, 212, 330 and 350 plus unconditional admission to the teacher education program; concurrent registration with EDUC 331, 371, 372, 373, and 374

EDUC 371 Teaching Mathematics and Technology (4 credits)
This course is designed to prepare teachers who will effectively engage learners with mathematics and technology. Emphasis is on developmentally appropriate practice for a range of learners in kindergarten, primary and intermediate grades; curriculum content and sources; performance based assessment strategies; connections with community resources; national and state standards; lesson and unit planning; and curriculum and technology integration. The course includes field-based experiences.
Prerequisites: EDUC 210, 212, 330 and 350 plus unconditional admission to the teacher education program; concurrent registration with 370, 372, 373, and 374

EDUC 372 Teaching Science and Healthy, Active Living (4 credits)
This course is designed to prepare teachers who will effectively engage learners with science and help them have the skills for lifelong healthy, active living. Emphasis is on developmentally appropriate practice for a range of learners in kindergarten, primary and intermediate grades; curriculum content and sources; instructionally based assessment strategies; connections with community resources; national and state standards; lesson and unit planning; and curriculum and technology integration. The course includes field-based experiences.
Prerequisites: EDUC 210, 212, 330 and 350 plus unconditional admission to the teacher education program; concurrent registration with EDUC 370, 371, 373, and 374

EDUC 373 Teaching Social Studies and Fine Arts (4 credits)
This course provides an overview of the social studies and fine arts for the elementary teacher that develops a civic and cultural awareness respectful of human diversity. National and state standards, unit and lesson planning, instructional resources and technology, teaching and assessment strategies, and curriculum integration are addressed. The course includes field-based experiences.
Prerequisites: EDUC 210, 212, 330 and 350 plus unconditional admission to the teacher education program; concurrent registration with EDUC 370, 371, 372, and 374

EDUC 374 Seminar in Middle Level Concentration Area (0 credit)
Students will participate in a series of guided classroom and field experiences designed to meet the Minnesota middle level competencies for K-6 pre-service teachers in their chosen 5-8 area of academic concentration. Emphasis is on developmentally appropriate practice for a range of learners in grades 5 through 8, expanding the content, curriculum, and instructional strategies students gain through their K-6 methods courses. Age appropriate performance based assessment strategies; connections with community resources; national and state standards; lesson and unit planning; and curriculum and technology integration will be covered.
Prerequisites: EDUC 210, 212, 330 and 350 plus unconditional admission to the teacher education program; concurrent registration with EDUC 370, 371, 372, and 373
01 Communication Arts and Literature (5-8)
02 Mathematics (5-8)
03 Science (5-8)
04 Social Studies (5-8)
05 World Languages and Cultures (K-8)

EDUC 380 Curriculum and Methods for Specific Discipline (K-12) (4 credits)
This course is designed to prepare teachers who will effectively engage learners with the curriculum of a specific licensure area. Emphasis is on developmentally appropriate practice for a range of learners in grades K through 12, curriculum content and sources; performance based assessment strategies; connections with community resources; national and state standards; lesson and unit planning; and curriculum and technology integration. The course includes a clinical experience.
Prerequisites: EDUC 210, 212, 330, plus unconditional admission to the teacher education program; concurrent registration with EDUC 383

EDUC 381 Curriculum and Methods for Specific Discipline (5-8) (2 credits)
This course is designed to prepare teachers who will effectively engage learners with the curriculum of a specific licensure area. Emphasis is on developmentally appropriate practice for a range of learners in grades 5 through 8, curriculum content and sources; performance based assessment strategies; connections with community resources; national and state standards; lesson and unit planning; and curriculum and technology integration. The course includes a clinical experience.
Prerequisites: EDUC 210, 212, 330, plus unconditional admission to the teacher education program; concurrent registration with EDUC 382 and 383
01 Communication Arts and Literature
02 Mathematics
03 Science
04 Social Studies
05 Theater and Dance

EDUC 382 Curriculum and Methods for Specific Discipline (9-12) (2 credits)
This course is designed to prepare teachers who will effectively engage learners with the curriculum of a specific licensure areas. Emphasis is on developmentally appropriate practice for a range of learners in grades 9 through 12, cur-

riculum content and sources; instructionally based assessment strategies; connections with community resources; national and state standards; lesson and unit planning; and curriculum and technology integration. The course includes a clinical experience.
Prerequisites: EDUC 210, 212, 330, plus unconditional admission to the teacher education program; concurrent registration with EDUC 381 and 383
01 Communication Arts and Literature
02 Mathematics
03 Science
04 Social Studies
05 Theater and Dance

EDUC 383 Field Experience: Secondary (9-12) (0 credit)
This is a Pass/No Pass a 30 hour guided, reflective, in-school field experience at the secondary level. Intended to serve as a pre-student teaching experience, it includes lesson design, whole group instruction, classroom management, student assessment, and instructional reflection. Participation in this field experience requires a recent Minnesota Criminal Background check.

EDUC 418 Music Education Methods IV (4 credits)
Contemporary music pedagogy for children in Grades 9-12. Examination of goals, objectives, diverse music repertoire, spiral curriculum content and skill development, strategies, materials, and methods. Study of learning styles, developmental stages, and culturally sensitive materials. Designing lessons and classroom environments for effective music teaching and learning. Techniques for classroom management and discipline. National and state standards for music education relative to Grades 9-12 music curricula. Emphasis on artistic teaching. Instrument lab meets one hr. per week: electronic applications, advanced arranging, non-traditional ensembles.
Prerequisites: EDUC 314

EDUC 424 Instrument Techniques for Vocal Music Educators (1 credit)
This course will acquaint the prospective choral music teacher with the basic knowledge and skills of performance pedagogy of woodwind, brass, percussion and string instruments which include proper embouchure, tone production, intonation, breathing, articulation, posture, bowing and fingering patterns. Students will become familiar with the construction and operation of these instruments and be able to make minor repairs. The students will gain knowledge of representative beginning through grade 12 solo and ensemble repertoire from diverse periods and become acquainted with instructional materials for beginning, intermediate, and advance levels of students. Students will learn how to select instruments, mouthpieces, and other equipment appropriate for elementary and secondary instrumental pupils.
Prerequisites: EDUC 314

EDUC 456 Inclusive School Communities (2 credits)
Provides an overview of students identified as gifted/talented, students with disabilities (learning disabilities, mental retardation, emotional/behavioral disabilities, and sensory and physical impairments), etiology, and appropriate interventions for exceptional students. Also, current issues and research in the field of exceptionality (legal rights, integration, best practices) are also discussed.
Prerequisite: PPST

EDUC 460 Student Teaching and Seminar (6 credits)
As the culminating experience of the teacher licensure program, student teaching provides the opportunity for students to apply their knowledge and skills of teaching and learning in a classroom setting. Accompanying seminars assist students to reflect upon the experience and to increase their repertoire of strategies for dealing with topical, relevant issues. Student teaching, along with the companion course Teacher as Educational Advocate, is a full-time, full-semester commitment under the supervision of university and school-based professionals. Students seeking licensure in multiple fields may require additional credits and time in the classroom.
Prerequisites: Senior status; unconditional admission to the teacher education program; satisfactory completion of all education courses in Blocks I, II, and III; submission of Multicultural Experience form; a recent Minnesota Criminal Background check; plus satisfactory completion of all licensure-related content courses; plus admission to student teaching, and concurrent registration with EDUC 456, 461.
01 (K-8)
02 (5-12)
03 (K-12)

EDUC 461 The Teacher as Educational Advocate (4 credits)
A capstone course designed to prepare teachers who will effectively collaborate to advocate for strong educational institutions and for students. The course emphasizes connections with families and communities, including strategies for working with students and families for whom English is not the primary language, and skill development in communication and teacher leadership. Includes a portfolio presentation by each teacher candidate as the culminating experience.
Prerequisites: Acceptance into Education program; completion of Blocks I, II and III; senior status; concurrent registration with EDUC 456, 460

EDUC 462 Student Teaching and Seminar Dual License Extended Term (10 credits)
This student teaching section is intended for students seeking licensure in multiple fields or grade ranges requiring additional credits and time in the classroom. As the culminating experience of the teacher licensure program, student teaching provides the opportunity for students to apply their knowledge and skills of teaching and learning in a classroom setting. Accompanying seminars assist students to reflect upon the experience and to increase their repertoire of strategies for dealing with topical, relevant issues. Student teaching, along with the companion course Teacher as Educational Advocate, is a full-time, full-semester commitment under the supervision of university and school-based professionals.
Prerequisites: Satisfactory completion of all education courses in Blocks I, II, and III, plus unconditional admission to the teacher education program, plus admission to student teaching, senior status; concurrent registration with EDUC 456, 461

EDUC 483, 484 Seminar (2 credits)
EDUC 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

EDUC 487, 488 Topics (2 credits)
EDUC 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

EDUC 491, 492 Research (2 credits)
EDUC 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

EDUC 495, 496 Individual Study (2 credits)
EDUC 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Special Education (SPUG)

Ryan (chair), Melloy, Vandercook, Wolfe

SPUG 405 Basic Skills Instruction: Mild/Moderate Handicaps (4 credits) (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

SPUG 414 Collaboration Skills for School Professionals (4 credits) (SPED 714)
The purpose of this course is to develop an ethic of collaboration and the knowledge and skills needed to effectively collaborate with faculty, administrators, paraprofessionals, students, families, and community members. Students will explore the fundamentals of collaboration; applications of collaboration related to consultation, interagency agreements, team membership, staff development, and co-teaching; and the pragmatic aspects of collaboration. Students will have the opportunity to develop the personal and interpersonal skills necessary to be an effective collaborative partner in meeting diverse students needs.

SPUG 450 Survey of Exceptionality (4 credits) (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 individuals with exceptionalities are explored. These include but are not limited to: gifted and talented, learning disabilities, emotional and behavioral disorders, developmental disabilities, sensory disabilities, early childhood special education, speech and language disorders.

SPUG 452 Fundamentals of Emotional and Behavioral Disorders (4 credits) (SPED 752)
Provides an introduction to the dynamics of emotional and behavioral disorders, their effect on students' education, legal responsibilities of schools, and collaboration among schools and other agencies who serve these youth. Theories, definitions, and characteristics within the context of school, family, and community settings will be discussed.

SPUG 453 Fundamentals of Developmental Disabilities (4 credits) (SPED 753)
To learn about students with developmental disabilities. These are students with a broad range of cognitive impairments and deficits in adaptive behavior. Most recently these have been individuals who have been identified as having mental retardation or mental impairments. This course will focus upon definition, etiology, prevention, assessment, characteristics, programming, family issues, inclusion, collaboration, transition and other current issues related to persons with cognitive or developmental disabilities.

SPUG 478 Fundamentals of Preschoolers (4 credits) (SPED 778)
This course is designed to provide a foundation for working with preschoolers and their families in early childhood and early childhood special education programs. Emphasis is placed on early childhood typical and atypical development, developmentally appropriate practice, and developing curriculum that is functional, appropriate, adaptable and fun. Curriculum units are created that enhance child development and are adapted for children with a variety of disabilities.

SPUG 485 Behavior Management (4 credits) (SPED 785)
This course explores the idea of positive behavior support for promoting acceptable behavior in school and other settings where youth learn. This course, grounded in research-based interventions, is designed to assist all who work with students in special and regular education in developing skills to teach and support acceptable behavior that will be demonstrated in home, school and community settings.

SPUG 486 Fundamentals of Learning Disabilities (4 credits) (SPED 786)
Theoretical and practical knowledge about the field of learning disabilities. This course emphasizes school-based definitions, criteria, characteristics, and etiology, as well as community and family support systems. It includes an analysis of current trends at the local, state, and national levels for students with learning disabilities.

Engineering (ENGR) - School of Engineering

School of Engineering
Department of Engineering
Bennett (dean), Abraham, George, Greene, Hennessey, Jalkio(chair), Mowry, Polsenberg Thomas
Faculty from other departments and adjunct faculty from industry teach specialized courses.

The University of St. Thomas offers five tracks in engineering:
- A program in electrical engineering
- A program in mechanical engineering
- Dual degree programs with Business, Physics, and QMCS
- Pre-engineering program
- Minors in engineering

The mechanical and electrical engineering curricula combine the study of basic sciences, general engineering, design and mechanical or electrical engineering with the study of the liberal arts. Emphasis is placed on applied engineering. Our mission states: "We provide an applied, values-based learning experience that produces well-rounded, innovative engineers and technology leaders who have the technical skills, passion and courage to make a difference."

Students graduating with a major in either mechanical or electrical engineering will meet the program objectives and outcomes designed to exceed the requirements of the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology's (ABET) *Engineering Criteria 2000.* These are a comprehensive set of criteria designed to provide graduates with the technical, ethical, attitudinal and communications skills required to be a productive contributor to society and to aggressively seek life-long learning experiences. These program objectives and outcomes are designed to provide the graduate with a foundation for clear thinking and expression in a balanced liberal arts educational program. Graduates will demonstrate competence in a variety of skills that enhance their ability to solve problems in diverse ways to meet the needs of the global community. Graduates will also develop teamwork and communication skills while gaining a comprehensive understanding of the design process and engineering systems.

Graduates will be prepared for direct entry into an engineering position in industry or for advanced study in graduate school.

Degree in Electrical Engineering (B.S.E.E.)

The bachelor of science in electrical engineering (B.S.E.E.) curriculum includes courses in circuits and electronics, signal processing and control system design, digital electronics and microprocessors, and electromagnetic fields and waves with a focus on embedded system design. The electrical engineering program is academically rigorous, complemented with a full liberal arts curriculum. The B.S.E.E. program is accredited by the Engineering Accreditation Commission (EAC) of ABET (410) 347-7700.

Program outcomes and objectives may be found on the Website: www.stthomas.edu/engineering.

Students must have completed ENGR 230 to be admitted to the major.

ENGR 150 Introduction to Engineering (0 credit)
ENGR 151 Introduction to Engineering Design (1 credit)
ENGR 230 Digital Design (4 credits)
ENGR 240 Circuit Analysis (4 credits)
ENGR 330 Design with Microprocessors I (4 credits)
ENGR 331 Design with Microprocessors II (4 credits)
ENGR 340 Signals and Systems (4 credits)
ENGR 342 Electromagnetic Fields and Waves (4 credits)
ENGR 345 Electronics I (4 credits)

ENGR 346 Electronics II (4 credits)
ENGR 410 Control Systems and Automation (4 credits)
ENGR 431 Design of Embedded Systems (4 credits)
ENGR 480 Engineering Design Clinic I (4 credits)
ENGR 481 Engineering Design Clinic II (4 credits)

Plus four credits from the following:
ENGR 219 Case Studies in Engineering (2 credits)
ENGR 220 Engineering Mechanics I (4 credits)
ENGR 225 Kinematics and Mechanism Design (2 credits)
ENGR 326 Fuel Cell Engineering (2 credits)
ENGR 328 Fuel Cell Engineering (4 credits)
ENGR 361 Engineering Materials (4 credits)
ENGR 381 Thermodynamics (4 credits)
ENGR 498 Individual Study (4 credits)
PHYS 226 Introduction to Modern Physics II (4 credits)
PHYS 347 Optics (4 credits)
QMCS 281 Object-Oriented Design and Programming (4 credits)
Or other courses approved by the dean

Allied requirements
MATH 113 Calculus I (4 credits)
MATH 114 Calculus II (4 credits)
MATH 200 Multi-Variable Calculus (4 credits)
MATH 210 Linear Algebra and Differential Equations (4 credits)
MATH 303 Statistics for the Applied Sciences (4 credits)
PHYS 111 Introduction to Classical Physics I (4 credits)
PHYS 112 Introduction to Classical Physics II (4 credits)
PHYS 225 Introduction to Modern Physics I (4 credits)
PHYS 341 Electricity and Magnetism (4 credits)
QMCS 230 Software Design Using the JAVA Language (4 credits)

Degree in Mechanical Engineering (B.S.M.E.)

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, complemented with a full liberal arts curriculum. The mechanical engineering curriculum provides a foundation in: theoretical and applied mechanics, materials, electrical-electronic fundamentals, computer-aided design, automation systems, thermodynamics, heat transfer/fluid flow, manufacturing processes and practical design. The B.S.M.E. program is accredited by the Engineering Accreditation Commission (EAC) of ABET (410) 347-7700. Program outcomes and objectives may be found on the Website: www.stthomas.edu/engineering.

Students must have completed ENGR 171 and 220 to be admitted to the major.

ENGR 150 Introduction to Engineering (0 credit)
ENGR 151 Introduction to Engineering Design (1 credit)
ENGR 171 Engineering Graphics (4 credits)
ENGR 220 Engineering Mechanics I (4 credits)
ENGR 221 Engineering Mechanics II (4 credits)
ENGR 320 Machine Design and Synthesis (4 credits)
ENGR 350 Introduction to Electronics (4 credits)
ENGR 361 Engineering Materials (4 credits)
ENGR 371 Manufacturing Processes (4 credits)
ENGR 381 Thermodynamics (4 credits)
ENGR 382 Heat Transfer and Fluid Flow (4 credits)
ENGR 410 Control Systems and Automation (4 credits)
ENGR 480 Engineering Design Clinic I (4 credits)
ENGR 481 Engineering Design Clinic II (4 credits)

Plus eight credits from the following:
ENGR 219 Case Studies in Engineering (2 credits)
ENGR 225 Kinematics and Mechanism Design (2 credits)
ENGR 326 Fuel Cell Engineering (2 credits)
ENGR 328 Fuel Cell Engineering (4 credits)
ENGR 385 Thermal Design (2 credits)
ENGR 420 Rapid Product Realization (4 credits)
ENGR 430 Applications of Thermodynamics (4 credits)
ENGR 440 Design with Plastics (4 credits)
ENGR 450 Vibration and Control Theory (4 credits)
ENGR 460 Engineering Economics and Project Management (4 credits)

ENGR 470 Fundamentals of Mechatronic Engineering I (4 credits)
ENGR 498 Individual Study (4 credits)

Allied requirements
CHEM 111 General Chemistry I (4 credits)
MATH 113 Calculus I (4 credits)
MATH 114 Calculus II (4 credits)
MATH 200 Multi-Variable Calculus (4 credits)
MATH 210 Linear Algebra and Differential Equations (4 credits)
MATH 303 Statistics for the Applied Sciences (4 credits)
PHYS 111 Introduction to Classical Physics I (4 credits)
PHYS 112 Introduction to Classical Physics II (4 credits)
QMCS 230 Software Design Using the JAVA Language (4 credits)

Dual Degree in Mechanical Engineering (B.S.M.E.) and General Business Management (B.A.)

The dual degree program in Mechanical Engineering and General Business Management is designed for students with an interest in both engineering and business. The program combines the applied engineering concepts of mechanical engineering with knowledge of the financial, marketing and management disciplines of the business program. Students in this dual program will have skills to prepare them for a wide variety of opportunities in industry or advanced graduate education. The dual degree program requires approximately five years to complete. Upon completion, students receive a B.A. degree in Business Administration and a B.S.M.E. degree accredited by EAC of ABET.
ENGR 150 Introduction to Engineering (0 credit)
ENGR 151 Introduction to Engineering Design (1 credit)
ENGR 171 Engineering Graphics (4 credits)
ENGR 220 Engineering Mechanics I (4 credits)
ENGR 221 Engineering Mechanics II (4 credits)
ENGR 320 Machine Design and Synthesis (4 credits)
ENGR 350 Electrical Engineering Principles (4 credits)
ENGR 361 Engineering Materials (4 credits)
ENGR 371 Manufacturing Processes (4 credits)
ENGR 381 Thermodynamics (4 credits)
ENGR 382 Heat Transfer and Fluid Flow (4 credits)
ENGR 410 Control Systems and Automation (4 credits)
ENGR 480 Engineering Design Clinic I (4 credits)
ENGR 481 Engineering Design Clinic II (4 credits)

Plus:
eight credits of ENGR electives

Plus:
ACCT 205 Introduction to Accounting (4 credits)
BUSN 200 Community Service (0 credit)
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)
DSCI 301 Management of Organizations and Processes (4 credits)
FINC 321 Financial Management (4 credits)
MGMT 480 Integrative Issues of Businesses and Organizations (4 credits)
MKTG 300 Principles of Marketing (4 credits)

Plus four credits from the following:
BLAW 301 Legal Environment of Business (4 credits)
BLAW 303 International Business Law (4 credits)

Allied requirements
CHEM 111 General Chemistry (4 credits)
COMM 105 Communications in the Workplace (4 credits)
ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
MATH 113 Calculus I (4 credits)
MATH 114 Calculus II (4 credits)
MATH 200 Multi-Variable Calculus (4 credits)
MATH 210 Linear Algebra and Differential Equations (4 credits)
MATH 303 Statistics for the Applied Sciences (4 credits)
PHYS 111 Introduction to Classical Physics I (4 credits)
PHYS 112 Introduction to Classical Physics II (4 credits)
QMCS 230 Software Design Using the JAVA Language (4 credits)

Dual Degree in Electrical Engineering (B.S.E.E.) and General Business Management (B.A.)

The dual degree program in Electrical Engineering and General Business Management is designed for students with an interest in both engineering and business. The program combines the applied engineering concepts of electrical engineering with knowledge of the financial, marketing and management disciplines of the business program. Students in this dual program will have skills to prepare them for a wide variety of opportunities in industry or advanced graduate education. The dual degree program requires approximately five years to complete. Upon completion, students receive a B.A. degree in Business Administration and a B.S.E.E. degree accredited by EAC of ABET.

ENGR 150 Introduction to Engineering (0 credit)
ENGR 151 Introduction to Engineering Design (1 credit)
ENGR 230 Digital Design (4 credits)
ENGR 240 Circuit Analysis (4 credits)
ENGR 330 Design with Microprocessors I (4 credits)
ENGR 331 Design with Microprocessors II (4 credits)
ENGR 340 Signals and Systems (4 credits)
ENGR 342 Electromagnetic Fields and Waves (4 credits)
ENGR 345 Electronics I (4 credits)
ENGR 346 Electronics II (4 credits)
ENGR 410 Control Systems and Automation (4 credits)
ENGR 431 Design of Embedded Systems (4 credits)
ENGR 480 Engineering Design Clinic I (4 credits)
ENGR 481 Engineering Design Clinic II (4 credits)

Plus four credits from the following:
ENGR 219 Case Studies in Engineering (2 credits)
ENGR 220 Engineering Mechanics I (4 credits)
ENGR 225 Kinematics and Mechanism Design (2 credits)
ENGR 326 Fuel Cell Engineering (2 credits)
ENGR 328 Fuel Cell Engineering (4 credits)
ENGR 361 Engineering Materials (4 credits)
ENGR 381 Thermodynamics (4 credits)
ENGR 498 Individual Study (4 credits)
PHYS 226 Introduction to Modern Physics II (4 credits)
PHYS 347 Optics (4 credits)
QMCS 281 Object-Oriented Design and Programming (4 credits)
Or other courses approved by the dean

Plus:
ACCT 205 Introduction to Accounting (4 credits)
BUS 200 Community Service (0 credit)
BUS 201 Ethics and Practice: Foundations of Business (4 credits)
DSCI 301 Management of Organizations and Processes (4 credits)
FINC 321 Financial Management (4 credits)
MGMT 480 Integrative Issues of Businesses and Organizations (4 credits)
MKTG 300 Principles of Marketing (4 credits)

Plus four credits from the following:
BLAW 301 Legal Environment of Business (4 credits)
BLAW 303 International Business Law (4 credits)

Allied requirements
COMM 105 Communications in the Workplace (4 credits)
ECON 251 Principles of Macroeconomics (4 credits)
ECON 252Principles of Microeconomics (4 credits)
MATH 113 Calculus I (4 credits)
MATH 114 Calculus II (4 credits)
MATH 200 Multi-Variable Calculus (4 credits)
MATH 210 Linear Algebra and Differential Equations (4 credits)
MATH 303 Statistics for the Applied Sciences (4 credits)
PHYS 111 Introduction to Classical Physics I (4 credits)
PHYS 112 Introduction to Classical Physics II (4 credits)
PHYS 225 Introduction to Modern Physics I (4 credits)
PHYS 341 Electricity and Magnetism (4 credits)
QMCS 230 Software Design Using the JAVA Language (4 credits)

Dual Degree in Electrical Engineering (B.S.E.E.) and Physics (B.A.)

The dual degree program in Electrical Engineering and Physics is designed for students interested in combining lab skills and theory with engineering principles and practice. Students in this dual program will have skills to prepare them for a wide variety of opportunities in industry or advanced graduate education. The dual degree program requires approximately five years to complete. Upon completion, students receive a B.A. degree in Physics and a B.S.E.E. degree accredited by EAC of ABET.

ENGR 150 Introduction to Engineering (0 credit)
ENGR 151 Introduction to Engineering Design (1 credit)
ENGR 230 Digital Design (4 credits)
ENGR 240 Circuit Analysis (4 credits)
ENGR 330 Design with Microprocessors I (4 credits)
ENGR 331 Design with Microprocessors II (4 credits)
ENGR 340 Signals and Systems (4 credits)
ENGR 342 Electromagnetic Fields and Waves (4 credits)
ENGR 345 Electronics I (4 credits)
ENGR 346 Electronics II (4 credits)
ENGR 410 Control Systems and Automation (4 credits)
ENGR 431 Design of Embedded Systems (4 credits)
ENGR 480 Engineering Design Clinic I (4 credits)
ENGR 481 Engineering Design Clinic II (4 credits)

Plus:
PHYS 111 Introduction to Classical Physics I (4 credits)
PHYS 112 Introduction to Classical Physics II (4 credits)
PHYS 225 Introduction to Modern Physics I (4 credits)
PHYS 300 Seminar I (1 credit)
PHYS 301 Seminar II (1 credit)
PHYS 341 Electricity and Magnetism (4 credits)

Plus:
4 PHYS credits 104 or greater

Allied requirements
MATH 113 Calculus I (4 credits)
MATH 114 Calculus II (4 credits)
MATH 200 Multi-Variable Calculus (4 credits)
MATH 210 Linear Algebra and Differential Equations (4 credits)
MATH 303 Statistics for the Applied Sciences (4 credits)
QMCS 230 Software Design Using the JAVA Language (4 credits)

Dual Degree in Electrical Engineering (B.S.E.E.) and QMCS (B.A.)

The dual degree program in Electrical Engineering and QMCS is designed for students interested in both hardware and software aspects of computing. Students in this dual program will have skills to prepare them for a wide variety of opportunities in industry or advanced graduate education. The dual degree program requires approximately five years to complete. Upon completion, students receive a B.A. degree in QMCS and a B.S.E.E. degree accredited by EAC of ABET.

ENGR 150 Introduction to Engineering (0 credit)
ENGR 151 Introduction to Engineering Design (1 credit)
ENGR 230 Digital Design (4 credits)
ENGR 240 Circuit Analysis (4 credits)
ENGR 330 Design with Microprocessors I (4 credits)
ENGR 331 Design with Microprocessors II (4 credits)
ENGR 340 Signals and Systems (4 credits)
ENGR 342 Electromagnetic Fields and Waves (4 credits)
ENGR 345 Electronics I (4 credits)
ENGR 346 Electronics II (4 credits)
ENGR 410 Control Systems and Automation (4 credits)
ENGR 431 Design of Embedded Systems (4 credits)
ENGR 480 Engineering Design Clinic I (4 credits)
ENGR 481 Engineering Design Clinic II (4 credits)

Plus:
QMCS 230 Software Design Using the JAVA Language (4 credits)
QMCS 281 Object Oriented Design and Programming (4 credits)
QMCS 350 Data and File Structures (4 credits)
QMCS 420 Systems Analysis and Design I (4 credits)
QMCS 450 Database Design (4 credits)

Plus:
Eight credits from course numbers QMCS 300 through 450
Four credits from course numbers QMCS 100 through 499

Allied requirements
MATH 113 Calculus I (4 credits)
MATH 114 Calculus II (4 credits)
MATH 200 Multi-Variable Calculus (4 credits)
MATH 210 Linear Algebra and Differential Equations (4 credits)
MATH 303 Statistics for the Applied Sciences (4 credits)
PHYS 111 Introduction to Classical Physics I (4 credits)
PHYS 112 Introduction to Classical Physics II (4 credits)
PHYS 225 Introduction to Modern Physics I (4 credits)
PHYS 300 Seminar I (1 credit)
PHYS 301 Seminar II (1 credit)
PHYS 323 Methods of Experimental Physics (4 credits)
PHYS 341 Electricity and Magnetism (4 credits)

Pre-Engineering

See Pre-Professional Programs

Minor in General Engineering

The general engineering minor provides a broad overview of topics in both electrical and mechanical engineering. It offers the opportunity to explore the field of engineering and provides an understanding of the technology of products and processes. It also strengthens pre-med and pre-law candidates who intend to pursue specialized areas such as biomechanics or patent law. This minor is not available for students majoring in electrical or mechanical engineering.
ENGR 150 Introduction to Engineering I (0 credit)
ENGR 151 Introduction to Engineering Design (1 credit)
ENGR 171 Engineering Graphics (4 credits)
ENGR 230 Digital Design (4 credits)

Plus one of:
ENGR 220 Engineering Mechanics I (4 credits)
ENGR 240 Circuit Analysis (4 credits)
ENGR 330 Microprocessors (4 credits)
ENGR 381 Thermodynamics (4 credits)
Plus four additional credits of engineering (ENGR) classes

Minor in Mechanical Engineering

The mechanical engineering minor is designed for students with majors in the sciences, mathematics, electrical engineering, quantitative methods, and business. This minor serves those who plan to go on to graduate school in engineering and those entering business and industry. The engineering minor offers the opportunity to explore the field of engineering and provides an understanding of the technology of products and processes. It also strengthens pre-med and pre-law candidates who intend to pursue specialized areas such as biomechanics or patent law.

Sixteen credits from the following:
ENGR 171 Engineering Graphics (4 credits)
ENGR 220 Engineering Mechanics I (4 credits)
ENGR 221 Engineering Mechanics II (4 credits)
ENGR 225 Kinematics and Mechanism Design (4 credits)
ENGR 320 Machine Design and Synthesis (4 credits)
ENGR 328 Fuel Cell Engineering (4 credits)
ENGR 361 Engineering Materials (4 credits)
ENGR 371 Manufacturing Processes (4 credits)
ENGR 381 Thermodynamics (4 credits)
ENGR 382 Heat Transfer and Fluid Flow (4 credits)
ENGR 385 Thermal Design (4 credits)
ENGR 410 Control Systems and Automation (4 credits)
ENGR 430 Applications of Thermodynamics (4 credits)
ENGR 440 Design with Plastics (4 credits)
ENGR 450 Vibration and Control Theory (4 credits)
ENGR 460 Engineering Economics and Project Management (4 credits)
ENGR 470 Fundamentals of Mechatronic Engineering I (4 credits)

The following two credit courses can be substituted for either ENGR 171 or 460.
ENGR 219 Case Studies in Engineering (2 credits)
ENGR 326 Fuel Cell Engineering (2 credits)

Minor in Electrical Engineering

The electrical engineering minor is designed for students with majors in the sciences, mathematics, mechanical engineering, quantitative methods, and business. This minor serves those who plan to go on to graduate school in engineering and those entering business and industry. The engineering minor offers the opportunity to explore the field of engineering and provides an understanding of the technology of products and processes. It also strengthens pre-med and pre-law candidates who intend to pursue specialized areas such as biomechanics or patent law.

Sixteen credits from the following:
ENGR 230 Digital Design (4 credits)
ENGR 240 Circuit Analysis (4 credits)
ENGR 330 Design with Microprocessors I (4 credits)
ENGR 331 Design with Microprocessors II (4 credits)
ENGR 340 Signals and Systems (4 credits)
ENGR 342 Electromagnetic Fields and Waves (4 credits)
ENGR 345 Electronics I (4 credits)
ENGR 346 Electronics II (4 credits)
ENGR 350 Introduction to Electronics (4 credits)
ENGR 410 Control Systems and Automation (4 credits)
ENGR 431 Design of Embedded Systems (4 credits)
ENGR 460 Engineering Economics and Project Management (4 credits)
ENGR 470 Fundamentals of Mechatronic Engineering I (4 credits)

ENGR 150 Introduction to Engineering (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.

ENGR 151 Introduction to Engineering Design (1 credit)
This course focuses on design as the central activity of engineering. Students learn a disciplined approach to design through case studies and open ended design experiences.
Prerequisite: ENGR 150

ENGR 171 Engineering Graphics (4 credits)
Students will learn to read blueprints and working drawings and become familiar with computer-aided design (CAD) terminology and technology. Topics cover the elements of drafting including: the use of CAD modern software based on solid modeling; principles of projection; and introductory methods of representation and constructive geometry, working drawings, conventions and standards.

ENGR 219 Case Studies in Engineering (2 credits)
This course will introduce applications of the finite-element method for the solution of real-world problems. Commercial software (such as ANSYS) will be used to model structural, thermal, electro-magnetic, and fluid flow problems. Students will be introduced to "case studies" in engineering and the applied-sciences. Students will learn the art of FEA modeling and will present their findings in written reports.
Prerequisite: sophomore standing

ENGR 220 Engineering Mechanics I (4 credits)
Principles of statics and dynamics including such topics as equilibrium, friction, distributed forces, work, kinetics of particles and rigid bodies, and vibrations.
Prerequisites: ENGR 151, 171, MATH 114 and PHYS 111

ENGR 221 Engineering Mechanics II (4 credits)
Principles of deformable body mechanics including stress, strain, basic loading situations, transformations of stress and strain, beam theory, and energy methods.
Prerequisite: ENGR 220

ENGR 225 Kinematics and Mechanism Design (2 credits)
Analysis and design of linkages and other mechanisms including geometry of motion and force distributions. Computer aided analysis and design tools are used as well as mathematical techniques.
Prerequisite: ENGR 220

ENGR 230 Digital Design (4 credits)
Introduction to the design of digital logic. Topics include Boolean logic, design and optimization of combinational and sequential logic, the use of programmable logic devices, logic hazards, electronic implementation of logic gates. Students will be expected to specify, design, simulate, construct, and test digital circuits and document all phases of the process.

ENGR 240 Circuit Analysis (4 credits)
Introduction to linear circuit analysis and basic electronic instrumentation. Students will learn linear models of passive components and sources as well as how real components depart from those models. Circuit analysis techniques including nodal and mesh analysis, equivalence theorems and computer simulation will be covered. Laplace transform techniques will be used to examine sinusoidal steady state and transient circuit behavior.
Prerequisites: PHYS 112 and concurrent registration with or prior completion of MATH 210

ENGR 295, 296 Topics (2 credits)
ENGR 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

ENGR 320 Machine Design and Synthesis (4 credits)
Focus is on advanced mechanics topics, failure theories (static and dynamic), and on an understanding of basic machine components. This course will develop the student's creative skills in conceptualizing machines to meet performance criteria by means of a design project. Machine designs will require the understanding and use of machine components such as springs, screws, bearings, basic 4-bar linkages, cams, and gears. Finally, a number of mini-labs/workshops on topics that support the design project such as dynamic analysis software, machine component design, and design for manufacture are given.
Prerequisite: ENGR 221 and MATH 210

ENGR 326 Fuel Cell Engineering (2 credits)
A discovery-oriented class focused on fuel cell technology. Fuel cell types and their safety, cost and operation are examined. Time is spent on hydrogen generation, storage and distribution. The class examines how to collect new information, analyze it, and express an educated opinion about an emerging technology. Class time includes hands-on laboratories, as well as student-led discussion. The two-credit class does not require a formal design of experiment, and requires preparation for only one student-led lecture.
Prerequisite: Junior standing or consent of instructor

ENGR 328 Fuel Cell Engineering (4 credits)
A discovery-oriented class focused on fuel cell technology. Fuel cell types and their safety, cost and operation are examined. Time is spent on hydrogen generation, storage and distribution. The class examines how to collect new information, analyze it, and express an educated opinion about an emerging technology. Class time includes hands-on laboratories and projects as well as student-led discussion. The four-credit option requires a formal design of experiment and preparing for more than one student-led lecture.
Prerequisite: Junior standing or consent of instructor

ENGR 330 Design with Microprocessors I (4 credits)
Introduction to computer architecture and assembly language programming. Topics include I/O and memory addressing modes, communication and BUSN protocols, A/D and D/A conversion, interrupts and common microcontroller peripherals. Tradeoffs between architectures and design approaches will be discussed.
Prerequisites: ENGR 230 and QMCS 230

ENGR 331 Design with Microprocessors II (4 credits)
A continuation of ENGR 330.
Prerequisite: ENGR 330

ENGR 340 Signals and Systems (4 credits)
To develop an understanding of the analysis of systems using Laplace, Fourier, and Z transforms, and an understanding of frequency domain characteristics, state space concepts, and modulation.
Prerequisites: ENGR 240 and MATH 210

ENGR 342 Electromagnetic Fields and Waves (4 credits)
A continuation of PHYS 341. An introduction to the practical consequences of Maxwell's equations including propagation, reflection and absorption of electromagnetic waves. Applications include antennas, waveguides, transmission lines, and shielding from electromagnetic interference.
Prerequisite: PHYS 341

ENGR 345 Electronics I (4 credits)
Analysis of electronic devices and circuits. Topics include linear and non-linear models of electronic devices, feedback and circuit design techniques. Applications include amplifiers, demodulation, oscillators, logic implementation.
Prerequisites: ENGR 240 and PHYS 225

ENGR 346 Electronics II (4 credits)
Continuation of ENGR 345.
Prerequisite: ENGR 345

ENGR 350 Introduction to Electronics (4 credits)
This course provides scientists and engineers with a background in electronics and electronic instrumentation. Topics include DC and AC circuit analysis, frequency response, filters, feedback, operational amplifiers, semiconductor devices, power supplies, oscillators, logic gates, codes for numbers and symbols, combinational and sequential digital logic design, timing, transducers, and analog-digital conversion. The course consists of lecture, demonstration, discussion, and laboratory.
Prerequisite: A minimum grade of C- in PHYS 112

ENGR 361 Engineering Materials (4 credits)
An introduction to materials and their properties. This course introduces students to the fundamentals of materials theory, properties and applications. Topics include properties and applications of metals, polymers, ceramics and composite materials. The course emphasizes characteristics of materials in manufacturing operations and service, including open-ended design issues.
Prerequisites: ENGR 221 and CHEM 111

ENGR 371 Manufacturing Processes (4 credits)
Provides an understanding of the fundamental technologies of manufacturing processes. This course covers such basic principles of manufacturing processes as metal forming, metal cutting, plastic molding and continuous processes. Students receive hands-on experience with modern production equipment and participate in factory tours.
Prerequisite: ENGR 361

ENGR 381 Thermodynamics (4 credits)
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).
Prerequisite: PHYS 111

ENGR 382 Heat Transfer and Fluid Flow (4 credits)
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: ENGR 381

ENGR 385 Thermal Design (2 credits)
Design of systems where the transfer of heat and/or the attainment of specific temperature levels are critical to the function of the system. Applications include heat exchangers, thermal climate control devices and a focused case study.
Prerequisite: ENGR 382

ENGR 410 Control Systems and Automation (4 credits)
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.
Prerequisites: ENGR 340 or 350, MATH 210, QMCS 230

ENGR 420 Rapid Product Realization (4 credits)
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.
Prerequisites: ENGR 171 and junior standing

ENGR 430 Applications of Thermodynamics (4 credits)
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: ENGR 382

ENGR 431 Design of Embedded Systems (4 credits)
Advanced interfacing and programming of microprocessor systems. Applications include machine control, digital signal processing, and real time communications. Students will design microprocessor based systems as part of this course.
Prerequisite: ENGR 331

ENGR 440 Design with Plastics (4 credits)
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.
Prerequisites: ENGR 171 and 361

ENGR 450 Vibration and Control Theory (4 credits)
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: ENGR 410

ENGR 460 Engineering Economics and Project Management (4 credits)
A practical look at the daily activities (including cost analysis and scheduling) and challenges of project managers in an engineering setting including the future supply and demand of critical materials. Significant time will be devoted to personnel related topics such as conflict resolution, time management and leadership.
Prerequisite: Junior standing

ENGR 470 Fundamentals of Mechatronic Engineering (4 credits)
Introduction to basic electronic devices and microprocessor systems for measurement 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: ENGR 410

ENGR 475, 476 Experiential Learning (2 credits)
ENGR 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

ENGR 480 Engineering Design Clinic I (4 credits)
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.
Prerequisites: ENGR 410 and MATH 303, plus either (ENGR 320, 371 and 382), or (ENGR 331 and 346)

ENGR 481 Engineering Design Clinic II (4 credits)
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/build and evaluation/test of alternative solutions.
Prerequisite: ENGR 480

ENGR 483, 484 Seminar (2 credits)
ENGR 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

ENGR 487, 488 Topics (2 credits)
ENGR 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

ENGR 491, 492 Research (2 credits)
ENGR 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

ENGR 495, 496 Individual Study (2 credits)
ENGR 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

English (ENGL)

College of Arts and Sciences
Department of English
Scheiber (chair), An, Bellamy, Bouwman, Callaway, Challakere, Chowdhury, Craft-Fairchild, Easley, Erdrich, Frisicaro, Garritano, Jordan, Lai, Larson, Lawrence, Li, MacKenzie, Mikolajczak, L. Miller, R. Miller, Muse, O'Reilley, Otto, Piorkowski, Powell, Redshaw, Reichardt, Ringnalda, Scheurer, Warren

The aims of the department are to:
– help students develop maturity in thinking, reading, and writing;
– extend to all interested students, regardless of their major, the opportunity for the self-enrichment which a study of language and literature affords;
– provide students with a solid foundation for graduate study in English and other professional fields such as law and medicine, the teaching of English in secondary and middle schools, and all careers that emphasize analysis and communication.

To attain these goals, the programs outlined below focus on different methodologies and approaches to the study of language, literature, and writing while allowing students to pursue areas of particular interest.

The Department of English offers three emphases.
1. The general major that allows students to take a variety of literature courses and to incorporate writing and cultural studies into their programs.
2. The writing emphasis that combines a foundation of literary study with a sequence of writing courses focused on poetry, fiction, and literary nonfiction, or on a range of nonfiction prose forms, including analytical, persuasive, and academic writing.
3. The Minnesota teacher licensure program in Communication Arts and Literature that prepares students for teaching middle and secondary school. This program requires courses in linguistics, literature, writing, and writing pedagogy. It requires, therefore, early and careful planning. Students completing this program may complete a major in English.

Students graduating with a major in English will be able to write thoughtfully about literature and life, in forms that range from engaged responses, to close readings of primary texts, to critical papers using secondary resources. They will understand and practice writing as a process that involves substantial revision and be able to reflect thoughtfully upon the writing process that works best for them. They will be able to read sophisticated literary works with imagination and intelligence and will be able to respond critically to their empathic, ethical, and aesthetic dimensions.

The Major in English, the Major in English with Writing Emphasis, and the Major in English with a Teacher Education Emphasis (5-12) consist of 44-credits each. ENGL 111 and 112 students fulfill either major by taking thirty-six additional upper-level credits, while ENGL 190 students fulfill either major by taking forty additional upper-level credits.

The department offers courses for non-majors to fulfill the Literature and Writing component of the core curriculum and the Human Diversity requirement.

English majors and minors are encouraged to study abroad. Specific courses taken abroad may substitute for St. Thomas requirements. The Glasgow English Semester in Scotland is particularly suitable. See the Chair of the department, a study abroad advisor in the International Education Center, or Academic Information & Programs in the front section of this catalog for program options.

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 have completed at least three semesters of college are eligible to apply for membership.

Major in English

ENGL 111 Critical Reading and Writing I: Fiction and Nonfiction Prose (4 credits)
ENGL 112 Critical Reading and Writing II: Drama and Poetry (4 credits)
Note: Qualified students who do not take ENGL 111 and 112 may substitute ENGL 190 Critical Reading and Writing: Major Genres and one additional literature course in English numbered above 200 (excluding ENGL 251, 252, 253, 300, 305, 321, 322, 326, 380, 401, 402, 403, 421, and 422).

In addition to the above core curriculum courses, students must also select courses that fulfill the following *course-level* and *area distribution* requirements:

Course-Level Requirements
At least 12 credits at the ENGL 200-level
At least 16 credits at the ENGL 300-level
Note: 4 of these credits must be from ENGL 380 Issues in English Studies (4 credits)

At least 4 credits at the ENGL 400-level

Note: ENGL 481 Seminar in English (4 credits) is strongly recommended for all majors, especially those preparing for graduate or professional school

Plus:

4 additional credits beyond the ENGL 100-level

Distribution Requirements

Four credits in Early Literature

- ENGL 211 British Authors I (4 credits)
- ENGL 214 American Authors I (4 credits)
- ENGL 220 The Classical Tradition (4 credits)
- ENGL 221 The Modern Tradition (4 credits)
- ENGL 325 Special Studies in Genre, Region, or Theme (4 credits) (section 11 only)
- ENGL 360 Chaucer and the Medieval Period (4 credits)
- ENGL 361 Shakespeare and the Early Modern Period (4 credits)
- ENGL 362 Milton and Seventeenth-Century British Literature (4 credits)
- ENGL 364 Eighteenth-Century British Literature: The Age of Satire and the Novel (4 credits)
- ENGL 370 Colonial and Early-American Literature (4 credits)
- ENGL 371 Nineteenth-Century American Literature (4 credits)
- ENGL 390 Major Literary Figures (4 credits) (section 11 only)
- ENGL 395 Issues in Literature and Culture (4 credits) (section 11 only)

Four credits in American Literature

- ENGL 214 American Authors I (4 credits)
- ENGL 215 American Authors II (4 credits)
- ENGL 217 Multicultural Literature (4 credits) (section 21 only)
- ENGL 324 Genre Studies (4 credits) (section 21 only)
- ENGL 325 Special Studies in Genre, Region, or Theme (4 credits) (section 21 only)
- ENGL 337 The Literature of Human Diversity (4 credits) (section 21 only)
- ENGL 341 Literature by Women: Critical Questions (4 credits) (section 21 only)
- ENGL 370 Colonial and Early-American Literature (4 credits)
- ENGL 371 Nineteenth-Century American Literature (4 credits)
- ENGL 372 Modern American Literature (4 credits)
- ENGL 373 Contemporary American Literature (4 credits)
- ENGL 390 Major Literary Figures (4 credits) (section 21 only)
- ENGL 395 Issues in Literature and Culture (4 credits) (section 21 only)

Four credits in British Literature

- ENGL 211 British Authors I (4 credits)
- ENGL 212 British Authors II (4 credits)
- ENGL 324 Genre Studies (4 credits) (section 31 only)
- ENGL 325 Special Studies in Genre, Region, or Theme (4 credits) (section 31 only)
- ENGL 341 Literature by Women: Critical Questions (4 credits) (section 31 only)
- ENGL 360 Chaucer and the Medieval Period (4 credits)
- ENGL 361 Shakespeare and the Early Modern Period (4 credits)
- ENGL 362 Milton and Seventeenth-Century British Literature (4 credits)
- ENGL 364 Eighteenth-Century British Literature: The Age of Satire and the Novel (4 credits)
- ENGL 365 The Romantic Age in Britain (4 credits)
- ENGL 366 The Victorian Age in Britain (4 credits)
- ENGL 367 Twentieth-Century British Literature (4 credits)
- ENGL 390 Major Literary Figures (4 credits) (section 31 only)
- ENGL 395 Issues in Literature and Culture (4 credits) (section 31 only)

Four credits in Diversity Literature

- ENGL 217 Multicultural Literature (4 credits)
- ENGL 218 Literature by Women: Critical History (4 credits)
- ENGL 297 Topics (4 credits) (section 61 only)
- ENGL 325 Special Studies in Genre, Region, or Theme (4 credits) (section 61 only)
- ENGL 337 The Literature of Human Diversity (4 credits)
- ENGL 341 Literature by Women: Critical Questions (4 credits)
- ENGL 390 Major Literary Figures (4 credits) (section 61 only)
- ENGL 395 Issues in Literature and Culture (4 credits) (section 61 only)

Four credits in Writing

- ENGL 251 Writing in the Academy (4 credits)
- ENGL 252 Writing Nonfiction Prose (4 credits)
- ENGL 253 Writing Poetry and Fiction (4 credits)
- ENGL 300 Theory and Practice of Writing (4 credits)

ENGL 321 Writing Poetry (4 credits)
ENGL 322 Writing Fiction (4 credits)
ENGL 326 Topics in Writing Literary Nonfiction (4 credits)
ENGL 401 Advanced Poetry or Fiction Writing (4 credits)
ENGL 402 Writing Literary Nonfiction (4 credits)
ENGL 403 Analytical and Persuasive Writing (4 credits)

Four credits in Issues in English Studies
ENGL 380 Issues in English Studies (4 credits)

ENGL 111 and 112 students should take a total of thirty-six credits in English beyond the 100-level
ENGL 190 students should take a total of forty credits in English beyond the 100-level

Major in English with Writing Emphasis

ENGL 111 Critical Reading and Writing I: Fiction and Nonfiction Prose (4 credits)
ENGL 112 Critical Reading and Writing II: Drama and Poetry (4 credits)
Note: Qualified students who do not take ENGL 111 and 112 may substitute ENGL 190 Critical Reading and Writing: Major Genres and one additional literature course in English numbered above 200 (excluding ENGL 251, 252, 253, 300, 305, 321, 322, 326, 380, 401, 402, 403, 421, and 422).

In addition to the above core curriculum courses, students must also select courses that fulfill the following *course-level* and *area distribution* requirements:

Course-Level Requirements
At least 12 credits at the ENGL 200-level
At least 16 credits at the ENGL 300-level
Note: 4 of these credits must be from ENGL 380 Issues in English Studies
At least 4 credits at the ENGL 400-level
Plus 4 additional credits beyond the ENGL 100-level

Distribution Requirements
Sixteen credits from the following writing courses:
ENGL 251 Writing in the Academy (4 credits)
ENGL 252 Writing Nonfiction Prose (4 credits)
ENGL 253 Writing Poetry and Fiction (4 credits)
ENGL 300 Theory and Practice of Writing (4 credits)
ENGL 321 Writing Poetry (4 credits)
ENGL 322 Writing Fiction (4 credits)
ENGL 326 Topics in Writing Literary Nonfiction (4 credits)
ENGL 401 Advanced Poetry or Fiction Writing (4 credits)
ENGL 402 Writing Literary Nonfiction (4 credits)
ENGL 403 Analytical and Persuasive Writing (4 credits)
ENGL 421 Literary Magazine Practicum, Part 1 (2 credits)
ENGL 422 Literary Magazine Practicum, Part 1I (2 credits)
Note: The writing courses should include one of the following sequences:
Academic, persuasive, and nonfiction writing sequence:
first – ENGL 251 *and/or* 252
then – ENGL 300 *and/or* 326
then – ENGL 402 *and/or* 403
Creative writing sequence
first – ENGL 253
then – ENGL 321 *and/or* 322
then – ENGL 401 *and/or* 402

Plus:
Twelve credits in literature to include:
Four credits in Early Literature
ENGL 211 British Authors I (4 credits)
ENGL 214 American Authors I (4 credits)
ENGL 220 The Classical Tradition (4 credits)
ENGL 221 The Modern Tradition (4 credits)
ENGL 325 Special Studies in Genre, Region, or Theme (4 credits) (section 11 only)
ENGL 360 Chaucer and the Medieval Period (4 credits)
ENGL 361 Shakespeare and the Early Modern Period (4 credits)
ENGL 362 Milton and Seventeenth-Century British Literature (4 credits)
ENGL 364 Eighteenth-Century British Literature: The Age of Satire and the Novel (4 credits)
ENGL 370 Colonial and Early-American Literature (4 credits)

ENGL 371 Nineteenth-Century American Literature (4 credits)
ENGL 390 Major Literary Figures (4 credits) (section 11 only)
ENGL 395 Issues in Literature and Culture (4 credits) (section 11 only)

Four credits in Diversity Literature
ENGL 217 Multicultural Literature (4 credits)
ENGL 218 Literature by Women: Critical History (4 credits)
ENGL 297 Topics (4 credits) (section 61 only)
ENGL 325 Special Studies in Genre, Region, or Theme (4 credits) (section 61 only)
ENGL 337 The Literature of Human Diversity (4 credits)
ENGL 341 Literature by Women: Critical Questions (4 credits)
ENGL 390 Major Literary Figures (4 credits) (section 61 only)
ENGL 395 Issues in Literature and Culture (4 credits) (section 61 only)

Four additional English credits in literature beyond the ENGL 100-level

ENGL 380 Issues in English Studies (4 credits)
Four credits in another English course beyond the ENGL 100-level

ENGL 111 and 112 students should take a total of thirty-six credits in English beyond the 100-level
ENGL 190 students should take a total of forty credits in English beyond the 100-level

Major in English with a Teacher Education Emphasis (5-12)

ENGL 111 Critical Reading and Writing I: Fiction and Nonfiction Prose (4 credits)
ENGL 112 Critical Reading and Writing II: Drama and Poetry (4 credits)
Note: Qualified students who do not take ENGL 111 and 112 may substitute ENGL 190 Critical Reading and Writing: Major Genres and one additional literature course in English numbered above 200 (excluding ENGL 251, 252, 253, 300, 305, 321, 322, 326, 380, 401, 402, 403, 421, and 422).
ENGL 211 British Authors I (4 credits) *or* ENGL 212 British Authors II (4 credits)
ENGL 214 American Authors I (4 credits) *or* ENGL 215 American Authors II (4 credits)
ENGL 217 Multicultural Literature (4 credits) *or* ENGL 218 Literature by Women: Critical History (4 credits)
ENGL 220 The Classical Tradition (4 credits) *or* ENGL 221 The Modern Tradition (4 credits)
ENGL 300 Theory and Practice of Writing (4 credits)
ENGL 305 Linguistics: English Language (4 credits)
ENGL 361 Shakespeare and the Early Modern Period (4 credits)
ENGL 380 Issues in English Studies (4 credits)
Four additional credits EITHER in English at the 300 or 400 level, *or* COMM 340 Rhetoric of Race, Class, and Gender *or* COMM 350 Modern American Rhetoric *or* COMM 440 Classical Rhetoric*
*COMM 340 or COMM 350 is not required for licensure, but students who complete one of these courses together with the COMM courses required for licensure listed below will also have completed a Minor in Communication Studies.

Students seeking licensure in Communication Arts and Literature (5-12) must also complete the following courses in Communication Studies: COMM 100, COMM 120, COMM 140, COMM 160, COMM 217, and the EDUC courses listed under Teacher Education for Communication Arts and Literature (5-12). *See Education*

Students seeking elementary licensure (K-6) with a 5-8 specialty in Communication Arts and Literature may complete the standard English major, the English major with a Writing Emphasis, or the English major with a Teacher Education Emphasis. For a complete listing of requirements in the area, *see Education.*

Literary Studies

See Literary Studies

Minor in English

The minor in English consists of twenty-four credits:
ENGL 111 Critical Reading and Writing I: Fiction and Nonfiction Prose (4 credits)
ENGL 112 Critical Reading and Writing II: Drama and Poetry (4 credits)
Note: Qualified students who do not take ENGL 111 and 112 may substitute ENGL 190 Critical Reading and Writing: Major Genres and one additional literature course in English numbered above 200 (excluding ENGL 251, 252, 253, 300, 305, 321, 322, 326, 380, 401, 402, 403, 421, and 422).
Eight credits at the ENGL 200-level
Eight credits at the ENGL 300-level

ENGL 110 Intensive Writing (4 credits)
The course provides 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

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.

ENGL 111 Critical Reading and Writing I: Fiction and Nonfiction Prose (4 credits)
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. This course fulfills the Literature and Writing requirement in the core curriculum.

ENGL 112 Critical Reading and Writing II: Drama and Poetry (4 credits)
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. This course fulfills the Literature and Writing requirement in the core curriculum.
Prerequisite: ENGL 111 or permission of department chair

ENGL 190 Critical Reading and Writing: Major Genres (4 credits)
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. This course, and an additional upper-level literature course, fulfills the Literature and Writing requirement in the core curriculum. Offered only in fall semester.

ENGL 205 Literature in Perspective (4 credits)
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 non-majors, 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.
Prerequisites: ENGL 111 and 112 or 190

ENGL 211 British Authors I (4 credits)
This course will focus on extensive reading of a broad selection of British authors from the medieval period through the eighteenth century. Students will engage in close analysis of literary texts by such authors as Chaucer, Shakespeare, Donne, Milton, and Behn, with some attention to historical and cultural contexts.
Prerequisites: ENGL 111 and 112 or 190

ENGL 212 British Authors II (4 credits)
This course will focus on extensive reading of a broad selection of British authors from Romanticism to the present. Students will engage in close analysis of literary texts by such authors as Blake, Wordsworth, Tennyson, Conrad, and Woolf, with some attention to historical and cultural contexts.
Prerequisites: ENGL 111 and 112 or 190

ENGL 214 American Authors I (4 credits)
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.
Prerequisites: ENGL 111 and 112 or 190

ENGL 215 American Authors II (4 credits)
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.
Prerequisites: ENGL 111 and 112 or 190

ENGL 217 Multicultural Literature (4 credits)
This course will focus on extensive reading of a broad selection of authors drawn from the literature of one of the following: (a) American communities of color; (b) postcolonial peoples; (c) diasporic peoples. Students will engage in

close analysis of literary texts from at least one such literary tradition, with some attention to historical and cultural contexts. This course fulfills the Human Diversity requirement in the core curriculum.
Prerequisites: ENGL 111 and 112 or 190

ENGL 218 Literature by Women: Critical History (4 credits)
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.
Prerequisites: ENGL 111 and 112 or 190

ENGL 220 The Classical Tradition (4 credits)
This course will focus on representative texts of Western literature in translation, from the origins of Greek literature through Early Modern Europe. Authors may include Homer, Sappho, Aeschylus, Sophocles, Virgil, Ovid, Dante, and Marie de France.
Prerequisites: ENGL 111 and 112 or 190

ENGL 221 The Modern Tradition (4 credits)
This course will focus on representative texts of Western literature in translation from the seventeenth century through the present, including some attention to the interactions of the European traditions with modern African, Latin American or Asian literatures. Authors may include Racine, Goethe, Flaubert, Dostoevsky, Sand, and Achebe.
Prerequisites: ENGL 111 and 112 or 190

ENGL 222 The Catholic Literary Tradition: Medieval to Modern (4 credits) (equivalent to CATH 222)
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.
Prerequisites: ENGL 111 and 112 or 190

ENGL 251 Writing in the Academy (4 credits)
This course focuses on principles of effective academic writing. Attention will be paid to strategies for development, patterns of organization, and rhetorical concerns such as voice, audience, purpose and style. Students will consider conventions of academic discourse, both as they are shared and as they vary across disciplines.
Prerequisites: ENGL 111 and 112 or 190

ENGL 252 Writing Nonfiction Prose (4 credits)
This course will aim to develop fluency, voice and style in a range of rhetorical situations within the genre of nonfiction prose, including memoir, the informal essay, experimental nonfiction, review, and argument. Intended to prepare students for advanced courses in literary nonfiction and analytical and persuasive writing.
Prerequisites: ENGL 111 and 112 or 190

ENGL 253 Writing Poetry and Fiction (4 credits)
This course introduces students to the skills necessary for writing literary fiction and poetry. It includes close readings of literary texts that model the basic techniques of imaginative writing, weekly writing exercises that encourage exploration and development of craft, and peer critique sessions to develop students' critical skills. This course will include instruction in imagery, figurative language, rhythm and sound patterns, tone, point of view, literary structures, character development, and style.
Prerequisites: ENGL 111 and 112 or 190

ENGL 295, 296 Topics (2 credits)
ENGL 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.
Prerequisites: ENGL 111 and 112 or 190

ENGL 300 Theory and Practice of Writing (4 credits)
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 communication arts and literature.
Prerequisites: ENGL 111 and 112 or 190; advanced writing skills

ENGL 305 Linguistics: English Language (4 credits)
The study of the historical, structural, and semantic features of the English language; systems of English grammar.
Prerequisites: ENGL 111 and 112 or 190

ENGL 321 Writing Poetry (4 credits)
This intermediate course explores traditional and innovative patterns of poetry writing. Emphasis on experimentation with a variety of techniques and development of individual voice. This course will include critique sessions, read-

ings to broaden possibilities of form and subject, and individual instruction. Open to students with some previous experience in writing poetry.
Prerequisite: ENGL 253 or permission of instructor.

ENGL 322 Writing Fiction (4 credits)
This intermediate course explores traditional and innovative patterns of fiction writing. Emphasis on experimentation with a variety of techniques and development of individual voice. This course will include critique sessions, readings to broaden possibilities of form and subject, and individual instruction.
Prerequisite: ENGL 253 or permission of instructor.

ENGL 324 Genre Studies (4 credits)
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.
Prerequisites: ENGL 111 and 112 or 190

ENGL 325 Special Studies in Genre, Region, or Theme (4 credits)
This course will offer an intensive focus on a body of literature defined by its association with a special genre, locale, or theme. Such specialized topics as the epic poem, contemporary autobiography, Minnesota literature, or Genesis in literature might be studied. Students will also consider relevant critical approaches and issues. Credit may be earned more than once under this number for different emphases.
Prerequisites: ENGL 111 and 112 or 190

ENGL 326 Topics in Writing Literary Nonfiction (4 credits)
This intermediate course explores traditional and innovative topics and forms of writing literary nonfiction. Emphasis on experimentation with a variety of techniques and development of literary voices. The focus of writing for each section offered will vary. Some examples of possible topics include "Environmental Writing," "Memoir," and "Writing Gender/Race." This course will include peer review, readings to broaden possibilities of form and subject, and individual instruction.
Prerequisites: ENGL 251, 252, or permission of the instructor

ENGL 334 Literature from a Christian Perspective (4 credits) (equivalent to CATH 334)
This course examines methods of reading and literary texts from a Christian perspective. The general question of the course is, "how does a reader engage works of imaginative literature from an intellectually serious Christian perspective?" The course studies works of criticism representing a variety of Christian viewpoints and applies them to literary texts that are explicitly Christian in theme as well as those which invite, or are enriched by, a Christian perspective.
Prerequisites: ENGL 111 and 112 or 190

ENGL 337 The Literature of Human Diversity (4 credits)
Offered with specific subtitles, this course provides an intensive focus on a selected body of literature concerning one of the following aspects of human diversity: race, ethnicity, class, gender, sexual orientation. Students will also consider relevant critical approaches and concepts. Credit may be earned more than once under this number for different emphases. This course fulfills the Human Diversity requirement in the core curriculum.
Prerequisites: ENGL 111 and 112 or 190

ENGL 341 Literature by Women: Critical Questions (4 credits)
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.
Prerequisites: ENGL 111 and 112 or 190

ENGL 360 Chaucer and the Medieval Period (4 credits)
This course offers an intensive focus on the literature and culture of the medieval period. Such authors as the Pearl poet, medieval dramatists, and Malory will provide a context for reading Chaucer's Canterbury Tales. Critical approaches and issues will also be studied.
Prerequisites: ENGL 111 and 112 or 190

ENGL 361 Shakespeare and the Early Modern Period (4 credits)
This course offers an intensive focus on the literature and culture of the English early modern period. Such authors as Sidney, Spenser, Elizabeth I and Cary will provide a context for reading Shakespeare's works. Critical approaches and issues will also be studied.
Prerequisites: ENGL 111 and 112 or 190

ENGL 362 Milton and Seventeenth-Century British Literature (4 credits)
This course offers an intensive focus on the literature and culture of the British seventeenth century. Such authors as Donne, Lanyer, Wroth and Herbert will provide a context for reading Milton's Paradise Lost. Critical approaches and

issues will also be studied.
Prerequisites: ENGL 111 and 112 or 190

ENGL 364 Eighteenth-Century British Literature: The Age of Satire and the Novel (4 credits)
This course offers an intensive focus on the literature and culture of eighteenth-century Britain. Such authors as Pope, Swift, Burney, and Johnson will be studied, along with critical approaches and issues relevant to the period.
Prerequisites: ENGL 111 and 112 or 190

ENGL 365 The Romantic Age in Britain (4 credits)
This course offers an intensive focus on the literature and culture of the Romantic Age in Britain. Such authors as Austen, Blake, Wollstonecraft, Byron, and the Shelleys will be studied, along with critical approaches and issues relevant to the period.
Prerequisites: ENGL 111 and 112 or 190

ENGL 366 The Victorian Age in Britain (4 credits)
This course offers an intensive focus on the literature and culture of the Victorian Age in Britain. Such authors as Tennyson, the Brownings, the pre-Raphaelites, Dickens, and Eliot will be studied. Special attention will be paid to the historical context, as well as to relevant critical approaches and issues.
Prerequisites: ENGL 111 and 112 or 190

ENGL 367 Twentieth-Century British Literature (4 credits)
This course offers an intensive focus on select aspects of the literature and culture of twentieth-century Britain. Such authors as Woolf, Joyce, Eliot, Lessing, and Walcott will be studied, along with critical approaches and issues relevant to the period.
Prerequisites: ENGL 111 and 112 or 190

ENGL 370 Colonial and Early-American Literature (4 credits)
This course offers an intensive focus on selected aspects of American literature from its beginnings to approximately 1820. Attention will be given to the diverse literary, cultural, and historical contexts of the literature being studied, as well as to relevant critical approaches and issues. Possible authors studied include Bradstreet, Franklin, Wheatley, Irving, Native American voices.
Prerequisites: ENGL 111 and 112 or 190

ENGL 371 Nineteenth-Century American Literature (4 credits)
This course offers an intensive focus on selected aspects of American literature 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 literature being studied, as well as to relevant critical approaches and issues. Possible authors studied include Emerson, Fuller, Douglass, Clemens, Dickinson.
Prerequisites: ENGL 111 and 112 or 190

ENGL 372 Modern American Literature (4 credits)
This course offers an intensive focus on selected aspects of American literature of the first half of the twentieth century, from approximately 1900 to 1945. Attention will be given to the diverse literary, cultural, and historical contexts that inform the literature being studied, as well as to relevant critical approaches and issues. Possible authors studied include Hemingway, Faulkner, Hurston, Eliot, Wharton, O'Neill.
Prerequisites: ENGL 111 and 112 or 190

ENGL 373 Contemporary American Literature (4 credits)
This course offers an intensive focus on selected aspects of American literature from approximately 1945 to the present. Attention will be given to the diverse literary, cultural, and historical contexts that inform the literature being studied, as well as to relevant critical approaches and issues. Possible authors studied include Erdrich, Morrison, Bellow, Ginsberg, Tennessee Williams, Adrienne Rich.
Prerequisites: ENGL 111 and 112 or 190

ENGL 380 Issues in English Studies (4 credits)
This course focuses on ideas and practices central to advanced work in the field of language and literature. In addition to refining students' facility with critical concepts and scholarly methodology, this course will explore a number of key questions for current work in the discipline: How do we define such concepts as literacy, literature, and interpretation? How do we understand the relationship between reader, writer, and text? How do such factors as gender, culture, and history affect our understanding of literature and of ourselves as writers and readers? This course fulfills the second-level Computer Competency requirement in the core curriculum.
Prerequisites: ENGL 111 and 112 or 190; at least two courses in ENGL above the 100-level

ENGL 390 Major Literary Figures (4 credits)
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.
Prerequisites: ENGL 111 and 112 or 190

ENGL 395 Issues in Literature and Culture (4 credits)
This course offers an intensive focus on a selected body of literature in relation to some significant "extraliterary" context, *e.g.,* history, popular culture, other disciplines, other arts. The course will emphasize critical approaches and issues appropriate to this focus. The content of this course will vary from semester to semester. Some sections of this course may fulfill the Human Diversity requirement in the core curriculum.
Prerequisites: ENGL 111 and 112 or 190

ENGL 401 Advanced Poetry or Fiction Writing (4 credits)
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: ENGL 321 or 322, or permission of instructor based on examination of a portfolio

ENGL 402 Writing Literary Nonfiction (4 credits)
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, Annie 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: ENGL 252 or 253 or 300 or consent of the instructor based on examination of a portfolio

ENGL 403 Analytical and Persuasive Writing (4 credits)
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: ENGL 251 or 252 or 253 or consent of instructor

ENGL 411 Criticism of Literature (4 credits)
Study in theoretical and applied literary criticism. Particular authors and works are closely examined in relation to various critical systems.
Prerequisites: ENGL 111 and 112 or 190 and 380

ENGL 421 and 422 Literary Magazine Practicum, Parts 1 and II
In this sequence of two, two-credit courses, participants will study the history and character of literary magazines from 1912 to the present, learn desktop publishing and Web design, and apply their knowledge to editing the university's literary and visual arts magazine. The two courses are integrated and mutually dependent on each other; ENGL 421 is an absolute prerequisite for ENGL 422. Completion of the two-semester sequence fulfills the second-level Computer Competency requirement in the core curriculum.

ENGL 421 Literary Magazine Practicum, Part 1 (2 credits)
Activities during the fall semester of the sequence include readings from The Little Magazine: A History and Bibliography and The Little Magazine in America: A Modern Documentary History; examining the design and content of fifteen professional literary magazines; learning QuarkXPress or an equivalent desktop publishing program; creating preliminary Summit Avenue Review page designs; working collaboratively with other literary magazine editors to develop selection procedures and principles; and writing a comparison essay on two professional literary magazines.
Prerequisite: Previous or concurrent enrollment in ENGL 321 or 322 or 326.

ENGL 422 Literary Magazine Practicum, Part 1I (2 credits)
The spring semester component of the sequence includes readings from The Art of Literary Editing; active involvement with other editors in the selection process; learning and applying principles of literary copyediting; using desktop publishing to produce the new edition of Summit Avenue Review, from the creation of style sheets and master pages to final proofreading; writing a reflection essay on the editing process as you experienced it; examining the design and content of five professional literary magazine web sites; learning the Dreamweaver web design program and using it to create and revise pages on the Summit Avenue Review web site.
Prerequisites: ENGL 421

ENGL 450 Advanced Literary Studies (4 credits)
This advanced course will focus on a closely defined group of literary and critical texts. Students will be asked to synthesize as they read and write, using extensive critical analysis to integrate their experience of literary texts with relevant critical insights and ongoing scholarship. Students will also be expected to take part in and lead discussion, and to write a substantial critical essay.
Prerequisites: 5 courses beyond the ENGL 100 level including ENGL 380. Open to limited undergraduate student enrollment by permission of instructor and the graduate program director.

ENGL 475, 476 Experiential Learning (2 credits)
ENGL 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

ENGL 481 Seminar in English (4 credits)
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.
Prerequisites: completion of five English courses beyond the 100-level, including ENGL 380; or, for non-majors, permission of the instructor and the department chair.

ENGL 483, 484 Seminar (2 credits)
ENGL 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

ENGL 487, 488 Topics (2 credits)
ENGL 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.
Prerequisites: ENGL 111 and 112 or 190

ENGL 491, 492 Research (2 credits)
ENGL 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

ENGL 495, 496 Individual Study (2 credits)
ENGL 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.
Prerequisites: ENGL 111 and 112 or 190

Entrepreneurship

See Business Administration

Environmental Studies (ENVR)

College of Arts and Sciences
Interdisciplinary Program
Scott (PSYC), program director; Environmental Studies Committee: Emms (BIOL), George (ENGR), Giebel (PHIL), Hickson (GEOL), Hoffman (POLS), Kelley (GEOG), Wammer (CHEM)

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 based 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 are designed to provide the student with a foundation in the physical, social and ethical dimensions of environmental issues. Students graduating with a major in environmental studies will demonstrate their ability to integrate their liberal arts and professionally-oriented education. 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.

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.

Major in Environmental Studies: Concentration Area in the Natural Sciences

ENVR 151 Humans and the Environment (4 credits)
ENVR 212 Social Dynamics and the Environment (4 credits)
ENVR 301 Environmental Ethics (4 credits)
ENVR 351 Environmental Policy Formation (4 credits)
ENVR 401 Field Seminar (4 credits)

Plus four credits from the following:
BLAW 351 Environmental Law (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
POLS 205 Introduction to the American Public Policy Process (4 credits)

Plus four credits from the following:
MATH 303 Statistics for the Applied Sciences (4 credits)
QMCS 220 Statistics I (4 credits)

Plus:
BIOL 102 Conservation Biology (4 credits)
or
BIOL 201 Diversity and Adaptation (4 credits)

Plus:
CHEM 101 Environmental Chemistry (4 credits)
or
CHEM 111 General Chemistry I (4 credits) *and* CHEM 112 General Chemistry II (4 credits)

Plus:
GEOL 115 Environmental Geology *or one of* GEOL 110, 111, 113, 114 (4 credits each)

Plus:
Six courses determined in consultation with the program director

Major in Environmental Studies: Concentration Area in Social Science, Business, or Humanities

ENVR 151 Humans and the Environment (4 credits)
ENVR 212 Social Dynamics and the Environment (4 credits)
ENVR 301 Environmental Ethics (4 credits)
ENVR 351 Environmental Policy Formation (4 credits)
ENVR 401 Field Seminar (4 credits)

Plus one of the three sequences below:
BIOL 102 Conservation Biology (4 credits)
CHEM 101 Environmental Chemistry (4 credits)
GEOL 115 Environmental Geology *or one of* GEOL 110, 111, 113, 114 (4 credits each)
GEOL 252 Geomorphology (4 credits) *or* GEOL 220 Oceanography (4 credits)
or
BIOL 201 Diversity and Adaptation (4 credits)
BIOL 202 Genetics and Population Biology (4 credits)
CHEM 101 Environmental Chemistry (4 credits)
GEOL 115 Environmental Geology *or one of* GEOL 110, 111, 113, 114 (4 credits each)
or
BIOL 102 Conservation Biology (4 credits)
CHEM 111 General Chemistry I (4 credits)
CHEM 112 General Chemistry II (4 credits)
GEOL 115 Environmental Geology *or one of* GEOL 110, 111, 113, 114 (4 credits each)

Plus four credits from the following:
MATH 303 Statistics for the Applied Sciences (4 credits)
QMCS 220 Statistics I (4 credits)

Plus:
Six courses determined in consultation with the program director

Minor in Environmental Studies

ENVR 151 Humans and the Environment (4 credits)
ENVR 212 Social Dynamics of the Environment (4 credits)
ENVR 301 Environmental Ethics (4 credits)
ENVR 351 Environmental Policy Formation (4 credits)

Plus four credits from the following:
BLAW 351 Environmental Law (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
POLS 205 Introduction to the American Public Policy Process (4 credits)

ENVR 151 Humans and the Environment (4 credits)
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.

ENVR 212 Social Dynamics and the Environment (4 credits)
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.

ENVR 295, 296 Topics (2 credits)
ENVR 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

ENVR 301 Environmental Ethics (4 credits) (equivalent to 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: ENVR 151 and PHIL 214

ENVR 351 Environmental Policy Formation (4 credits) (equivalent to POLS 316)
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: ENVR 212

ENVR 401 Field Seminar (4 credits)
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: ENVR 301 and 351 or permission of the instructor

ENVR 475, 476 Experiential Learning (2 credits)
ENVR 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

ENVR 483, 484 Seminar (2 credits)
ENVR 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

ENVR 487, 488 Topics (2 credits)
ENVR 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

ENVR 491, 492 Research (2 credits)
ENVR 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

ENVR 495, 496 Individual Study (2 credits)
ENVR 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Family Studies (FAST)

College of Arts and Sciences
Interdisciplinary Program
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

FAST 400 Family Studies Seminar (4 credits)

Plus four credits from the following:
PSYC 288 Psychology of Marriage and the Family (4 credits)
SOCI 321 Marriage and the Family (4 credits)

Plus twelve credits from the following:
COMM 425 Family Communication (4 credits)
ENTR 349 Family Business Management (4 credits)
FAST 495, 496 Individual Study (2 credits each)
FAST 497, 498 Individual Study (4 credits each)
HIST 345 Family and Women in Chinese History (4 credits)
HLTH 462 Human Sexuality Education (4 credits)
PSYC 200 Psychology of Infancy and Childhood (4 credits)
PSYC 203 Psychology of Adolescence (4 credits)
PSYC 204 The Psychology of Adulthood and Aging (4 credits)
PSYC 288 Psychology of Marriage and the Family (4 credits)
SOWK 210 Relationship, Intimacy, and Sexuality (4 credits)
SOCI 304 Adolescence in Society (4 credits)
SOCI 321 Marriage and the Family (4 credits)
SOCI 354 Sex in Society (4 credits)
THEO 315 Christian Marriage (4 credits)

FAST 295, 296 Topics (2 credits)
FAST 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

FAST 400 Seminar in Family Studies (4 credits)
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: PSYC 288 or SOCI 321 and three other courses from the list of approved courses for the minor.

FAST 495, 496 Individual Study (2 credits)
FAST 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Finance

See Business Administration

French (FREN)

See Modern and Classical Languages

Geography (GEOG)

College of Arts and Sciences
Department of Geography
Kelley (Chair), Hansen, Kennedy, Lorah, Slaats, Werner

The Department of Geography offers a major and minor in geography, as well as a Geographic Information Systems (GIS) minor (for non-geography majors) and a concentration area in GIS for majors. The GIS minor is well-adapted to majors in the physical and social sciences and complements studies in education, marketing, real estate, and entrepreneurship.

The department emphasizes GIS laboratory work, internships, collaborative faculty-student research and service learning to give our students a solid foundation in geographic principles and techniques, as well as an appreciation for the diversity of people and places. It makes extensive use of computer skills to explore a wide range of topics, from regional studies to remote sensing.

With foundations in both the natural and social sciences, geography prepares students for a wide range of careers in government, the private sector, and education. Geographers create digital maps, perform location analyses for retail and service stores, analyze land use and urban planning, work with census data, teach, and hold a wide variety of other jobs. Graduates also pursue advanced degrees in geography, business, urban and regional planning, community development, GIS, and natural resource management.

Major in Geography

GEOG 111 Human Geography (4 credits)
GEOG 112 Physical Geography (4 credits)
GEOG 113 World Geography (4 credits)
GEOG 480 Seminar in Geography (4 credits)

Plus eight credits in methods courses:
GEOG 221 Computer Skills in Geography (4 credits)
GEOG 222 Geographical Analysis (4 credits)
GEOG 223 Remote Sensing (4 credits)
GEOG 321 Geographic Information Systems (4 credits)
GEOG 421 Applied Geographic Information Systems (4 credits)

Plus four credits in a topical course:
ECON 333 Urban and Regional Economics (4 credits)
GEOG 230 Weather and Climate (4 credits)
GEOG 231 Global Migrations (4 credits)
GEOG 330 Geography for Business and Planning (4 credits)
GEOL 252 Geomorphology (4 credits)

Plus four credits in a regional course:
GEOG 297, 298 Topics (4 credits each)
GEOG 340 Geography of the U.S. and Canada (4 credits)
GEOG 384 Field Study in Geography (4 credits)

Plus:
Eight elective geography credits

Concentration in Geographic Information Systems (GIS)

Many fields use GIS, from the demographic and economic problems of marketing and store location to the natural resource management applications of erosion and groundwater modeling. Necessary subjects range from map projections and coordinate systems to remote sensing and database management. This concentration is open only to those students majoring in geography.
GEOG 111 Human Geography (4 credits)
GEOG 112 Physical Geography (4 credits)
GEOG 113 World Geography (4 credits)
GEOG 221 Computer Skills in Geography (4 credits)
GEOG 321 Geographic Information Systems (4 credits)
GEOG 330 Geography for Business and Planning (4 credits)
GEOG 421 Applied Geographic Information Systems (4 credits)
GEOG 480 Seminar in Geography (4 credits)

Plus four credits from the following:
GEOG 222 Geographical Analysis (4 credits)
GEOG 223 Remote Sensing (4 credits)

Plus four credits in a regional course:
GEOG 297, 298 Topics (4 credits each)
GEOG 340 Geography of the U.S. and Canada (4 credits)
GEOG 384 Field Study in Geography (4 credits)

Plus:
QMCS 220 Statistics I (4 credits)
QMCS 230 Software Design Using the JAVA Language (4 credits)

Minor in Geography
Eight credits in core courses
Eight credits in methods courses
Eight elective geography credits

Minor in Geographic Information Systems (GIS)
The GIS minor will appeal particularly to students majoring in geology biology, marketing, entrepreneurship, and sociology. This minor is only available to non-geography majors.
GEOG 221 Computer Skills in Geography (4 credits)
GEOG 321 Geographic Information Systems (4 credits)
GEOG 421 Applied Geographic Information Systems (4 credits)

Plus:
QMCS 230 Software Design Using the JAVA Language (4 credits)

Plus eight credits from the following methods courses:
GEOG 222 Geographical Analysis (4 credits)
GEOG 223 Remote Sensing (4 credits)
GEOG 330 Geography for Business and Planning (4 credits)
QMCS 220 Statistics I (4 credits)
QMCS 281 Object-oriented Design and Programming (4 credits)

Teacher Licensure
Elementary Education with a Specialty in Social Studies (5-8)
Co-major in Social Studies (5-12) and a Co-major in Secondary Education
See Education

GEOG 111 Human Geography (4 credits)
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. Offered every semester. This course fulfills the Social Analysis and Human Diversity requirements in the core curriculum.

GEOG 112 Physical Geography (4 credits)
This course asks why the natural environment looks and acts the way it does and addresses the interrelationships between climate, soils, water, landforms, and the biosphere. The emphasis of the course is on natural processes with some discussion of how humans interact with their surroundings. Exercises from a lab manual written specifically for this course provide hands-on experiences through inquiry-based learning and GIS. This course fulfills the second-level Computer Competency requirement in the core curriculum.

GEOG 113 World Geography (4 credits)
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. Offered every semester. This course fulfills the Social Analysis and Human Diversity requirements in the core curriculum.

GEOG 221 Computer Skills in Geography (4 credits)
A course with an emphasis on useful computing, especially computer-generated maps. Topics include the basic operation of a computer, editors and word processing, spreadsheets, databases, graphics, thematic maps, map design, and webpage design. An applications-oriented course that teaches the use of ArcView GIS. Offered every semester. This course fulfills the second-level Computer Competency requirement in the core curriculum.

GEOG 222 Geographical Analysis (4 credits)
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.

GEOG 223 Remote Sensing (4 credits)
The principles and techniques of remotely sensed data are presented including photographic and digital sensing. The applicability of these techniques to land use analysis and environmental studies will be emphasized. Students will become familiar with aerial photography and digital imagery interpretation through inquiry-based learning and GIS. This course fulfills the second-level Computer Competency requirement in the core curriculum. Offered alternate years.

GEOG 230 Weather and Climate (4 credits)
The causes and consequences of weather and climate, from global-scale processes of climate dynamics, the greenhouse effect and El Niño to regional and local-scale processes of fronts, thunderstorms, hurricanes and tornadoes. Students are introduced to weather map analysis and simple forecasting and observational techniques.

GEOG 231 Global Migrations (4 credits)
This course explores the causes of migration today: post-colonial environmental exploitation, ecological degradation and resource scarcity in the developing world that create political and economic instability; declining populations in the developed world; globalization of human trafficking; and the resulting population movements from East to West, South to North.

GEOG 295, 296 Topics (2 credits)
GEOG 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

GEOG 321 Geographic Information Systems (4 credits)
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 workstation ArcInfo 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. Offered spring semester.
Prerequisite: A minimum grade of C- in GEOG 221 or consent of instructor

GEOG 330 Geography for Business and Planning (4 credits)
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, optimal routing, and marketing.

GEOG 340 Geography of the U.S. and Canada (4 credits)
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.

GEOG 384 Field Study in Geography (4 credits)
A geographic analysis through field experience. Includes study-abroad courses.
Prerequisite: consent of instructor

GEOG 421 Applied Geographic Information Systems (4 credits)
A sequel to GEOG 321, this project-based course is designed around individual student interests to utilize advanced ArcGIS functions and analysis. Principles of geographic information systems will be implemented in a wide variety of applications. Usually offered fall semester.
Prerequisite: GEOG 321 or consent of the instructor.

GEOG 475, 476 Experiential Learning (2 credits)
GEOG 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

GEOG 480 Seminar in Geography (4 credits)
The seminar explores 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.
Prerequisites: four geography courses, including one methods course

GEOG 481 Advanced Field Study in Geography (4 credits)
A geographic analysis through field experience. Designed for advanced students in geography. Includes study-abroad courses.
Prerequisite: consent of instructor

GEOG 483, 484 Seminar (2 credits)
GEOG 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

GEOG 487, 488 Topics (2 credits)
GEOG 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

GEOG 491, 492 Research (2 credits)
GEOG 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

GEOG 495, 496 Individual Study (2 credits)
GEOG 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Geology (GEOL)

College of Arts and Sciences
Department of Geology
Hickson (chair), Lamb, Theissen

Geologists study the Earth, not as a static lump of rock, but as a dynamic, changing system with a long, deep, and rich history. The science of geology focuses on the processes that have sculpted and continue to shape the planet and its life. The Department of Geology seeks to provide a solid foundation in the Earth sciences for its majors, preparing them for a variety of career paths.

The geology curriculum has been designed to provide students with a solid core, but with sufficient flexibility to allow students with particular interests to pursue a more customized program. At the heart of this program is the field laboratory experience, a fundamental and basic component of a St. Thomas geoscience degree. Department faculty emphasize the fact that geology must be learned in the field and as a result offer field laboratory experiences in all courses that extend from a short afternoon trip to a multi-week field course on field methods and regional geology. Majors will visit many of the geologically significant localities throughout the upper Midwest as part of their program.

Major in Geology (B.A.)

Four credits from the following:
GEOL 110 Geology of the National Parks (4 credits)
GEOL 111 Introductory Physical Geology (4 credits)
GEOL 113 The Earth's Record of Climate (4 credits)
GEOL 114 The Science of Natural Disasters (4 credits)
GEOL 115 Environmental Geology (4 credits)

Plus:
GEOL 211 Earth Materials (4 credits) *or* GEOL 310 Environmental Geochemistry (4 credits)
GEOL 260 Regional Geology and Field Methods (4 credits)
GEOL 320 Sedimentology and Stratigraphy (4 credits)
GEOL 340 Fundamentals of the Lithosphere I (Petrology) (4 credits)
GEOL 360 Fundamentals of the Lithosphere II (Structural Geology) (4 credits)
GEOL 430 Advanced Earth History (4 credits)

Plus twelve credits from the following (four credits of which must be at the 400-level):
GEOL 130 Earth History (4 credits)
GEOL 211 Earth Materials (if not chosen above) (4 credits)
GEOL 220 Oceanography (4 credits)
GEOL 252 Earth Surface Processes and Geomorphology (4 credits)
GEOL 310 Environmental Geochemistry (4 credits) (if not chosen above)
GEOL 410 Hydrogeology (4 credits)
GEOL 460 Advanced Field Methods (4 credits)
GEOL 494 Research (4 credits)
Note: GEOG 321 Geographic Information Systems and geology courses offered at Macalester College may fulfill one of these courses with permission of chair

Allied requirements
MATH 113 Calculus I (4 credits)
or
MATH 108 Calculus with Review I (4 credits) *and* MATH 109 Calculus with Review II (4 credits)

Plus one of the following sequences:
CHEM 111 General Chemistry I (4 credits) *and* CHEM 112 General Chemistry II (4 credits)
PHYS 111 Introduction to Classical Physics I (4 credits) *and* PHYS 112 Introduction to Classical Physics II (4 credits)
CHEM 111 General Chemistry I (4 credits) *and* PHYS 111 Introduction to Classical Physics I (4 credits)

For students wishing to pursue careers in paleontology, geobiology, or geomicrobiology:
BIOL 201 Diversity and Adaptation (4 credits) *and* BIOL 202 Genetics and Population (4 credits)
Biology may be substituted for one of the CHEM/PHYS sequences with permission of chair

Strongly recommended for students considering graduate study:
additional courses in the allied sciences and mathematics

Major in Geology (B.S.)

Four credits from the following:
GEOL 110 Geology of the National Parks (4 credits)
GEOL 111 Introductory Physical Geology (4 credits)
GEOL 113 The Earth's Record of Climate (4 credits)
GEOL 114 The Science of Natural Disasters (4 credits)
GEOL 115 Environmental Geology (4 credits)

Plus:
GEOL 211 Earth Materials (4 credits) *or* GEOL 310 Environmental Geochemistry (4 credits)
GEOL 260 Regional Geology and Field Methods (4 credits)
GEOL 320 Sedimentology and Stratigraphy (4 credits)
GEOL 340 Fundamentals of the Lithosphere I (Petrology) (4 credits)
GEOL 360 Fundamentals of the Lithosphere II (Structural Geology) (4 credits)
GEOL 430 Advanced Earth History (4 credits)

Plus twelve credits from the following (four credits of which must be at the 400-level):
GEOL 130 Earth History (4 credits)
GEOL 211 Earth Materials (if not chosen above) (4 credits)
GEOL 220 Oceanography (4 credits)
GEOL 252 Earth Surface Processes and Geomorphology (4 credits)
GEOL 310 Environmental Geochemistry (4 credits) (if not chosen above)
GEOL 410 Hydrogeology (4 credits)
GEOL 460 Advanced Field Methods (4 credits)
GEOL 494 Research (4 credits)
Note: GEOG 321 Geographic Information Systems and geology courses offered at Macalester College may fulfill one of these courses with permission of chair

Allied requirements
MATH 113 Calculus I (4 credits) *or* MATH 109 Calculus with Review II (4 credits)
MATH 114 Calculus II (4 credits)
CHEM 111 General Chemistry I (4 credits)
CHEM 112 General Chemistry II (4 credits)
PHYS 111 Introduction to Classical Physics I (4 credits)
PHYS 112 Introduction to Classical Physics II (4 credits)
MATH 303 Statistics for the Applied Sciences (4 credits) *or* QMCS 220 Statistics I (4 credits)

For students wishing to pursue careers in paleontology, geobiology, or geomicrobiology:
BIOL 201 Diversity and Adaptation (4 credits) *and* 202 Genetics and Population (4 credits)
Biology may be substituted for one of the CHEM/PHYS sequences with permission of chair

Depending on a student's interest and career goals, substitutions may be made for other advanced courses in Biology, Chemistry, or Physics for certain listed courses, in consultation with the geology department chair.

Teacher Licensure

Elementary Education with a Co-major in Science and Mathematics for Elementary Education
Elementary Education with a Specialty in Science (5-8)
Co-major in Science (5-8) – Earth and Space Science (9-12) and a Co-major in Secondary Education
See Education.

Minor in Geology

Four credits from the following:
GEOL 110 Geology of the National Parks (4 credits)
GEOL 111 Introductory Physical Geology (4 credits)
GEOL 113 The Earth's Record of Climate (4 credits)
GEOL 114 Natural Disasters (4 credits)
GEOL 115 Environmental Geology (4 credits)

Plus four credits from the following:
GEOL 211 Earth Materials (4 credits)
GEOL 310 Environmental Geochemistry (4 credits)
GEOL 320 Sedimentology and Stratigraphy (4 credits)

Plus:
GEOL 340 Fundamentals of the Lithosphere I (Petrology) (4 credits)

Plus eight credits from the following:
GEOL 130 Earth History (4 credits)
GEOL 211 Earth Materials (4 credits) (if not chosen above)
GEOL 220 Oceanography (4 credits)
GEOL 252 Earth Surface Processes and Geomorphology (4 credits)
GEOL 260 Regional Geology and Field Methods (4 credits)
GEOL 310 Environmental Geochemistry (4 credits) (if not chosen above)
GEOL 320 Sedimentology and Stratigraphy (4 credits) (if not chosen above)
GEOL 360 Fundamentals of the Lithosphere II (Structural Geology) (4 credits)
GEOL 410 Hydrogeology (4 credits)

GEOL 102 Origins and Methods (4 credits) (GEOL 110, 111, 114, 115)
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 student will focus on the materials which make up the Earth and on the geologic processes that operate on these materials. Offered in January term.
NOTE: Students who receive credit for GEOL 102 may not receive credit for GEOL 110, 111, 114, or 115.

GEOL 110 Geology of the National Parks (4 credits) (GEOL 102, 111, 114, 115)
This course introduces fundamental geologic concepts, processes and materials using examples from the national parks. Emphasis is placed on the specific geologic materials, natural processes, landforms and sequence of events responsible for the outstanding scenery in selected U.S. national parks. Laboratories will include study of the rocks common to the national parks; analysis of geomorphic, topographic and geologic maps of the national parks; and field studies of local sites. Lecture and two laboratory hours per week.
NOTE: Students who receive credit for GEOL 110 may not receive credit for GEOL 102, 111, 114, or 115.

GEOL 111 Introductory Physical Geology (4 credits) (GEOL 102, 110, 114, 115)
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, and the geologic processes operating at the surface and in the interior. Lecture and two laboratory hours per week.
NOTE: Students who receive credit for GEOL 111 may not receive credit for GEOL 102, 110, 114, or 115.

GEOL 113 The Earth's Record of Climate (4 credits)
Climate change is a pressing issue for all of humanity, yet we cannot understand modern climate change without an awareness of the Earth's natural climate variability over the billions of years of geological time. In this course we will first explore modern climate and the controls on it; then focus on the methods used to understand how climate has changed over recent and distant geological time; explore the factors and theories that explain changes in the Earth's climate system; and finally analyze human-induced climate changes in light of the past geological evidence. Labs will focus on the analysis of climate data and geological evidence for changes in climate. This course fulfills the second-level Computer Competency requirement in the core curriculum.

GEOL 114 The Science of Natural Disasters (4 credits) (GEOL 102, 110, 111, 115)
This introductory geology course focuses on how and why natural disasters occur, as well as on their effects and how scientists study them. The course will examine internal and external Earth processes and in particular how these processes impact humans. Course emphases will be upon the principles underlying natural disasters such as earthquakes, volcanic eruptions, landslides, floods, coastal processes, and extinctions. We will use case studies of recent and historic events to understand these natural processes.
NOTE: Students who receive credit for GEOL 114 may not receive credit for GEOL 102, 110, 111, or 115.

GEOL 115 Environmental Geology (4 credits) (GEOL 102, 110, 111, 114)
This course emphasizes the interactions between humans and their environment, focusing on those processes and issues that are fundamentally geological in nature. Early in the course, students will be introduced to basic geoscience concepts and principals, the scientific method, plate tectonics, and Earth materials (rocks and minerals). The remainder of the course will focus on specific topics at the interface between humans and their environment, including volcanic and earthquake hazards, human impacts on the hydrological cycle, surface and groundwater contamination, climate and the carbon cycle, nuclear waste storage, soil erosion, non-renewable resources, and slope stability.
NOTE: Students who receive credit for GEOL 115 may not receive credit for GEOL 102, 110, 111, or 114.

GEOL 130 Earth History (4 credits)
The course introduces fundamental geologic concepts while examining the major tectonic, chemical and biological events that shaped the Earth through time. It will include a study of fossils, sedimentary structures, depositional environments, radiometric dating techniques, and other tools geoscientists use to interpret the past. Throughout the course global events will be studied but focus will be on the North American continent.

GEOL 211 Earth Materials (4 credits)
Earth's materials record the vast history of the earth, help us understand current earth processes and are vital to our daily living. By the end of this course, you will be able to identify many common Earth materials and their compo-

nents, describe how they formed, state where on or in Earth they typically form, and describe their economic and environmental importance. We will travel to the Badlands and Black Hills, SD, to collect data from several field sites for analysis during the rest of the semester.
Prerequisite: one of GEOL 102, 110, 111, 113, 114 or 115

GEOL 220 Oceanography (4 credits)
The Earth's surface is dominated by vast oceans known for the beauty of their wildlife and waters. The oceans are also increasingly recognized for their critical importance to the functioning of the Earth's climate system and for their endangered natural resources. For example, the ocean-atmospheric climate phenomenon known as the El Niño Southern Oscillation has gained household name recognition for its global impact on the weather, economy, and public health. In this course we will explore the physical, chemical, and biological processes that characterize the oceans. Students will develop research and analytical skills by making observations and interpretations of oceanographic processes using data, demonstrations, and field experiences.
Prerequisite: one of GEOL 110, 111, 113, 114, 115, 130, or permission of the instructor

GEOL 252 Earth Surface Processes and Geomorphology (4 credits)
This course emphasizes the physical processes that are responsible for shaping the Earth's surface. The qualitative description of landforms is pursued, in light of student's newly-gained analytical and quantitative understanding of processes. The labs focus on techniques used by geomorphologists to characterize landforms, soils, and the processes that shape, including: air photo interpretation, analysis of digital topographic data, experimental simulation of landforms evolution, and field techniques in geomorphology. This course fulfills the second-level Computer Competency requirement in the core curriculum.
Prerequisite: one of GEOL 102, 110, 111, 113, 114 or 115

GEOL 260 Regional Geology and Geological Field Methods (4 credits)
The field is geology's laboratory. this course is an introduction to the major concepts of geology, as well as the methods of field geology. Students will learn how to collect, synthesize, and analyze geological data in the field. Techniques will be taught in the context of the regional geology of an area so students will gain a critical appreciation of a geological terrain outside of their usual experience. Students will spend 2-3 weeks in the field examining geological structures, modern-day faults, modern processes that shape the Earth's surface, and examining the ancient record of past climate and environments preserved in the rock record. Student teams will learn basic techniques and instruments of geological mapping and rock description, how to recognize geological structures like faults and folds, ways to interpret the evolution of the Earth from sedimentary, igneous, and metamorphic rocks, and to link surface processes with the rock record. Offered in January-term.
Prerequisite: one of GEOL 102, 110, 111, 113, 114, 115, or permission of instructor

GEOL 295, 296 Topics (2 credits)
GEOL 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

GEOL 310 Environmental Geochemistry (4 credits)
Environmental geochemistry is a growing and dynamic field in geology which explores past and present environments for their chemical characteristics and environmental quality. In this course we will explore the applications of chemistry to solve geological and environmental problems, with an emphasis on freshwater environments. Students will get hands-on field and laboratory experience investigating Minnesota rock formations and lake sediments using several different geochemical methods.
Prerequisite: one of GEOL 110, 111, 113, 114, 115; and CHEM 111 or permission of instructor

GEOL 320 Sedimentology and Stratigraphy (4 credits)
Sedimentology is the study of sediment, particularly focusing on how it is transported and deposited. Stratigraphy emphasizes the analysis of sedimentary strata, the layers of sedimentary (and some volcanic) rocks that cover about three-quarters of the Earth's surface. Sedimentary rocks illuminate many of the details of the Earth's history: effects of sea level change, global climate, tectonic processes, and geochemical cycles are all recorded in the sedimentary strata of the Earth. This course will cover basics of fluid flow and sediment transport, sedimentary structures and textures, and – forming the bridge between modern landforms and ancient rocks – depositional sedimentary environments.
Prerequisite: one of GEOL 110, 111, 113, 114, 115; GEOL 211 recommended

GEOL 340 Fundamentals of the Lithosphere I (Petrology) (4 credits)
This is the first course in a year-long sequence that covers the fundamentals of petrology and structural geology in a global tectonic framework. The course begins with a discussion of plate tectonics and then examines each of the major plate settings and their boundaries. It will include the formation of igneous, sedimentary and metamorphic rocks. Labs will include hand specimen identification and the use of the petrographic microscope. The course will also examine the conditions of rock deformation and the typical structural features of each tectonic setting. Labs will cover structural geology techniques including recognition and analysis of features in the field and in hand samples. In the fall semester the focus will be on the petrology of the mantle and lithosphere as well as divergent margins. In the

spring semester, the focus will be on convergent margins. There will be several field trips as part of this course, ranging from 1-4 days, in the early fall and late spring.
Prerequisites: one of GEOL 110, 111, 113, 114 or 115; GEOL 211 and 320 or permission of the instructor

GEOL 360 Fundamentals of the Lithosphere II (Structural Geology) (4 credits)
Continuation of GEOL 340.
Prerequisite: GEOL 340

GEOL 410 Hydrogeology (4 credits)
This course focuses on groundwater and how geology influences its recharge, movement, storage, and withdrawal. The course will cover basic concepts of surface- and subsurface water flow, aquifer properties, well testing, heterogeneity in aquifers, groundwater chemistry and contamination, the role of groundwater in geological processes, and regional groundwater systems. Examples, labs, and projects will focus on groundwater in Minnesota and its immediate surroundings.
Prerequisite: one of GEOL 110, 111, 113, 114 or 115; GEOL 360 recommended

GEOL 421 Geophysics (4 credits)
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: GEOL 360

GEOL 430 Advanced Earth History (4 credits)
This course serves as a senior capstone experience in the geology major. Using the tools and concepts from previous coursework—including geochronology, plate tectonics, and other Earth processes—students will examine in-depth some aspect of Earth history. The specific subject matter and focus of this course will vary from year to year, and will be chosen based on input from the students in consultation with the instructor. Some examples of topics include: Precambrian tectonics of the Great Lakes region; Global Mesozoic tectonics; Sedimentary basins and basin analysis; or the Phanerozoic amalgamation of Asia.
Prerequisite: C- or better in GEOL 260, 320, and 340

GEOL 460 Advanced Field Geology (4 credits)
In this course, students will use skills developed in the introductory field methods course, Geology 260, to tackle more complex geologic problems. We will spend 3 weeks in the field mapping in an area that is more structurally complicated and learning additional techniques not introduced in the first course. Students will have the option of starting a research project and collecting data to be analyzed and written up in the following semester. Students not choosing this option will complete a field project during the course.
Prerequisites: GEOL 260 and permission of the instructor

GEOL 475, 476 Experiential Learning (2 credits)
GEOL 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

GEOL 483, 484 Seminar (2 credits)
GEOL 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

GEOL 487, 488 Topics (2 credits)
GEOL 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

GEOL 491, 492 Research (2 credits)
GEOL 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

GEOL 495, 496 Individual Study (2 credits)
GEOL 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

German (GERM)

See Modern and Classical Languages

Greek (GREK)

See Modern and Classical Languages

Health and Human Performance

College of Arts and Sciences
Department of Health and Human Performance
Sauter (COMM), (interim chair); Carey, Derry, Duoos, Grochowski, Hodgson, Mathre, Pham, Roney, Sinn, Skrypek, Stenzel, Sweeney, Tschida

Health and Human Performance offers the following undergraduate professional programs of study:

1. a major in physical education teaching which leads to licensure at the elementary, middle, and secondary levels. Students graduating with a major in physical education will be able to effectively make application of the skills required for conducting the teaching-learning process in an extended practicum setting. They will also demonstrate the skill and knowledge to evaluate the teaching-learning process, the analysis of motor performance, and an assessment of theory to interface it with practice.
2. a major in health education teaching, which leads to licensure at the middle and secondary school levels. Students graduating with a major in health education will be able to effectively apply the knowledge and skills required for conducting the teaching-learning process in health education.
3. a major in community health education, which prepares the student for work in community health. Students graduating with a major in community health education will be able to effectively apply the knowledge and skills required in community health education settings.
4. a major in health promotion which prepares the student for work as a fitness specialist outside the school setting. Students graduating with a major in health promotion will have had experience at a work site. They will demonstrate the skill and knowledge expected of the entry-level exercise science professional in the areas of fitness evaluation, exercise prescription, and delivery of exercise programs to normal and special populations. They will effectively assess theory and interface it with practice.
5. a major in health promotion science which prepares the student for entrance into a doctor of physical therapy program or other related medical field. A student graduating with a major in health promotion science will be trained on highly sophisticated assessment equipment and gain real-world experience outside the classroom.
6. a non-teaching major in health education or physical education prepares students who have career objectives that include completing teaching licensure in graduate school or at other licensing organizations.
7. a minor in community health education provides student with basic community health education concepts and skills that complement the student's major.

The department also offers a course to fulfill the Health and Fitness competency of the core curriculum.

Major in Community Health Education

HLTH 345 Nutrition for Health and Fitness (4 credits)
HLTH 350 Personal Health and Wellness (4 credits)
HLTH 353 Consumer, Community and Environmental Health (4 credits)
HLTH 375 Lifelong Stress Management (2 credits)
HLTH 400 Epidemiology (4 credits)
HLTH 441 Community Health Education: Curriculum, Assessments, and Administration (4 credits)
HLTH 451 Community Health Education: Methods, Resources, and Partnerships (4 credits)
HLTH 462 Human Sexuality Education (4 credits)
HLTH 464 Critical Issues in Health Education (4 credits)

Plus one of the following:
HLTH 470 Health Internship I (2 credits)
HLTH 471 Health Internship II extended (4 credits)

Allied requirements
Four credits from the following:
BIOL 101 General Biology (4 credits)
BIOL 105 Human Biology (4 credits)

Plus four credits from the following:
BIOL 251C Human Anatomy and Physiology I (CSC) (4 credits)
PHED 410 Human Anatomy and Physiology (4 credits)

Plus four credits from the following:
PSYC 111 General Psychology (4 credits)
SOCI 100 Introduction to Sociology (4 credits)

Plus four credits from the following:
CHEM 100 Chemistry in our World (4 credits)
CHEM 101 Environmental Chemistry (4 credits)
CHEM 111 General Chemistry (4 credits)

Plus four credits from the following:
COMM 100 Public Speaking (4 credits)
COMM 105 Communication in the Workplace (4 credits)

Recommended:
PSYC 200 Psychology of Infancy and Childhood (4 credits)
PSYC 203 Psychology of Adolescence (4 credits)
PSYC 204 Psychology of Adulthood and Aging (4 credits)

Major in Health Education 5-12
Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
Block III
EDUC 355 Reading for the 5-12 Teacher (4 credits)
EDUC 369 Field Experience: Primary Level (K-4) (0 credit)
HLTH 440[1] Health Education : 5-12 Curriculum Assessment and Administration (4 credits)
HLTH 450[1] Health Education: 5-12 Methods, Resources and Partnerships (4 credits)
[1]*Note:* These courses substitute for EDUC 381 and 382
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus:
HLTH 345 Nutrition for Health and Fitness (4 credits)
HLTH 350 Personal Health and Wellness (4 credits)
HLTH 353 Consumer, Community and Environmental Health (4 credits)
HLTH 375 Lifelong Stress Management (2 credits)
HLTH 400 Epidemiology (4 credits)
HLTH 462 Human Sexuality Education (4 credits)
HLTH 464 Critical Issues in Health Education (4 credits)
American Red Cross Certification in First Aid/CPR/AED

Plus four credits from the following:
BIOL 101 General Biology (4 credits)
BIOL 105 Human Biology (4 credits)

Plus four credits from the following:
BIOL 251C Human Anatomy and Physiology I (CSC) (4 credits)
PHED 410 Human Anatomy and Physiology (4 credits)

Plus four credits from the following:
CHEM 100 Chemistry in our World (4 credits)
CHEM 101 Environmental Chemistry (4 credits)
CHEM 111 General Chemistry (4 credits)

Plus four credits from the following:
COMM 100 Public Speaking (4 credits)
COMM 105 Communication in the Workplace (4 credits)

Plus four credits from the following:
PSYC 111 General Psychology (4 credits)
SOCI 100 Introduction to Sociology (4 credits)

Recommended:
PSYC 200 Psychology of Infancy and Childhood (4 credits)
PSYC 203 Psychology of Adolescence (4 credits)

Plus:
Demonstrated competence on all required state standards

Major in Health Promotion (B.S.)
HLTH 345 Nutrition for Health and Wellness (4 credits)
HLTH 350 Personal Health and Wellness (4 credits)
HLTH 375 Lifelong Stress Management (2 credits)
PHED 113 Introduction to Health Promotion (2 credits)
PHED 205 Principles of Strength Training (2 credits)
PHED 206 Principles of Aerobic Training (2 credits)

PHED 250[1] Emergency Care (First Responder) (4 credits)
PHED 410 Human Anatomy and Physiology (4 credits)
PHED 420 Kinesiology (4 credits)
PHED 426 Biomechanics (4 credits)
PHED 430 Measurement and Evaluation (2 credits)
PHED 431 Exercise Physiology (2 credits)
PHED 432 Advanced Exercise Physiology (4 credits)
PHED 433 Exercise in Special Populations (2 credits)
PHED 449 Health Promotion Seminar (2 credits)

[1]Note: Students who complete American Red Cross Certification in First Responder, which when documentation is presented to HHP chair, course PHED 250 would be waived.

Plus one of:
PHED 450 Health Promotion Internship I (2 credits)
PHED 451 Health Promotion Internship II extended (4 credits)

Allied requirements
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)
MKTG 300 Principles of Marketing (4 credits)

Plus four credits from the following:
BIOL 101 General Biology (4 credits)
BIOL 105 Human Biology (4 credits)

Plus four credits from the following:
CHEM 100 Chemistry in our World (4 credits)
CHEM 111 General Chemistry (4 credits)

Plus four credits from the following:
COMM 100 Public Speaking (4 credits)
COMM 105 Communication in the Workplace (4 credits)

Plus four credits from the following:
ENGL 251 Writing in the Academy (4 credits)
ENGL 252 Written Nonfiction Prose (4 credits)

Note: Eighty-four credits are required outside the areas of PHED and HLTH.

Major in Health Promotion – Science Emphasis (B.S.)

This program is designed for students interested in applying to a doctor of physical therapy (DPT) program. The University of St. Thomas has a cooperative program with the College of St. Catherine in that the College of St. Catherine holds three places per year for qualified UST students. Completion of this degree also enables students to apply to other DPT schools throughout the country. Students not accepted into a DPT program will be degreed and prepared to work in the field of Health Promotion.
HLTH 345 Nutrition for Health and Fitness (4 credits)
HLTH 350 Personal Health and Wellness (4 credits)
PHED 113 Introduction to Health Promotion (2 credits)
PHED 250[1] Emergency Care (First Responder) (4 credits)
PHED 420 Kinesiology (4 credits)
PHED 426 Biomechanics (4 credits)
PHED 430 Measurement and Evaluation (2 credits)
PHED 431 Exercise Physiology (2 credits)
PHED 432 Advanced Exercise Physiology (4 credits)
PHED 433 Exercise in Special Populations (2 credits)
PHED 449 Health Promotion Seminar (2 credits)

[1]Note: Students who complete American Red Cross Certification in First Responder, which when documentation is presented to HHP chair, course PHED 250 would be waived.

Plus one of the following:
PHED 450 Health Promotion Internship I (2 credits)
PHED 451 Health Promotion Internship II extended (4 credits)

Allied requirements
BIOL 201 Diversity and Adaptation (4 credits)
BIOL 202 Genetics and Population Biology (4 credits)
BIOL 251C Human Anatomy and Physiology I (CSC) (4 credits)
BIOL 252C Human Anatomy and Physiology II (CSC) (4 credits)
CHEM 111 General Chemistry I (4 credits)

CHEM 112 General Chemistry II (4 credits)
PHYS 109 General Physics I (4 credits)
PHYS 110 General Physics II (4 credits)
PSYC 111 General Psychology (4 credits)
PSYC 301 Psychopathology (4 credits)
QMCS 220 Statistics I (4 credits)

Plus one of the following:
MATH 113 Calculus I (4 credits)
MATH 108 Calculus with Review I (4 credits) *and* MATH 109 Calculus with Review II (4 credits)

Note: Eighty four credits are required outside the areas of PHED and HLTH.

Application Procedure for St. Catherine's DPT Program
A minimum cumulative grade-point average of 3.00 for undergraduate course work is required. Completed applications for admission are due to St. Catherine no later than February 15 of the senior year.

To request an application, please contact Office of Admissions, College of St. Catherine, 2004 Randolph, St. Paul, MN 55105 or phone 651-690-6505. Applicants are informed of their status no later than April 1.

Major in Health Education – Non-Licensure

HLTH 345 Nutrition for Health and Fitness (4 credits)
HLTH 350 Personal Health and Wellness (4 credits)
HLTH 353 Consumer, Community and Environmental Health (4 credits)
HLTH 375 Lifelong Stress Management (2 credits)
HLTH 400 Epidemiology (4 credits)
HLTH 440 Health Education: Curriculum, Assessments, and Administration (4 credits)
HLTH 450 Health Education: Methods, Resources, and Partnerships (4 credits)
HLTH 462 Human Sexuality Education (4 credits)
HLTH 464 Critical Issues in Health Education (4 credits)

Allied requirements
Four credits from the following:
BIOL 101 General Biology (4 credits)
BIOL 105 Human Biology (4 credits)

Plus four credits from the following:
BIOL 251C Human Anatomy and Physiology I (CSC) (4 credits)
PHED 410 Anatomy and Physiology (4 credits)

Plus four credits from the following:
PSYC 111 General Psychology (4 credits)
SOCI 100 Introduction to Sociology (4 credits)

Plus four credits from the following:
CHEM 100 Chemistry in Our World (4 credits)
CHEM 101 Environmental Chemistry (4 credits)
CHEM 111 General Chemistry (4 credits)

Plus four credits from the following:
COMM 100 Public Speaking (4 credits)
COMM 105 Communication in the Work Place (4 credits)

Plus:
American Red Cross Instructor Certifications: First Aid, CPR/AED

Major in Physical Education (K-12)

Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
Block III
EDUC 355 Reading for the 5-12 Teacher (4 credits)
EDUC 369 Field Experience: Primary Level (K-4) (0 credit)
PHED 204[1] Physical Education Methods for Elementary School (4 credits)
PHED 304[1] Physical Education Methods for Middle School (4 credits)

PHED 404[1] Physical Education Methods for Secondary School (4 credits)
PHED 405[1,2] Physical Education Methods for Teaching Aquatics/First Aid/CPR/AED (4 credits)
[1]*Note:* These courses substitute for EDUC 381 and 382
[2]Students may complete American Red Cross Certifications in Water Safety Instruction and Basic First Aid/CPR/AED, which when documentation is presented to HHP chair course PHED 405 would be waived.
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus:
HLTH 350 Personal Health and Wellness (4 credits)
PHED 104 Physical Education Curriculum, Instruction, and Assessment (4 credits)
PHED 215 Rhythms and Dance (2 credits)
PHED 311 Motor Development (2 credits)
PHED 351 Teaching of the Special Needs Student (2 credits)
PHED 410 Human Anatomy and Physiology (4 credits)
PHED 420 Kinesiology (4 credits)
PHED 431 Exercise Physiology (2 credits)
PSYC 111 General Psychology (4 credits)

Plus four credits from the following:
BIOL 101 General Biology (4 credits)
BIOL 105 Human Biology (4 credits)

Recommended Courses:
SOCI 100 Introduction to Sociology (4 credits)
COMM 100 Public Speaking (4 credits)

Plus:
Demonstrated competence on all required state standards
Attendance at one professional conference

Major in Physical Education - Non-Licensure

HLTH 350 Personal Health and Wellness (4 credits)
PHED 104 Physical Education: Curriculum, Instruction, and Assessment (4 credits)
PHED 204 Physical Education: Methods for Elementary (4 credits)
PHED 215 Rhythms & Dance (2 credits)
PHED 304 Physical Education: Methods for Middle School (4 credits)
PHED 311 Motor Development (2 credits)
PHED 351 Teaching Special Needs Students (2 credits)
PHED 404 Physical Education: Methods for Secondary (4 credits)
PHED 405[1] Methods for Teaching WSI and First Aid/CPR/AED (4 credits)
PHED 410 Human Anatomy and Physiology (4 credits)
PHED 420 Kinesiology (4 credits)
PHED 431 Exercise Physiology (2 credits)
[1]Students may complete American Red Cross Certifications in Water Safety Instruction and Basic First Aid/CPR/AED, which when documentation is presented to HHP chair course PHED 405 would be waived.

Allied Course Requirements:
PSYC 111 General Psychology (4 credits)

Plus four credits from the following:
BIOL 105 Human Biology (4 credits)
BIOL 101 General Biology (4 credits)

Recommended Courses:
SOCI 100 Introduction to Sociology (4 credits)
COMM 100 Public Speaking (4 credits)

Minor in Community Health Education

HLTH 350 Personal Health and Wellness (4 credits)
HLTH 353 Consumer, Community and Environmental Health (4 credits)
HLTH 441 Community Health Education: Curriculum, Assessments, and Administration (4 credits)
HLTH 451 Community Health Education: Methods, Resources, and Partnerships (4 credits)
HLTH 470 Health Internship I (2 credits)

Plus four credits from the following:
HLTH 345 Nutrition (4 credits)
HLTH 462 Human Sexuality (4 credits)

Physical Education Courses (PHED)

PHED 100 Foundations for Fitness (0 credit)
The primary purpose of this course is to provide the student with the knowledge and skills necessary to become a physically educated person; that is, one who is able to design and maintain a lifestyle of fitness. This course seeks to improve the student's knowledge and understanding of the role of physical activity, how it contributes to one's lifelong health and how to develop a personal fitness program that will enable the student to effectively integrate physical activity into her or his lifestyle. Students will have an opportunity to participate in moderate to intense physical activity (e.g. walking, running, aerobics, and strength training). The course includes mini presentations and discussions reflecting the principles and dynamics of fitness. This course fulfills the fitness requirement in the core curriculum. Military veterans will be waived from PHED 100 by submitting a copy of their Form 214 discharge paper and UST student ID number to the HHP chair.

PHED 104 Physical Education Curriculum, Instruction, and Assessment (K-12) (4 credits)
Students will examine a variety of curriculum models and look at teaching as a goal-oriented activity, study criteria for learning experiences and the instructional process. Factors that influence learning, designing learning experiences, task presentation, content analysis and development will be experienced. Teaching strategies, teacher responsibilities, student motivation, and establishing goals and objectives for learning will be addressed. Evaluation and assessment of cognitive, psychomotor and affective effects in physical education will be studied. Students will learn how to use the AAHPERD Fitnessgram computer program.

PHED 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. The student will have the opportunity to listen to and interact with employees in the field explain what they do, skills and competencies needed, and job marketability. The student will also work in small groups to design and implement a health promotion program.

PHED 204 Physical Education Methods for Elementary Level (4 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 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. Successful completion of a clinical site teaching experience at the elementary level is required.

PHED 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.

PHED 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 testing and training programs for a variety of clients.

PHED 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. Students learn to write lesson plans, teach and assess rhythmic activities and dance.

PHED 250 Emergency Care (4 credits)
This course is designed to develop the emergency-care skills and understanding currently considered to be within the scope of a first responder. This course consists of classroom, laboratory and internship experience. Upon satisfactory completion of this course, students will be first responder certified.
*Note: Students who complete American Red Cross Certification in First Responder, which when documentation is presented to HHP chair, course PHED 250 would be waived.

PHED 295, 296 Topics (2 credits)
PHED 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

PHED 304 Physical Education Methods for Middle School (4 credits)
Orientation to the physical education profession pertaining to current trends and research in middle school physical education. Factors affecting adolescent and multicultural students in physical education will be discussed and analyzed. Appropriate and effective teaching methods utilizing the Tactical Approach to Teaching Games will be introduced and practiced through peer and clinical site teaching experience. Successful completion of a clinical site teaching experience at the middle school level is required.

PHED 311 Motor Development (2 credits)
This course provides an overview of the principles of human growth, motor development and motor learning. Fundamental movement abilities, perceptual motor development and developmental physical activity will be studied in depth.

PHED 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.

PHED 404 Physical Education Methods for Secondary Level (4 credits)
Current trends, research, and teaching methods specific to the secondary physical education environment will be identified. Appropriate and effective teaching methods/strategies/curricular choices will be discussed utilizing the Sport Education Model and the Tactical Approach to Teaching Games. Successful completion of a clinical site teaching experience at the middle and/or secondary level is required.

PHED 405 Physical Education Methods for Teaching Aquatics/First Aid (4 credits)
Learners will study the biomechanics of swimming, techniques for teaching and analyzing appropriate skill performance for the six strokes, long shallow dive, and standing dive. In addition water safety and victim assistance are addressed. Successful completion of this course will provide the learner with an American Red Cross Water Safety Instructor certification, in addition to one of the following: 1) a current American Red Cross Health and American Red Cross CPR certification, 2) an Instructor Candidate Training Certificate (Cert. 3007), issued within one year, 3) Successfully pass the pre-course written test and skills test. The written test and Skills 1-5 in the skills test are based on a proficiency level equal to the American Red Cross Community Water Safety course. Skills 6-10 in the skills test are based on a proficiency level equal to Level VI of the American Red Cross Learn-to-Swim program. Prospective candidates who hold current certification in Lifeguard Training will exceed the requirements for taking the safety skills pretest. However, all candidates must undergo pretesting.
*Note: Students who complete American Red Cross Certifications in Water Safety Instruction and Basic First Aid/CPR/AED, which when documentation is presented to HHP chair, course PHED 405 would be waived.

PHED 410 Human Anatomy and Physiology (4 credits)
This course is designed to meet the needs of students requiring fundamental knowledge of the structure and function of the human body. The human skeleton, bones, articulations and the muscular system will be examined in regards to human movement. The functions of the cardiovascular, respiratory, nervous, muscular and metabolic systems will be studied.

PHED 420 Kinesiology (4 credits)
Structure and function of the human skeletal and muscular systems with respect to movement will be examined. Neuromuscular aspects of movement, forces, torque, balance and stability are studied with applications to sport, physical activity and activities of daily living. Observing and analyzing skill performance are experienced.
Prerequisites: PHED 410 or BIOL 251C

PHED 426 Biomechanics (4 credits)
Principles of human movement with applications to sport, activity and activities of daily living are studied through hands-on experiences. Torque, angular momentum, projectiles, fluid forces, aerodynamics, hydrodynamics and throw-like and push-like movement patterns are examined. Research techniques will be covered and students will have the opportunity to design and conduct research in sports biomechanics.
Prerequisite: PHED 420 and PHED 430

PHED 430 Measurement and Evaluation (2 credits)
The primary objective of this course is to prepare the student to design, measure and evaluate original research. Topics include study design, descriptive statistics, frequency distribution, percentile ranks, correlation, z-scores, t-scores, and measurement error. This course prepares the student to conduct his/her original research for PHED 449.

PHED 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. The student will gain an understanding of the acute and chronic long-term adaptation of the cardiovascular, respiratory, nervous, muscular and metabolic systems of the body. In addition, they will gain hands-on experience in testing and measurement in an exercise physiology laboratory.
Prerequisite: PHED 410 or BIOL 251C

PHED 432 Advanced Exercise Physiology (4 credits)
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.
Prerequisites: PHED 410 and PHED 431, or BIOL 251C

PHED 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

PHED 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. The student will work individually in developing, conducting, and evaluating original research. This research will be presented to the department at the end of the course. The student must also choose one of a number of options to advance their career and/or to improve their marketability in the field.
Prerequisite: Junior standing and PHED 420, 426, 430, 431 and HLTH 345, 350

PHED 450 Health Promotion Internship I (2 credits)
This course is one of two courses that meets the internship requirement for majors in the Health Promotion and Health Promotion Science programs. The internship experience provides majors with direct observation in clinic or agency settings so as to better prepare them for careers in health promotion. The required 100 observational hours also fulfills a requirement for application to graduate clinical programs (e.g., physical therapy, chiropractic school, physician assistant school) for the Health Promotion Science majors. For those majors who desire an extended internship experience, PHED 451 serves as an alternative.
Prerequisite: Permission of department chair

PHED 451 Health Promotion Internship II extended (4 credits)
This course is one of two courses that meet the internship requirement for majors in the Health Promotion and Health Promotion Science programs. This internship experience provides majors with direct observation in clinic or agency settings so as to better prepare them for careers in health promotion. The required 200 observational hours also fulfills a current 100 hour requirement for application to graduate clinical programs (e.g., physical therapy, chiropractic school, physician assistant school) for the Health Promotion Science majors. This course serves as an alternative for students who wish an extended internship experience.
Prerequisite: Permission of department chair

PHED 475, 476 Experiential Learning (2 credits)
PHED 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

PHED 483, 484 Seminar (2 credits)
PHED 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

PHED 487, 488 Topics (2 credits)
PHED 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

PHED 491, 492 Research (2 credits)
PHED 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

PHED 495, 496 Individual Study (2 credits)
PHED 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Health Courses (HLTH)

HLTH 345 Nutrition for Health and Fitness (4 credits)
An examination of essential nutrients, energy balancing, 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.

HLTH 350 Personal Health and Wellness (4 credits)
This course 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, resiliency enhancement, disease prevention, aging, grief and loss will be addressed.

HLTH 353 Consumer, Community and Environmental Health (4 credits)
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.

HLTH 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.

HLTH 400 Epidemiology (4 credits)
Epidemiology provides an overview of the approaches used in epidemiological studies to measure the disease or health state in a population and to identify possible causes of a disease or health state. Included will be an examination of study designs, strengths and weaknesses of each. The ability to evaluate the findings from epidemiological studies will be emphasized. Learners will explore associations, correlations, between disease or health state and possible causes. The factors of bias, confounding or chance causes will be included. This course invites learners to study causality and criteria for assessing causality.
Prerequisite: a course in BIOL is recommended

HLTH 440 Health Education: 5-12 Curriculum, Assessment and Administration (4 credits)
Learners will explore effective strategies for development and evaluation of 5-12 health education curriculum with emphasis on comprehensive and coordinated school health education concepts. This exploration will include growth and developmental concerns, innovative learning theories, learner-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 quality coordinated health education programs for families, schools, and communities.

HLTH 441 Community Health Education: Curriculum, Assessment and Administration (4 credits)
Learners will explore effective strategies for development and evaluation of Community Health Education curriculum with emphasis on comprehensive and coordinated 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.

HLTH 450 Health Education: 5-12 Methods, Resources and Partnerships (4 credits)
Learners will identify, practice, and demonstrate effective methods of facilitating 5-12 health education. Off-campus observations and teaching of health lessons in middle and secondary school settings are included in the requirements. An off-campus tutorial experience with middle school or high 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 5-12 learners. This will include development of a professional telecommunications network. Learners will learn strategies for effectively using and evaluating telecommunications and interactive multimedia for 5-12 health education. Learners will also investigate and design active partnerships with parents/guardians and communities.

HLTH 451 Community Health Education: Methods, Resources and Partnerships (4 credits)
Learners will identify, practice, and demonstrate 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.

HLTH 462 Human Sexuality Education (4 credits)
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 5-12 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.
Prerequisite: Sophomore standing

HLTH 464 Critical Issues in Health Education (4 credits)
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 design, Internet research, grant writing, and computer-enhanced presentations and teaching. This course fulfills the second-level Computer Competency requirement in the core curriculum.
Prerequisites: HLTH 440/441 and 450/451 (may be taken concurrently) or permission of instructor

HLTH 470 Health Internship I (2 credits)
This is one of two internship courses that meets the internship requirement for a major or minor in Community Health Education. HLTH 470 is designed to provide the student with an opportunity to observe and when appropriate assist with a community health educational program in a medical clinic, community or public health center or agency setting. Students are required to complete 100 hours at a site that is directly involved in some aspect of the community health education field. Students will be under the direct guidance of an on-site community health supervisor.
Prerequisite: Permission of department chair

HLTH 471 Health Internship II extended (4 credits)
This is one of two internship courses that meets the internship requirement for a major or minor in Community Health Education. HLTH 471 is designed as an alternative to HLTH 470. HLTH 471 provides the student with an opportunity to extend the internship experience of observing and when appropriate assisting with a community health educational program in a medical clinic, community or public health center or agency setting. Students are required to complete 200 hours at a site that is directly involved in some aspect of the community health education field. Students will be under the direct guidance of an on-site community health supervisor.
Prerequisite: Permission of department chair

HLTH 475, 476 Experiential Learning (2 credits)
HLTH 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

HLTH 483, 484 Seminar (2 credits)
HLTH 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

HLTH 487, 488 Topics (2 credits)
HLTH 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

HLTH 491, 492 Research (2 credits)
HLTH 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

HLTH 495, 496 Individual Study (2 credits)
HLTH 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

History (HIST)

College of Arts and Sciences
Department of History
Wright (chair), Chrislock, Fitzharris, Foote, Howe, Hwa, Klejment, Mega, Schrunk, Woytanowitz

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 China, 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.

Students graduating with a major in history will have knowledge in European, American, and non-Western history. They will demonstrate a proficiency in the methods and techniques of history. They will be conversant with the content of the history of at least one non-Western culture.

As part of the student outcomes assessment program at the university, all majors in history will be required to take the major field examination.

The department also offers courses for the non-major in fulfillment of the Historical Studies component of the core curriculum.

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

Four credits from the following:
HIST 111 Origins of the Modern World to 1550 (4 credits)
HIST 112 The History of the Modern World since 1550 (4 credits)

Plus four credits from the following:
HIST 113 Early America in Global Perspective (4 credits)
HIST 114 The Modern U.S. in Global Perspective (4 credits)
(no more than one additional 100-level course may be applied to major)

Plus one thematic course from:
HIST 326 English Law and Government Before the American Revolution (4 credits)
HIST 345 Family and Women in Chinese History (4 credits)
HIST 360 Early American Thought and Culture (4 credits)
HIST 361 American Thought and Culture Since the Civil War (4 credits)
HIST 365 U.S. Constitutional History (4 credits)
HIST 366 The History of the Catholic Church in the United States (4 credits)
HIST 368 History of Women in the United States (4 credits)
HIST 369 African-American History (4 credits)
HIST 371 History of U.S. Foreign Policy (4 credits)
HIST 373 Origins of War: 1850 to 1945 (4 credits)
HIST 382 Careers in History (4 credits)
HIST 384 Uses of History: Decision-Making (4 credits)
HIST 391 Development of Industrial Economies (4 credits)

Plus one limited period course from:
HIST 314 Modern Europe since 1945 (4 credits)
HIST 328 The French Revolution and Napoleonic Era (4 credits)
HIST 333 Eastern Europe, 1914 to the Present (4 credits)
HIST 353 History of the American Revolution (4 credits)
HIST 355 The Civil War Era (4 credits)
HIST 358 Twentieth-Century United States (4 credits)
HIST 372 The United States and Vietnam (4 credits)

Plus four credits from the following:
HIST 463 Seminar in European History (4 credits)
HIST 464 Seminar in Non-Western History (4 credits)
HIST 465 Seminar in U.S. History (4 credits)

Plus:
Twenty-four credits in history chosen in consultation with student's major adviser

Teacher Licensure

Elementary Education with a Specialty in Social Studies (5-8)
Co-major in Social Studies (5-12) and a Co-major in Secondary Education
See Education

Minor in History

Twenty credits in history, no more than eight of which may be at the HIST 100-level and four of which must be a HIST 400-level seminar (HIST 463 or 465). Selection of the specific courses to fulfill the requirements should be done in consultation with a member of the department faculty.

HIST 111 Origins of the Modern World to 1550 (4 credits)
This course examines significant political, social, economic, religious and cultural developments of ancient Near East, ancient India, Greco-Roman civilizations, ancient and medieval China, ancient Japan, Islamic civilization, ancient African and American societies, and Medieval and Renaissance Europe. As beliefs and social-political concepts and practices of various civilizations formulated and developed during this period still heavily influence our modern world, this course provides a foundation to our understanding of the highly interdependent and interrelated contemporary world. This course fulfills the Historical Studies requirement in the core curriculum.

HIST 112 The History of the Modern World since 1550 (4 credits)
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. This course fulfills the Historical Studies requirement in the core curriculum.

HIST 113 Early America in Global Perspective (4 credits)
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. This course fulfills the Historical Studies requirement in the core curriculum.

HIST 114 The Modern U.S. in Global Perspective (4 credits)
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 racial minorities, ethnic groups, and immigrants 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 selected contemporary issues. This course fulfills the Historical Studies requirement in the core curriculum.

HIST 115 The World Since 1900 (4 credits)
This course is an introduction to the history of the world since 1900. Rather than surveying the history of the world's regions in turn the instructor focuses on the historical processes which led in the 20th century to the emergence of an interdependent world. Initially a background is provided on the establishment of Europe's world hegemony in the years leading up to World War I. The class examines the character of the international order in Europe, Asia, and Africa, and discusses the internal conflicts which beset European civilization in the years between the wars. In particular, the instructor emphasizes the rise of Communism and Fascism, and the world economic crisis of the 1930s which pushed Europe and Asia toward World War II. The class analyzes the character of the world order that emerged after 1945. Following an examination of the origins of the Cold War between the United States and the Soviet Union, the class looks at the problems of some of the nations newly emerging from colonial domination. Finally, we discuss the role of religion and international politics in one major world region: the Middle East. This course fulfills the Historical Studies requirement in the core curriculum.

HIST 210 Modern Latin America, 1800 to the Present (4 credits)
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.

HIST 220 Introduction to Japanese History and Culture (4 credits)
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; World War II and postwar occupation; and a look at contemporary Japan. This course fulfills the Human Diversity requirement in the core curriculum.

HIST 230 Canadian History (4 credits)
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.

HIST 295, 296 Topics (2 credits)
HIST 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

HIST 301 Egypt and the Near East, 8000 B.C. to A.D. 750 (4 credits)
A historical, comparative survey of the origins and diversity of human societies in northeastern Africa (Egypt, Nubia) and western Asia (Anatolia, Levant, Mesopotamia, Arabia, Persia), from the earliest organized political and religious communities to the Arab conquest. Historical processes of special emphasis will include: transition to agriculture; urbanization; state and empire building; emergence of major religious traditions; migrations and cultural crosscurrents. Topics will be explored taking into account the latest textual and archaeological evidence. The course should provide historical understanding of the current ethnic, linguistic, and religious diversity in the region.

HIST 302 The Ancient Greek World (4 credits)
This course is a study of ancient Greek social structures, political processes, culture, beliefs, and moral values, from the Mycenaean society in the Bronze Age to the Hellenistic world of Alexander's legacy. The objective is to learn about major social, political, economic, and cultural change over time in the Greek world, with regard to the wider context of the surrounding cultures. We examine textual and material evidence in order to learn about the nature, value, and explication of primary sources and about historical, archaeological and anthropological methods of inquiry and analysis. Overall, we seek to understand the historic roots of modern issues and the relevance of past experiences, while keeping abreast of recent research and current scholarly debate.

HIST 304 History of the Roman World (4 credits)
From Britain to Africa and from Spain to Iran, the Roman Empire seemingly united diverse peoples and cultures. All roads led to Rome, the City - Urbs, a cosmopolitan and overcrowded metropolis. In this course we study written records and material remains from the beginnings of Rome in the eight century BCE to the late Empire in the fourth century of our era. We follow political, social, economic, and cultural changes over time, examining a variety of evidence and voices and keeping abreast of current problematic areas and scholarly debate. The Roman material is supplemented with comparative evidence from non-Roman societies within and bordering the Empire, as we account for the relevance of past experiences to our current issues.

HIST 306 The World of Late Antiquity: A.D. 284-641 (4 credits)
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.

HIST 307 The Church in the Roman Empire to A.D. 395 (4 credits)
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.

HIST 310 The Making of Europe: Middle Ages to 1000 (4 credits)
Origins of the middles ages: the late Roman Empire; Germanic migrations and settlements; the Frankish Dynasties of the Merovingians and Carolingians; Anglo-Saxon England; development of the early Medieval Papacy and Western Church. Recovery of Byzantine Empire; Islamic World under Umayyad and Abbasid Caliphates.

HIST 311 The Dawn of a New Era: Europe from 1000 to 1450 (4 credits)
Rebirth of Europe in the high and late Middle Ages: the Feudal Revolution; the world of knights and chivalry; the emergence of Western Monarchies; the Crusades; the Renaissance of the 12th Century; the rise of Medieval Christendom in the 13th century: papacy; mendicant orders; universities; heresy; Inquisition. Political and economic crises of the 14th century. Ecclesiastical crises of the later middle ages. Recovery and renaissance in the 15th century.

HIST 312 Early Modern Europe: 1450-1750 (4 credits)
Political, religious, and cultural development of the early modern Europe: Late Renaissance; Religious Reformations; Age of Discovery and the rise of the Atlantic Economy; State building in Early Modern Europe; the New Science.

HIST 313 Europe 1750 to 1945 (4 credits)
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.

HIST 314 Modern Europe since 1945 (4 credits)
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.

HIST 322 Tudor and Stuart Britain (4 credits)
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.

HIST 323 A Survey of Irish History: Celtic Ireland to 1972 (4 credits)
As a survey of Irish History, the course covers early Irish history and society, the Viking and Norman invasions, and special attention is given to the early modern period and the origins of Ulster during the Tudor-Stuart Period in English History. In the 18th century the origins of Irish nationalism and the Rising of 1798 is highlighted. In the 19th century the course covers Catholic Emancipation, the Great Famine and emigration and the movement for Home Rule. Twentieth century Ireland includes the creation of the Irish Free State and the history of contemporary Ireland to the present.

HIST 324 Britain Since 1688 (4 credits)
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.

HIST 326 English Law and Government Before the American Revolution (4 credits)
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.

HIST 328 The French Revolution and Napoleonic Era (4 credits)
A background in the ancient 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.

HIST 331 Eastern Europe, 1699-1914 (4 credits)
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.

HIST 333 Eastern Europe, 1914 to the Present (4 credits)
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.

HIST 340 Foundations of Chinese Civilization (4 credits)
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. This course fulfills the Human Diversity requirement in the core curriculum.

HIST 341 The History of Modern China (4 credits)
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. This course fulfills the Human Diversity requirement in the core curriculum.

HIST 345 Family and Women in Chinese History (4 credits)
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. This course fulfills the Human Diversity requirement in the core curriculum.

HIST 352 American Colonial History (4 credits)
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.

HIST 353 History of the American Revolution (4 credits)
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.

HIST 355 The Civil War Era (4 credits)
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.

HIST 358 Twentieth-Century United States (4 credits)
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.

HIST 360 Early American Thought and Culture (4 credits)
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.

HIST 361 American Thought and Culture Since the Civil War (4 credits)
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.

HIST 365 U.S. Constitutional History (4 credits)
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.

HIST 366 The History of the Catholic Church in the United States (4 credits)
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.

HIST 368 History of Women in the United States (4 credits)
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.

HIST 369 African-American History (4 credits)
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.

HIST 371 History of U.S. Foreign Policy (4 credits)
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.

HIST 372 The United States and Vietnam (4 credits)
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.

HIST 373 Origins of War: 1850 to 1945 (4 credits)
The theme of the course is international relations, 1850-1945: the Crimean War, the unifications of Italy and Germany, the Peace of Paris—with emphasis on the origins of World War I, the war, and the Inter-war period and

the origins of World War II. Any exploration of the origins of war must keep in mind several important factors. Power lies at the heart of nearly every explanation of why nations go to war. The influence of powerful leaders, their aims, policies, and decisions are crucial to any discussion of the origins of war. A harsh or lenient peace treaty is a further factor which can promote peace or encourage war. There is a clear link between a breakdown of diplomacy and the outbreak of war. Yet the most crucial factor in promoting war or peace is the prevailing balance of power between nations.

HIST 374 World War II (4 credits)
The Second World War was a cataclysmic event involving nearly every nation and affecting all nations and peoples. Some of the grandest heroics and greatest evils mark the era. The course starts in 1919 with the Paris Peace Conference and ends in the early years of occupation in Germany and Japan. The rise of militaristic and fascistic or Nazi regimes, the origins and development of the "Holocaust," the causes of war in Asia (1937) and Europe, the engagement of America, global logistics, a coalition of Allies, and the use of atomic bombs are key components.

HIST 376 Minnesota History (4 credits)
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.

HIST 377 The History of the Twin Cities (4 credits)
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.

HIST 382 Careers in History (4 credits)
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.

HIST 384 Uses of History: Decision-Making (4 credits)
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.

HIST 386 Historical Archaeology (4 credits)
The course offers an understanding of archaeological theories, methods, and interpretations in discovering, reconstructing, and understanding past societies in Africa, the Americas, Asia, Australia, and Europe. Archaeology primarily deals with material remains of societies and time periods that lack written documents. Historical archaeology combines the methods of archaeology with analysis of written and oral sources. Together, archaeology and history provide a critical reappraisal of historical events and cultural change around the world.

HIST 391 Development of Industrial Economies (4 credits)
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.

HIST 398 History Internships (4 credits)
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.

HIST 463 Seminar in European History (4 credits)
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.

HIST 464 Seminar in Non-Western History (4 credits)
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.

HIST 465 Seminar in U.S. History (4 credits)
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.

HIST 475, 476 Experiential Learning (2 credits)
HIST 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

HIST 487, 488 Topics (2 credits)
HIST 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

HIST 491, 492 Research (2 credits)
HIST 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

HIST 495, 496 Individual Study (2 credits)
HIST 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Human Resource Management

See Business Administration

Interdisciplinary Courses (IDSC)

Cross-College Program
Michael C. Jordan, Director of Undergraduate Academic Affairs, director

IDSC 150 Development of the Natural World (4 credits)
The Mississippi River, one of the world's largest rivers, flows through the Twin Cities. It will be used as a context for course that takes an integrated, inquiry-based approach to understanding the fundamentals of the scientific disciplines of astronomy, biology, chemistry, geology and physics. The course will be designed to address the content and skills required by the state for middle school and elementary science teachers, and will model an inquiry based pedagogy.

IDSC 180 English as a Second Language I (4 credits)
Special and individual attention to speaking, writing, reading, listening and study skills. For students whose native language is not English. Offered in fall semester.

IDSC 181 English as a Second Language II (4 credits)
Continuation of IDSC 180. Offered in spring semester.
Prerequisite: IDSC 180 or permission of instructor

IDSC 281 Topics in American Culture (4 credits)
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.

IDSC 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

IDSC 287 The German Cultural Heritage (4 credits)
An historic survey of German cultural development from the beginnings in antiquity through the present. Attention is given to significant events in the history of Germany, Austria, Switzerland and Liechtenstein and the development of historic events into the living German culture of today. Events and significant achievements in the areas of politics, music, literature, science, philosophy and theology are examined. The course is usually offered online with no classroom meetings.

IDSC 291 The Anatomy of Violence (4 credits)
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. This course fulfills the Human Diversity requirement in the core curriculum.

IDSC 293 Grief, Loss and Coping (4 credits)
This courses focuses on understanding loss and grief in the human experience. Emphasis is given to recognizing loss in various forms and to understand grief from different perspectives. Content includes theory from psychology, sociology, social work, and medicine/nursing along with materials from literature, lay persons and a spectrum of multicultural influences. Skills are taught for coping with personal loss and for relating in helpful ways to others who are experiencing grief. Special topics related to death and dying in our society including trauma, suicide, child loss and chronic illness are covered. A variety of teaching methods will engage learners to better understand the many influences on grief, loss and coping.

IDSC 295, 296 Topics (2 credits)
IDSC 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

IDSC 310 Washington Semester (16 credits)
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 the following: American Politics; Economic Policy; Education Policy and Special Education; Foreign Policy; International Business and Trade; International Environment and Development; Journalism; Justice; Peace and Conflict Resolution; Public Law; Transforming Communities; Visual and Performing Arts. 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.

IDSC 312 Gender and Science (4 credits)
This course examines women's participation in science currently and historically. Students will examine the contributions of women scientists and explore the question: Do women do science differently from men? The course explores the way science is used to study questions related to gender. In this course students will study the ways that scientific work has, at time, been a tool for challenging cultural stereotypes and biases. This course fulfills the Human Diversity requirement in the core curriculum.

IDSC 313 A Vision of Community Action and Change in Guatemala (4 credits)
The majority of this course will occur among the Mayan people of the Guatemalan highlands. Students will study the politics, history, cultures and economy of Guatemala as a case study on some of the major issues facing many Third World countries at the beginning of the 21st century. Particular attention will be given to topics such as Guatemala's struggles over ethnic and national identity, its place in the global economy, its peace process, and the role of the church. Speakers, readings, and field trips will allow students to compare alternative models of social change and human development in the region. Complementing academic engagement with these issues, students will engage in practical service-learning activities that relate to the goals of the course. The class will also follow the VISION Program's six-point philosophy.
Prerequisite: Permission of the instructor

IDSC 320 Seminar in the Human Side of Medicine: Patient and Physician (2 credits)
This course will concentrate on learning about how patients, their families, and professionals who care for them experience illness; how stories patients tell become the basis for diagnosis and therapeutic action; what it's like to be a physician; and the therapeutic relationship. Didactic presentations, interactive discussion using stories from patients', students' and the instructor's experience, and related literature will provide the content of the course. Others, including faculty members, professional colleagues, and patients will help provide material for the course work and participate in the discussions.
Prerequisite: Sophomore, junior or senior student interested in a career in medicine or related health profession

IDSC 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.

IDSC 333 Renaissance Program Studies (4 credits)
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.

IDSC 340 Criminal Law and the Social Order (4 credits)
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.

IDSC 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 crises; 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

IDSC 466 City Arts: Reading Seminar (Creating Social Change: Art and Culture in Political, Social, and Historical Context) (HECUA) (4 credits)
Students critically examine the notion of dominant culture and the purposes of art and popular culture. They identify ways in which the arts and popular culture impact urban social issues and create social change. Students gain the tools to become critical analysts as both consumers and producers of art and popular culture.

IDSC 467 City Arts: Field Seminar (Arts Praxis: Social Justice Theory and Practice in the Field) (HECUA) (4 credits)
In the field seminar, students "test" theoretical perspectives by meeting with artists, policy makers, and community activists, as well as attending and participating in art and cultural activities. Students observe how art and popular culture maintain or change social structures.

IDSC 468 City Arts: Internship (HECUA) (4 credits)
Each student works in a half-time internship, with a wide variety of placements available, including arts organizations, artistic groups, and community organizations using the arts in programs and service.

IDSC 469 City Arts: Internship Seminar (HECUA) (4 credits)
Students reflect on their internship experience with other students in the program and connect their real-life experience with the learning taking place in the reading and field seminars.

IDSC 471 MUST Seminar: Research on Urban Issues (HECUA) (4 credits)
MUST focuses on issues of poverty and inequality and ways to address these critical issues. Students explore key institutions that impact urban poverty and inequality, namely the economy, education and welfare. The role of urban sprawl, segregation and racial, class and gender discrimination are also analyzed. Students examine an array of strategies to rebuild the city more equitably.

IDSC 472 MUST Seminar: Field Studies in the Twin Cities (HECUA) (4 credits)
Students meet with a wide variety of community leaders, educators, urban planners, corporate executives and others as a way to connect the theories studied with actual practice in the field.

IDSC 473 MUST: Urban Studies Internship (HECUA) (4 credits)
Each student works in a half-time internship, with a wide variety of placements available, including public, private and community non-profit organizations working on urban issues.

IDSC 474 MUST: Urban Studies Internship Seminar (HECUA) (4 credits)
Students reflect on their internship experience with other students in the program and connect their real-life experience with the learning taking place in the reading and field seminars.

IDSC 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 is offered in January term and the first summer session. May be repeated for a maximum total of 4 credits.

IDSC 475, 476 Experiential Learning (2 credits)
IDSC 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

IDSC 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.)

IDSC 481 Seminar in International Studies (4 credits)
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 feature guest lecturers in political science, economics and history.

IDSC 483, 484 Seminar (2 credits)
IDSC 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

IDSC 487, 488 Topics (2 credits)
IDSC 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

IDSC 491, 492 Research (2 credits)
IDSC 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

IDSC 495, 496 Individual Study (2 credits)
IDSC 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

International Studies

College of Arts and Sciences
Interdisciplinary Program
Papagapitos (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.

Students graduating with a major in international studies should have adequate preparation for their professional lives, and the capacity for intellectually stimulating lives. They will be capable of critical thought and writing in the discipline. They will have pursued opportunities for broader governmental and international experience, and should be well-prepared to undertake post-baccalaureate studies.

Major in International Studies

ECON 251 Principles of Macroeconomics (4 credits)
GEOG 113 World Geography (4 credits)
HIST 112 The Modern World Since 1550 (4 credits)
IDSC 481 Seminar in International Studies (4 credits)
POLS 105 Politics and Government in a Comparative Perspective (4 credits)

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 Principles of Microeconomics (4 credits)
ECON 345 Economics of Development and Growth (4 credits)
ECON 346 Country and Area Studies in Economics (4 credits)
ECON 348 International Economics (4 credits)
ECON 349 Comparative Economic Systems (4 credits)

HIST 210 Modern Latin America, 1800 to the Present (4 credits)
HIST 220 Introduction to Japanese History and Culture (4 credits)
HIST 313 Europe 1750 to 1945 (4 credits)
HIST 314 Modern Europe since 1945 (4 credits)
HIST 340 Foundations of Chinese Civilization (4 credits)

HIST 341 History of Modern China (4 credits)
HIST 345 Family and Women in Chinese History (4 credits)
HIST 347 The Modernization of Taiwan, Hong Kong, and China (4 credits)
HIST 371 History of U.S. Foreign Policy (4 credits)

POLS 225 Introduction to World Politics (4 credits)
POLS 320 American Foreign Policy (4 credits)
POLS 326 International Law and Organizations (4 credits)
POLS 350 Comparative Politics of the New Europe (4 credits)
POLS 352 Third World Politics and Government (4 credits)
POLS 424 Seminar in International Politics (4 credits)
POLS 454 Seminar in Comparative Politics (4 credits)

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 205 Introduction to Accounting (4 credits)
BLAW 301 Legal Environment of Business (4 credits)
MGMT 300 Management for Non-Business Majors (4 credits)
MKTG 300 Principles of Marketing (4 credits)

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.

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.

Irish Gaelic (IRGA)

See Modern and Classical Languages

Japanese (JAPN)

See Modern and Classical Languages

Journalism and Mass Communication (JOUR)

College of Arts and Sciences
Department of Journalism and Mass Communication
Bunton (chair), Anderson, Boros, Christy, Connery, Craig, Gavrilos, Gillies, Neuzil, O'Donnell, Wyatt

The Department of Journalism & Mass Communication provides a values-oriented education that adheres to legal and ethical principles. Our aim is to teach students to think critically, to produce mass messages clearly and accurately, and to help students understand the consequences of those messages.

Our students study the principles of various mass media disciplines, and the practice and skills of written and visual communication essential for mass media professionals. Students also come to understand the role mass media play in a democracy and recognize that the mass media have a social responsibility to serve the common good because First Amendment freedoms convey corresponding obligations.

Courses in journalism and mass communication prepare students for a variety of careers in newspapers, magazines

and other publications, in public relations and advertising agencies, in television and radio stations, in electronic media organizations, and in corporate and government communication departments.

All students take four core courses and follow one of five major concentrations: Advertising, Broadcast Journalism, Media Studies, Print Journalism, or Public Relations. 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 Macintosh computer labs. In addition, students may practice their professional skills by working on the Aquin student newspaper, by joining Advertising Federation students to compete in the National Student Advertising Competition or by seeking internships with Twin Cities media organizations.

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:
JOUR 100 Mass Communication and Society (4 credits)
JOUR 105 Visual Communication (4 credits)
JOUR 110 Media Writing and Information Gathering (4 credits)
JOUR 480 Media Ethics (4 credits)

Plus:
One of the concentrations below

Allied requirements

All majors must also take a group of courses outside journalism and mass communication. This allied requirement 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 before choosing an option, students should consult with the department chair and the academic adviser.

Concentration in Print Journalism

JOUR 210 Reporting for Print Media (4 credits)
JOUR 211 Editing (4 credits)
JOUR 410 Advanced Reporting (4 credits)

Plus four credits from the following:
JOUR 220 Design Concepts of Communication (4 credits)
JOUR 225 Writing and Designing for the Web (4 credits)
JOUR 311 Persuasion in Writing (4 credits)
JOUR 370 Magazine Writing (4 credits)

Plus four credits from the following:
JOUR 301 Journalism History (4 credits)
JOUR 302 Literary Journalism (4 credits)
JOUR 304 Media Law (4 credits)
JOUR 305 Gender, Race and Mass Media (4 credits)
JOUR 402 Society, Culture and the Media (4 credits)
JOUR 404 Media Structure and Power (4 credits)

Concentration in Broadcast Journalism

COMM 160 Electronic Media Production (4 credits)
COMM 270 Videography: Television Production in the Field (4 credits)
JOUR 260 Broadcast Reporting (4 credits)
JOUR 460 Advanced Broadcast Reporting (4 credits)

Plus four credits from the following:
COMM 365 Documentary in American Culture (4 credits)
COMM 465 Current Issues in Electronic Media (4 credits)
JOUR 301 Journalism History (4 credits)
JOUR 304 Media Law (4 credits)
JOUR 305 Gender, Race and Mass Media (4 credits)
JOUR 402 Society, Culture and the Media (4 credits)
JOUR 404 Media Structure and Power (4 credits)
JOUR 410 Advanced Reporting (4 credits)

Concentration in Public Relations

JOUR 250 Public Relations Principles (4 credits)
JOUR 300 Mass Communication Research (4 credits)

JOUR 350 Public Relations Writing (4 credits)
JOUR 450 Advanced Public Relations (4 credits)

Plus four credits from the following:
JOUR 211 Editing (4 credits)
JOUR 220 Design Concepts (4 credits)
JOUR 225 Writing and Designing for the Web (4 credits)
JOUR 305 Gender, Race and Mass Media (4 credits)
JOUR 311 Persuasion in Writing (4 credits)
JOUR 402 Society, Culture and the Media (4 credits)
JOUR 404 Media Structure and Power (4 credits)

Concentration in Advertising
JOUR 240 Advertising Principles (4 credits)
JOUR 445 Advertising Campaign Strategies (4 credits)

Plus one of the following concentrations:
Creative
JOUR 340 Advertising Copywriting (4 credits)

Plus eight credits from the following:
JOUR 220 Design Concepts of Communication (4 credits)
JOUR 225 Writing and Designing for the Web (4 credits)
JOUR 420 Graphic Design Studio (4 credits)
JOUR 440 Advanced Advertising Copywriting (4 credits)

Account Services
Twelve credits from the following:
JOUR 300 Mass Communication Research (4 credits)
JOUR 340 Advertising Copywriting (4 credits)
JOUR 345 Media Planning (4 credits)
One course in Marketing

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 school or law school than in careers in the mass media.
JOUR 300 Mass Communication Research (4 credits)
JOUR 305 Gender, Race and Mass Media (4 credits)
JOUR 402 Society, Culture and the Media (4 credits)
JOUR 404 Media Structure and Power (4 credits)

Plus four credits from the following:
JOUR 301 Journalism History (4 credits)
JOUR 302 Literary Journalism (4 credits)
JOUR 304 Media Law (4 credits)

Minor in Print Journalism
JOUR 100 Mass Communication and Society (4 credits)
JOUR 110 Media Writing and Information Gathering (4 credits)
JOUR 210 Reporting for Print Media (4 credits)
JOUR 211 Editing (4 credits)
JOUR 410 Advanced Reporting (4 credits)

Minor in Broadcast Journalism
COMM 160 Electronic Media Production (4 credits)
JOUR 100 Contemporary Mass Communication (4 credits)
JOUR 110 Media Writing and Information Gathering (4 credits)
JOUR 260 Broadcast Reporting (4 credits)
JOUR 460 Advanced Broadcast Reporting (4 credits)

Minor in Public Relations
JOUR 100 Mass Communication and Society (4 credits)
JOUR 110 Media Writing and Information Gathering (4 credits)
JOUR 250 Public Relations Principles (4 credits)
JOUR 350 Public Relations Writing (4 credits)
JOUR 450 Advanced Public Relations (4 credits)

Minor in Advertising

JOUR 100 Mass Communication and Society (4 credits)
JOUR 110 Media Writing and Information Gathering (4 credits)
JOUR 240 Advertising Principles (4 credits)

Plus four credits from the following:
JOUR 220 Design Concepts of Communication (4 credits)
JOUR 340 Advertising Copywriting (4 credits)
JOUR 345 Media Planning (4 credits)

Plus four credits from the following:
JOUR 420 Graphic Design Studio (4 credits)
JOUR 440 Advanced Advertising Copywriting (4 credits)
JOUR 445 Advertising Campaign Strategies (4 credits)

Minor in Visual Communication

JOUR 100 Mass Communication and Society (4 credits)
JOUR 105 Visual Communication (4 credits)

Plus eight credits from the following:
JOUR 220 Design Concepts of Communication (4 credits)
JOUR 225 Writing and Designing for the Web (4 credits)
JOUR 230 Photojournalism (4 credits)

Plus four credits from the following:
JOUR 330 Advanced Photojournalism (4 credits)
JOUR 420 Graphic Design Studio (4 credits)

Minor in Media Studies

JOUR 100 Mass Communication and Society (4 credits)
JOUR 300 Mass Communication Research (4 credits)
JOUR 402 Society, Culture and the Media (4 credits)
JOUR 404 Media Structure and Power (4 credits)

Plus four credits from the following:
JOUR 301 Journalism History (4 credits)
JOUR 302 Literary Journalism (4 credits)
JOUR 304 Media Law (4 credits)
JOUR 305 Gender, Race and Mass Media (4 credits)
JOUR 480 Media Ethics (4 credits)

JOUR 100 Mass Communication and Society (4 credits)
Examines the nature of mass communication and the contributions of other disciplines to a knowledge of the media. Concentrates on newspapers, radio, television, magazines, and motion pictures for comparative functions and their influence on society.

JOUR 105 Visual Communication (4 credits)
Introduction to the history, theory and principles of communicating visually through art, illustration, photography, design, typography, film, video and other visual forms.
Prerequisite: JOUR 100 or permission of instructor

JOUR 110 Media Writing and Information Gathering (4 credits)
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: JOUR 100

JOUR 210 Reporting for Print Media (4 credits)
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: JOUR 110

JOUR 211 Editing (4 credits)
Preparation of copy for publication; evaluation of news; headline writing; news display, including typography; picture editing; and editing magazines.
Prerequisite: JOUR 110

JOUR 215 Journalistic Writing in the Workplace (4 credits)
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.

JOUR 220 Design Concepts of Communication (4 credits)
This course has been developed to provide students with an elementary understanding of graphic 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: JOUR 105 or permission of instructor

JOUR 225 Writing and Designing for the Web (4 credits)
This course teaches students HTML and Web-page production. The goal is to help students develop strategies for writing, editing, designing and publishing a Website that meets professional standards. This course fulfills the second-level Computer Competency requirement in the core curriculum.
Prerequisite: JOUR 105 or permission of instructor

JOUR 230 Photojournalism (4 credits)
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: JOUR 105 or permission of instructor

JOUR 240 Advertising Principles (4 credits)
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: JOUR 100 or permission of instructor

JOUR 250 Public Relations Principles (4 credits)
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: JOUR 100 or permission of instructor

JOUR 260 Broadcast Reporting (4 credits)
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: JOUR 110

JOUR 295, 296 Topics (2 credits)
JOUR 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

JOUR 300 Mass Communication Research (4 credits)
This course examines 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: JOUR 110 or permission of instructor

JOUR 301 Journalism History (4 credits)
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

JOUR 302 Literary Journalism (4 credits)
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

JOUR 304 Media Law (4 credits)
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

JOUR 305 Gender, Race and Mass Media (4 credits)
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 considers questions such as the decision-making status of women and minorities in media organizations. In examining media depictions, the course examines 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: JOUR 100 or permission of instructor

JOUR 311 Persuasion in Writing (4 credits)
Effective writing based upon principles of rhetoric. Student writing directed to the execution of editorials, advertising copy and promotion.
Prerequisites: Juniors and seniors only; JOUR 110 or permission of instructor

JOUR 316 Environmental Reporting (4 credits)
This course focuses on the gathering, writing and understanding of news about the environment. Students will examine what makes (and what has made) environmental news historically; newsgathering techniques like interviewing and researching are stressed; and an emphasis on clear, crisp writing is a given. Students also will study the effect of the mass media on the environmental movement and environmental topics. Journalistic standards of ethics and other conventions, like Associated Press style, will be expected.
Prerequisite: JOUR 110 or permission of instructor

JOUR 330 Advanced Photojournalism (4 credits)
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: JOUR 230

JOUR 340 Advertising Copywriting (4 credits)
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.
Prerequisites: JOUR 110 and 240

JOUR 345 Media Planning (4 credits)
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.
Prerequisites: JOUR 110 and 240

JOUR 350 Public Relations Writing (4 credits)
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.
Prerequisites: JOUR 110 and 250

JOUR 370 Magazine Writing (4 credits)
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.
Prerequisites: Juniors and seniors only; JOUR 110 or permission of instructor

JOUR 402 Society, Culture and the Media (4 credits)
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: JOUR 110 or permission of instructor

JOUR 404 Media Structure and Power (4 credits)
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: JOUR 110 or permission of instructor

JOUR 410 Advanced Reporting (4 credits)
Refinement of reportorial and writing skills. Advanced work in interviewing, investigating, and use of public documents. Focuses on the development of news stories. This course fulfills the second-level Computer Competency requirement in the core curriculum.
Prerequisites: JOUR 210

JOUR 420 Graphic Design Studio (4 credits)
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.
Prerequisite: JOUR 220 and permission of instructor

JOUR 440 Advanced Advertising Copywriting (4 credits)
This course is highly selective and designed for those wishing to pursue advertising copywriting as a career. It builds on JOUR 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.
Prerequisites: JOUR 340

JOUR 445 Advertising Campaign Strategies (4 credits)
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: JOUR 340 or 345 or 420 or permission of instructor

JOUR 450 Advanced Public Relations (4 credits)
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: JOUR 350

JOUR 460 Advanced Broadcast Reporting (4 credits)
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: JOUR 260

JOUR 475, 476 Experiential Learning (2 credits)
JOUR 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

JOUR 480 Media Ethics (4 credits)
This capstone seminar for graduating seniors explores ethical issues that confront media professionals and audiences. Students work from case studies to understand professional ethical standards, discuss current ethical issues in the media, work in teams to perfect oral and written ethical analysis skills, and write an individual thesis paper.
Prerequisites: graduating seniors only and permission of department chair

JOUR 483, 484 Seminar (2 credits)
JOUR 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

JOUR 487, 488 Topics (2 credits)
JOUR 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

JOUR 491, 492 Research (2 credits)
JOUR 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

JOUR 495, 496 Individual Study (2 credits)
JOUR 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Justice and Peace Studies (JPST)

College of Arts and Sciences
Interdisciplinary Program
Toffolo (POLS) (director), Nelson-Pallmeyer (JPST), King (THEO), Landry (THEO), Montero (THEO), Schlabach (THEO), Smith (THEO), Andregg, Davidov, Klein, Nairn, Palackapilly, Tousignant

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. Core courses for the major and minor, and the pattern of the program in general, make use of the four stages of the *Circle of Praxis:*

1. *Experience* (actual and vicarious) of poverty, injustice, violence and marginalization.
2. *Descriptive analysis:* Empirical study of the economic, political, social, and cultural realities of society, and the historical events that produce them.
3. *Normative analysis:* Moral judgment on existing societies; study of alternative possibilities; 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.

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 thought in the context of pluralistic world societies.

Students graduating with a major in Justice and Peace Studies will understand how the circle of praxis works, as well as the role of each of its components (see above). They will also know how to use skills associated with each component. They will know the principles of active nonviolence, how it operates to promote social change, and several historical examples of its use. Students will also learn the techniques and uses of other methods of social change and how to judge when to use each method effectively. They will be able to engage in respectful dialogue with people who value and propose responses to violence and injustice that differ widely from their own. They will understand and be able to use conflict resolution skills in personal life and small groups, and they will understand how these techniques are used in inter-group and international conflicts. They will have developed the personal skills and confidence to work effectively in organizations committed to justice and peace.

While all core courses utilize all four steps of the circle of praxis, JPST 250 concentrates on experience and descriptive analysis, and THEO 305 concentrates on normative analysis. The others concentrate on action possibilities.

JPST 250 and THEO 305 require extensive student writing and discussion. One elective course, JPST 285, typically incorporates a service-learning, action research, or inquiry-based research component that connects the classroom setting to experiences in local, domestic or global communities.

Major in Justice and Peace Studies

JPST 250 Introduction to Justice and Peace Studies (4 credits)
JPST 280 Active Nonviolence (4 credits)
JPST 470 Conflict Resolution (4 credits)
JPST 472 Justice and Peace Senior Seminar (4 credits)
THEO 305 Theologies of Justice and Peace (4 credits)

Plus a significant experience:
Appropriate experience of poverty, injustice, violence, and/or marginalization. May be done for credit through 475-478 Experiential Learning.

It may also be done on a non-credit basis (*e.g.,* in the context of another course or through volunteer activities). Possibilities include a trip taken as part of JPST 285, Campus Ministry programs, and off-campus study through programs that expose students to poverty and oppression.

Examples of appropriate off-campus study programs include those run by: HECUA (*e.g.,* conflict resolution in Northern Ireland, poverty in the Twin Cities; development in Ecuador; environment in Guatemala; immigration in Norway); Augsburg's Center for Global Education (*e.g.,* in Cuernevaca Mexico); American University's Washington Semester (*e.g.,* on homelessness); and UMAIE. Campus Ministry programs include VISION trips during January term, spring break or summer sessions (to Guatemala, Appalachia, the border of Mexico, a Native American reservation, *etc.*), and VIA programs located in the Twin Cities (*e.g.,* working at a shelter, tutoring immigrant students, Catholic Worker house, *etc.*).

Plus four additional credits in descriptive analysis
Appropriate courses include:
ACST 200 Foundations of American Cultural Studies (4 credits)
BIOL 102 Conservation Biology (4 credits)
COMM 322 Intercultural Communication (4 credits)
COMM 340 Rhetoric of Race, Class, and Gender (4 credits)
COMM 350 Modern American Rhetoric (4 credits)
ECON 211 Current Economic Issues (4 credits)
ECON 337 Economics of the Public Sector (4 credits)
ECON 339 Labor Economics (4 credits)
ECON 345 Economics of Development and Growth (4 credits)

ENTR 390 Diversity Issues in Entrepreneurship (4 credits)
ENVR 151 Humans and the Environment (4 credits)
ENVR 212 Social Dynamics and the Environment (4 credits)
GEOG 111 Human Geography (4 credits)
GEOG 113 World Geography (4 credits)
HIST 210 Modern Latin America, 1800 to the Present (4 credits)
HIST 368 History of Women in the United States (4 credits)
HIST 369 African American History (4 credits)
HIST 371 History of U.S. Foreign Policy (4 credits)
HIST 372 The United States and Vietnam (4 credits)
IDSC 462 Environmental Studies Twin Cities: Adapt Ecosystem Management (HECUA) (4 credits)
IDSC 467 City Arts: Field Seminar (HECUA) (4 credits)
IDSC 472 MUST Seminar: Field Studies in the Twin Cities (HECUA) (4 credits)
JOUR 305 Gender, Race and Mass Media (4 credits)
JOUR 402 Society, Culture and the Media (4 credits)
JOUR 404 Media Structure and Power (4 credits)
POLS 225 Introduction to World Politics (4 credits)
POLS 301 American Political Behavior (4 credits)
POLS 302 Women and Politics (4 credits)
POLS 314 Constitutional Rights and Liberties (4 credits)
POLS 326 International Law and Organizations (4 credits)
POLS 350 Comparative Politics of the New Europe (4 credits)
POLS 352 Third World Politics and Government (4 credits)
PSYC 121 Social Psychology (4 credits)
PSYC 151 Cross-Cultural Psychology (4 credits)
SOCI 110 Social Problems (4 credits)
SOCI 200 Introduction to Criminal Justice (4 credits)
SOCI 251 Race and Ethnicity (4 credits)
SOCI 254 Gender in Global Perspective (4 credits)
SOCI 301 Cultural Anthropology (4 credits)
SOCI 350 Social Inequality: Privilege & Power (4 credits)
SOCI 351 Immigration, Fear and Hate (4 credits)
SOCI 331 Cross-Cultural Perspectives on Religion (4 credits)
SOCI 365 Social Psychology (4 credits)
SOWK 340 Human Behavior and the Social Environment (4 credits)

Plus four additional credits in normative analysis
Appropriate courses include:
BLAW 303 International Business Law (4 credits)
BLAW 351 Environmental Law (4 credits)
BLAW 352 Gender Issues and the Law (4 credits)
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)
CATH 312 Catholic Social Thought (4 credits)
COMM 240 Persuasion (4 credits)
COMM 250 Argumentation and Advocacy (4 credits)
ENGL 217 Multicultural Literature (4 credits)
ENGL 218 Literature by Women: Critical History (4 credits)
ENGL 337 The Literature of Human Diversity (4 credits)
ENGL 341 Literature by Women: Critical Questions (4 credits)
ENVR 301 Environmental Ethics (4 credits)
IDSC 291 The Anatomy of Violence (4 credits)
IDSC 461 Environmental Studies Twin Cities: Social Dimensions of Environmental Change (HECUA) (4 credits)
IDSC 466 City Arts: Reading Seminar (HECUA) (4 credits)
IDSC 471 MUST Seminar: Research on Urban Issues (HECUA) (4 credits)
MUSC 222 The Theology of American Popular Music (4 credits)
PHIL 350 Advanced Ethical Theory (4 credits)
PHIL 353 Machiavelli, Hobbes, and Nietzsche (4 credits)
PHIL 357 Political Philosophy (4 credits)
POLS 275 Introduction to Political Thought (4 credits)
POLS 375 American Political Thought (4 credits)
THEO 306 Christian Faith and the Management Professions (4 credits)
THEO 325 The Catholic Social Traditions (4 credits)
THEO 334 Islam (4 credits)
THEO 337 Evil and the Suffering of God (4 credits)
THEO 361 Black Religious Experience (4 credits)

THEO 365 Prophetic Literature of the Old Testament (4 credits)
THEO 386 Topics in Systematic Theology (4 credits) (i.e., Church in Latin America; Catholic Worker Movement)
Note: Topic must be approved by the JPST director (e.g., Church in Latin America; Catholic Worker Movement; Christianity and Consumer Culture)
WMST 205 Foundations in Women's Studies (4 credits)

Plus an internship and seminar in the area of justice and peace studies. The internship may, but need not, carry credit:
JPST 473 Vocational Internship Seminar (0 credit)
Students are required to take this seminar during the semester they are doing an internship. At the core of this mini course is a reflective process designed to lead students to: a deeper understanding of the practical means of working for social change; an evaluation of their internship experience (both in terms of gaining a deeper understanding of their own vocation and a better understanding of the type of institutions they are working with); and applying these insights to future course work and career planning. Three 2-hour seminars, at the beginning, middle and end of the semester, provide opportunities for those engaged in individual placements to get peer support for their discernment process.

The internships themselves involve 7-10 hours a week of justice and peace work. Acceptable placements include work with a nonprofit or governmental group doing direct service; education for peace and justice; political action for peace and justice; and leadership positions in UST's Students for Justice and Peace (SJP). There is no objection to using an appropriate internship from another major (such as social work) to fulfill this requirement as long as the student is enrolled in JPST 473 during the semester of the internship.

Alternatively, the internship and seminar requirement may be fulfilled by participating in appropriate off-campus academic programs which have reflective internship components, such as the programs of HECUA and Augsburg's Center for Global Education. Students may also get credit for doing further research on, and analysis of, their internship experience by enrolling in JPST 475-478 Experiential Learning.

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 courses may deal with any part of the circle of praxis. Students seeking further opportunities to learn the theories behind, or honing of, skills for action might consider:
ENTR 360 Creativity and Change (4 credits)
ENVR 351 Environmental Policy Formation (4 credits)
JOUR 311 Persuasion in Writing (4 credits)
JPST 285 Social Movements and Methods (4 credits)
SOWK 391 Social Policy for Social Change (4 credits)

Students majoring *only* in Justice and Peace Studies are strongly encouraged to take a "methods" course from a department that uses approaches relevant to the way they are choosing to complete the JPST major. The purpose of this recommendation is to strengthen abilities in data interpretation, manipulation and generation.
Possibilities include:
GEOG 221 Computer Skills in Geography (4 credits)
POLS 205 Introduction to the American Public Policy Process (4 credits)
SOCI 210 Research Methods in Sociology (4 credits)
SOC 220 Sociological Analysis (4 credits)

Minor in Justice and Peace Studies

JPST 250 Introduction to Justice and Peace Studies (4 credits)
JPST 280 Active Nonviolence (4 credits)
THEO 305 Theologies of Justice and Peace (4 credits)

Plus:
Eight additional credits to be selected with the approval of the program director. At least four of these credits must be outside the student's major department. Any of the courses listed for the major may be applied to the minor.

JPST 250 Introduction to Justice and Peace Studies (4 credits)
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 are cultural differences, scarcity of resources, economic and social structures, international trade, the arms race, corruption, oppression and war. Proposed solutions assessed include development, structural changes, world governance, multinational agencies, military power, civilian-based defense, active nonviolence for social change, conflict resolution, disarmament, cultural exchange, religious revival and prayer. These topics are considered in the light of theory, history, and literature. Students apply these concepts by investigating one country or geographic area in depth through a semester-long research project. Usually offered every semester. This course fulfills the Human Diversity requirement in the core curriculum.

JPST 295, 296 Topics (2 credits)
JPST 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

JPST 280 Active Nonviolence (4 credits)
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, Danish resistance to Nazi occupation, the struggle for interracial justice in the United State, an integrated Canada-to-Cuba peace-and-freedom walk, the campaign to close the U.S. Army School of the Americas (WHINSEC), fair trade movements, and the Honeywell Project. The course emphasizes the theory and active practice of nonviolence as well as oral histories of successful nonviolent movements. Usually offered every semester.

JPST 285 Social Movements (4 credits)
Our class will analyze social movements through the events that shape their struggles for justice. Historical survey and key theoretical concepts will provide context for examining the methods used to advance social change. The first half of the course will explore the U.S. Civil Rights Movement through primary documents, video and classroom analysis. The second half of the course will apply the lessons of historical movements to contemporary movements. We will explore local manifestations of global movements through immersion, service-learning projects, guest speakers, student research and final presentations.

JPST 470 Conflict Resolution (4 credits)
An introduction to issues surrounding conflict and the resolution of conflict in today's world focusing primarily on its contextual manifestation at the international, regional and intrastate levels. The course will explore important structural, social and psychological explanations of conflict. Attention will be given to ethnic and nationalist themes surrounding conflicts and their resolution at the intrastate and international levels. The course will examine how different types of intervention affect conflicts (the media, force, other types of third party intervention). Effective methods that foster an environment conducive to resolving or managing disputes will be studied. As part of this final task, the course will critically study how institutions such as power-sharing arrangements, federalism, and the rule of law figure into establishing a lasting basis for peaceful co-existence. Usually offered spring semester.

Note: 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 *i.e.,* peace without justice.

JPST 472 Justice and Peace Senior Seminar (4 credits)
This seminar brings together what students have learned throughout their justice and peace studies, activities, internships and service projects and applies it to a project of their own choice negotiated with the professor through a learning contract. In carrying out that project, students will pay attention to the four steps of the circle of praxis. Results of the project are shared with the other members of the seminar. In addition, common topics studied include basic statistics needed to understand, judge, and use statistics responsibly; writings of key theoreticians in justice and peace studies; and an introduction to a broad range of organizations working for the relief of suffering and for structural and social change. Usually offered spring semester.

JPST 473 Vocational Internship Seminar (0 credit)
Students are required to take this seminar during the semester they are doing an internship of 7-10 hrs/wk. The seminar meets three times (at the beginning, middle, and end of the semester), to provide opportunities for those engaged in individual placements to get peer support for their discernment process. At its core is a reflective process designed to lead students to: a deeper understanding of the practical means of working for social change; an evaluation of their internship experience (both in terms of gaining a deeper understanding of their own vocation and a better understanding of the type of institutions they are working with); and applying these insights to future course work and career planning.

JPST 475, 476 Experiential Learning (2 credits)
JPST 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

JPST 483, 484 Seminar (2 credits)
JPST 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

JPST 487, 488 Topics (2 credits)
JPST 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

JPST 491, 492 Research (2 credits)
JPST 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

JPST 495, 496 Individual Study (2 credits)
JPST 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Latin (LATN)

See Modern and Classical Languages

Legal Studies

College of Arts and Sciences
Interdisciplinary Program
Hatting (POLS), acting 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 301 Legal Environment of Business (4 credits)
BLAW 302 Business Law for Accounting (4 credits)
BLAW 303 International Business Law (4 credits)
BLAW 304 Real Estate Law (4 credits)
BLAW 351 Environmental Law (4 credits)
BLAW 352 Gender Issues and the Law (4 credits)
BLAW 401 Legal Research, Advocacy, and Dispute Resolution (4 credits)
BLAW 402 Law of Electronic Commerce (4 credits)
ECON 321 Law and Economics (4 credits)
HIST 326 English Law and Government before the American Revolution (4 credits)
HIST 365 U.S. Constitutional History (4 credits)
IDSC 340 Criminal Law and the Social Order (4 credits)
JOUR 304 Media Law (4 credits)
PHIL 357 Political Philosophy (4 credits)
PHIL 359 Philosophy of Law (4 credits)
POLS 312 Judicial Process (4 credits)
POLS 313 Constitutional Law and Politics (4 credits)
POLS 314 Constitutional Rights and Liberties (4 credits)
POLS 326 International Law and Organizations (4 credits)
POLS 414 Seminar in Law and Judicial Politics (4 credits)
THEO 397 Topics courses that involve a legal aspect (4 credits) (consult Legal Studies adviser)

Legal Studies in Business

See Business Administration

Literary Studies

College of Arts and Sciences
Interdisciplinary Program
Scheiber (ENGL) and Sauter (acting chair, H&HP), 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

See Business Administration

Marketing

See Business Administration

Mass Communication

See Journalism and Mass Communication

Mathematics (MATH)

College of Arts and Sciences
Department of Mathematics
Kemper (chair), Dayananda, Dokken, Kroschel, Loe, McLean, Rezac, Scholz, Shakiban, Shemyakin, Shvartsman, Van Fleet, Yang, Youn; Tiefenbruck

The Department of Mathematics offers major programs that can satisfy a variety of student interests and careers. Majors in 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 and statistics in science, business, industry and government.

Students majoring in mathematics are encouraged to use elective courses to broaden their background in mathematics or in a related area of special interest. Coursework in biology, chemistry, economics, engineering, finance, geology, physics, psychology and quantitative methods/computer science combines well with a major in mathematics.

Students graduating with a major in mathematics will be able to demonstrate an understanding of the fundamental notions of mathematics, including rigorous proof. They will be able to model and solve real-world problems arising in business and industry. They will be able to effectively communicate, both orally and in writing, mathematical concepts to their peers and to an audience of non-majors. They will be able to learn and apply mathematics on their own through independent study, research and participation in non-class-related lectures.

In all of the department's major programs, a student must successfully complete at least 16 credits in mathematics courses numbered 300 and above at the University of St. Thomas.

In addition to the mathematics programs described below, the department has programs to prepare students for careers in actuarial science (see Interdisciplinary Programs) or teacher licensure (see Education). A minor in mathematics is available to support majors in many other departments.

Students should see the chair of the Department of Mathematics for advice in selecting courses for a particular purpose. The department offers a number of courses for non-majors to fulfill the mathematics portion of the core curriculum.

Center for Applied Mathematics
Within the Department of Mathematics, the Center for Applied Mathematics (CAM) provides opportunities for students to work on significant mathematical problems of current interest to business, industry, and government. The CAM summer student research program funds a number of student projects each year.

Major in Mathematics

MATH 113 Calculus I (4 credits) (or 108 and 109)
MATH 114 Calculus II (4 credits)
MATH 200 Multi-Variable Calculus (4 credits)
MATH 210 Linear Algebra and Differential Equations (4 credits)
MATH 317 Real Analysis (4 credits)

Plus one of the mathematics programs below:

Allied requirement for all programs
QMCS 230 Software Design Using the JAVA Language (4 credits)

Pure Mathematics Program
Four credits from the following:
MATH 301 Abstract Algebra I (4 credits)
MATH 310 Modern Linear Algebra (4 credits)

Plus four credits from the following:
MATH 302 Abstract Algebra II (4 credits)
MATH 385 Mathematical Methods of Numerical Analysis (4 credits)
MATH 400 Dynamical Systems and Chaos (4 credits)
MATH 419 Complex Variables (4 credits)
MATH 420 Topology (4 credits)

Plus:
eight credits of courses MATH 300 or higher not already taken

Plus one of the following sequences of applications of mathematics:
ACSC 264 Theory of Interest (4 credits) *and* ACSC 464 Mathematical Finance (4 credits)
ACSC 351 Foundations of Actuarial Mathematics (4 credits) *and* ACSC 352 Actuarial Contingencies (4 credits)
ECON 351 Macroeconomic Theory (4 credits) *and* ECON 352 Microeconomic Theory (4 credits) *and* ECON 418 Mathematical Economics (4 credits)
MATH 303 Statistics for the Applied Sciences (4 credits) *and* MATH 333 Applied Statistical Methods: Regression, Time Series, Forecasting (4 credits)
MATH 313 Probability (4 credits) *and* MATH 314 Mathematical Statistics (4 credits)
MATH 315 Applied Mathematics and Modeling I (4 credits) *and* MATH 316 Applied Mathematics and Modeling II (4 credits)
MATH 325 Geometry (4 credits) *and* MATH 450 Advanced Mathematics: Exploration and Exposition (4 credits)
PHYS 111 Introduction to Classical Physics I (4 credits) *and* PHYS 112 Introduction to Classical Physics II (4 credits)
QMCS 410 Operations Research I (4 credits) *and* QMCS 411 Operations Research II (4 credits)

Applied Mathematics Program
MATH 300 Differential Equations and Applied Mathematics (4 credits)
MATH 310 Modern Linear Algebra (4 credits)
MATH 315 Applied Mathematics and Modeling I (4 credits)
MATH 316 Applied Mathematics and Modeling II (4 credits)

Plus four credits from the following:
MATH 303 Statistics for the Applied Sciences (4 credits)
MATH 313 Probability (4 credits)

Plus four credits from the following:
MATH 385 Mathematical Methods of Numerical Analysis (4 credits)
MATH 419 Complex Variables (4 credits)

Statistics Program
MATH 310 Modern Linear Algebra (4 credits)
MATH 313 Probability (4 credits)
MATH 314 Mathematical Statistics (4 credits)
MATH 333 Applied Statistical Methods: Regression, Time Series, Forecasting (4 credits)
MATH 385 Mathematical Methods of Numerical Analysis (4 credits)

Plus:
QMCS 320 Statistics II (4 credits)

Teacher Licensure

Elementary Education with a Co-major in Science and Mathematics for Elementary Education
Elementary Education with a Specialty in Mathematics (5-8)
Major in Mathematics with a Co-major in Secondary Education (5-12)
See Education

Minor in Mathematics

MATH 113 Calculus I (4 credits) (or 108-109)
MATH 114 Calculus II (4 credits)

Plus at least four credits from the following:
MATH 200 Multi-Variable Calculus (4 credits)
MATH 210 Linear Algebra and Differential Equations (4 credits)

Plus:
A minimum of twelve additional credits in courses numbered above 200 (or approved by the department chair)
A student minoring in mathematics must successfully complete a minimum of 8 credits in mathematics numbered 200 and above at St. Thomas.

MATH 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. 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.

MATH 100 Mathematical Sampler (4 credits) (MATH 101)
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, set theory, graph theory, an introduction to randomness, counting and probability, statistics and data exploration, measurement and symmetry, and recursion. This course satisfies the core curriculum requirement for a core-area course in mathematics and is also recommended as the first course in mathematics for prospective elementary teachers.
Prerequisite: A satisfactory score on the mathematics placement exam
NOTE: Students who receive credit for MATH 100 may not receive credit for MATH 101.

MATH 101 Finite Mathematics (4 credits) (MATH 100)
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
NOTE: Students who receive credit for MATH 101 may not receive credit for MATH 100.

MATH 105 Precalculus (4 credits) (MATH 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
NOTE: Students who receive credit for MATH 105 may not receive credit for MATH 108 or 109.

MATH 108 Calculus with Review I (4 credits) (MATH 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 and graphing. 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 the mathematics requirement in the core curriculum. This course fulfills the second-level Computer Competency requirement in the core curriculum.
Prerequisite: A satisfactory score on the mathematics placement examination
NOTE: Students who receive credit for MATH 108 may not receive credit for MATH 105, 111, or 113.

MATH 109 Calculus with Review II (4 credits) (MATH 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. This course fulfills the second-level Computer Competency requirement in the core curriculum.
Prerequisite: a grade of C- or better in MATH 108
NOTE: Students who receive credit for MATH 109 may not receive credit for MATH 105, 111, or 113.

MATH 111 Calculus for Business and Social Science (4 credits) (MATH 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 recommended as background for this course.) Students intending to continue in calculus are strongly advised to take MATH 113.
NOTE: Students who receive credit for MATH 111 may not receive credit for MATH 108, 109, or 113.

MATH 113 Calculus I (4 credits) (MATH 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.)
NOTE: Students who receive credit for MATH 113 may not receive credit for MATH 108, 109, or 111.

MATH 114 Calculus II (4 credits)
Techniques of integration; applications of integration; infinite series; L'Hospital's rule; improper integrals. This course fulfills the second-level Computer Competency requirement in the core curriculum.
Prerequisite: a grade of C- or above in MATH 113 or 109 (or 111, with permission of the department chair)

MATH 121 Structures of Elementary Mathematics (4 credits)
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, and mathematical problem-solving. This course is recommended as a second course in mathematics for prospective elementary teachers, and also satisfies the core curriculum requirement for the third course in the Natural Sciences and Mathematical and Quantitative reasoning requirement in the core curriculum.
Prerequisite: 100 and an EDUC course, or permission of the instructor

MATH 128 Introduction to Discrete Mathematics (4 credits)
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.
Prerequisite: MATH 111 or 113 or 109 (may be taken concurrently with consent of the instructor)

MATH 200 Multi-Variable Calculus (4 credits)
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 MATH 114

MATH 210 Linear Algebra and Differential Equations (4 credits)
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, and applications to science and engineering. This course fulfills the second-level Computer Competency requirement in the core curriculum.
Prerequisite: a grade of C- or higher in MATH 114

MATH 259 Elements of Geometry and Statistics (4 credits)
Intended for elementary education majors who plan a specialization in mathematics for grades 5-8. Includes intermediate concepts in geometry and statistics essential for a middle school teacher of mathematics. Topics will include: axiomatic systems of geometry with emphasis on Books I and VI of Euclid's Elements; an introduction to non-Euclidean geometry; geometric and inductive reasoning, with applications; introduction to geometric probability and the geometric display of data; organization and analysis of data sets; statistical support of decisions, including applications in education; prediction; the role of randomness in both formal and empirical probability.
Prerequisites: MATH 100 and 121

MATH 295, 296 Topics (2 credits)
MATH 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

MATH 300 Differential Equations and Applied Mathematics (4 credits)
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.
Prerequisites: MATH 200 and 210 or permission of the department chair

MATH 301 Abstract Algebra I (4 credits)
Properties of sets, relations and mappings; introduction to groups, rings and fields. Offered in fall semester.
Prerequisite: MATH 210

MATH 302 Abstract Algebra II (4 credits)
Topics in modern algebra with applications. Includes material selected from the theory of groups, rings, and fields; linear algebra; Boolean algebra and discrete structures.
Prerequisite: MATH 301

MATH 303 Statistics for the Applied Sciences (4 credits) (MATH 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: MATH 200
NOTE: Students who receive credit for MATH 303 may not receive credit for MATH 313 or 314.

MATH 310 Modern Linear Algebra (4 credits)
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: MATH 210

MATH 313 Probability (4 credits) (MATH 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. Offered in spring semester.
Prerequisites: MATH 200 (may be taken concurrently with consent of instructor)
NOTE: Students who receive credit for MATH 313 may not receive credit for MATH 303.

MATH 314 Mathematical Statistics (4 credits) (MATH 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 fall semester.
Prerequisite: MATH 210 and 313
NOTE: Students who receive credit for MATH 314 may not receive credit for MATH 303.

MATH 315 Applied Mathematics and Modeling I (4 credits)
This is a topics course in applied mathematics 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, optimization theory, and wavelet theory. Students will work in teams on projects of current interest in applied mathematics.
Prerequisites: MATH 200 and 210, or permission of instructor

MATH 316 Applied Mathematics and Modeling II (4 credits)
This is a second topics course in applied mathematics offered through the Center for Applied Mathematics (CAM). It does not necessarily require 315 as a prerequisite. Course content will be drawn from the topics listed under MATH 315. Students will work in teams on projects of current interest in applied mathematics.
Prerequisites: MATH 114 and 210, or permission of instructor

MATH 317 Real Analysis (4 credits)
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.
Prerequisites: MATH 200 and 210

MATH 325 Geometry (4 credits)
Axioms for geometries; geometrical transformations and their invariants; non-Euclidean geometries; additional topics. Offered in spring semester.
Prerequisites: MATH 200 and 210 or permission of the instructor

MATH 333 Applied Statistical Methods: Regression, Time Series, Forecasting (4 credits)
Regression and exponential smoothing methods; Stochastic Time Series: auto- and cross-correlation, autoregressive moving average models; application to forecasting.
Prerequisites: MATH 303 or 314 or permission of instructor

MATH 385 Mathematical Methods of Numerical Analysis (4 credits)
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.
Prerequisites: MATH 210 or permission of instructor

MATH 400 Dynamical Systems and Chaos (4 credits)
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: MATH 210 or 317 or permission of instructor

MATH 419 Complex Variables (4 credits)
Analytic functions; theorems of Cauchy; Laurent series; residue calculus; entire and meromorphic functions; conformal mapping.
Prerequisite: MATH 317

MATH 420 Topology (4 credits)
Properties of Euclidean spaces; general spaces; mappings; separation properties; connectedness; compactness; metrizable spaces.
Prerequisite: MATH 317

MATH 450 Advanced Mathematics: Exploration and Exposition (4 credits)
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. Topics are included from discrete mathematics and from continuous mathematics. Students 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: one of 301 or 317 with concurrent registration in the other; 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.

MATH 475, 476 Experiential Learning (2 credits)
MATH 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

MATH 483, 484 Seminar (2 credits)
MATH 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

MATH 487, 488 Topics (2 credits)
MATH 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

MATH 491, 492 Research (2 credits)
MATH 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

MATH 495, 496 Individual Study (2 credits)
MATH 497, 498 Individual Study (4 credits)
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Middle Eastern Studies (ACTC)

College of Arts and Sciences
Interdisciplinary Program
Nice (Center for Faculty Development/English), coordinator and UST campus representative

The Middle Eastern Studies Program through the Associated Colleges of the Twin Cities (ACTC) offers an interdisciplinary minor focusing on the Middle East. The term "Middle East" includes the geographic regions of southwest Asia and North Africa, extending from Turkey to the Sudan and from Afghanistan to Morocco. The minor in Middle Eastern Studies considers the following concepts:

1. the Middle Eastern has global significance and is vital to the national interests of many countries, including he United States;
2. increasing numbers of Americans have some Middle Eastern ethnic or cultural background;
3. the region offers numerous opportunities for business and the professions;
4. it is the birthplace of several of the world's major civilizations and religions.

The minor in Middle Eastern Studies enables students to bring together several courses in different disciplines

to constitute a program of area study. This area specialization offers students the opportunity to learn about the religions, economics, historical and political developments, literature, philosophy and culture of Middle Eastern peoples and countries. Such an interdisciplinary approach permits students to apply the theory and methodology of several disciplines to a common subject matter and allows a greater mastery of the Middle East area than could normally be attained through strictly disciplinary majors or minors.

A Middle Eastern Studies minor provides valuable preparation for careers in government service, research, non-governmental organizations, journalism, education, and consulting in international business. Acquiring some Middle Eastern expertise will make ACTC students more credible candidates for internships with organizations related to the Middle East.

The minor is offered by combining courses already in place at the ACTC institutions. Courses with a focus on the Middle East are being offered regularly in political science (with historical components), sociology, women's studies and theology. Arabic language classes through the third semester are offered every year at the University of St. Thomas. For higher levels of Arabic, students may enroll at the University of Minnesota through the ACTC language contract. Elementary and intermediate Hebrew are offered at Macalester College.

Consult the MES web site for the offered courses for each academic year (http://www.associatedcolleges-tc.org/Majors&minors/middleeast.htm). The next year's courses are listed before registration opens in the spring.

Minor in Middle Eastern Studies

Requirements

A. Foundational course:

POLS 3580H Politics and Society in the Middle East (Hamline)

B. Five area courses:

2 courses selected from the social sciences
2 courses selected from the humanities
1 elective chosen from either area

Language courses

Students may substitute two courses in a Middle Eastern language for two of the five area studies courses above. Some acquaintance and experience with the Arabic and/or Hebrew languages is highly desirable, particularly for students combining the Middle Eastern Studies minor with a major in business, journalism, or political science.

Internships and Study Abroad

Internships and opportunities for study abroad are strongly recommended and are accepted for credit toward the minor. No more than one course may be an independent study or internship. Study abroad, internships and independent study are subject to the approval of the student's campus advisor for the minor.

Modern and Classical Languages

College of Arts and Sciences

Department of Modern and Classical Languages

Miller, D., (chair); **Arabic** – Khalek; **French** – Bibbee, Dziekowicz (coordinator), Shams; Hartlaub, Pelletier-Skoog; **German** – Fullard, Schons (coordinator); **Spanish** – Badessich (coordinator), Chavarría-Mendoza, Córdova Jr., Pinto, Raschio, Sandmann, Scham, Tar; Johnston, Milstein, Pelletier-Skoog; Rios-Freund, Sanchez-Schwartz; **Classics** –Quartarone; **Irish Gaelic** – Moore; **Japanese** – Heberlein; **Russian** – Grinberg

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. Language classes are also available in Arabic. 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).

Students graduating with a major in Classical languages will have acquired a working vocabulary and a knowledge of the structures of Greek and/or Latin adequate to read the works of Greek and/or Latin authors. They will have gained experience in reading major authors in the languages, and will perceive the relationship between the authors and their cultural context.

Students graduating with a major in French will have a solid understanding of the French language and the ability to use the language effectively in speaking, comprehension, reading, and writing. They will have developed the skills necessary for the study, analysis, and interpretation of a wide range of cultural texts, including literary texts.

Students graduating with a major in German will have acquired a command of the German language for use in academic and/or professional life. They will have become acquainted with the culture of the German-speaking countries and with the role these countries and their culture have historically played and continue to play in the world today.

Students graduating with a major in international business – language intensive will be able to demonstrate a command of the appropriate language for use in business and professional life, will understand the historical and cultural development of the countries of that language, and will understand the business practices and economic structure of those countries.

Students graduating with a major in Spanish will have a solid understanding of the Spanish language and the ability to use the language effectively in speaking, comprehension, reading, and writing. They will have developed the skills necessary for the study, analysis, and interpretation of a wide range of cultural texts, including literary texts.

The department also offers courses for the non-major to fulfill the Language and Culture component of the core curriculum.

Teacher Licensure

Elementary Education with a Specialty in World Languages and Cultures (K-8)
World Languages and Cultures (K-12) with a Major in French, German, or Spanish and a Co-major in Secondary Education

See Education

Arabic

ARAB 111 Elementary Arabic I (4 credits)
The first year of elementary Arabic is designed for non-native beginners in the Arabic language to primarily learn the formal form of Arabic also known as Modern Standard Arabic. During the year, students will learn how to express basic communication idioms and needs in Arabic. The year begins with learning the alphabet and progresses into learning how to read elementary level Arabic, writing simple sentences, and speaking basic and introductory idioms. Listening drills and exercises are also practiced in class and in the language lab.

ARAB 112 Elementary Arabic II (4 credits)
Continuation of 111.

ARAB 211 Intermediate Arabic I (4 credits)
Intermediate Arabic I is a continuation of Elementary Arabic II. It is designed to further develop language proficiency in modern standard Arabic in the four language skills. In speaking, the focus is on the use of everyday expressions through discussion and presentations. In reading, the focus is on reading authentic materials from Arabic journals and magazines. Writing is emphasized especially through writing weekly journals and homework assignments. Listening exercises and drills are utilized in class as well as in the language lab by listening and watching audio and video materials. The course is also aimed at familiarizing students with the cultures of the Arab world.

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

A minimum proficiency in each language at the 211-level for a total of 28 credits in Greek and Latin. (see descriptions below under Greek and Latin)

Plus:
Twelve additional credits in Greek or Latin, ancient history, ancient philosophy, classical art, mythology, or classical literature in translation.

Minor in Classical Languages

Twelve credits in Greek (see descriptions below under Greek)
Twelve credits in Latin (see descriptions below under Latin)

French

The primary goal of the department is to provide opportunity to its majors for acquiring:

a. A solid command of the French language
b. A thorough introduction to the literary and cultural origins of France and the role of French in today's world
c. 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
d. 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 twelve 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

Note: A minimum of eight credits in FREN must be completed at St. Thomas.
Completion of FREN 212 or equivalent

Plus:
Four credits in French language study at the FREN 300-level or beyond
Four credits in French literature
Four credits in French civilization
Four additional credits in FREN to be selected in consultation with the French faculty.

FREN 111 Elementary French I (4 credits)
Practice in understanding, speaking, reading and writing simple French for beginners.

FREN 112 Elementary French II (4 credits)
Continuation of FREN 111.
Prerequisite: FREN 111 or its equivalent

FREN 211 Intermediate French I (4 credits)
Introduction to cultural and literary materials along with rapid review of basic skills in reading, speaking, writing and understanding oral French.
Prerequisite: FREN 112 or its equivalent

FREN 212 Intermediate French II (4 credits)
Continuation of FREN 211 with emphasis on oral and written use of complex sentence structure.
Prerequisite: FREN 211 or its equivalent

FREN 295, 296 Topics (2 credits)
FREN 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

FREN 300 Advanced Oral and Written French I (4 credits)
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: FREN 212

FREN 301 French Poetry (4 credits)
Individualized and group exercises in oral expression and comprehension focusing on the elements of French versification from the 16th century to the present.
Prerequisite: FREN 300 or equivalent

FREN 302 *Questions de langage* (4 credits)
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: FREN 300 or its equivalent

FREN 309 Introduction to French Literature I (4 credits)
Excerpts of French literature from the Middle Ages to the 18th century 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: FREN 300 or equivalent

FREN 310 Introduction to French Literature II (4 credits)
Excerpts of post-revolutionary 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: FREN 300 or equivalent

FREN 311 French Civilization I (4 credits)
An introduction to the most significant historical, cultural, social, religious and economic realities of France from the prehistoric period through the 17th century.
Prerequisite: FREN 300 or equivalent

FREN 312 French Civilization II (4 credits)
An introduction to the most significant historical, cultural, social, religious and economic realities of France from the 18th century to the present.
Prerequisite: FREN 300 or equivalent

FREN 370 French Phonetics (4 credits)
A course designed to improve pronunciation and intonation by means of phonetic transcription and technological aids.
Prerequisite: FREN 300 or equivalent

FREN 371 French Conversation (4 credits)
Individualized French conversation practice in comprehension and speaking involving group and individualized activities.
Prerequisite: FREN 300 or permission of instructor

FREN 401 French Theater (4 credits)
Intensive study of the trends in French theater with analysis and interpretation of selected works from the seventeenth century to the present.
Prerequisite: FREN 300 or equivalent

FREN 402 The French Novel (4 credits)
In depth study of selected works of fiction primarily from the 19th and 20th centuries.
Prerequisite: FREN 300 or equivalent

FREN 475, 476 Experiential Learning (2 credits)
FREN 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

FREN 483, 484 Seminar (2 credits)
FREN 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

FREN 487, 488 Topics (2 credits)
FREN 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

FREN 491, 492 Research (2 credits)
FREN 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

FREN 495, 496 Individual Study (2 credits)
FREN 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

German

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

Completion of GERM 212 or its equivalent
GERM 300 Introduction to German Studies (4 credits)

Plus:
Twenty-four additional credits numbered above GERM 300
- At least six of these 28 credits must be literature courses.
- At least twelve of these 28 credits must be completed at the University of St. Thomas.
- No more than twelve 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

Completion of GERM 212 or its equivalent
GERM 300 Introduction to German Studies (4 credits)

Plus:
Twelve additional credits numbered above GERM 300
At least three of these 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.

GERM 111 Elementary German I (4 credits)
Introduction to fundamentals of language structure and vocabulary. Practice in speaking, reading, writing and understanding.

GERM 112 Elementary German II (4 credits)
Continuation of GERM 111.
Prerequisite: GERM 111 or equivalent

GERM 211 Intermediate German I (4 credits)
Review of fundamentals. Study of cultural texts with practice in speaking, reading, writing and understanding.
Prerequisite: GERM 112 or equivalent

GERM 212 Intermediate German II (4 credits)
Continuation of GERM 211.
Prerequisite: GERM 211 or equivalent

GERM 295, 296 Topics (2 credits)
GERM 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

GERM 300 Introduction to German Studies (4 credits)
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: GERM 212 or equivalent

GERM 311 Conversation and Composition (4 credits)
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: GERM 300

GERM 315 Influential Ideas in Non-fictional German (4 credits)
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: GERM 300

GERM 320 Contemporary Germany and Current Events (4 credits)
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: GERM 300

GERM 341 Highlights of German Literature I (4 credits)
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: GERM 300

GERM 342 Highlights of German Literature II (4 credits)
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: GERM 300

GERM 345 Austria: The Golden Age (4 credits)
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: GERM 300

GERM 350 Genre Studies in German Literature (4 credits)
This course will focus on genres of literature in German. The particular genres to be studied will vary with each offering. They will include German Drama, the German Novel of the 20th century, German Novellas, Modern German Drama, German Film, German Poetry.
Prerequisite: GERM 300

GERM 401 German Poetry (4 credits)
A critical study of selections from important German poets.
Prerequisite: GERM 300

GERM 410 The German Opera (4 credits)
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: GERM 300

GERM 440 Introduction to Business German and German Business (4 credits)
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: GERM 300

GERM 475, 476 Experiential Learning (2 credits)
GERM 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

GERM 483, 484 Seminar (2 credits)
GERM 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

GERM 487, 488 Topics (2 credits)
GERM 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

GERM 491, 492 Research (2 credits)
GERM 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

GERM 495, 496 Individual Study (2 credits)
GERM 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Greek

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, Latin, ancient history, ancient philosophy, classical art, mythology or classical literature in translation.

GREK 111 Elementary Greek I (4 credits)
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.

GREK 112 Elementary Greek II (4 credits)
Continuation of GREK 111.
Prerequisite: GREK 111

GREK 211 Intermediate Greek I (4 credits)
Selected readings in Greek prose; review of grammar.
Prerequisite: GREK 112 or equivalent

GREK 212 Intermediate Greek II (4 credits)
Readings in classical Greek prose, particularly Plato.
Prerequisite: GREK 211 or equivalent

GREK 295, 296 Topics (2 credits)
GREK 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

GREK 342 Greek Reading and Exegesis: John (4 credits)
Careful reading of the Gospel of John in Greek combined with theological commentary from the Greek text, adapted to intermediate-level Greek students.
Prerequisite: GREK 112 or equivalent (Recommended: THEO 205 or THEO 210)

GREK 475, 476 Experiential Learning (2 credits)
GREK 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

GREK 483, 484 Seminar (2 credits)
GREK 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

GREK 487, 488 Topics (2 credits)
GREK 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

GREK 491, 492 Research (2 credits)
GREK 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

GREK 495, 496 Individual Study (2 credits)
GREK 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "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.

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.

A program of study abroad is strongly recommended.

International Business – French Intensive

FREN 300 Advanced Oral and Written French (4 credits)
One course in French on contemporary France

Plus:
Twenty additional credits in French courses numbered above FREN 300, including literature and civilization, selected in consultation with the French section coordinator

International Business – German Intensive

GERM 300 Introduction to German Studies (4 credits)
GERM 440 Introduction to Business German and German Business (4 credits)

Plus:
Twenty additional credits in German courses numbered above GERM 300

International Business – Spanish Intensive

SPAN 300 Oral and Written Spanish (4 credits)
SPAN 320 Business Spanish (4 credits)

Plus:
Twenty additional credits in Spanish courses numbered above SPAN 300

Allied requirements for all languages
Twenty credits in business administration

Plus:
ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
ECON 348 International Economics (4 credits)
QMCS 110 Introduction to Information Processing (4 credits)

Plus four credits from the following:
MATH 101 Finite Mathematics (4 credits)
MATH 111 Calculus for Business or Social Science (4 credits)
MATH 113 Calculus I (4 credits)

Other recommended courses:
ECON 345 Economics of Development and Growth (4 credits)
ECON 349 Comparative Economic Systems (4 credits)
IDSC 481 Seminar in International Studies (4 credits)
JPST 250 Introduction to Justice and Peace Studies (4 credits)
POLS 105 Politics and Government in Comparative Perspective (4 credits)
POLS 326 International Law and Organizations (4 credits)
POLS 350 Comparative Politics of the New Europe (4 credits)
THEO 325 The Catholic Social Traditions (4 credits)

Irish Gaelic

IRGA 111 Irish Gaelic I (4 credits)
Introduction to the pronunciation, structure, and culture of Irish Gaelic by developing basic skills in conversation, writing, and reading. Progress is evaluated through classroom interaction (dialogue, role-playing, oral drills, *etc.*), written assignments, song-learning, and an interview in Irish with the instructor.

IRGA 112 Irish Gaelic II (4 credits)
Continuation of IRGA 111 with further development of the same skills in conversation, writing, and reading and an expanded awareness of the culture of Irish Gaelic. Progress is evaluated through classroom interaction (dialogue, role-playing, oral drills, *etc.*), written assignments, and a brief presentation in Irish before the class at the end of the semester.
Prerequisite: IRGA 111 or equivalent with instructor's approval

IRGA 211 Irish Gaelic III (4 credits)
Continuation of IRGA 112 with an emphasis on increasing comprehension of, and fluency in, Irish Gaelic. The course will take place in a Gaelic-speaking community in Co. Galway, Ireland at a campus of the National University of Ireland. Students will learn and practice their Gaelic in the classroom and in the community with native speakers. Students will engage the Gaelic culture, history, and traditions at seminars in the late afternoon and evening and on four field trips to locations of literary and cultural importance. Students will be evaluated on the basis of three interviews with their instructor and a third party.
Prerequisite: IRGA 112 or equivalent with instructor's approval

Japanese

Courses in Japanese are offered with the assumption that many of the students will be visiting Japan in the near future. Thus, the Japanese program strives to:
1. lay a solid foundation in the areas of speaking, listening, reading and writing. All three writing systems (hiragana, katakana and kanji) are covered.
2. give students basic language skills sufficient to manage day-to-day life in Japan
3. promote interest in Japan, Japanese people, and their culture
4. help students fulfill professional and personal endeavors at an international level
5. eliminate fear of speaking Japanese in front of people.
6. To provide the foundation for earning a major or minor in the language.

Students wishing to major or minor in Japanese may do so by special arrangement with Macalester College and approval of the St. Thomas Department of Modern and Classical Languages.

Minor in Japanese
Completion of JAPN 212 or equivalent

Plus:
Eight additional credits selected in consultation with the department adviser

JAPN 111 Elementary Japanese I (4 credits)
Mastering 46 hiragana alphabets. Introduction to basic sentence structures, particles, polite forms of verbs, and simple kanjis (Chinese characters). Students are encouraged to converse in given situations utilizing whatever has been learned in the class.

JAPN 112 Elementary Japanese II (4 credits)
Continuation of JAPN 111. Mastering 46 katakana alphabets. Further study of kanjis. Conjugation of adjectives, plain forms, te-forms. Noun modification. Action-in-progress as well as resultant-state forms of verbs. Main and subordinate clause construction. Daily free speaking in Japanese at simple level.
Prerequisite: JAPN 111 or placement test result

JAPN 211 Intermediate Japanese I (4 credits)
Continuation of JAPN 112. Some of the volitional forms, hypothetical forms, and desirative forms are introduced. Continued study of kanjis. Daily free speaking. Introduction to the use of Japanese word processor.
Prerequisite: JAPN 112 or placement test result

JAPN 212 Intermediate Japanese II (4 credits)
Continuation of JAPN 211. Potential forms, transitive-intransitive verbs, respectful-humble forms, giving-receiving verbs, and some more hypothetical forms are introduced. Practice in situational and functional Japanese. Daily free conversation and further study of kanjis are continued.
Prerequisite: JAPN 211 or placement test result

Latin

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 LATN 212 or 255

Plus:
Twenty-eight credits in Latin numbered above LATN 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 LATN 211

Plus:
Eight additional credits in ancient history, ancient philosophy, classical art, mythology or classical literature in translation.

LATN 111 Elementary Latin I (4 credits)
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.

LATN 112 Elementary Latin II (4 credits)
Continuation of 111. More graded readings, further mastery of forms, syntax and vocabulary.
Prerequisite: LATN 111 or equivalent

LATN 211 Intermediate Latin I (4 credits)
Readings of narrative prose. Review and further study of grammar.
Prerequisite: LATN 112 or equivalent

LATN 212 Intermediate Latin II (4 credits)
Selections from Vergil's epic poem, the Aeneid.
Prerequisite: LATN 211 or equivalent

LATN 255 Latin Readings in the Old and New Testament (4 credits)
Readings from St. Jerome's Latin translation of the Old and New Testament.
Prerequisite: LATN 211 or equivalent

LATN 295, 296 Topics (2 credits)
LATN 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

LATN 311 Latin Composition (4 credits)
A thorough review of Latin grammar. Practice in the writing of continuous Latin prose.
Prerequisite: LATN 212 or 255 or equivalent

LATN 325 Catullus and Horace (4 credits)
Selections from the lyric poetry of Catullus and Horace. Poetic sources, influence, the principal lyric meters.
Prerequisite: LATN 212 or 255 or equivalent

LATN 360 Philosophy in Latin Texts (4 credits)
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: LATN 211 and three courses in PHIL or permission of the instructor.

LATN 421 Vergil (4 credits)
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: LATN 212 or 255 or equivalent

LATN 430 Caesar and Cicero (4 credits)
Extensive reading of the Gallic War and of the Orations of Cicero. A study of the character and career of each author.
Prerequisite: LATN 212 or 255 or equivalent

LATN 475, 476 Experiential Learning (2 credits)
477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

LATN 483, 484 Seminar (2 credits)
LATN 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

LATN 487, 488 Topics (2 credits)
LATN 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

LATN 491, 492 Research (2 credits)
LATN 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

LATN 495, 496 Individual Study (2 credits)
LATN 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Russian

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
3. To provide the foundation for earning a major or minor in the language

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 RUSS 212 or equivalent

Plus:
Thirty-two additional credits in Russian and related courses, plus a study abroad program in Russia jointly approved by Macalester College and the University of St. Thomas

Minor in Russian

Completion of RUSS 212 or equivalent

Plus:
Two advanced Russian language or literature courses

RUSS 111 Elementary Russian I (4 credits)
Introduction to the Russian sound system and grammar encompassing reading, writing, speaking and listening skills. Some exposure to Russian culture. Offered in fall semester.

RUSS 112 Elementary Russian II (4 credits)
Continuation of RUSS 111 with further development of same skills. Offered in spring semester.
Prerequisite: RUSS 111 or permission of instructor

RUSS 211 Intermediate Russian I (4 credits)
Continuation of RUSS 112 expanding on the fundamentals, with more emphasis on listening and speaking skills needed in everyday situations in the culture, more reading of authentic short texts of various types. Offered in fall semester.
Prerequisite: RUSS 112 or permission of instructor

RUSS 212 Intermediate Russian II (4 credits)
Further development of skills begun in RUSS 211 plus learning to translate and use more advanced grammatical forms (complex verbs of motion, participles, *etc.*) in written and oral presentations. Upon successful completion of this course, the student should be prepared to study in Russia. Offered spring semester.
Prerequisite: RUSS 211 or permission of instructor

Spanish

The Spanish program provides students the opportunity to develop a solid command of the Spanish language, and an understanding of the literature and culture of the Hispanic world. Diverse course offerings allow students, in consultation with their advisors, to tailor a program of studies consistent with various goals: to prepare for graduate school, to usefully complement a variety of majors (business, political science, psychology, *etc.*), to interact with Spanish-speaking people in the US and abroad, and to read great Spanish and Spanish American literature. We offer (and strongly recommend) study abroad as a fundamental component of the Spanish major.

Major in Spanish

In consultation with their major field adviser, students must complete twenty-eight (28) credits in courses numbered 300 and above with a minimum of six (6) credits in each of the following areas:
Oral and Written Spanish – SPAN 300 (required); 301, 305, 310, 315, 320, 330, 396, 440
Culture/Civilization – SPAN 331, 332, 397
Literature – SPAN 335, 340, 341, 380, 381, 385, 390, 398, 405, 410

Students in teacher licensure programs must include a course in linguistics.

Students majoring in Spanish must take a minimum of twelve (12) credits in Spanish at the 300-level or above at St. Thomas or in a St. Thomas approved study abroad program.

Minor in Spanish

In consultation with their minor field adviser, students must complete sixteen (16) credits in courses numbered 300 and above with a minimum of three (3) credits in each of the following areas:
Oral and Written Spanish – SPAN 300 (required); 301, 305, 310, 315, 320, 396, 440
Culture/Civilization – SPAN 330 (recommended); 331, 332, 397
Literature – SPAN 335 (recommended); 340, 341, 380, 381, 385, 390, 398, 405, 410
Students minoring in Spanish must take a minimum of eight (8) credits in Spanish at the 300-level or above at St. Thomas or in a St. Thomas approved study abroad program.

SPAN 111 Elementary Spanish I (4 credits)
Pronunciation, essentials of grammatical structures, aural-oral practice, writing, reading of simple Spanish prose, introduction to the culture of the Spanish-speaking world.

SPAN 112 Elementary Spanish II (4 credits)
Continuation of SPAN 111. Emphasis on grammatical structure, aural-oral practice, writing, reading. Continuation of Hispanic culture.
Prerequisite: SPAN 111 or its equivalent

SPAN 211 Intermediate Spanish I (4 credits)
Designed to increase listening, speaking, reading, and writing skills in Spanish. Reinforcement of grammatical structures of Elementary Spanish I and II. Continued exposure to Hispanic culture.
Prerequisite: SPAN 112 or its equivalent

SPAN 212 Intermediate Spanish II (4 credits)
Continuation of SPAN 211. Emphasis on Hispanic culture, conversation, writing, and expansion of vocabulary based on thematic discussions and cultural readings.
Prerequisite: SPAN 211 or its equivalent

SPAN 295, 296 Topics (2 credits)
SPAN 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

SPAN 300 Oral and Written Spanish (4 credits)
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: SPAN 212 or its equivalent

SPAN 301 Advanced Oral and Written Spanish (4 credits)
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: SPAN 300 or its equivalent

SPAN 305 Spanish Oral Expression (4 credits)
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: SPAN 300 or its equivalent

SPAN 310 Advanced Spanish Writing (4 credits)
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: SPAN 300 or its equivalent

SPAN 315 Hispanic Linguistics (4 credits)
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.
Prerequisites: SPAN 300 or its equivalent

SPAN 320 Business Spanish (4 credits)
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.
Prerequisites: SPAN 300 or its equivalent

SPAN 330 *Temas Hispanicos* (4 credits)
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: SPAN 300 or equivalent

SPAN 331 Survey of Spanish Culture and Civilization (4 credits)
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.
Prerequisites: Eight credits numbered SPAN 300 or above

SPAN 332 Survey of Latin American Culture and Civilization (4 credits)
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.
Prerequisites: Eight credits numbered SPAN 300 or above

SPAN 335 Introduction to Spanish Literature (4 credits)
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.
Prerequisites: Eight credits numbered SPAN 300 or above

SPAN 340 Survey of Spanish Literature I (4 credits)
Readings in Medieval, Renaissance and Baroque literature of Spain. Ranging from the twelfth to the seventeenth century, the course includes some of the greatest works of Spanish prose, poetry and theater. Historical contexts and other artistic productions are considered as they illuminate the literary works in question.
Prerequisites: Eight credits numbered SPAN 300 or above

SPAN 341 Survey of Spanish Literature II (4 credits)
Readings in Spanish literature from the 18th through the 20th centuries.
Prerequisites: Eight credits numbered SPAN 300 or above

SPAN 380 Spanish-American Literature I (4 credits)
Readings in Spanish-American literature from the colonial period through the 19th century.
Prerequisites: Eight credits numbered SPAN 300 or above

SPAN 381 Spanish-American Literature II (4 credits)
Readings in 20th century Spanish-American literature.
Prerequisites: Eight credits numbered SPAN 300 or above

SPAN 385 Modern Spanish-American Short Story (4 credits)
Intensive readings in the modern Spanish-American short story from Horacio Quiroga to the contemporary period (Rulfo, Fuentes, Cortazar, Onetti, Borges, *etc.*).
Prerequisites: Eight credits numbered SPAN 300 or above

SPAN 390 Contemporary Spanish-American Novel (4 credits)
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.
Prerequisites: Eight credits numbered SPAN 300 or above

SPAN 405 Spanish Genre Studies (4 credits)
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, non-fictional 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.
Prerequisites: Eight credits numbered SPAN 300 or above

SPAN 410 Hispanic Women Writers (4 credits)
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.
Prerequisites: Eight credits numbered SPAN 300 or above

SPAN 440 Advanced Spanish Oral Expression (4 credits)
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.
Prerequisites: Eight credits numbered SPAN 300 or above

SPAN 475, 476 Experiential Learning (2 credits)
SPAN 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

SPAN 483, 484 Seminar (2 credits)
SPAN 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

SPAN 487, 488 Topics (2 credits)
SPAN 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

SPAN 491, 492 Research (2 credits)
SPAN 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

SPAN 495, 496 Individual Study (2 credits)
SPAN 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Music (MUSC)

College of Arts and Sciences
Department of Music
George (chair), Broeker, Bryan, Callahan, Gleason, Gonzo, Johnson, Kachian, Orzolek, Schmalenberger, Trinka; Allaire, K. Banfield, W. Banfield, Brudnoy, Budde, Dumas, Duna, Faricy, Garvin, Gerth, Griffith, Haugen, Hauser, Itkin, Jenkins, Jorstad, Kemperman, Keno, Kolarov, Kotulski, Lewis, Lilienthal, Mensah, Merz, Morgan, Ohanessian, Reed, Rinear, Seerup, Skaar, Strasser, Strusinski, Stuckey, Thygeson, Titus, Van Nostrand, Volpe, Zimmerman

The Mission of the University of St. Thomas Department of Music is to provide outstanding music instruction through our progressive curriculum, enabling students to realize their full potentials in the development of their musical, artistic and career goals. Our accomplished faulty provide and model musical and academic excellence while mentoring students in a creative environment, which in turn enhances the cultural, spiritual and intellectual life of the university and community.

Students majoring in music take courses in six areas: music theory, music history, performance studies, ensembles, music media, and conducting.

Through the study of music theory, students develop an aural comprehension of tonal and non-tonal music, an understanding of the harmonic language and voice-leading principles of the "common-practice" style, and an understanding of the musical vocabulary, analytical systems, and structural and formal principles that apply to music since 1600. Students develop the necessary skills to read orchestral scores and to write in standard musical notation for the instruments of the orchestra. Students develop the ability to understand a wide range of musical traditions and cultural practices, ranging from the western classical tradition to the music of selected non-western cultures. Students will be able to discuss music critically, and will be prepared to engage in meaningful research in musical fields. Student performers will develop an expressive interpretation of solo repertoire through an understanding of compositional process and historical style with the necessary technical proficiency. Students will demonstrate advanced ensemble skills and contextual understandings of repertoire by artistically performing music representing a variety of genres, stylistic periods and cultures.

Transfer students must:

- take a theory placement test. This placement test should be taken at the beginning of the first semester of studies at UST. Review sheets and information on time and place of the placement test are available from the Music Department Office (651) 962-5850.
- file an Application for Major Field with the department chair.
- take at least one semester of music history at UST.
- pass the performance level audition.
- take at least four semesters of performance level lessons at UST.
- perform their final level recital at UST.
- take a minimum of four semesters of an appropriate ensemble.
- complete 32 of their last 36 credits at UST.

Students majoring in music may not have a letter grade lower than C- in a required music course.

For information concerning the department's current policies and procedures, consult the *Handbook for Music Majors and Minors*, which is available in the department office.

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, regardless of major.

The department also offers a number of courses for non-majors that fulfill the Fine Arts, Human Diversity, and second-level Computer Competency components of the core curriculum.

The University of St. Thomas is a member of the National Association of Schools of Music.

Music – Performance (B.M.)

MUSC 001 Student Convocation Hour (0 credits) (6 semesters)
MUSC 140 Music Media (2 credits)
MUSC 113 Music Theory I (4 credits)
MUSC 131 Eurhythmics I (1 credit)
MUSC 114 Music Theory II (4 credits)
MUSC 132 Eurhythmics II (1 credit)
MUSC 213 Music Theory III (4 credits)
MUSC 214 Music Theory IV (4 credits)

MUSC 340 Theory Elective: Eighteenth-Century Counterpoint (2 credits)
MUSC 341 Theory Elective: Musicianship Pedagogy for Music Educators (2 credits)
MUSC 231 Introduction to Conducting I (1 credit)
MUSC 232 Introduction to Conducting II (1 credit)
MUSC 133 Music of the United States: Aural and Written Traditions (4 credits)
MUSC 233 Music of the World: Aural and Written Traditions (4 credits)
MUSC 411 History and Literature of Music I (4 credits)
MUSC 412 History and Literature of Music II (4 credits)
MUSC 420 Senior Research Paper (2 credits)
MUSP 2xx Performance studies (8 semesters) (2 credits each semester)
MUSR 270 Level I Recital (0 credits)
MUSR 350 Level II Recital (0 credits)
MUSR 450 Level III Recital (0 credits)
MUSP 102 or 103 Skills for piano Proficiency (0 credits)
MUSR 200 Piano Proficiency (0 credits)
MUSN 1xx Eight semesters of Ensemble participation (1 credit each semester)
Guidelines for choosing an ensemble:
If principal instrument is:
Piano - at least two semesters in MUSN 171: at least two semesters in MUSN 172; at least two semesters in one of: MUSN 143. 160, 181, 185, 186, 190: two semesters may be in 161, 182, 183.
Voice - voice majors must participate in a minimum of eight semesters in MUSN 140, 142, 143, or 160.
Woodwind, Brass or Percussion - at least eight semesters in MUSN 185 or 186.
Orchestral String - at least eight semesters in MUSN 181.
Guitar - at least six semesters in MUSN 173; at least two semesters in MUSN 174.
Other Instruments - at least eight semesters chosen from: MUSN 143, 160, 171, 172, 185, 190.

Plus:
EDUC 308 Pedagogy and Literature for Music Performers I (2 credits)
EDUC 309 Pedagogy and Literature for Music Performers II (2 credits)

Allied Requirements:
PHYS 105 Musical Acoustics (4 credit hours)

Music Education – Instrumental (K-12) (B.M.)

Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
Block III
EDUC 110 Introduction to Music Education I (0 credit)
EDUC 112 Introduction to Music Education II (0 credit)
EDUC 207 Music Education Methods I (4 credits)
EDUC 307 Music Education Methods II (4 credits)
EDUC 314 Music Education Methods III (4 credits)
EDUC 418 Music Education Methods IV (4 credits)
Note: These courses substitute for EDUC 381 and 382
EDUC 369 Field Experience: Primary Level (K-4) (0 credit)
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
See note below about completion of licensure in Plan B
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus the following Instrumental Concentrations:
EDUC 218 Teaching Techniques for the Brass Family (1 credit)
EDUC 220 Teaching Techniques for the Percussion family (1 credit)
EDUC 221 Teaching Techniques for the Woodwind Family (1 credit)
EDUC 324 Teaching Techniques for the String Family (1 credit)
EDUC 328 Vocal Pedagogy for the Music Educator (1 credit)
MUSC 354 Advanced Conducting and Materials: Instrumental Concentration (2 credits)

Plus:
MUSC 001 Student Convocation Hour (0 credits) (6 semesters)
MUSC 113 Music Theory I (4 credits)

MUSC 114 Music Theory II (4 credits)
MUSC 131 Eurhythmics I (1 credit)
MUSC 132 Eurhythmics II (1 credit)
MUSC 133 Music of the United States: Aural and Written Traditions (4 credits)
MUSC 140 Music Media (2 credits)
MUSC 213 Music Theory III (4 credits)
MUSC 214 Music Theory IV (4 credits)
MUSC 231 Introduction to Conducting I (1 credit)
MUSC 232 Introduction to Conducting II (1 credit)
MUSC 233 Music of the World: Aural and Written Traditions (4 credits)
MUSC 341 Theory Elective: Musicianship Pedagogy for Music Educators (2 credits)
MUSC 411 History and Literature of Music I (4 credits)
MUSC 412 History and Literature of Music II (4 credits)
MUSN 1xx Ensemble (6 semesters) (0 credits each semester)
MUSP 102 or 103 Skills for Piano Proficiency (0 credit)
MUSP 2xx Performance studies (6 semesters) (2 credits each semester)
MUSR 200 Piano Proficiency (0 credit)
MUSR 270 Level I Recital (0 credit)
MUSR 350 Level II Recital (0 credit)

Guidelines for choosing an ensemble:
Students must spend 6 semesters in a large instrumental ensemble.
Instrumental majors must spend at least 4 semesters in MUSN 185 or MUSN 186.

Allied Requirements:
PHYS 105 Musical Acoustics (4 credit hours)

Music Education – Vocal (K-12) (B.M.)

Block I
EDUC 210 Education's Place in Society (4 credits)
EDUC 211 Field Experience: Introductory (K-12) (0 credit)
EDUC 212 Human Relations and Multicultural Education (4 credits)
Block II - Praxis I Exam (PPST) required for admission to program
EDUC 330 Psychology for Teaching and Learning (4 credits)
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)
Block III
EDUC 110 Introduction to Music Education I (0 credit)
EDUC 112 Introduction to Music Education II (0 credit)
EDUC 207 Music Education Methods I (4 credits)
EDUC 307 Music Education Methods II (4 credits)
EDUC 314 Music Education Methods III (4 credits)
EDUC 418 Music Education Methods IV (4 credits)

Note: These courses substitute for EDUC 381 and 382

EDUC 369 Field Experience: Primary Level (K-4) (0 credit)
Block IV (Praxis II PLT & Content Area Exams required for licensure)
EDUC 456 Inclusive School Communities (2 credits)
EDUC 460 Student Teaching and Seminar (6 credits)
EDUC 461 The Teacher as Educational Advocate (4 credits)

Plus the following for Vocal Concentrations:
EDUC 328 Vocal Pedagogy for the Music Educator (1 credit)
EDUC 334 Vocal Diction (1 credit)
EDUC 424 Instrumental Techniques for Vocal Music Educators (1 credit)
MUSC 355 Advanced Conducting and Materials: Vocal Concentration (2 credits)

Plus:
MUSC 001 Student Convocation Hour (0 credits) (6 semesters)
MUSC 113 Music Theory I (4 credits)
MUSC 114 Music Theory II (4 credits)
MUSC 131 Eurhythmics I (1 credit)
MUSC 132 Eurhythmics II (1 credit)
MUSC 133 Music of the United States: Aural and Written Traditions (4 credits)
MUSC 140 Music Media (2 credits)
MUSC 213 Music Theory III (4 credits)
MUSC 214 Music Theory IV (4 credits)
MUSC 231 Introduction to Conducting I (1 credit)
MUSC 232 Introduction to Conducting II (1 credit)
MUSC 233 Music of the World: Aural and Written Traditions (4 credits)

MUSC 341 Theory Elective: Musicianship Pedagogy for Music Educators (2 credits)
MUSC 411 History and Literature of Music I (4 credits)
MUSC 412 History and Literature of Music II (4 credits)
MUSP 2xx Performance studies (6 semesters) (2 credits each semester))
MUSR 270 Level I Recital (0 credits)
MUSR 350 Level II Recital (0 credits)
MUSP 102 or 103 Skills for piano Proficiency (0 credits)
MUSR 200 Piano Proficiency (0 credits)
MUSN 1xx Ensemble (6 semesters) (0 credits each semester)
Guidelines for choosing an ensemble:
Students must spend 6 semesters in a large choral ensemble.
Voice majors must spend at least 4 semesters in MUSN 142 or MUSN 160.

Allied Requirements:
PHYS 105 Musical Acoustics (4 credit hours)

Music (B.A.)

MUSC 001 Student Convocation Hour (0 credits) (6 semesters)
MUSC 140 Music Media (2 credits)
MUSC 113 Music Theory I (4 credits)
MUSC 131 Eurhythmics I (1 credit)
MUSC 114 Music Theory II (4 credits)
MUSC 132 Eurhythmics II (1 credit)
MUSC 213 Music Theory III (4 credits)
MUSC 214 Music Theory IV (4 credits)
MUSC 231 Introduction to Conducting I (1 credit)
MUSC 232 Introduction to Conducting II (1 credit)
MUSC 411 History and Literature of Music I (4 credits)
MUSC 412 History and Literature of Music II (4 credits)
MUSN 1xx Six semesters of Ensemble participation (1 credit each semester)
Guidelines for choosing an ensemble:
2 consecutive semesters of a large choral or instrumental ensemble
4 semesters chosen from any combination of large or small vocal or instrumental ensembles
MUSP 102 or 103 Skills for Piano Proficiency (0 credits each)
MUSP 1xx Six semesters of performance studies in the same performance medium (1 credit per semester)
MUSR 200 Piano Proficiency (0 credit)
MUSR 270 Level I Recital (0 credit)
MUSR 350 Level II Recital (0 credit)

Plus 8 credit hours selected from the following:
MUSP 1xx Up to 2 credits on any secondary instrument or voice (1 or 2 credit hours)
MUSP 101 Group Piano (1 credit hour)
MUSP 108 Class Voice (1 credit hour)
MUSC 125 Jazz Theory I (2 credit hours)
MUSC 126 Fundamentals of Jazz Music I (2 credit hours)
MUSC 133 Music of the United States: Aural and Written Traditions (4 credits)
MUSC 216 Jazz in America (4 credits)
MUSC 218 Black American Music: A Historical Survey (4 credits)
MUSC 222 The Theology of American Popular Music (4 credits)
MUSC 223 Jazz Arranging (2 credit hours)
MUSC 224 Jazz Composition/Song Writing (2 credit hours)
MUSC 225 Jazz Theory II (2 credit hours)
MUSC 226 Fundamentals of Jazz Music II (2 credit hours)
MUSC 228 Advanced Jazz Arranging (2 credit hours)
MUSC 233 Music of the World: Aural and Written Traditions (4 credits)
MUSC 281 Introduction to Accompanying (2 credit hours)
MUSC 308 Pedagogy and Literature for Music Performers I (2 credit hours)
MUSC 309 Pedagogy and Literature for Music Performers II (2 credit hours)
MUSC 340 Theory Elective: Eighteenth-Century Counterpoint (2 credits)
MUSC 341 Theory Elective: Musicianship Pedagogy for Music Educators (2 credit hours)
MUSC 354 Advanced Conducting and Materials: Instrumental Conc. (2 credit hours)
MUSC 355 Advanced Conducting and Materials: Vocal Concentration (2 credit hours)

Allied requirements
PHYS 105 Musical Acoustics (4 credits)
Four credits in Art History or Theater

Music – Liturgical Music (B.A.)

Note: This concentration is available only to students whose principal instrument is voice, keyboard, guitar, or by special permission of the chair.
MUSC 001 Student Convocation Hour (6 semesters) (0 credits)
MUSC 113 Music Theory I (4 credits)
MUSC 114 Music Theory II (4 credits)
MUSC 131 Eurhythmics I (1 credit)
MUSC 132 Eurhythmics II (1 credit)
MUSC 140 Music Media (2 credits)
MUSC 213 Music Theory III (4 credits)
MUSC 214 Music Theory IV (4 credits)
MUSC 231 Introduction to Conducting I (1 credit)
MUSC 232 Introduction to Conducting II (1 credit)
MUSC 355 Advanced Conducting and Materials: Vocal Concentration (2 credits)
MUSC 304 Hymnody (2 credits)
MUSC 306 Psalms in Christian Worship (2 credits)
MUSC 411 History and Literature of Music I (4 credits)
MUSC 412 History and Literature of Music II (4 credits)
MUSP 1xx Performance Studies (8 semesters) (1 credit each semester)
MUSP 102 or 103 Skills for Piano Proficiency (0 credits each)
MUSR 200 Piano Proficiency (0 credit)
MUSR 270 Level I Recital (0 credit)
MUSR 350 Level II Recital (0 credit)
MUSR 450 Level III Recital (0 credit)
MUSN 1xx Eight semesters of Ensemble participation (1 credit per semester)

Guidelines for choosing an ensemble:
If principal instrument is:
Piano - one semester in MUSN 171: one semester in MUSN 172; six semesters in MUSN 143.
Voice – a minimum of six semesters in MUSN 143. The remaining two semesters may be in MUSN 140, 142, 143, or 160.
Guitar – Six semesters in MUSN 143 and two semesters in MUSN 173

Plus four semesters (if principal instrument is not voice) (1 credit each semester)
MUSP 133 Voice: Elective

Allied requirements
THEO 101 Christian Theological Tradition (4 credits)

Plus four credits from the following:
THEO 205 Old Testament (4 credits)
THEO 210 New Testament (4 credits)

Plus four credits from the following:
THEO 310 Christian Worship (4 credits)
THEO 313 Christian Sacramentality (4 credits)

Plus four credits from the following:
THEO 356 Music and the Bible (4 credits)
THEO 357 Sacred Music of the Catholic Heritage (4 credits)

Plus:
IDSC 478 Experiential Learning (4 credits)
PHYS 105 Musical Acoustics (4 credits)

Plus four credits from the following:
ARTH 280 Sacred Architecture and Space (4 credits)
ARTH 335 Cathedrals, Monasteries, and Caliphates (4 credits)
ARTH 340 Southern Renaissance Art and Society (4 credits)
ARTH 342 Renaissance and Reformation in Northern Europe (4 credits)

Music Business (B.A.)

MUSC 001 Student Convocation Hour (6 semesters) (0 credits)
MUSC 113 Music Theory I (4 credits)
MUSC 114 Music Theory II (4 credits)
MUSC 131 Eurhythmics I (1 credit)
MUSC 132 Eurhythmics 2 (1 credit)
MUSC 140 Music Media (2 credits)
MUSC 213 Music Theory III (4 credits)

MUSC 214 Music Theory IV (4 credits)
MUSC 231 Introduction to Conducting I (1 credit)
MUSC 232 Introduction to Conducting II (1 credit)
MUSC 411 History and Literature of Music I (4 credits)
MUSC 412 History and Literature of Music II (4 credits)
MUSC 480 Music Business Seminar (4 credits)
MUSN 1xx Six semesters of Ensemble participation (1 credit per semester)
Guidelines for Choosing an Ensemble:
If principal instrument is:
Piano - at least two semesters in MUSN 171: at least two semesters in MUSN 172; at least two semesters in one of: MUSN 143, 160, 181, 185, 186, 190: two semesters may be in MUSN 161, 182, 183.
Voice - a minimum of eight semesters in MUSN 140, 142, 143, or 160.
Woodwind, Brass or Percussion - at least eight semesters in MUSN 185 or 186.
Orchestral String - at least eight semesters in MUSN 181.
Guitar - at least six semesters in MUSN 173; at least two semesters in MUSN 174.
Other Instruments - at least eight semesters chosen in consultation with the chair.
MUSP 102 or 103 Skills for Piano Proficiency (0 credits each)
MUSR 200 Piano Proficiency (0 credit)
MUSP 1xx Six semesters of performance studies in the same performance medium (1 credit per semester)
MUSR 270 Level I Recital (0 credit)
MUSR 350 Level II Recital (0 credit)

Plus 4 credit hours selected from the following:
MUSP 1xx Up to 2 credits on any secondary instrument or voice (1 or 2 credits)
MUSP 101 Group Piano (1 credit)
MUSP 108 Class Voice (1 credit)
MUSC 125 Jazz Theory I (2 credits)
MUSC 126 Fundamentals of Jazz Musicianship I (2 credits)
MUSC 133 Music of the United States: Aural and Written Traditions (4 credits)
MUSC 216 Jazz in America (4 credits)
MUSC 218 Black American Music: A Historical Survey (4 credits)
MUSC 222 The Theology of American Popular Music (4 credits)
MUSC 223 Jazz Arranging (2 credits)
MUSC 224 Jazz Composition/Song Writing (2 credits)
MUSC 225 Jazz Theory II (2 credits)
MUSC 226 Fundamentals of Jazz Music II (2 credits)
MUSC 228 Advanced Jazz Arranging (2 credits)
MUSC 233 Music of the World: Aural and Written Traditions (4 credits)
MUSC 281 Introduction to Accompanying (2 credits)
MUSC 308 Pedagogy and Literature for Music Performers I (2 credits)
MUSC 309 Pedagogy and Literature for Music Performers II (2 credits)
MUSC 340 Theory Elective: Eighteenth-Century Counterpoint (2 credits)
MUSC 341 Theory Elective: Musicianship Pedagogy for Music Educators (2 credits)
MUSC 354 Advanced Conducting and Materials: Instrumental Conc. (2 credits)
MUSC 355 Advanced Conducting and Materials: Vocal Concentration (2 credits)

Allied requirements
ECON 252 Principles of Microeconomics (4 credits)
ENTR 300 Entrepreneurship for Non-majors (4 credits)
IDSC 475 Experiential Learning: Career Exploration Externship (2 credits)

Plus:
Sixteen additional credits in business courses chosen in consultation with the program adviser (all prerequisites for the courses selected must be satisfied)

Plus:
PHYS 105 Musical Acoustics (4 credits)
Four credits in Art History or Theater

Minor in Music

MUSC 113 Music Theory I (4 credits)
MUSC 114 Music Theory II (4 credits)
MUSC 131 Eurhythmics I (1 credit)
MUSC 132 Eurhythmics II (1 credit)
MUSP 1xx Four semesters of performance studies in same performance medium (1 credit per semester)
MUSR 270 Level I Recital (0 credits)
MUSN 1xx Four semesters of appropriate ensemble for principal instrument (1 credit per semester)

Plus four credits from the following:
MUSC 411 History and Literature of Music I (4 credits)
MUSC 412 History and Literature of Music II (4 credits)

Plus four credits from the following:
MUSC 216 Jazz in America (4 credits)
MUSC 233 Music of the World: Aural and Written Traditions (4 credits)

Minor in Electronic Music Production

MUSC 113 Music Theory I (4 credits)
MUSC 114 Music Theory II (4 credits)
MUSC 131 Eurhythmics I (1 credit)
MUSC 132 Eurhythmics II (1 credit)
MUSC 150 MIDI Studio (2 credits)
MUSC 180 Multi-Track Tape Recording (2 credits)
MUSC 220 Digital Recording/Sampling (2 credits)
MUSC 240 Musical Audio Post Production (2 credits)

Plus:
MUSP 101 Group Piano (2 semesters) (1 credit per semester)
or
MUSC 140 Music Media (2 credits) (to be taken in place of 2 semesters of MUSP 101 if student possesses adequate keyboard skills as determined by a keyboard placement exam.)

Allied requirement
PHYS 105 Musical Acoustics (4 credits)

Minor in Jazz Studies

MUSC 125 Jazz Theory I (2 credits)
MUSC 126 Fundamentals of Jazz Musicianship I (2 credits)
MUSC 216 Jazz in America (4 credits)
MUSC 223 Jazz Arranging (2 credits)
MUSC 226 Fundamentals of Jazz Musicianship II (2 credits)
MUSP 1xx Four semesters of performance jazz studies (50-minute lessons)
MUSR 290 Jazz Recital (0 credits)

Plus four credits from the following:
MUSC 224 Jazz Composition/Song Writing (2 credits)
MUSC 225 Jazz Theory II (2 credits)
MUSC 228 Advanced Jazz Arranging (2 credits)

Plus four semesters in:
MUSN 182 or 183 Instrumental Jazz Ensemble or Jazz Singers (1 credit per semester)

Music Courses (MUSC)

MUSC 001 Student Convocation Hour (0 credit)
The student convocation hour is for all music majors regardless of specialization. This course meets five times per semester for each semester of enrollment and gives the community of learners performance opportunities, lectures/discussions on topics applicable to all music concentrations, and lecture/discussions on topics specific to each music concentration.

MUSC 113 Music Theory I (4 credits)
Basic materials and structures of music, approached through analysis and experience. This course is the first of a four-semester sequence that 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. Offered fall semester.

MUSC 114 Music Theory II (4 credits)
Continuation of MUSC 113. Offered in spring semester.
Prerequisite: MUSC 113 or successful placement test

MUSC 115 Understanding Music and Culture (4 credits) (MUSC 118, 119)
This survey course explores the classics of European and American music in their historical, cultural and social contexts. It will investigate the many ethnic, religious, political, philosophical, economic and scientific influences that have shaped these traditions. This course is designed to enable students, regardless of musical background, to increase their understanding of music. The listening skill and knowledge acquired will provide a foundation for students to become more critical and discerning listeners of music of all types. This course fulfills the Fine Arts requirement in the core curriculum.
NOTE: Students who receive credit for MUSC 115 may not receive credit for MUSC 118 or 119.

MUSC 118 Understanding Music and Culture to 1850 (2 credits) (MUSC 115)
The first half of MUSC 115, the general survey of music up to approximately 1850. This course partially fulfills the Fine Arts requirement in the core curriculum. Offered in January term.
NOTE: Students who receive credit for MUSC 118 may not receive credit for MUSC 115.

MUSC 119 Understanding Music and Culture 1850 to Present (2 credits) (MUSC 115)
The second half of MUSC 115, the general survey of music, beginning around 1850 and continuing the survey to the present. This course partially fulfills the Fine Arts requirement in the core curriculum. Offered in January term.
Prerequisite: MUSC 118
NOTE: Students who receive credit for MUSC 119 may not receive credit for MUSC 115.

MUSC 120 Orchestral Literature (4 credits)
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. This course fulfills the Fine Arts requirement in the core curriculum.

MUSC 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. Offered fall semester.
Prerequisite: Ability to read music

MUSC 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. Offered fall semester.

MUSC 130 Introduction to World Music (4 credits)
This course studies the phenomenon of music as an activity in people's lives. Students will be guided to think critically about music employing an anthropological and multicultural perspective. Models will be presented to provide a context in which music serves as part of larger social ritual. The music of selected cultures such as from Africa, the Middle East, China, Japan, India, Native American and American popular music in addition to European classical music will be covered. Designed for the non-major. This course fulfills the Fine Arts and the Human Diversity requirements in the core curriculum.

MUSC 131 Eurhythmics I (1 credit)
This course uses body movement to introduce and practice rhythmic/pitch skills and concepts. From aural and kinesthetic activities, students are led to music literacy and improvisation. Topics include the internalization of the beat, rhythm patterns, measure shapes, phrase shapes, asymmetric and mixed meters, counterpoint, and pitch related concepts. Offered fall semester.
Prerequisite: Concurrent Enrollment with MUSC 113

MUSC 132 Eurhythmics II (1 credit)
This course uses body movement to introduce and practice rhythmic/pitch skills and concepts. From aural and kinesthetic activities, students are led to music literacy and improvisation. Topics include the internalization of the beat, rhythm patterns, measure shapes, phrase shapes, asymmetric and mixed meters, counterpoint, and pitch related concepts. Offered spring semester.
Prerequisite: Concurrent enrollment with MUSC114

MUSC 133 Music of the United States: Aural and Written Traditions (4 credits)
This course focuses on the study of U.S. music within its cultural context. The course, with its emphasis on listening, analysis, and vocabulary development will contain 1) music of aural traditions to include jazz, popular, and ethnic music and 2) music of written traditions to include art music and jazz.

MUSC 140: Music Media (2 credits)
This course will serve to introduce first semester freshmen music majors to software, hardware, techniques and issues surrounding digital music media. Learners will engage in the retrieval, generation, and distribution of musical notation, digital recordings, and MIDI sequences.

MUSC 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.

MUSC 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.

MUSC 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.

MUSC 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: MUSC 150

MUSC 213 Theory III (4 credits)
Continuation of MUSC 114. Offered in fall semester.
Prerequisite: MUSC 114 or successful placement test

MUSC 214 Music Theory IV (4 credits)
Continuation of MUSC 213. Offered in spring semester.
Prerequisite: MUSC 213 or successful placement test

MUSC 216 Jazz in America (4 credits)
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 fall semester. This course fulfills the Fine Arts and Human Diversity requirements in the core curriculum.

MUSC 217 Music of the Americas (4 credits)
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 Fine Arts and Human Diversity requirements in the core curriculum.

MUSC 218 Black American Music: A Historical Survey (4 credits)
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. This course fulfills the Fine Arts and Human Diversity requirements in the core curriculum.

MUSC 219 Music in the United States (4 credits)
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. This course fulfills the Fine Arts requirement in the core curriculum.

MUSC 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: MUSC 150

MUSC 222 The Theology of American Popular Music (4 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. This course fulfills the Fine Arts requirement in the core curriculum.

MUSC 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. Offered fall semester.

MUSC 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: MUSC 125 or 126 or permission of the instructor

MUSC 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. Offered spring semester.
Prerequisite: MUSC 125

MUSC 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. Offered spring semester.
Prerequisite: MUSC 126

MUSC 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. Offered spring semester.
Prerequisites: MUSC 125 and 223 and 226

MUSC 231 Introduction to Conducting I (1 credit)
This course includes basic conducting patterns and gestures, general knowledge of score types (choral, band, orchestral, etc.), score study and basic rehearsal planning. Practice in conducting small ensembles will be provided. Offered fall semester.
Prerequisite: Concurrent enrollment in MUSC 213

MUSC 232: Introduction to Conducting II (1 credit)
This course includes basic conducting patterns and gestures, general knowledge of score types (choral, band, orchestral, etc.), score study and basic rehearsal planning. Practice in conducting small ensembles will be provided. Offered spring semester.
Prerequisite: MUSC231; Concurrent enrollment in MUSC 214

MUSC 233 Music of the World: Aural and Written Traditions (4 credits)
This course studies music as a ritual activity among the peoples of the non-Western world. It employs an anthropological approach that analyzes music in cultural context rather than as an object of art. The musical and cultural activities of a diverse number of countries will be investigated each semester.

MUSC 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. Offered in spring semester.
Prerequisite: MUSC 220

MUSC 281 Introduction to Accompanying (2 credits)
This course focuses on topics related to the accompanying of singers and solo instrumentalists.

MUSC 295, 296 Topics (2 credits)
MUSC 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

MUSC 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.

MUSC 304 Hymnody (2 credits)
Students will learn about the history of and current trends in hymns used in Christian worship, with particular emphasis on Roman Catholic worship. They will learn criteria for evaluating hymns in terms of musical quality, literary characteristics, theological content, and liturgical application. Students will also practice skills in leading hymns from the organ or piano.
Prerequisite: THEO 101, MUSC 113

MUSC 306 Psalms in Christian Worship (2 credits)
Students will learn about the literary forms and historical context of the Hebrew psalms. They will learn about the history of and present practices of the appropriation of psalms in Christian worship, with emphasis on liturgical application in the rites of the Roman Catholic church. Students will also develop practical skills in evaluating psalm settings for use in worship and in leading psalmody by singing and from the organ or piano.
Prerequisite: THEO 101, MUSC 113

MUSC 308 Pedagogy and Literature for Music Performers I (2 credits)
Cross-listed with EDUC 308:
Section 1: Voice
Section 2: Keyboard
Section 3: Guitar
Section 4: Winds/Percussion/Brass
This class will survey methods and materials for performance studies. Discussions will include principles of technique, learning theories, musicianship, and performance based upon a wide and diverse body of literature. Students should sign up for section numbers that correspond with primary area of performance.

MUSC 309 Pedagogy and Literature for Music Performers II (2 credits)
Cross-listed with EDUC 309:
Section 1: Voice
Section 2: Keyboard
Section 3: Guitar
Section 4: Winds/Percussion/Brass
All 4 sections will meet concurrently.
A continuation of Pedagogy and Literature for Music Performers I, this class will survey methods and materials for performance studies. Discussions will include principles of technique, learning theories, musicianship, and performance based upon a wide and diverse body of literature. Students should sign up for section numbers that correspond with primary area of performance.
Prerequisite: EDUC 308/MUSC 308

MUSC 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.*

MUSC 340 Theory Elective: Eighteenth-Century Counterpoint (2 credits)
This course will examine the basics of tonal counterpoint beginning with species counterpoint and culminating with analysis and composition of larger pieces.
Prerequisite: Completion of MUSC 214 with a grade of C- or better

MUSC 341 Theory Elective: Musicianship Pedagogy for Music Educator (2 credits)
Study and practical application of historical pedagogic systems for teaching melody, rhythm, form, and harmony, using moveable-do tonic solfa and rhythm syllables. Analysis of small forms in pentatonic, diatonic, and modal systems. Rhythmic and melodic improvisation and composition in question-answer, strophic, ABA, rondo forms.
Prerequisite: Ability to match pitch and maintain steady beat and satisfactory completion of MUSC 113 and MUSC 114

MUSC 354 Advanced Conducting and Materials: Instrumental Concentration (2 credits)
Advanced Conducting and Materials: Instrumental Concentration: Continuation of Introduction to Conducting I and II. Study of advanced conducting patterns and refined expressive gestures. Survey of orchestral and band literature and in-depth study of selected pieces. Rehearsal planning, rehearsal techniques, and classroom management.
Prerequisite: MUSC 232

MUSC 355 Advanced Conducting and Materials: Vocal Concentration (2 credits)
Continuation of Introduction to Conducting I and II. Study of advanced conducting patterns and refined expressive gestures. Survey of choral literature and in-depth study of selected pieces. Rehearsal planning, rehearsal techniques, and classroom management.
Prerequisite: MUSC 232

MUSC 411 History and Literature of Music I (4 credits)
A survey of Western European music to 1800: the medieval, Renaissance, Baroque and Classical periods. Historical development, social context, forms, styles and issues of expression are explored. Offered in fall semester.

MUSC 412 History and Literature of Music II (4 credits)
A survey of Western European music from 1800 to the present: the Romantic period and the twentieth century. This course includes traditional music of the world and selected American popular styles. Emphasis is on social context and issues of meaning and expression. Continuation of 411. This course fulfills the Fine Arts requirement in the core curriculum. Offered in spring semester.

MUSC 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.
Prerequisite: 200, 312

MUSC 420 Senior Research Paper (2 credits)
Senior Research Paper (2 credits): This course allows music students to demonstrate research and writing skills by utilizing standard music resources (Music Index, RILM, Grove, Baker's, etc.). The paper may contain theoretical analysis, and/or it may be connected to the student's performance area or degree focus
Prerequisite: MUSC 412.

MUSC 475, 476 Experiential Learning (2 credits)
MUSC 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

MUSC 480 Music Business Seminar (4 credits)
A course involving individual research that is shared among the participants. Guest speakers 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.

MUSC 483, 484 Seminar (2 credits)
MUSC 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

MUSC 487, 488 Topics (2 credits)
MUSC 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

MUSC 491, 492 Research (2 credits)
MUSC 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

MUSC 495, 496 Individual Study (2 credits)
MUSC 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "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 in one of the following ensembles: MUSN 140, 142, 143, 160, 185, 186. A total of four semesters in MUSN 142 and 160 or 185 and 186 will also fulfill the requirement. Other combinations must be approved by the department chair. 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 Majors and Minors* available from the Department of Music office.) Music majors audit all ensembles.

MUSN 140 Women's Choir (1 credit)
A vocal ensemble that explores the wide variety of secular and sacred repertoire composed for women's voices. Major performances are given each semester and may include exchange/joint concerts with other choirs. Two rehearsals a week. Membership by audition. Four semesters of participation fulfill the Fine Arts requirement in the core curriculum.

MUSN 142 Chamber Singers (1 credit)
A mixed vocal ensemble of 30-40 members that will study and perform materials appropriate to the chamber ensemble; repertoire will include secular and sacred literature. Major performances are given each semester and may include exchange/joint concerts with other choirs. Three rehearsals per week. Membership by audition. Four semesters of participation fulfill the Fine Arts requirement in the core curriculum.

MUSN 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 fulfills the Fine Arts requirement in the core curriculum.

MUSN 151 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.

MUSN 160 Concert Choir (1 credit)
A mixed vocal ensemble that performs a variety of secular and sacred repertoire from the Middle Ages to the 21st 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. Three rehearsals a week. Membership by audition. Four semesters of participation fulfill the Fine Arts requirement in the core curriculum.

MUSN 161 String Ensemble (1 credit)
Ensemble meets weekly and are conducted by a member of the string faculty. Membership by audition.

MUSN 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.

MUSN 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.

MUSN 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.

MUSN 165 Chamber Wind Ensemble (1 credit)
Formation of mixed woodwinds, brass and percussion. Ensembles meet once a week and are conducted by a member of the faculty. Membership by audition.

MUSN 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.

MUSN 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.

MUSN 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.

MUSN 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.

MUSN 171 Piano Ensembles (1 credit)
Study and performance of duets and two-piano music. One major performance per semester. Membership by audition.

MUSN 172 Accompanying Ensembles (1 credit)
Qualified pianists have the opportunity to accompany solo vocalists and solo instrumentalists through individual instruction. Membership by audition.

MUSN 173 Guitar Ensemble (1 credit)
Study, performance and recording of music for multiple guitars and bass from Renaissance through twentieth-century composers including American jazz and rock styles. Repertoire includes original works, transcriptions, and arrangements. Opportunities provided for students to learn improvisation, composition, and arrangement.

MUSN 174 Guitar Small Ensemble (1 credit)
The study and performance of all styles of music for guitar and diverse instruments, including bass and drums. At least one major performance per semester.

MUSN 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.

MUSN 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.

MUSN 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.

MUSN 185 Symphonic Band (1 credit)
Study and performance of original works for wind-band; transcriptions, manuscripts, and solo repertoire with band accompaniment. Two 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 in the core curriculum.

MUSN 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 symphonic 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 two times a week. Membership by audition. Four semesters of participation fulfill the Fine Arts requirement in the core curriculum.

MUSN 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.

MUSN 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.

MUSN 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.

MUSP 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 six students and meet for an hour each week. This course may be repeated.

MUSP 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.

MUSP 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.

MUSP 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.

MUSP 110 Digital Music Lessons (1 credit)
These lessons focus on Hard-Disk Recording and MIDI-Sequencing and are designed with the modern musician in mind. Each week students witness the demonstration of professional recording techniques in one of the UST computerized recording studios. Then they apply their new skills to original compositions in scheduled studio sessions. Some of the subjects covered: Multi-tracking, Automation, Groove Quantizing, Harmonizing, Music Notation, and miking. Students may have their choice of MIDI-controllers: guitar, keyboard, or drum-machine pads.
Prerequisite: Basic computer and music-making skills

MUSP 121 Harpsichord: elective (1 credit)

MUSP 122 Lute: elective (1 credit)

MUSP 128 Recorder: elective (1 credit)

MUSP 131 Piano: elective (1 credit)

MUSP 133 Voice: elective (1 credit)

MUSP 135 Organ: elective (1 credit)

MUSP 136 Flute: elective (1 credit)

MUSP 137 Oboe: elective (1 credit)

MUSP 138 Clarinet: elective (1 credit)

MUSP 139 Bassoon: elective (1 credit)

MUSP 141 Saxophone: elective (1 credit)

MUSP 144 Trumpet: elective (1 credit)

MUSP 145 French horn: elective (1 credit)

MUSP 146 Trombone: elective (1 credit)

MUSP 147 Euphonium: elective (1 credit)

MUSP 148 Tuba: elective (1 credit)

MUSP 149 Percussion: elective (1 credit)

MUSP 152 Jazz/Pop Vocal: elective (1 credit)
Covers techniques for communicative lyric singing, including repertoire from different eras of the American music spectrum. Considers stage presence, microphone technique, vocal inflection and communication with an accompanist or rhythm section. Improvisation may also be explored.

MUSP 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.

MUSP 154 Violin: elective (1 credit)

MUSP 155 Viola: elective (1 credit)

MUSP 156 Cello: elective (1 credit)

MUSP 157 Double Bass: elective (1 credit)

MUSP 158 Guitar: elective (1 credit)
Students will study all styles of music including classical, blues, rock, folk and others on acoustic, nylon and electric guitars. Topics include all forms of notation (standard, tab, chord symbols, etc.), improvisation and performance practice.

MUSP 159 Harp: elective (1 credit)

MUSP 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.

MUSP 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 .

MUSP 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 current Handbook for Music Students.

MUSP 221 Harpsichord: performance (2 credits)

MUSP 231 Piano: performance (2 credits)

MUSP 233 Voice: performance (2 credits)

MUSP 235 Organ: performance (2 credits)

MUSP 236 Flute: performance (2 credits)

MUSP 237 Oboe: performance (2 credits)

MUSP 238 Clarinet: performance (2 credits)

MUSP 239 Bassoon: performance (2 credits)

MUSP 241 Saxophone: performance (2 credits)

MUSP 244 Trumpet: performance (2 credits)

MUSP 245 French horn: performance (2 credits)

MUSP 246 Trombone: performance (2 credits)

MUSP 247 Euphonium: performance (2 credits)

MUSP 248 Tuba: performance (2 credits)

MUSP 249 Percussion: performance (2 credits)

MUSP 254 Violin: performance (2 credits)

MUSP 255 Viola: performance (2 credits)

MUSP 256 Cello: performance (2 credits)

MUSP 257 Double Bass: performance (2 credits)

MUSP 258 Guitar: performance (2 credits)

MUSP 259 Harp: performance (2 credits)

MUSP 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: MUSC 114 and permission of instructor

MUSP 266 Music Composition (2 credits)
Same as MUSP 265, but 50-minute sessions.
Prerequisite: MUSC 114 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.

MUSR 200 Piano Proficiency (0 credit)
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.

MUSR 270 Level I Recital (0 credit)
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.

MUSR 290 Jazz Recital (0 credit)
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.

MUSR 350 Level II Recital (0 credit)
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: MUSR 270

MUSR 400 Festival Orchestra Honors Concert (0 credit)
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.

MUSR 450 Level III Recital (0 credit)
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: MUSR 350

Philosophy (PHIL)

College of Arts and Sciences
Department of Philosophy
Atkinson (chair), Clemenson, Coulter, Deavel, Degnan, Giebel, Grant, Heaney, Kemp, Kronen, Laumakis, Lemmons, Menssen, Nash-Marshall, Pannier, Rota, Schenk, Sullivan, van Ingen, Vlahovic, Winter

Philosophy engages questions such as:

- Is the human mind just a very complicated machine?
- Can we have free will if the mind is a machine?
- Must we have free will in order for life to be meaningful?
- What makes an act moral or immoral?
- When, if ever, can a government mandate moral acts or outlaw immoral acts?
- Is it ever permissible to start a war with a preemptive strike?

- Is the design in the world evidence that there is a God?
- Do the world's evils show that a good God cannot exist?
- What is the role of philosophy in dealing with questions about God?

- What is knowledge?
- Can we know anything with certainty?
- Are warrants for knowledge relative to particular cultures?

Philosophy considers these questions, and countless others, from the standpoint of human reason and experience. It emphasizes precise and careful argument, and sharpens your thinking skills.

The philosophy program at St. Thomas will introduce you to distinguished philosophical work over the centuries and into our own time. While attending carefully to writings foundational to the Catholic intellectual tradition, particularly Aristotle and Aquinas, the program is committed to broad integration of our understanding of reality. As you work to construct a philosophical worldview you will engage a variety of traditions, including non-Western, and confront questions prompted by the study of such subjects as the natural and social sciences, mathematics, medicine, business, law, theology, the fine arts, and literature.

Major in Philosophy

PHIL 115 Philosophy of the Human Person (4 credits)
PHIL 214 Introductory Ethics (4 credits)
PHIL 220 Logic (4 credits)

Plus eight credits in the history of philosophy
Four credits in classical Western philosophy
- PHIL 200 Ancient Philosophy (4 credits)
- PHIL 202 Medieval Philosophy (4 credits)
- PHIL 340 Thought of Thomas Aquinas (4 credits)
- or another course approved by the department

Four credits in an elective in the history of philosophy
- PHIL 200 Ancient Philosophy (4 credits)
- PHIL 202 Medieval Philosophy (4 credits)
- PHIL 204 Modern Philosophy (4 credits)
- PHIL 208 Indian Philosophy (4 credits)
- PHIL 210 Chinese Philosophy (4 credits)
- PHIL 306 Contemporary Philosophy (4 credits)
- PHIL 340 Thought of Thomas Aquinas (4 credits)
- PHIL 353 Machiavelli, Hobbes, and Nietzsche (4 credits)
- or another course approved by the department

Plus:
Twelve credits at the 300-level or above, including four credits at the 400-level (all 400-level courses require public presentation of a paper)

Plus:
Additional coursework in Philosophy to bring the total number of credits in philosophy either to forty-four (for single majors) or thirty-six (for double or triple majors).

Minor in Philosophy

PHIL 115 Philosophy of the Human Person (4 credits)
PHIL 214 Introductory Ethics (4 credits)

Plus:
Twelve additional credits in philosophy. It is recommended that minors take PHIL 220 Logic (4 credits).

PHIL 115 Philosophy of the Human Person (4 credits)
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. This course, with PHIL 214, fulfills the Moral and Philosophical Reasoning requirement in the core curriculum.

PHIL 200 Ancient Philosophy (4 credits)
A survey of the roots of philosophical inquiry in the classical period. The pre-Socratics, Plato, and Aristotle.
Prerequisite: PHIL 115

PHIL 202 Medieval Philosophy (4 credits)
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: PHIL 115

PHIL 204 Modern Philosophy (4 credits)
An examination of major philosophers of the early modern period from René Descartes to Immanuel Kant, with emphasis on methodology and claims to knowledge.
Prerequisite: PHIL 115

PHIL 208 Indian Philosophy (4 credits)
An examination of the primary texts and problems that form the basis of Hindu, Buddhist, or Zoroastrian thought. Metaphysical and ethical themes will be considered.
Prerequisite: PHIL 115

PHIL 210 Chinese Philosophy (4 credits)
An examination of the primary texts and problems that form the basis of Confucianism, Daoism, or Chinese Buddhism. Metaphysical and ethical themes will be considered.
Prerequisite: PHIL 115

PHIL 214 Introductory Ethics (4 credits) (PHIL 215)
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. This course, with PHIL 115, fulfills the Moral and Philosophical Reasoning requirement in the core curriculum.
Prerequisite: PHIL 115
NOTE: Students who receive credit for PHIL 214 may not receive credit for PHIL 215.

PHIL 215 Introductory Ethics (4 credits) (PHIL 214)
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. Special emphasis will be placed on the consideration of the similarities and differences found by comparing important Eastern (i.e., Confucian, Hindu, Buddhist, and Taoist accounts) and Western (i.e., Platonic, Aristotelian, Thomistic, Kantian, and Millian accounts) ethical theories. This course, taught at the University of Hawaii during J-term, with PHIL 115, fulfills the Moral and Philosophical Reasoning requirement in the core curriculum.
Prerequisite: PHIL 115
NOTE: Students who receive credit for PHIL 215 may not receive credit for PHIL 214.

PHIL 220 Logic (4 credits)
This course provides students with skills for identifying, analyzing, and evaluating the sorts of reasoning encountered in natural language. Emphasis will be placed on attaining facility with different formal systems for representing and evaluating arguments – including propositional logic, Aristotelian syllogistic, first-order predicate calculus, and some of their simple extensions – as well as on acquiring the ability to apply these systems in the analysis and evaluation of arguments in ordinary and scientific discourse.
Prerequisite: PHIL 115

PHIL 234 Love, Sex and Friendship (4 credits) (equivalent to CATH 234)
A philosophical examination of the nature of human love. Possible topics include reciprocity and permanence, fidelity, romantic love, human sexuality, kinds of friendship. Special attention will be given to the thought of John Paul II.
Prerequisite: PHIL 115

PHIL 240 Faith and Doubt (4 credits) (equivalent to CATH 240)
Philosophical arguments for and against the possibility of divine revelation. Special attention will be given to the claim that the faith of the Catholic Church is revealed. Possible topics include tests of alleged revelations and miracles, evil as a barrier to belief in revelatory claims, the compatibility of science and religion, the role of reason and faith in religious commitment, and personal decision-making in a state of doubt about evidence.
Prerequisite: PHIL 115

PHIL 250 Christian Mysteries from a Philosophical Viewpoint (4 credits) (equivalent to CATH 250)
A consideration of philosophical problems associated with Catholicism. Possible topics include divine providence, creation, the soul, freedom of the will, faith, the Eucharist, the Incarnation, and the variety of religious beliefs.
Prerequisite: PHIL 115

PHIL 272 Evolution and Creation (4 credits) (equivalent to CATH 272)
A philosophical examination of the relation between the doctrine of creation and theories in the evolutionary sciences. The course will consider arguments concerning evolution and creation from a variety of disciplines (including philosophy, theology, and natural science). The course will also examine historical and philosophical aspects of the relation between science and religion on the origins of the material world and the human race.
Prerequisite: PHIL 115

PHIL 295, 296 Topics (2 credits)
PHIL 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

PHIL 306 Contemporary Philosophy (4 credits)
An investigation of major philosophical problems from the late nineteenth century to the present, with a focus on prominent philosophers and diverse traditions.
Prerequisite: PHIL 220

PHIL 320 Aristotelian Logic (4 credits)
A study of Aristotle's Organon, covering such topics as the categories, the nature of propositions, forms of argument. Emphasis on demonstration (proof of necessary truths) and its distinction from dialectical reasoning. Applications to philosophical texts.
Prerequisite: PHIL 220

PHIL 325 Intermediate Symbolic Logic (4 credits)
A study of developments in twentieth-century symbolic logic. Possible topics include axiomatic systems, set theory, extensions of predicate logic (such as predicate logic with identity, quantified modal logic, relevance logic, deviant logics), and metatheorems (such as soundness and completeness theorems).
Prerequisite: PHIL 220

PHIL 330 Philosophy of Mind (4 credits)
A study of central issues in the philosophy of mind and soul. Possible topics include the relation between mind and body; the senses, emotions, intellect and will; personal identity. Attention will be given to both the Aristotelian/Thomistic tradition and contemporary philosophy.
Prerequisites: PHIL 115 and 220 or permission of instructor

PHIL 335 Aesthetics (4 credits)
This course addresses philosophical questions that arise in connection with art and aesthetic experience. Possible topics include: the nature of beauty, artistic representation, aesthetic properties, and the relationship between art and insight, between art and emotion, between art and morality, and between art and religious experience.
Prerequisite: two philosophy courses.

PHIL 340 Thought of Thomas Aquinas (4 credits)
An examination of some major topics in the philosophy of Thomas Aquinas. Possible topics include: Aquinas' conception of philosophy and its relation to faith; God; and the destiny of the human being. Satisfies requirement in medieval philosophy.
Prerequisite: PHIL 115 and one other PHIL course

PHIL 350 Advanced Ethical Theory (4 credits)
An advanced treatment of central aspects in ethical theory. Possible topics include justification of normative theories (*e.g.,* eudaimonism, deontology, consequentialism) and metaethical issues (*e.g.,* the is/ought problem, moral realism, naturalism). May satisfy a requirement in Philosophy through the Ages, depending on choice of materials.
Prerequisite: PHIL 214 or 215

PHIL 353 Machiavelli, Hobbes, and Nietzsche (4 credits)
An examination of three central figures in the history of political theory, and the challenge each presents to the moral evaluation of the use of political power.
Prerequisite: PHIL 214 or 215

PHIL 354 Biomedical Ethics (4 credits)
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: PHIL 214 or 215

PHIL 356 Contemporary Social Issues (4 credits)
An investigation into conceptions of the human person, ethics, and the law related to current issues with public policy implication. Issues chosen at the discretion of the instructor.
Prerequisite: PHIL 214 or 215

PHIL 357 Political Philosophy (4 credits)
A study of the nature and justification of political authority. Possible topics include natural rights, liberty and equality, the common good and its relation to the individual good, the place of liberty and equality and the common good in justifying state action. Attention is given to both classical and contemporary authors.
Prerequisite: PHIL 214 or 215

PHIL 358 Environmental Ethics (4 credits) (equivalent to 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: PHIL 214 or 215 and ENVR 151 (ENVR 151 is waived for philosophy majors and minors)

PHIL 359 Philosophy of Law (4 credits)
A study of philosophical problems connected with human law and legal institutions. Possible topics include the nature and kinds of law, the relation of law and morality, analysis of legal concepts, the nature and justification of punishment, the principles of legal interpretation and reasoning. Attention will be given to both classical and contemporary authors.
Prerequisite: PHIL 214 or 215

PHIL 360 Philosophy of Religion (4 credits)
Western and non-Western philosophical arguments concerning the nature and justifying bases of religious belief, with special attention to the philosophical implications of religious pluralism.
Prerequisites: PHIL 115 and one other PHIL course

PHIL 365 Natural Philosophy and Metaphysics (4 credits)
This course examines central topics in the philosophy of nature and in metaphysics. Possible topics include substance and accident, change and the conditions of substantial generation, matter and form, causality, necessity and possibility, time and persistence through time, universals and particulars, essence and existence, and the transcendentals (unity, truth, goodness, beauty). Attention will be paid both to classical and to contemporary authors.
Prerequisite: PHIL 220, plus one other PHIL course

PHIL 380 Epistemology (4 credits)
This course considers various accounts of the nature, origin, and limits of human knowledge. Attention will be paid to the main figures in the Western tradition as well as to contemporary authors.
Prerequisite: PHIL 220

PHIL 385 Philosophy of Science (4 credits)
This course examines central topics in the philosophy of science. Possible topics include scientific explanation, realism and the nature of scientific theories, reductionism in science, and the nature of scientific change.
Prerequisite: PHIL 115 and PHIL 220, or consent of instructor. The prerequisite of PHIL 220 may be waived for science or math majors or minors.

PHIL 398 Topics (4 credits)
The subject matter of the courses taught under PHIL 398 will vary from year to year, but will not duplicate existing courses. Descriptions of the courses are available from the philosophy department, and at www.stthomas.edu/registrar/onlineschedule/.
Prerequisite: at least two philosophy courses (prerequisites may be further specified; see individual course descriptions).

PHIL 410 Colloquium: Philosophical Research (4 credits)
An advanced course in philosophical research, writing, and presentation. On a topic chosen in consultation with the instructor, students will submit at least two drafts of a substantial paper on a major problem or debate in philosophy. Students will be expected to meet every other week as a group to discuss the progress of their projects and critique preliminary drafts of one another's work. An oral presentation of the final draft is required.
Prerequisites: PHIL 214 or 215 and 220

PHIL 460 Philosophy of God (4 credits)
Systematic treatment of philosophical arguments concerning the existence and attributes of God.
Prerequisites: PHIL 220 and 390

PHIL 475, 476 Experiential Learning (2 credits)
PHIL 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

PHIL 483, 484 Seminar (2 credits)
PHIL 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

PHIL 487, 488 Topics (2 credits)
PHIL 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

PHIL 491, 492 Research (2 credits)
PHIL 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

PHIL 495, 496 Individual Study (2 credits)
PHIL 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Physical Education

See Health and Human Performance

Physics (PHYS)

College of Arts and Sciences
Department of Physics
Johnston (chair), Green, Lane, Nollenberg, Ohmann, Tommet; Blilie, Koser

Physics majors learn the fundamental laws that govern the physical universe, from the smallest subatomic 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.

For students interested in teacher licensure, see the various combinations of science education in the School of Education Department of Teacher Education in this catalog.

The department offers courses for non-majors to fulfill the laboratory science component of the core curriculum.

Graduation with Honors in Physics
Students graduating with a B.A. or B.S. degree in physics may also qualify for departmental honors. Students interested in this designation must consult with the department chair one year or more before graduation. All requirements must be met one month before graduation.

1. Complete four credits in 400-level physics research
2. Prepare a written thesis in the format of primary literature
3. Defend the thesis before a panel composed of:
   thesis director (chair of committee)
   two additional UST physics faculty
   one UST faculty member outside of physics
4. Achieve a final cumulative grade point average in physics department courses of 3.50 and 3.50 overall
5. Present their research at a scientific meeting beyond the St. Thomas community

Major in Physics (B.S.)

PHYS 111 Introduction to Classical Physics I (4 credits)
PHYS 112 Introduction to Classical Physics II (4 credits)
PHYS 225 Introduction to Modern Physics I (4 credits)
PHYS 226 Introduction to Modern Physics II (4 credits)
PHYS 300 Physics Seminar I (1 credit)
PHYS 301 Physics Seminar II (1 credit)
PHYS 323 Methods of Experimental Physics (4 credits)
PHYS 331 Theoretical Mechanics (4 credits)
PHYS 341 Electricity and Magnetism (4 credits)
PHYS 347 Optics (4 credits)
PHYS 410 Statistical Mechanics and Thermodynamics (4 credits)
PHYS 431 Quantum Mechanics (4 credits)

Plus:
four PHYS credits 104 or greater

Allied requirements
MATH 113 Calculus I (4 credits)
MATH 114 Calculus II (4 credits)
MATH 200 Multi-Variable Calculus (4 credits)
MATH 210 Linear Algebra and Differential Equations (4 credits)

Plus:
ENGR 350 Introduction to Electronics (4 credits)
or
ENGR 230 Digital Design (4 credits) *and* ENGR 240 Circuit Analysis (4 credits)

Plus four credits from the following:
QMCS 230 Software Design Using the JAVA Language (4 credits)
QMCS 342 Computer Applications in Experimental Sciences (4 credits)

Major in Physics (B.A.)

PHYS 111 Introduction to Classical Physics I (4 credits)
PHYS 112 Introduction to Classical Physics II (4 credits)

PHYS 225 Introduction to Modern Physics I (4 credits)
PHYS 226 Introduction to Modern Physics II (4 credits)
PHYS 300 Physics Seminar I (1 credit)
PHYS 301 Physics Seminar II (1 credit)
PHYS 323 Methods of Experimental Physics (4 credits)

Plus:
four PHYS credits 104 or greater
eight PHYS credits above 301

Allied requirements
MATH 113 Calculus I (4 credits)
MATH 114 Calculus II (4 credits)
MATH 200 Multi-variable Calculus (4 credits)
MATH 210 Linear Algebra and Differential Equations (4 credits)

Plus either:
ENGR 350 Introduction to Electronics (4 credits)
or
ENGR 230 Digital Design (4 credits) *and* ENGR 240 Circuit Analysis (4 credits)

Plus four credits from the following:
QMCS 230 Software Design Using the JAVA Language (4 credits)
QMCS 342 Computer Applications in Experimental Sciences (4 credits)

Teacher Licensure

Elementary Education with a Co-major in Science and Mathematics for Elementary Education
Elementary Education with a Specialty in Science (5-8)
Co-major in Science (5-8) – Physics (9-12) and a Co-major in Secondary Education
See Education

Minor in Physics

Four credits from the following:
PHYS 109 General Physics I (4 credits)
PHYS 111 Introduction to Classical Physics I (4 credits)

Plus four credits from the following:
PHYS 110 General Physics II (4 credits)
PHYS 112 Introduction to Classical Physics II (4 credits)

Plus:
twelve PHYS credits 104 or greater

PHYS 101 Physics as a Liberal Art I (4 credits) (PHYS 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
NOTE: Students who receive credit for PHYS 101 may not receive credit for PHYS 109 or 111.

PHYS 102 Physics as a Liberal Art II (4 credits) (PHYS 110, 112)
This course is intended for students who have completed PHYS 101 and wish to continue their study, or for those who have had high school physics. It is organized around a thematic approach and includes specifically studies of a) electric charges and related forces, b) commonly observed light behavior, and c) interactions of light and particles. The course consists of lecture, discussion, and laboratory.
Prerequisite: PHYS 101 or high school physics
NOTE: Students who receive credit for PHYS 102 may not receive credit for PHYS 110 or 112.

PHYS 104 Astronomy (4 credits)
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 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

PHYS 105 Musical Acoustics (4 credits)
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)

PHYS 109 General Physics I (4 credits) (PHYS 111)
This course and its continuation PHYS 110 serve as a two-semester introduction to classical and modern physics. Applications are chosen that focus on the life-sciences. Topics include principles of classical mechanics: description of motion, force, torque and rotational motion, energy, momentum and their conservation, fluid mechanics; thermodynamics. The course meets three times a week for two consecutive periods consisting of integrated lecture, discussion and laboratory.
Prerequisite: Math placement at a level of MATH 111 or above.
NOTE: Students who receive credit for PHYS 109 may not receive credit for PHYS 111.

PHYS 110 General Physics II (4 credits) (PHYS 112)
Continuation of 109. Topics include oscillations, waves and sound, electricity and magnetism; light and optics; atomic, quantum and nuclear physics. The course meets three times a week for two consecutive periods consisting of integrated lecture, discussion and laboratory.
Prerequisite: A minimum grade of C in PHYS 109 or 111
NOTE: Students who receive credit for PHYS 110 may not receive credit for PHYS 112.

PHYS 111 Introduction to Classical Physics I (4 credits) (PHYS 109)
This course and its continuation PHYS 112 serve as a two-semester introduction to classical physics. Applications are chosen that focus on engineering and the physical sciences. Topics include principles of classical mechanics: vectors, kinematics, particle and rigid body rotational dynamics and statics; conservation laws; and thermodynamics. The course meets three times a week for two consecutive periods consisting of integrated lecture, discussion and laboratory.
Prerequisite: A minimum grade of C in MATH 113
NOTE: Students who receive credit for PHYS 111 may not receive credit for PHYS 109.

PHYS 112 Introduction to Classical Physics II (4 credits) (PHYS 110)
Continuation of PHYS 111. Topics include waves and sound; electricity and magnetism; geometric and physical optics. The course meets three times a week for two consecutive periods consisting of integrated lecture, discussion and laboratory.
Prerequisites: A minimum grade of C in both PHYS 111 and MATH 114
NOTE: Students who receive credit for PHYS 112 may not receive credit for PHYS 110.

PHYS 225 Introduction to Modern Physics I (4 credits)
This course and its continuation PHYS 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: A minimum grade of C in PHYS 112 and in Math 200

PHYS 226 Introduction to Modern Physics II (4 credits)
Continuation of PHYS 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 either 110 or 112 and in Math 114

PHYS 295, 296 Topics (2 credits)
PHYS 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

PHYS 300 Physics Seminar I (1 credit)
This course and PHYS 301 are a sequence of two courses taken during the spring semesters of the junior and senior years. The goal of the course is to provide an overview of physics, relating ideas and concepts presented in other physics classes as well as in research investigations within the department. Additionally, students will be exposed to topics presented by outside speakers and will learn about opportunities that a physics degree provides, smoothing the transition between being a physics student and becoming a physicist.
Prerequisite: A minimum grade of C in either PHYS 225 or 226

PHYS 301 Physics Seminar II (1 credit)
Continuation of 300
Prerequisite: A minimum grade of C in either PHYS 225 or 226

PHYS 323 Methods of Experimental Physics (4 credits)
Standard tools and techniques used in experimental physics are introduced while conducting an in-depth investigation of a non-linear system. Technical topics include: identifying and characterizing chaotic systems, data acquisition and instrument control using LabVIEW, signal conditioning, data and error analysis, and experimental design. Lecture, discussion and laboratory.
Prerequisite: A minimum grade of C in either 225 or 226 and in either ENGR 240 or 350 and in MATH 200

PHYS 331 Theoretical Mechanics (4 credits)
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.
Prerequisites: A minimum grade of C in either PHYS 225 or 226 and in MATH 200 and MATH 210

PHYS 341 Electricity and Magnetism (4 credits)
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: A minimum grade of C in either PHYS 225 or 226 and in MATH 200 and MATH 210

PHYS 342 Electromagnetic Waves (4 credits) (equivalent to ENGR 342)
A continuation of PHYS 341. An introduction to the practical applications of Maxwell's equations including propagation, reflection and absorption of electromagnetic waves. Applications include antennas, waveguides, transmission lines, and shielding from electromagnetic interference. Lecture and discussion.
Prerequisite: A minimum grade of C in PHYS 341

PHYS 347 Optics (4 credits)
Foundations of geometric optics: Fermat's Principle of Stationary Time. Nature of electromagnetic waves: dipole radiation, energy, momentum, polarization, coherence, interference, diffraction, Fourier optics. Interactions between light and matter: scattering, reflection, refraction, absorption, dispersion, birefringence, dichroism, nonlinear effects. Quantum optics: nature of the photon, lasers, detectors, other modern topics. Lecture and discussion. Laboratory with an emphasis on biomedical applications.
Prerequisites: A minimum grade of C in PHYS 225, MATH 200, and MATH 210

PHYS 410 Statistical Mechanics and Thermodynamics (4 credits)
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: A minimum grade of C in PHYS 225, 226, and both MATH 200 and MATH 210

PHYS 431 Quantum Mechanics (4 credits)
The foundation of Quantum Mechanics will be explored with mathematical rigor. Specific topics include the time-independent Schrödinger equation, the hydrogen atom, and angular momentum including spin. Discussion of identical particles will lead to an introduction of quantum statistical mechanics. Lecture and discussion.
Prerequisite: A minimum grade of C in 225, 226, and both MATH 200 and MATH 210

PHYS 483, 484 Seminar (2 credits)
PHYS 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

PHYS 487, 488 Topics (2 credits)
PHYS 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

PHYS 491, 492 Research (2 credits)
PHYS 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

PHYS 495, 496 Individual Study (2 credits)
PHYS 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Political Science (POLS)

College of Arts and Sciences
Department of Political Science
Hoffman (chair), Hatting, High-Pippert, Toffolo

The program of courses offered by the Political Science Department is designed to enable students to acquire an understanding of political processes, governmental institutions, and theories of politics.

As one of the liberal arts, political science enables students to develop skills in communication and analytic problem solving that are useful in a wide variety of careers, including business. More specifically, the major in political science prepares students for the study of law, graduate programs in political science or public administration or for careers in government, politics, the non-profit sector, or teaching.

Students graduating with a major in political science will have a broad overview of the discipline, as well as substantive familiarity with at least two of the five political science sub-fields: American politics, comparative politics, international politics, law and judicial politics, and political thought. At various points in their study of political science, majors will develop a wide variety of skills, including skills related to the carrying out of research projects, the interpretation of empirical data, and the presentation of their work to a wider audience.

Students majoring in Political Science must take a minimum of sixteen credits in political science at St. Thomas.

The department also offers courses for non-majors to fulfill the Social Analysis component of the core curriculum.

Political Science Honor Society

Pi Sigma Alpha, the national political science honor society, established the *Chi Theta* chapter at St. Thomas in 1999. The purpose of *Pi Sigma Alpha* is to acknowledge superior performance in the study of political science, to forge closer links between faculty and political science majors and minors, and to stimulate political interest in the St. Thomas community.

Pi Sigma Alpha is open to juniors and seniors who meet the following qualifications for membership. Students must have completed at least three political science courses and be currently enrolled in or have taken a fourth. Two of the four courses must be UST political science courses, and one of the four must be at least a 300-level course. Additionally, students must have a grade point average of at least 3.00 in political science courses and be within the top third of their graduating class.

Major in Political Science

POLS 105 Politics and Government in Comparative Perspective (4 credits)
POLS 205 Introduction to the American Public Policy Process (4 credits)
POLS 225 Introduction to World Politics (4 credits)
POLS 275 Introduction to Political Thought (4 credits)

Plus:
Sixteen credits in POLS 300-level courses
(completed in at least two of the four sub-fields)

Plus:
One POLS 400-level seminar
Four elective credits

Note: While students are encouraged to take an experiential learning course (POLS 475, 476, 477, 478), these internships do not normally fulfill a major field requirement.

Teacher Licensure

Elementary Education with a Specialty in Social Studies (5-8)
Co-major in Social Studies (5-12) and a Co-major in Secondary Education
See Education.

Minor in Political Science

POLS 105 Politics and Government in Comparative Perspective (4 credits)

Plus eight credits from the following:
POLS 205 Introduction to the American Public Policy Process (4 credits)
POLS 225 Introduction to World Politics (4 credits)
POLS 275 Introduction to Political Thought (4 credits)

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 POLS 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.

POLS 101 American Government and Politics (4 credits)
An introduction to the political system of the United States, including the Constitution, federalism, the three branches of government, elections, political parties, interest groups, and public policies. The role of public opinion and citizen participation will also be examined. *Note:* This course does not fulfill the introductory course requirement of the major or minor in political science. It does not fulfill the core curriculum requirement in Social Analysis.

POLS 105 Politics and Government in Comparative Perspective (4 credits)
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 Social Analysis and Human Diversity requirements in the core curriculum.

POLS 205 Introduction to the American Public Policy Process (4 credits)
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.

POLS 225 Introduction to World Politics (4 credits)
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.

POLS 275 Introduction to Political Thought (4 credits)
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.

POLS 295, 296 Topics (2 credits)
POLS 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

POLS 301 American Political Behavior (4 credits)
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.

POLS 302 Women and Politics (4 credits)
An examination of the political involvement of women. Topics include: the representation of women, feminism as a social movement, the campaign strategies and styles of women candidates, the election of women to local, state, and national office, and the differences that women make in public office. Emphasis is on women in the United States, but comparisons will be made with women in other countries.

POLS 303 Urban and Metropolitan Politics and Government (4 credits)
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 govern-

ment, 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.

POLS 305 Congress and the Presidency (4 credits)
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.

POLS 307 Public Policy Analysis and Administration (4 credits)
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.

POLS 312 Judicial Process (4 credits)
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.

POLS 313 Constitutional Law and Politics (4 credits)
The Supreme Court as a legal and political institution; leading cases and related materials on the presidency, Congress, the judiciary, federalism and national emergency.

POLS 314 Constitutional Rights and Liberties (4 credits)
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.

POLS 316 Environmental Policy (4 credits) (equivalent to ENVR 351)
An examination of environmental policy outcomes generated by institutions and organizations, including legislation, court decisions and administrative decisions. Additional focus is on the nature of the decision-making process and those methods commonly used to assess public policy.
Prerequisite: POLS 101 or 105 or permission of instructor

POLS 320 American Foreign Policy (4 credits)
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.

POLS 321 Comparative Foreign Policy (4 credits)
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.

POLS 326 International Law and Organizations (4 credits)
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.

POLS 350 Comparative Politics of the New Europe (4 credits)
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."

POLS 352 Third World Politics and Government (4 credits)
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.

POLS 372 Political Thought from Plato to Marx (4 credits)
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.

POLS 373 Political Thought from Marx to the Present (4 credits)
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.

POLS 375 American Political Thought (4 credits)
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.

POLS 404 Seminar in American Politics (4 credits)

POLS 414 Seminar in Law and Judicial Politics (4 credits)

POLS 424 Seminar in International Politics (4 credits)

POLS 454 Seminar in Comparative Politics (4 credits)

POLS 474 Seminar in Political Thought (4 credits)
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.

POLS 475, 476 Experiential Learning (2 credits)
POLS 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "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: POLS 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: POLS 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: POLS 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: POLS 205 plus previous or concurrent enrollment in 312.

POLS 480 Research Seminar (4 credits)
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: POLS 105, 205, and permission of instructor

POLS 483, 484 Seminar (2 credits)
POLS 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

POLS 487, 488 Topics (2 credits)
POLS 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

POLS 491, 492 Research (2 credits)
POLS 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

POLS 495, 496 Individual Study (2 credits)
POLS 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "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 information will guide students toward the major field programs and supplementary courses that will prepare them for the various professional schools.

Preparation for the Catholic Priesthood

Cross-College Program
Preparation for entering a postgraduate seminary takes place best in a college-level seminary. St. John Vianney college seminary, located on the St. Thomas campus, provides an integrated program of spiritual and apostolic formation, along with the academic coursework available through the university.

Seminarians may major in a variety of fields. However, they must complete certain prerequisites in philosophy, theology and languages according to the direction of their diocese.

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 in compliance with the Program of Priestly Formation:

Thirty credits of philosophy
Sixteen credits of theology
Language requirements: Latin or Spanish if determined by the student's diocese.

Interested students should contact the rector, Rev. William Baer, at St. John Vianney Seminary:
wjbaer@stthomas.edu

Pre-Engineering (PNGR)

Cross-College Program
Tommet (PHYS), Marsh (CHEM), Jalkio (ENGR), advisory committee

Besides offering degree programs in electrical and mechanical engineering, the University of St. Thomas offers a choice of pre-engineering programs to provide the student with a broad range of engineering fields. The program prepares for all engineering fields which include: aeronautical, aerospace, agricultural, architecture, biomedical, chemical, civil, computer, electrical, engineering science, geological, industrial, materials science, mechanical, metallurgical, mineral and nuclear.

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 in major is made while at the university, a maximum number of credits will be applicable to the St. Thomas requirements for graduation. In addition to the liberal arts, courses prerequisite to an engineering school program are available in areas of mathematics, physics, chemistry, computer programming, and engineering. There are few significant differences in courses taken in the first two years of undergraduate study toward any type of engineering field. All pre-engineering students take mathematics, physics, and chemistry courses, along with a seminar introducing them to the various fields of engineering and to the work of engineers.

A Liberal Arts-Engineering (3-2) program is 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 will normally spend three years at St. Thomas and, upon approval of St. Thomas and acceptance by the engineering school, two additional years at the engineering school in an engineering field. 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 four-year (4-2) program is offered formally in cooperation with the University of Minnesota, and informally with virtually any other engineering school. The student normally spends four years at St. Thomas and graduates with a major in Physic, Mathematics, Chemistry, or Quantitative Methods and Computer Science. The student then enters a masters or bachelors program at an engineering school.

A two-year (2-2) program is offered in which 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. No St. Thomas degree is awarded.

For all these programs, students are strongly encouraged to discuss with a pre-engineering adviser their own individual program. Each student, field, and school has different needs and requirements.

Liberal Arts – Engineering Program

CHEM 111 General Chemistry I (4 credits)
CHEM 112 General Chemistry II (4 credits)
ENGR 150 Introduction to Engineering (0 credit)
ENGR 151 Introduction to Engineering Design (1 credit)

MATH 113 Calculus I (4 credits)
MATH 114 Calculus II (4 credits)
MATH 200 Multi-Variable Calculus (4 credits)
MATH 210 Linear Algebra and Differential Equations (4 credits)
PHYS 111 Introduction to Classical Physics I (4 credits)
PHYS 112 Introduction to Classical Physics II (4 credits)
QMCS 230 Software Design Using the JAVA Language (4 credits)
At least three additional courses are required. Which technical courses are needed will depend upon the field of engineering. Students must discuss their program with a pre-engineering adviser.

Pre-Health Professions

Cross-College Program
Ovechka, 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 (0 credit)
BIOL 217 Students and Physicians Program (0 credit)
BIOL 218 Pre-Dental Internship Program (0 credit)

Pre-dentistry

Most schools of dentistry require a minimum of three years of college coursework prior to admission to their programs. The University of Minnesota School of Dentistry requires at least 87 semester credits. However, the majority of first-year dental students complete four or more years of college.

Specifically required or highly recommended courses vary from one dental school to another. The University of Minnesota School of Dentistry requires study in each of the following subjects:

two semesters of biology
two semesters of general chemistry
two semesters of organic chemistry
one semester of biochemistry
two semesters of physics
two semesters of English
one semester of psychology
college algebra, pre-calculus, computer science or statistics

Pre-medicine

Most medical schools require a baccalaureate degree before entrance into their programs.

Two semesters of study in each of the following subjects are required for admission to most medical schools:

biology
general chemistry
organic chemistry
physics
English

A number of medical schools also require one semester 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 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
two semesters of anatomy and physiology
one semester of microbiology
two semesters of general chemistry
two semesters of organic chemistry
two semesters of physics
one semester of calculus
two semesters of behavioral science
two semesters of English
one semester of economics
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:

two semesters of biology
two semesters of general chemistry
one semester of organic chemistry
one semester of biochemistry
one semester of mathematics
two semesters of physics
one semester of genetics
one semester of microbiology
two semesters of English

Four courses from history and social sciences, arts and humanities are also required. No more than two of these courses should be from one single department.

Other Pre-Health Professions

Many courses are offered at St. Thomas to prepare students for admission to the following health professional schools: chiropractic, optometry, osteopathic medicine, physical therapy, physician assistant, podiatric medicine, and public health.

Students are encouraged to research the programs at each professional school and to seek the guidance of the pre-health professions adviser.

Pre-Law

Cross-College Program
Hatting (POL) and Marsnik (BLAW) advisers

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 301 Legal Environment of Business (4 credits)
BLAW 303 International Business Law (4 credits)
BLAW 401 Legal Research, Advocacy, and Dispute Resolution (4 credits)
ECON 321 Law and Economics (4 credits)
ECON 332 Industrial Organization (4 credits)
HIST 326 English Law and Government before the American Revolution (4 credits)
HIST 365 U.S. Constitutional History (4 credits)
IDSC 340 Criminal Law and the Social Order (4 credits)
JOUR 304 Media Law (4 credits)
POLS 205 Introduction to the American Public Policy Process (4 credits)
POLS 312 Judicial Process (4 credits)
POLS 313 Constitutional Law and Politics (4 credits)
POLS 314 Constitutional Rights and Liberties (4 credits)
POLS 326 International Law and Organizations (4 credits)
POLS 414 Seminar in Law and Judicial Politics (4 credits)

B. Fostering critical thinking about society
ENGL 402 Writing Literary Nonfiction (4 credits)
HIST 361 American Thought and Culture Since the Civil War (4 credits)
PHIL 357 Political Philosophy (4 credits)
PHIL 359 Philosophy of Law (4 credits)
POLS 373 Political Thought from Marx to the Present (4 credits)
POLS 375 American Political Thought (4 credits)

C. Providing useful skills and improving analytical ability
ACCT 205 Introduction to Accounting (4 credits)
COMM 100 Public Speaking (4 credits)
COMM 250 Argumentation and Advocacy (4 credits)
ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
ENGL 251 Writing in the Academy (4 credits)
ENGL 252 Writing Nonfiction Prose (4 credits)

ENGL 403 Analytical and Persuasive Writing (4 credits)
JOUR 311 Persuasion in Writing (4 credits)
MATH 101 Finite Mathematics (4 credits) *or* MATH 113 Calculus I (4 credits)
PHIL 220 Logic (4 credits)

Psychology (PSYC)

College of Arts and Sciences
Department of Psychology
Johnson (chair), Amel, Bock, Buri, Chalkley, Giebenhain, Prichard, Robinson-Riegler, Scott, Tauer

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 psychology, the scientific study of human behavior, mental processes, and emotions. The psychology programs are designed to prepare students with the analytical and technical skills necessary for graduate study in psychology and for careers in human services and other occupations for which a psychology background is valuable. Courses are offered that introduce psychology to non-majors, enabling students to make practical applications of psychology to their own lives.

Students who graduate with a major in psychology will be able to produce a research paper written in accordance with American Psychological Association (APA) guidelines. They will be trained in those research and statistical skills frequently employed in the field of psychology. They will be able to complete an independent research project, and write a synthesis of the psychological literature in an area of psychological interest.

Students majoring in psychology must successfully complete a minimum of twenty-four credits in psychology at St. Thomas.

The department also offers General Psychology (PSYC 111) for students to fulfill the Social Analysis component of the core curriculum.

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.

Major in Psychology

PSYC 111 General Psychology (4 credits)
PSYC 212 Research Methods in Psychology (4 credits)
PSYC 422 History and Systems (4 credits) (to be taken during the senior year)

Plus two laboratory courses from:
PSYC 321 Current Research Issues in Social Psychology (4 credits)
PSYC 322 Sensation and Perception (4 credits)
PSYC 323 Learning and Memory (4 credits)
PSYC 401 Physiological Psychology (4 credits)
PSYC 415 Research Issues in Cognition (4 credits)

Plus four credits from the following:
PSYC 200 Psychology of Infancy and Childhood (4 credits)
PSYC 202 Lifespan Development (4 credits) (students may not receive credit for both 202 and 200)
PSYC 203 Psychology of Adolescence (4 credits)
PSYC 204 The Psychology of Adulthood and Aging (4 credits)

Plus four credits from the following:
PSYC 121 Social Psychology (4 credits)
PSYC 301 Psychopathology (4 credits)
PSYC 302 Personality Theories (4 credits)

Plus four credits from the following:
PSYC 206 The Brain and Human Behavior (4 credits)
PSYC 315 Cognition (4 credits)
PSYC 400 Seminar in Cognitive and Language Development (4 credits)

Plus twelve elective credits 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 (4 credits) *or* BIOL 105 Human Biology (4 credits) *or* BIOL 106 Women, Medicine and Biology (4 credits)

Plus:
MATH 101 Finite Mathematics (4 credits)
(or MATH 108-109, 111 or 113; students should take highest level for which eligible)
QMCS 220 Statistics I (4 credits)

Students should take the following courses in the following order:
MATH 101 (or MATH 108-109 or 111 or 113)
QMCS 220
PSYC 212
Note: 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

PSYC 111 General Psychology (4 credits)
PSYC 206 The Brain and Human Behavior (4 credits)
PSYC 207 Alcohol, Other Drugs and Behavior (4 credits)
PSYC 212 Research Methods in Psychology (4 credits)
PSYC 322 Sensation and Perception (4 credits)
PSYC 401 Physiological Psychology (4 credits)
PSYC 422 History and Systems (4 credits) (to be taken during the senior year)

Plus four credits from the following:
PSYC 200 Psychology of Infancy and Childhood (4 credits)
PSYC 202 Lifespan Development (4 credits) (students may not receive credit for both 202 and 200)
PSYC 203 Psychology of Adolescence (4 credits)
PSYC 204 The Psychology of Adulthood and Aging (4 credits)

Plus four credits from the following:
PSYC 121 Social Psychology (4 credits)
PSYC 301 Psychopathology (4 credits)
PSYC 302 Personality Theories (4 credits)

Plus:
Two elective courses in psychology

Allied requirements
All of the following or an adequate substitute approved by the chair:
BIOL 101 General Biology (4 credits) *or* BIOL 105 Human Biology (4 credits) *or* BIOL 106 Women, Medicine and Biology (4 credits)

Plus:
MATH 101 Finite Mathematics (4 credits)
(or MATH 108-109, 111 or 113; students should take highest level for which eligible)
QMCS 220 Statistics I (4 credits)

Students should take the following courses in the following order:
MATH 101 (or MATH 108-109 or 111 or 113)
QMCS 220
PSYC 212
Note: 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:
PSYC 493, 494 Research (4 credits each)
Additional courses in biology and chemistry (consult the Behavioral Neuroscience adviser)

Teacher Licensure

Elementary Education with a Specialty in Social Studies (5-8)
Co-major in Social Studies (5-12) and a Co-major in Secondary Education
See Education

Minor in Psychology

PSYC 111 General Psychology (4 credits)

Plus eight credits from the following:
PSYC 121 Social Psychology (4 credits)
PSYC 151 Cross-Cultural Psychology (4 credits)
PSYC 200 Psychology of Infancy and Childhood (4 credits)
PSYC 202 Lifespan Development (4 credits) (students may not receive credit for both 202 and 200)
PSYC 203 Psychology of Adolescence (4 credits)
PSYC 204 The Psychology of Adulthood and Aging (4 credits)
PSYC 205 Psychology of Women (4 credits)
PSYC 206 The Brain and Human Behavior (4 credits)
PSYC 207 Alcohol, Other Drugs and Behavior (4 credits)
PSYC 212 Research Methods in Psychology (4 credits)
PSYC 288 Psychology of Marriage and the Family (4 credits)

Plus eight credits from the following:
PSYC 301 Psychopathology (4 credits)
PSYC 302 Personality Theories (4 credits)
PSYC 308 Motivation and Emotion (4 credits)
PSYC 313 Psychological Testing (4 credits)
PSYC 315 Cognition (4 credits)
PSYC 321 Current Research Issues in Social Psychology (4 credits)
PSYC 322 Sensation and Perception (4 credits)
PSYC 323 Learning and Memory (4 credits)
PSYC 342 Industrial/Organizational Psychology (4 credits)
PSYC 400 Seminar in Cognitive and Language Development (4 credits)
PSYC 401 Physiological Psychology (4 credits)
PSYC 415 Research Issues in Cognition (4 credits)
PSYC 422 History and Systems (4 credits)
PSYC 424 Clinical Psychology (4 credits)
PSYC 428 Theories of Counseling and Psychotherapy (4 credits)

Students should consult early with a department adviser to have their plan approved.

PSYC 111 General Psychology (4 credits)
An introduction to the research questions, concepts, theories, methods, and findings of psychological science. Although the selection varies with instructor, topics include brain function, psychological testing, sensation and perception, cognition (learning, memory, language), states of consciousness, motivation, human development, personality, origins and treatment of disorders, social behavior, stress and health, and applied psychology (workplace, community, environment). This course fulfills the Social Analysis requirement in the core curriculum.

PSYC 121 Social Psychology (4 credits)
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: PSYC 111

PSYC 151 Cross-Cultural Psychology (4 credits)
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 specific; 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: PSYC 111

PSYC 200 Psychology of Infancy and Childhood (4 credits) (PSYC 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: PSYC 111
NOTE: Students who receive credit for PSYC 200 may not receive credit for PSYC 202.

PSYC 202 Lifespan Development (4 credits) (PSYC 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: PSYC 111
NOTE: Students who receive credit for PSYC 202 may not receive credit for PSYC 200.

PSYC 203 Psychology of Adolescence (4 credits)
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: PSYC 111

PSYC 204 The Psychology of Adulthood and Aging (4 credits)
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: PSYC 111

PSYC 205 Psychology of Women (4 credits)
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: PSYC 111

PSYC 206 The Brain and Human Behavior (4 credits)
An examination of brain systems that subserve human behavior. Topics include: human development, consciousness, social behavior, cognition, emotion and abnormal behavior.
Prerequisite: PSYC 111

PSYC 207 Alcohol, Other Drugs and Behavior (4 credits)
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: PSYC 111

PSYC 212 Research Methods in Psychology (4 credits)
This laboratory course focuses on 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.
Prerequisites: PSYC 111 and QMCS 220

PSYC 288 Psychology of Marriage and the Family (4 credits)
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.
Prerequisites: PSYC 111 and junior standing or permission of the instructor

PSYC 295, 296 Topics (2 credits)
PSYC 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

PSYC 301 Psychopathology (4 credits)
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.
Prerequisites: PSYC 111 and junior standing

PSYC 302 Personality Theories (4 credits)
A review of major theories of personality, including psychoanalytic, behavioristic, humanistic and trait-factor approaches.
Prerequisite: PSYC 111

PSYC 308 Motivation and Emotion (4 credits)
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: PSYC 111 and junior standing

PSYC 313 Psychological Testing (4 credits)
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: PSYC 212

PSYC 315 Cognition (4 credits)
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: PSYC 111

PSYC 321 Current Research Issues in Social Psychology (4 credits)
This laboratory course includes discussion of several specific research issues in contemporary social psychology. The course includes presentation of computer applications. An original research project is required. Approximately four lectures and three laboratory hours per week.
Prerequisites: PSYC 121 and 212

PSYC 322 Sensation and Perception (4 credits)
This laboratory course includes discussion 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.
Prerequisite: PSYC 212

PSYC 323 Learning and Memory (4 credits)
In this laboratory course 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: PSYC 212

PSYC 342 Industrial/Organizational Psychology (4 credits)
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.
Prerequisites: PSYC 111 and junior standing

PSYC 400 Seminar in Cognitive and Language Development (4 credits)
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: PSYC 200 and one additional PSYC course or permission of the instructor

PSYC 401 Physiological Psychology (4 credits)
This laboratory course includes 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.
Prerequisites: PSYC 212 and BIOL 101 (or equivalent)

PSYC 407 Seminar in Behavioral Neuroscience (4 credits)
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: PSYC 401

PSYC 415 Research Issues in Cognition (4 credits)
This laboratory course explores research issues in cognitive psychology, with special emphasis on cognitive psychology methodology, current research issues, hands-on research, and discussion/analysis 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.
Prerequisites: PSYC 212 and 275

PSYC 422 History and Systems (4 credits)
This course explores how contemporary psychology developed from its remote and more recent roots. It emphasizes the contributions, contributors and perennial issues that led to psychology today and that could help to fashion its future.
Prerequisites: Senior standing and must be major in Psychology.

PSYC 424 Clinical Psychology (4 credits)
Study of the clinical application of psychological processes in the evaluation, diagnosis and treatment of behavioral disorders.
Prerequisites: PSYC 301 and three psychology courses or permission of instructor

PSYC 428 Theories of Counseling and Psychotherapy (4 credits)
Theories and procedures of counseling and psychotherapy are discussed, including psychoanalysis, client-centered therapy, cognitive therapy, behavior therapy, and others.
Prerequisites: PSYC 301 and three psychology courses or permission of the instructor

PSYC 475, 476 Experiential Learning (2 credits)
PSYC 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

PSYC 483, 484 Seminar (2 credits)
PSYC 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

PSYC 487, 488 Topics (2 credits)
PSYC 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

PSYC 491, 492 Research (2 credits)
PSYC 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

PSYC 495, 496 Individual Study (2 credits)
PSYC 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Quantitative Methods and Computer Science (QMCS)

College of Arts and Sciences
Department of Quantitative Methods and Computer Science
Heltne (chair), Bagley, Hansen, Jarvis, Komar, Pliego, Raymond, Schwebel (emeritus), Smith, Sturm, Werness

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 collection, organization, processing, storage, retrieval, communication, and use of information in today's society. The emphasis is on the 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 database design, systems analysis, telecommunication, security, artificial intelligence, statistics and operations research. Program goals can be found on the department website: www.stthomas.edu/qmcs.

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 to encourage participation of students from other disciplines. The department defines three paths for its majors: Computer Science (CS), Computer Information Systems (CIS), and Quantitative Methods (QM). These paths are described below. The department encourages majors to obtain a minor in another field. Students interested in teacher licensure should see the various science and mathematics programs in the Department of Teacher Education section of this catalog. There is also a dual degree program with Engineering.

Major in Quantitative Methods and Computer Science

QMCS 220 Statistics I (4 credits)
QMCS 230 Software Design Using the JAVA Language (4 credits)*
QMCS 281 Object-Oriented Design and Programming (4 credits)*
QMCS 350 Data and File Structures (4 credits)

*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):
Eight credits numbered 300 through 450. Students should consult with their department adviser in choosing the most appropriate courses.

Plus (for all majors):
Four credits numbered 100 through 499

Plus:
A set of courses in one of three paths (CS, CIS, or QM):

Computer Science (CS)
A traditional computer-science path that emphasizes low-level computing fundamentals as well as high-level design issues.
QMCS 420 Systems Analysis and Design I (4 credits)
QMCS 450 Database Design (4 credits)

Plus four credits from the following:
QMCS 300 Computer Organization (4 credits)
QMCS 340 Digital Electronics and Microcontrollers (4 credits)

Computer Information Systems (CIS)
A management information systems path emphasizing high-level design issues and designer/user interaction.
QMCS 420 Systems Analysis and Design I (4 credits)
QMCS 450 Database Design (4 credits)

Plus four credits from the following:
QMCS 421 Systems Analysis and Design II (4 credits)
QMCS 425 Information Resource Management (4 credits)

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.
QMCS 410 Operations Research I (4 credits)

Plus eight credits from the following:
QMCS 320 Statistics II (4 credits)
QMCS 411 Operations Research II (4 credits)
QMCS 420 Systems Analysis and Design I (4 credits)
QMCS 450 Database Design (4 credits)

Allied requirements
MATH 128 Introduction to Discrete Mathematics (4 credits)

Plus four credits from the following:
MATH 109 Calculus with Review II (4 credits)
MATH 111 Calculus for Business and Social Science (4 credits)
MATH 113 Calculus I (4 credits)

Plus four credits from the following:
COMM 100 Public Speaking (4 credits)
COMM 105 Communication in the Workplace (4 credits)

Teacher Licensure

Elementary Education with a Co-major in Science and Mathematics for Elementary Education
See Education

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.
QMCS 230 Software Design Using the JAVA Language (4 credits)
QMCS 281 Object-Oriented Design and Programming (4 credits)

Plus twelve credits from the following:
QMCS 220 Statistics I (4 credits)
QMCS 300 Computer Organization (4 credits)
QMCS 320 Statistics II (4 credits)
QMCS 330 Graphics and Numerical Methods (4 credits)
QMCS 340 Digital Electronics and Microcontrollers (4 credits)
QMCS 342 Computer Applications in Experimental Sciences (4 credits)
QMCS 350 Data and File Structures (4 credits)
QMCS 380 Artificial Intelligence and Robotics (4 credits)

QMCS 381 Expert Systems (4 credits)
QMCS 410 Operations Research I (4 credits)
QMCS 411 Operations Research II (4 credits)
QMCS 450 Database Design (4 credits)

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.
QMCS 200 Introduction to Computer Technology and Business Applications (4 credits)

Plus four credits from the following:
QMCS 230 Software Design Using the JAVA Language (4 credits)
QMCS 238 Software Design using Business Languages (4 credits)

Plus twelve credits from the following:
QMCS 215 Rapid Application Development (4 credits)
QMCS 281 Object-Oriented Design and Programming (4 credits)
QMCS 420 Systems Analysis and Design I (4 credits)
QMCS 425 Information Resource Management (4 credits)
QMCS 450 Database Design (4 credits)

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.
QMCS 230 Software Design Using the JAVA Language (4 credits)

Plus twelve credits from the following:
QMCS 220 Statistics I (4 credits)
QMCS 281 Object-Oriented Design and Programming (4 credits)
QMCS 320 Statistics II (4 credits)
QMCS 330 Graphics and Numerical Methods (4 credits)
QMCS 410 Operations Research I (4 credits)
QMCS 411 Operations Research II (4 credits)

QMCS 110 Introduction to Information Processing (4 credits) (QMCS 216)
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.
NOTE: Students who receive credit for QMCS 110 may not receive credit for QMCS 216.

QMCS 120 Computers in Elementary Education (4 credits)
This course is intended for elementary education majors. Topics include the role of the computer in elementary and middle-school education, computer applications in science and mathematics, data analysis, software packages for use in elementary and middle-school classrooms, Computer-Assisted-Instruction (CAI), multimedia, telecommunication and software creation using MicroWorlds and HTML. This course fulfills the third course in the Natural Science and Mathematical and Quantitative Reasoning and the second-level Computer Competency requirements in the core curriculum.
Prerequisite: elementary education or SMEE major

QMCS 200 Introduction to Computer Technology and Business Applications (4 credits)
This course will prepare students to use computers in a business environment and in daily life. Through application of basic computing fundamentals, students will be better prepared to purchase computers, diagnose and solve computer problems, use and build local area network/home networks, use and build common software applications, and design simple web pages. Student teams will transfer concepts and skills learned in the course as they assist organizations in the community with their technology needs. This course fulfills the second-level Computer Competency requirement in the core curriculum.

QMCS 201 Introductory Statistics II (2 credits) (QMCS 220)
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: QMCS 206 or at least .35 semester, but less than one semester, of statistics
NOTE: Students who receive credit for QMCS 201 may not receive credit for QMCS 220.

QMCS 215 Rapid Application Development (4 credits)
Introduction to user-friendly development tools. These tools allow non-programmers to create usable software without programmer assistance. Students will be exposed to developing systems using software packages emphasizing

structured analysis techniques. These packages integrate spreadsheet software database management software and presentation software. Queries to the World Wide Web (WWW) and a variety of techniques to display data on the Web are included. Approximately half of the course deals with philosophical and foundational topics such as modeling or requirements. This course fulfills the second-level Computer Competency requirement of the core curriculum.
Prerequisite: QMCS 110 or 200

QMCS 216 Quantitative Techniques in Business (2 credits) (QMCS 110)
The use of microcomputer spreadsheet software to aid in solving quantitative business problems. This course is to be taken by students who have been given transfer credits for the equivalent of some part but not all of 110 and who are required to take 110.
Prerequisite: ACCT 205 or ACCT 216
NOTE: Students who receive credit for QMCS 216 may not receive credit for QMCS 110.

QMCS 220 Statistics I (4 credits) (QMCS 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 third course in the Natural Science and Mathematical and Quantitative Reasoning and the second-level Computer Competency requirements in the core curriculum.
Prerequisite: Math placement at level of MATH 111 or above; or MATH 100, or 101, or 105, or 109, or 111, or 113
NOTE: Students who receive credit for QMCS 220 may not receive credit for QMCS 201.

QMCS 230 Software Design Using the JAVA Language (4 credits)
Introduction to software development including procedural and object-oriented concepts. Topics include: algorithmic development, classes and methods, arrays, sorting and searching, recursion. This course fulfills the second-level Computer Competency requirement in the core curriculum.
Prerequisite: None in general. However, certain sections will be designated for science students. The prerequisite for those sections is MATH 109 or 111 or 113.

QMCS 238 Software Design Using Business Languages (4 credits)
Introduction to software development 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.

QMCS 281 Object-Oriented Design and Programming (4 credits)
Continuation of object-oriented design and programming in JAVA, with emphasis on more advanced concepts. Topics include classes, inheritance, encapsulation, polymorphism, GUI interface design, exception handling and files. This course fulfills the second-level Computer Competency requirement in the core curriculum.
Prerequisite: QMCS 230; MATH 128 recommended

QMCS 295, 296 Topics (2 credits)
QMCS 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

QMCS 300 Computer Organization (4 credits)
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, BUSN protocols and I/O interfaces, multiple-module memory, caches, memory, memory organization, registers, microprocessor families, pipelining, and RISC features. This course fulfills the second-level Computer Competency requirement in the core curriculum.
Prerequisites: QMCS 230 or 238 and MATH 128

QMCS 310 World Wide Web Management (4 credits)
This course will introduce students to the many technical and non-technical issues related to designing and constructing an effective World Wide Web (WWW) site. Students will be introduced to the Internet and the WWW, how they function, and what they do. The course will cover basic relational database principles and introduce the various tools necessary to implement an electronic commerce (e-commerce) WWW site. Students will work in small teams, using their own WWW server, and develop a fully functional site using many of the tools introduced in the course.
Prerequisite: QMCS 281

QMCS 320 Statistics II (4 credits)
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 or MATH 333

QMCS 330 Graphics and Numerical Methods (4 credits)
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.
Prerequisites: QMCS 230 and MATH 109 or 111 or 113

QMCS 340 Digital Electronics and Microcontrollers (4 credits)
Digital electronics techniques: semiconductor devices, digital logic, counters, clocks, shift registers, combinatorial and sequential logic circuits and minimization. Microcontroller organization, programming, device addressing, buffering and enabling. Microcontroller interfacing with switches, A to D, D to A, and communications.
Prerequisites: QMCS 230 and MATH 128

QMCS 342 Computer Applications in Experimental Sciences (4 credits)
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 in addition to LabVIEW programming. Topics include laboratory device interfacing, analog-signal acquisition and processing, frequency transformations, data analysis, and math modeling and simulation. This course fulfills the second-level Computer Competency requirement in the core curriculum.
Prerequisites: QMCS 230 or 238; MATH 109 or 111 or 113; one course in a laboratory science

QMCS 350 Data and File Structures (4 credits)
An introduction to data structures and abstract data types using an object-oriented language. Includes arrays and linked lists, stacks and queues, recursion, searching and sorting, trees, heaps, files, hashing and graphs. Measures of algorithmic efficiency are developed for algorithms processing these data structures.
Prerequisites: QMCS 281 and MATH 128

QMCS 360 Operating Systems Design (4 credits)
The basic principles of designing and building operating systems. Sequential versus concurrent processes, synchronization and mutual exclusion, memory management techniques, CPU scheduling, input/output device handling, file systems design, security and protection. Primary focus on uniprocessors, with some coverage of multi-processor operating systems.
Prerequisite: QMCS 281; Recommended: QMCS 300

QMCS 370 Telecommunications and Teleprocessing (4 credits)
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: QMCS 230 or 238 and MATH 128

QMCS 371 Advanced Voice and Data Communications (4 credits)
Analysis of voice, data and video telecommunication requirements, network configuration, network operations, network monitoring and optimization, documentation and legal issues.
Prerequisite: QMCS 370

QMCS 380 Artificial Intelligence and Robotics (4 credits)
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: QMCS 220 and 281

QMCS 381 Expert Systems (4 credits)
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: QMCS 281 and junior standing

QMCS 410 Operations Research I (4 credits)
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.
Prerequisites: QMCS 220 and MATH 109 or 111 or 113

QMCS 411 Operations Research II (4 credits)
Advanced modeling techniques. Techniques include: decision theory, Markov chains, integer programming, dynamic programming, forecasting, game theory, transportation problems and decision theory.
Prerequisites: QMCS 410 and MATH 114

QMCS 419 Accounting Information Systems (4 credits)
This course will provide an understanding of the conceptual framework and practices of accounting information systems and the ability to work effectively with computer specialists and management to design, implement and audit such systems. Examples of subjects included are: systems development life cycle (SDLC), systems analysis phase of the SDLC, data and process models, operations of a corporate data center, including internal controls, database integrity, audit considerations for both internal and external auditors, unit integration, and system testing.
Prerequisites: QMCS 110 or 200, and previous or concurrent enrollment in ACCT 316

QMCS 420 Systems Analysis and Design I (4 credits)
A study of systems analysis methodologies used in the analysis and design of information systems. Emphasis on data, process, and modeling by use of a CASE tool: entity relationship diagrams and data normalization, data flow diagrams, use case diagrams, and data dictionaries. This is a "hands on" course where students form teams to analyze the needs of a business client in the community.
Prerequisite: QMCS 230 or 238 and junior standing

QMCS 421 Systems Analysis and Design II (4 credits)
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: QMCS 420

QMCS 425 Information Resource Management (4 credits)
A study of relevant technologies and how they are used in today's modern organizations to help manage the information resource of the organization. Emphasis is placed on the use of the Internet and World Wide Web and how they have changed organizational operations and strategies. This is an "active learning" course in which students will be researching current information systems technologies (such as Electronic Commerce [e-commerce]) and will be participating in the design and development of an e-commerce website for a fictitious organization.
Prerequisite: QMCS 230 or 238; junior standing

QMCS 450 Database Design (4 credits)
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, and database administration. Emphasis on general purpose relational database management systems using SQL.
Prerequisite: QMCS 281 or 420 or 425

QMCS 460 Senior Project (4 credits)
Work on a software analysis, design, and implementation project under the direction of a faculty member.
Prerequisite: Senior standing and permission of the instructor

QMCS 475, 476 Experiential Learning (2 credits)
QMCS 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

QMCS 483, 484 Seminar (2 credits)
QMCS 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

QMCS 487, 488 Topics (2 credits)
QMCS 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

QMCS 491, 492 Research (2 credits)
QMCS 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

QMCS 495, 496 Individual Study (2 credits)
QMCS 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Renaissance Program

College of Arts and Sciences
Interdisciplinary Program
MacKenzie (ENGL), director

The Renaissance Program is an interdisciplinary minor which provides students the opportunity to combine 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 is designed for students majoring in the liberal arts who want preparation for their career search.

Students who minor in the Renaissance Program elect a major field of study from any of the liberal arts disciplines – that is, from the humanities, social sciences, natural sciences and the like. Students who major in any of the Business fields or in Health and Human Performance are not eligible for the program.

The program's requirements consist of coursework and an internship. Students choose a set of six courses (detailed below) from a broad range of pre-professional and professional areas. In their senior year, students take IDSC 333 Renaissance Program Studies, a capstone seminar that brings together the perspectives of economics, business, and the liberal arts. Students also complete an internship in a career-related field. A variety of options and opportunities are available through the Career Center; students are encouraged to be creative and to search for inventive ways of implementing a plan of practical work experience.

As part of its commitment to Renaissance Program students, the University of St. Thomas extends to graduates of the program the opportunity to take undergraduate business courses tuition-free, on a space-available basis. There is no limit on the number of such courses the student may take. Students may take these courses either for credit or as audits, but may not use the courses toward a major or minor in business.

Application for admission is made through the Renaissance Program director's office, currently in the Department of English. Application should normally take place during the second semester of the sophomore year, but may occur later.

Renaissance Program Professional Minor

Four credits from the following:
ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)

Note: 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 four credits from the following:
QMCS 110 Introduction to Information Processing (4 credits)
QMCS 120 Computers in Elementary Education (4 credits)
QMCS 220 Statistics I (4 credits)
QMCS 230 Software Design Using the JAVA Language (4 credits)
QMCS 238 Software Design Using Business Languages (4 credits)

Note: Other courses from the Department of QMCS may be acceptable if the necessary prerequisites have been met, and on the approval of the director of the Renaissance Program.

Plus twelve credits from the following:
ACCT 205 Introduction to Accounting (4 credits)
BLAW 301 Legal Environment of Business (4 credits)
BUSN 201 Ethics and Practice: Foundations of Business (4 credits)
FINC 300 Finance for Non-Business Majors (4 credits)
MGMT 300 Management for Non-Majors (4 credits)
MKTG 300 Principles of Marketing (4 credits)

Note: Other courses from the College 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 (0 credit)
IDSC 333 Renaissance Program Studies (4 credits)

Note: Another course that integrates themes involving the relation between the liberal arts and the world of work may be acceptable provided the necessary prerequisites have been met, and on the approval of the director of the Renaissance Program.

Russian (RUSS)

See Modern and Classical Languages

Social Sciences

College of Arts and Sciences
Interdisciplinary Program
Papagapitos (ECON), Wright (HIST), Hoffman (POL), Karraker (SOC), advisers

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 & criminal justice – 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 (4 credits) *and* HIST 112 The Modern World Since 1550 (4 credits)
or
HIST 113 Early America in Global Perspective (4 credits) *and* HIST 114 The Modern U.S. in Global Perspective (4 credits)

Plus:
ECON 251 Principles of Macroeconomics (4 credits)
ECON 252 Principles of Microeconomics (4 credits)
ECON - One additional course in economics numbered above 300
HIST - One additional history course numbered above 300
POLS 105 Politics and Government in Comparative Perspective (4 credits)
POLS - Two additional political science courses
SOCI 100 Introduction to Sociology (4 credits)
SOCI 210 Research Methods in Sociology (4 credits)
SOCI - 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 & Criminal Justice. The choice of these courses is subject to the approval of the department involved.

Plus four credits from the following:
MATH 101 Finite Mathematics (4 credits)
MATH 111 Calculus for Business and Social Science (4 credits)
MATH 113 Calculus I (4 credits)
QMCS 220 Statistics I (4 credits)

Social Work (SOWK) - School of Social Work

School of Social Work
Department of Social Work
Shank (dean), Herman (undergraduate program director), Bauer, Berger, Brenden, Canfield, Caron, Chovanec, Dziengel, Freeman, Garrett, Graham, Hanley, Hollidge, Holloway, Kaiser, Kuechler, McPartlin, Miller, Parnell, Phan, Roseborough, Rottenberg, Stolz, Thornton, Tinucci, Toft

A major in social work is available through a joint School of Social Work 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.

Students graduating with a major in social work will be prepared to begin generalist professional practice with individuals, families, small groups, organizations and communities. They will be prepared to develop an identity which will incorporate the values and ethics of the social work profession. They will be prepared for practice with diverse, oppressed and at-risk populations. They will be prepared as beginning social work generalists who link social research and social service practice. They will be prepared for lifelong learning and critical thinking through an educational process combining a liberal arts foundation with professional social work education. They will be prepared for graduate education in social work.

Transfer students must be in social work courses for a minimum of three semesters, excluding summer sessions.

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 *Phi Alpha* National Social Work Honor Society, was established at the University of St. Thomas and the College of St. Catherine in 2002. 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 an overall grade point average of 3.25 or above, and a social work grade point average of 3.50 or above.

International Program
Students have an opportunity to study in Mexico in the spring semester of their junior year. This semester-long program will enable students to take all required social work courses as well as study Spanish.

Major in Social Work

SOWK 281 Introduction to Social Work (4 credits)
SOWK 340 Human Behavior and the Social Environment (4 credits)
SOWK 355 Communication and Interviewing Skills (4 credits)
SOWK 375, 376 or 378 Junior Fieldwork in Social Work (4 credits)
SOWK 380 Social Research: Designs and Statistical Applications (4 credits)
SOWK 385 Working with Groups: Theory and Practice (4 credits)
SOWK 391 Social Policy for Social Change (4 credits)
SOWK 401 Generalist Practice with Individuals, Families and Groups (4 credits)
SOWK 402 Generalist Practice for Social Change (4 credits)
SOWK 405, 406 Senior Fieldwork in Social Work (4 credits each)

Allied requirements
Four credits from the following:
BIOL 105 Human Biology (4 credits)
BIOL 106 Women, Medicine and Biology (4 credits)
BIOL 112C Biology of Women (4 credits)

Plus:
PSYC 111 General Psychology (4 credits)
PSYC 202 Lifespan Development (4 credits)
SOCI 100 Introduction to Sociology (4 credits)

Required Fieldwork Experience
These experiences, arranged by the School 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 eight 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 hours per week off campus totaling 400 hours, plus weekly seminar groups on campus.

Elective courses
Electives are updated frequently. Visit www.stthomas.edu/socialwork/BSW/descriptions.cfm for a current list of electives.
CDC 300 Introduction to Chemical Dependency (4 credits)
CDC 305 Chemical Dependency and the Family (4 credits)
IDSC 291 The Anatomy of Violence (4 credits)
IDSC 293 Grief, Loss and Coping (4 credits)
INDI 499C Multi-Professional Community Work and Learning
Semester Abroad – Cuernavaca, Mexico
SOWK 210 Relationships, Intimacy and Sexuality (4 credits)
SOWK 414 School Social Work (4 credits)
SOWK 416 Child Welfare Policy (4 credits)
SOWK 490 Practice with Older Adults and their Families (4 credits)

Admission Process
The School of Social Work requires students to be formally admitted to the major. This process takes place at the middle of the junior year. Prospective majors must have a GPA of 2.25 and be interviewed by faculty of the school. Contact an adviser for more details.

Minor in Social Welfare

A minor in social welfare is available through the joint School of Social Work 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.

SOWK 281 Introduction to Social Work (4 credits)
SOWK 340 Human Behavior and the Social Environment (4 credits)
SOWK 391 Social Policy for Social Change (4 credits)

Plus eight credits from the following:
PSYC 202 Lifespan Development (4 credits)
PSYC 207 Alcohol, Other Drugs and Behavior (4 credits)
SOCI 251 Race and Ethnicity (4 credits)
SOWK 380 Social Research: Designs and Statistical Application (4 credits)

(The CT designation beside course numbers indicates the same course is offered at the College of St. Catherine and the University of St. Thomas.)

SOWK 210CT Relationships, Intimacy and Sexuality (4 credits)
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.

SOWK 281CT Introduction to Social Work (4 credits)
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: SOCI 100 or PSYC 111 or permission of the instructor

SOWK 295, 296 Topics (2 credits)
SOWK 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

SOWK 340CT Human Behavior and the Social Environment (4 credits)
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: SOWK 281; PSYC 202; and BIOL 105 or 112C; or consent of the instructor

SOWK 355CT Communication and Interviewing Skills (4 credits)
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: SOWK 281 or consent of the instructor

SOWK 375, 376, 378CT Junior Fieldwork in Social Work (4 credits)
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: SOWK 281 or consent of the instructor

SOWK 380 Social Research: Designs and Statistical Application (4 credits) (INDI 380C)
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. This course fulfills the second-level Computer Competency requirement in the core curriculum.
Prerequisites for majors: SOWK 281 and junior status or permission of the instructor

SOWK 385CT Working with Groups: Theory and Practice (4 credits)
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: SOWK 355 or consent of the instructor

SOWK 391CT Social Policy for Social Change (4 credits)
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: SOWK 281 or consent of the instructor

SOWK 401CT Generalist Practice with Individuals, Families and Groups (4 credits)
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: SOWK 385; senior major status and concurrent registrations in SOWK 405 are required

SOWK 402CT Generalist Practice for Social Change (4 credits)
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: SOWK 401; concurrent registration in SOWK 406 is required

SOWK 405CT Senior Fieldwork in Social Work (4 credits)
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 approximately 15 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 SOWK 401

SOWK 406CT Senior Fieldwork in Social Work (4 credits)
Prerequisite: Concurrent registration in SOWK 402

SOWK 414 School Social Work (4 credits) (GRSW 514)
This course examines the school as a social institution which serves to educate and socialize children into American society and the role of the social worker in such a setting. Emphasis is placed on discovering similarities and differences between social work and education values and tasks and the process of integrating social work values into a school setting. Social work with special and at-risk populations is discussed. This course also examines specific handicaps to learning and the role of the social worker in helping students, schools and families adjust to and cope with special needs. Emphasis will be placed on evaluation of social work practice. Interventions with children which fit within a school setting are included. Undergraduate students are expected to spend time working with the instructor outside of class.
Prerequisite: Junior standing

SOWK 416 Child Welfare Policy (4 credits) (GRSW 516)
This course is designed to give students an overview of important topics in child welfare practice and policy. Students will be asked to examine their own values about orientations toward child welfare, children's rights and responsibilities, the nature of maltreatment, and other issues facing the field today, as they affect diverse families. Additionally, students will be given tools to advocate for children, and an opportunity to exercise new advocacy skills. Offered in spring semester.

SOWK 475, 476 Experiential Learning (2 credits)
SOWK 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

SOWK 483, 484 Seminar (2 credits)
SOWK 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

SOWK 487, 488 Topics (2 credits)
SOWK 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

SOWK 491, 492 Research (2 credits)
SOWK 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

SOWK 495, 496 Individual Study (2 credits)
SOWK 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Sociology and Criminal Justice (SOCI)

College of Arts and Sciences
Department of Sociology and Criminal Justice
Karraker (chair), Parilla (Law Enforcement Education Coordinator), Kinney, Smith, Smith-Cunnien, Waldner; Bruton, Caldie, Davis, Kennedy, Peterson, Plesha, Schuth, Upright

Sociology is the scientific study of society and social relations. A major in Sociology provides knowledge and skills applicable to careers in business, education, government, law, public health, public policy, and social service. Additionally, an undergraduate degree prepares students for graduate study in sociology and other closely related fields.

Students who graduate with a major in Sociology will understand the methodological and theoretical foundations of sociology and possess skills to apply this knowledge in a practical way. They will have the opportunity to specialize in crime and criminology, family and the life course, inequalities and stratification, and work and organizations, as well as individual course work in other areas such as anthropology, health, and urban sociology. We also offer courses with comparative perspectives on global issues such as crime, gender, immigration, and religion. The sociology curriculum reflects the breadth of the discipline, its place in the liberal arts tradition, and the application of sociological theories and methods to the critical issues and problems facing societies today.

Students who graduate with a major in Criminal Justice will know the main components of the criminal and juvenile justice systems and will know the basics of criminal law and criminal procedure in the U.S. system of justice. They will have the tools to understand the long standing and current dilemmas faced by society in trying to develop and maintain an effective and just criminal justice system. They will be prepared for employment in the field of criminal justice, including corrections or law enforcement.

Sociology and Criminal Justice majors pursue graduate and professional degrees in sociology and criminology, as well as business, law, public health, public policy, social work, and other fields. The sociology department and sociology faculty also provide intensive support for students who wish to engage in individual research and preparation for graduate and professional school, as well as internships and career development.

A Sociology major or minor is a strong complement to studies in American cultural studies, business (especially human resources, management, marketing), Catholic studies, family studies, international studies, journalism, justice and peace studies, legal studies, psychology, social sciences, social work, urban studies, and women's studies.

Sociology majors and minors are encouraged to take advantage of HECUA, study abroad, and other special learning opportunities. Specific courses may substitute for St. Thomas requirements. Students should consult with their academic advisor, the department chair, or a study abroad advisor in the International Education Center for program options. Also, see Academic Information & Programs in the front section of this catalog for more information.

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 sociology, criminal justice, the sociology concentration of social science, or social studies and who have a minimum overall grade point average in the top 30th percentile.

Major in Sociology

SOCI 100 Introduction to Sociology (4 credits)
SOCI 210 Research Methods in Sociology (4 credits)
SOCI 220 Sociological Analysis (4 credits)
SOCI 350 Social Inequality: Privilege and Power (4 credits)
SOCI 470 Sociological Theory (4 credits)
SOCI 474 Seminar in Sociology (4 credits)

Plus four credits from the following:
SOCI 365 Social Psychology (4 credits)
SOCI 366 Self and Society (4 credits)

Plus:
Twelve additional credits in Sociology (eight of which must be 300-level or higher)

Strongly recommended:
MATH 101 Finite Mathematics (4 credits)
In addition, it is recommended that students take the following courses in this order:
MATH 101 Finite Mathematics (4 credits) (or adequate substitute) in the first year
SOCI 210 Research Methods in Sociology (4 credits)
SOCI 220 Sociological Analysis (4 credits)
Finally, we recommend that students begin the SOCI 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 SOCI 210, PSYC 212, and QMCS 220 do not need to take SOCI 220.

Major in Criminal Justice

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 Technical College and Hibbing Community College, 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 SOCI 251, PHED 250, and PSYC 111. Please see the department's Law Enforcement Education Coordinator.

SOCI 100 Introduction to Sociology (4 credits)
SOCI 200 Introduction to Criminal Justice (4 credits)
SOCI 210 Research Methods in Sociology (4 credits)
SOCI 220 Sociological Analysis (4 credits)
SOCI 310 Juvenile Delinquency (4 credits)
SOCI 320 Criminology (4 credits)
SOCI 480 Seminar in Criminal Justice (4 credits)

Plus:
IDSC 340 Criminal Law and the Social Order (4 credits)
POLS 314 Constitutional Rights and Liberties (4 credits)

Plus four credits from the following:
POLS 312 Judicial Process (4 credits)
SOCI 338 Law Enforcement (4 credits)
SOCI 340 Corrections (4 credits)

Plus four credits from the following:
SOCI 405 Internship in Criminal Justice (4 credits)
SOCI 498 Individualized Study (4 credits) (for in-career students only)

Strongly recommended:
MATH 101 Finite Mathematics (4 credits)
SOCI 251 Race and Ethnicity (4 credits)
In addition, it is recommended that students take the following courses in this order:
MATH 101 Finite Mathematics (4 credits) (or adequate substitute) in the first year
SOCI 210 Research Methods in Sociology (4 credits) in first semester sophomore year
SOCI 220 Sociological Analysis (4 credits) in second semester sophomore year
Note: Students with a double major in sociology and psychology who have completed SOCI 210, PSYC 212 and QMCS 220 do not need to take SOCI 220.

Note: Students choosing to double major in Sociology and Criminal Justice are limited to the number of courses that can be applied to both majors. Only the following courses may count toward requirements in both majors: SOCI 100, 210, 220, 310 and 320.

Teacher Licensure

Elementary Education with a Specialty in Social Studies (5-8)
Co-major in Social Studies (5-12) and a Co-major in Secondary Education
See Education

Minor in Sociology

SOCI 100 Introduction to Sociology (4 credits)

Plus at least four credits from the following:
SOCI 210 Research Methods in Sociology (4 credits)
SOCI 220 Sociological Analysis (4 credits)
SOCI 350 Social Inequality: Privilege and Power (4 credits)
SOCI 365 Social Psychology (4 credits)
SOCI 366 Self and Society (4 credits)
SOCI 470 Sociological Theory (4 credits)
SOCI 474 Seminar is Sociology (4 credits)

Plus twelve additional credits from the list above or below:
SOCI 110 Social Problems (4 credits)
SOCI 251 Race and Ethnicity (4 credits)
SOCI 254 Gender in Global Perspective (4 credits)
SOCI 304 Adolescence in Society (4 credits)
SOCI 310 Juvenile Delinquency (4 credits)
SOCI 320 Criminology (4 credits)
SOCI 321 Marriages and Families (4 credits)
SOCI 330 Religion and Society (4 credits)
SOCI 331 Cross-Cultural Perspectives on Religion (4 credits)
SOCI 332 Urban Sociology (4 credits)
SOCI 341 Work, Organizations, and Society (4 credits)
SOCI 351 Immigration, Fear and Hate (4 credits)
SOCI 354 Sex in Society (4 credits)
SOCI 498 Individual Study (4 credits)

Minor in Criminal Justice

SOCI 100 Introduction to Sociology (4 credits)
SOCI 200 Introduction to Criminal Justice (4 credits)
SOCI 310 Juvenile Delinquency (4 credits)

Plus eight credits from the following, at least four of which must be in sociology:
IDSC 340 Criminal Law and the Social Order (4 credits)
POLS 312 Judicial Process (4 credits)
POLS 314 Constitutional Rights and Liberties (4 credits)
SOCI 320 Criminology (4 credits)
SOCI 338 Law Enforcement (4 credits)
SOCI 340 Corrections (4 credits)
SOCI 480 Seminar in Criminal Justice (4 credits)

Note: Students wishing to combine a major in either Sociology or Criminal Justice with a minor in the other field may do so. However, the major and minor may not have more than eight credits in common. Non-majors can also earn a minor in Sociology and minor in Criminal Justice. However, the two minors many not have more than eight credits in common.

SOCI 100 Introduction to Sociology (4 credits)
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. This course fulfills the Social Analysis and Human Diversity requirements in the core curriculum.

SOCI 110 Social Problems (4 credits)
Contemporary society is confronted with a number of serious problems that are often global in their impact. This course explores the causes, effects, and proposed solutions to some of these major social issues. Special attention is given to issues of inequality (such as racism, sexism, and poverty) and problems in core institutions (such as family violence, unequal educational opportunities, and unemployment). This course meets a requirement in the Justice and Peace Studies program and fulfills the Social Analysis and Human Diversity requirements in the core curriculum.

SOCI 200 Introduction to Criminal Justice (4 credits)
A critical introduction to the American criminal justice system. Studies the role of the police, courts and corrections in the administration of criminal justice. This course meets a requirement in the Justice and Peace Studies program.

SOCI 210 Research Methods in Sociology (4 credits)
Consideration of both quantitative and qualitative 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. Data entry and recoding with SPSS will also be introduced.
Prerequisite: SOCI 100

SOCI 220 Sociological Analysis (4 credits)
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. This course fulfills the second-level Computer Competency requirement in the core curriculum. Because SOCI 220 integrates the learning of statistics with SPSS software in a setting where research questions and statistical interpretation are framed within a sociological perspective, students may not substitute QMCS 220 for SOCI 220. Students interested in graduate study in the social sciences are strongly encouraged to take QMCS 220 after first completing SOCI 220.
Prerequisite: SOCI 210

SOCI 251 Race and Ethnicity (4 credits)
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 meets a requirement in American Cultural Studies, East Asian Studies and Justice and Peace Studies and fulfills the Human Diversity requirement in the core curriculum.
Prerequisite: sophomore standing

SOCI 254 Gender in Global Perspective (4 credits)
How is gender socially constructed across culture? How does gender affect opportunity and quality of life across societies? In this course we examine the socialization of boys and girls, and the experiences of men and women in the family, religion, education, work, and government. We analyze social policies and social movements through contemporary issues such as the AIDS pandemic, circumcision and female genital mutilation, hajib or "veil," emigration and immigration, sex trafficking, the effects of war, and the worldwide gender gap. This course meets a requirement in Justice and Peace Studies; Women's Studies; and fulfills the Human Diversity requirement in the core curriculum.
Prerequisite: SOCI 100 or permission of the instructor

SOCI 295, 296 Topics (2 credits)
SOCI 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

SOCI 301 Cultural Anthropology (4 credits)
This course provides an overview of various components and dynamics of human societies throughout the world. It focuses on topics such as 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 a requirement in the Justice and Peace Studies program and the Human Diversity requirement in the core curriculum.
Prerequisite: SOCI 100

SOCI 304 Adolescence in Society (4 credits)
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. This course meets a requirement in Family Studies and in Women's Studies.
Prerequisite: SOCI 100 or permission of the instructor

SOCI 310 Juvenile Delinquency (4 credits)
An examination of the causes and consequences of juvenile delinquency. Major topics include the emergence of "juvenile delinquency" as a social problem, an overview and comparison of sociological and non-sociological theories of delinquency, and social and legal responses to delinquents.
Prerequisite: SOCI 100 or 200

SOCI 320 Criminology (4 credits)
This course scrutinizes the nature and extent of crime and victimization in American society. It provides a critical analysis and comparison of sociological and non-sociological theories of crime. The course also analyzes specific criminal behavior such as homicide, femicide, varieties of street crime, white collar and corporate crime.
Prerequisite: SOCI 310 or permission of instructor

SOCI 321 Marriages and Families (4 credits)
This course uses sociological theories and research to understand some of the most pressing social issues facing families today – single parenting, divorce and blended families, violence, and poverty. We study the social processes involved in choosing partners (and remaining single); sexualities and intimacy; parenting (or not); communication

(and conflict); power (and satisfaction). Finally, we focus not just on family stress, but also on family resilience. This course meets a requirement in Family Studies and Women's Studies.
Prerequisite: SOCI 100 or permission of the instructor

SOCI 330 Religion and Society (4 credits)
Theoretical and empirical examination of the sociological dimensions of religion, with a special emphasis on the religious situation in America. Topics include diverse religious expressions and values of each religion, including Christian denominations and other world religions with members living in the U.S., for example, Buddhism, Hinduism, Islam, and Judaism, as well as cultural contexts, organizational structures, individual religiosity, and emerging new forms. This course meets a requirement in Catholic Studies and fulfills the Human Diversity requirement in the core curriculum.
Prerequisite: SOCI 100

SOCI 331 Cross-Cultural Perspectives on Religion (4 credits)
This course considers the relationship between religion and society on a world-wide basis. It examines why people are religious and how the beliefs and practices of various religious traditions have influenced family life, education, morality, politics, and other social dimensions of life. The course includes discussion of all the major religious traditions, such as Christianity, Judaism, Hinduism, Buddhism, and Islam. This course meets a requirement in Justice and Peace Studies.
Prerequisite: SOCI 100

SOCI 332 Urban Sociology (4 credits)
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. This course meets a requirement in Real Estate Studies and in Urban Studies.
Prerequisite: SOCI 100

SOCI 338 Law Enforcement (4 credits)
Examination of the role of law enforcement organizations in a contemporary society. Explores the limitations imposed on law enforcement in a democratic society. Other topics included are the ability of police to control crime, community policing, police ethics, and criminal investigation techniques.
Prerequisite: SOCI 200

SOCI 340 Corrections (4 credits)
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: SOCI 200

SOCI 341 Work, Organizations, and Society (4 credits)
This course provides students with knowledge about the importance and role of work and organizations in society and in our everyday lives. Key topics include conflict in organizations, occupational choice and prestige, social control in work environments, the labor movement, the "McDonaldization" of the work environment and American culture, the clash between personal and organizational life, and many others. This course meets a requirement in the Business Administration concentration in Leadership and Management.
Prerequisite: SOCI 100

SOCI 350 Social Inequality: Privilege & Power (4 credits)
This course identifies and investigates the following topics: general principles of stratification, theoretical explanations by which inequality emerges and is maintained, the relationship between social class and other forms of inequality in the United States including gender, race, and changes in social hierarchy over time. The course will explore issues such as poverty, welfare, occupational prestige, meritocracy, and class prestige. Although primary focus is on the United States, the course also examines global inequality.
Prerequisite: SOCI 251 or Junior Standing

SOCI 351 Immigration, Fear and Hate (4 credits)
International migration is reshaping societies and politics around the globe. This course provides an introduction to the forces behind international migration and the politics of immigration and xenophobia (prejudice, fear, and intolerance) in the United States and in other parts of the world, including forces such as globalization, shifting labor-market demands, and socio-economic and political changes. The course includes an examination of anti-immigration movements and violence against minorities in many countries, including the U.S. This course meets a requirement in the Justice and Peace Studies program and fulfills the Human Diversity requirement in the core curriculum.
Prerequisite: SOCI 100.

SOCI 354 Sex in Society (4 credits)
Sexuality as a social construction is explored with a specific focus on cultural and institutional influences including the family, government, religion, and the media. Current research finding are discussed within the context of historical change in American sexual behavior, attitudes and research methodologies. This course meets a requirement in Family Studies.
Prerequisite: SOCI 100 or 110

SOCI 365 Social Psychology (4 credits)
This course provides a general survey of major social psychological theories and research. Topics include selfhood, socialization, conformity/deviance, attitudes, gender roles, and intergroup/intragroup dynamics. Through exposure to real life settings and simulations, students will explore key questions such as "What attracts us to each other?, "How do we respond to deviant behavior?" and, "Why do we conform?". This course meets a requirement in the Justice and Peace Studies program.
Prerequisite: SOCI 100

SOCI 366 Self and Society (4 credits)
In what ways does the world around us shape who we are as individuals? This course exposes learners to the ways in which various social forces such as family, social class, mass media, and school shape our lives. It 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: SOCI 100

SOCI 380 Cross-Cultural Perspectives on Religion in Society (4 credits)
This course considers the relationship between religion and society on a world-wide basis. It examines why people are religious and how the beliefs and practices of various religious traditions have influenced family life, education, morality, politics, and other social dimensions of life. The course includes discussion of all the major religious traditions, such as Christianity, Judaism, Hinduism, Buddhism, and Islam.
Prerequisite: SOCI 100

SOCI 405 Internship in Criminal Justice (4 credits)
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.
Prerequisites: SOCI 200, 210, 320, and permission of the instructor

SOCI 470 Sociological Theory (4 credits)
Study of the place of sociological theory in understanding interaction and society. Examination of both classical and contemporary theories, including conflict, functionalism, and interactionism. Application of theories to contemporary social concerns. Normally offered only in the fall semester.
Prerequisite: SOCI 100

SOCI 474 Seminar in Sociology (4 credits)
The senior capstone experience offers graduating students an opportunity to actively reflect upon theory, methodology, and substantive sociological knowledge and to integrate these components to assess the role of sociology in understanding social problems. These issues will be explored in the context of a specific topic, chosen by the instructor. Careers, vocation, and preparation for graduate school will also be addressed.
Prerequisite: SOCI 210 and 470

SOCI 475, 476 Experiential Learning (2 credits)
SOCI 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

SOCI 480 Seminar in Criminal Justice (4 credits)
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 the focus of the seminar changes.
Prerequisite: SOCI 200, 320 or permission of instructor

SOCI 483, 484 Seminar (2 credits)
SOCI 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

SOCI 487, 488 Topics (2 credits)
SOCI 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

SOCI 491, 492 Research (2 credits)
SOCI 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

SOCI 495, 496 Individual Study (2 credits)
SOCI 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Spanish (SPAN)

See Modern and Classical Languages

Study Abroad

See Academic Information & Programs in the front section of this catalog

Theater (THTR)

College of Arts and Sciences
Department of Theater
Kritzer (chair), Arnold, Hegdahl, Holonbek, Morrissey, Seamon, Snapko, Wexler, Wilhelmson, Winther

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 and films. Courses enable students to gain a knowledge of history, theory, and aesthetics, as well as skills for working in theater and related areas.

Three well-equipped theaters and an audio and television studio at St. Thomas and St. Catherine provide facilities for the creation of musical and dramatic performances for college and metropolitan audiences.

Students majoring in theater may pursue interests in acting and directing, theater history and theory, or design and technology. For those interested in theater education, the department offers a program leading to licensure in the state of Minnesota.

Students graduating with a major in theater will have a usable knowledge of works, styles, and evaluative methods. They will have developed performance and/or production skills for amateur or professional theater.

Minors are available in Theater and Film.

Special topics classes are offered periodically. These vary from stage combat or improvisation to in-depth studies of major playwrights or directors, or examinations of 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.

The department offers a number of courses for the non-major to fulfill the Fine Arts component of the core curriculum.

Drama Honor Society
A chapter of *Alpha Psi Omega* 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 class work and production.

Major in Theater

For students seeking careers in professional or academic theater who wish to concentrate in performance, direction, and criticism.
THTR 105 Stagecraft (4 credits)
THTR 215 Beginning Directing (4 credits)
THTR 315 Advanced Directing (4 credits)
THTR 412 Drama: Theory and Criticism (4 credits)

Plus eight credits from the following:
THTR 221 History of Theater I: Classical Through 17th Century (4 credits)
THTR 222 History of Theater II: 18th Century to Contemporary (4 credits)
THTR 223 History of Theater III: American (4 credits)

Plus eight credits from the following:
THTR 214 Beginning Acting (4 credits)
THTR 218 Acting for the Camera (4 credits)
THTR 314 Advanced Acting (4 credits)

Plus:
Twelve additional credits in Theater courses

Teacher Licensure

Theater Arts and Dance (K-12)
See Education

Minor in Theater Performance

THTR 105 Stagecraft (4 credits)
THTR 214 Beginning Acting (4 credits)
THTR 215 Beginning Directing (4 credits)

Plus four credits from the following:
THTR 221 History of Theater I: Classical through 17th Century (4 credits)
THTR 222 History of Theater II: 18th Century to Contemporary (4 credits)

Plus four credits from the following:
THTR 204 Oral Interpretation (4 credits)
THTR 253 Creative Dramatics and Children's Theater (4 credits)

Minor in Theater History/Theory-Criticism
THTR 221 History of Theater I: Classical through 17th Century (4 credits)
THTR 222 History of Theater II: 18th Century to Contemporary (4 credits)
THTR 412 Drama: Theory and Criticism (4 credits)

Plus eight credits from the following:
COMM 264 Electronic Media and Society (4 credits)
COMM 440 Classical Rhetoric (4 credits)
THTR 223 History of Theater III: American (4 credits)
THTR 359 Film II: Textual Analysis (4 credits)

Minor in Film
THTR 259 Film I: Introduction to Narrative and Non-Narrative World Cinema (4 credits)
THTR 260 History of Film: The Silent Era (4 credits)
THTR 261 History of Film: Sound Era, 1926 to Present Day (4 credits)
THTR 359 Film II: Film Theory and Criticism (4 credits)
THTR 360 Film III: Super 8 Film-making (4 credits)

THTR 105 Stagecraft (4 credits)
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 crew assignments on a stage production.

THTR 111 Introduction to the Theater (4 credits)
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. This course fulfills the Fine Arts requirement in the core curriculum.

THTR 204 Oral Interpretation (4 credits)
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.

THTR 214 Beginning Acting (4 credits)
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.

THTR 215 Beginning Directing (4 credits)
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.

THTR 217 Production Design (4 credits)
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.

THTR 218 Acting for the Camera (4 credits)
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.

THTR 221 History of Theater I: Classical through 17th Century (4 credits)
The history and analysis of theater forms, Western and non-Western, 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. This course fulfills the Fine Arts requirement in the core curriculum.

THTR 222 History of Theater II: 18th Century to Contemporary (4 credits)
Examination of 18th, 19th and 20th century world theater with special attention to both the contemporary and his-

toric perspectives. Deals with major movements and styles of modern theater. This course fulfills the Fine Arts requirement in the core curriculum.

THTR 223 History of Theater III: American (4 credits)
Development of theater in the United States from its 17th century roots to the present, with special attention to contemporary American drama. Emphasis on the connections between theater and culture. This course fulfills the Fine Arts requirement in the core curriculum.

THTR 231 Dance for Musical Theater (4 credits)
Introduction to the styles of dance associated with musical theater, including tap, ballet, and jazz. Students will explore the basics of choreography and will create some short original dance pieces. Videos will be used to study the development of musical theater dance by comparing and contrasting the styles of choreographers such as Busby Berkeley, Agnes de Mille, Michael Kidd, Jack Cole, Gower Champion, Jerome Robbins, Michael Bennett and Bob Fosse. Readings on the history of dance in musical theater and ground-breaking directors and choreographers.
Prerequisite: THTR 214 or permission of instructor

THTR 253 Creative Dramatics and Children's Theater (4 credits)
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.

THTR 259 Film I: Introduction to Narrative and Non-Narrative World Cinema (4 credits)
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. This course fulfills the Fine Arts requirement in the core curriculum.

THTR 260 History of Film: The Silent Era (4 credits)
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. This course fulfills the Fine Arts requirement in the core curriculum.

THTR 261 History of Film: Sound Era, 1926 to Present Day (4 credits)
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. This course fulfills the Fine Arts requirement in the core curriculum.

THTR 295, 296 Topics (2 credits)
THTR 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/. Topics listed under 297 fulfill the Fine Arts requirement in the core curriculum.

THTR 314 Advanced Acting (4 credits)
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: THTR 214 or permission of instructor

THTR 315 Advanced Directing (4 credits)
Study of directing theory and practice from Stanislavsky to contemporary; practical directing experience through preparation of scenes and one-acts.
Prerequisite: THTR 215 or permission of instructor

THTR 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.

THTR 359 Film II: Film Theory and Criticism (4 credits)
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. This course fulfills the Fine Arts requirement in the core curriculum.
Prerequisite: Any beginning film course or permission of instructor

THTR 360 Film III: Super 8 Film-making (4 credits)
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: THTR 259 or equivalent is recommended but not required

THTR 375 Methods of Teaching Theater and Dance (4 credits)
This course focuses on teaching theater to children and young people. It includes sections on working with young actors, selecting appropriate plays and other material, budgeting for theater productions, finding and using school and community resources, and legal and ethical issues.

THTR 412 Drama: Theory and Criticism (4 credits)
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. This course fulfills the Fine Arts requirement in the core curriculum.

THTR 475, 476 Experiential Learning (2 credits)
THTR 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

THTR 483, 484 Seminar (2 credits)
THTR 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

THTR 487, 488 Topics (2 credits)
THTR 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

THTR 491, 492 Research (2 credits)
THTR 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

THTR 495, 496 Individual Study (2 credits)
THTR 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Theology (THEO)

College of Arts and Sciences
Department of Theology
Brady (chair), Anthony, Boyle, Carvalho, Cavanaugh, Cory, Feldmeier, Gavrilyuk, Hallman (Emeritus), Hollerich, Joncas, Jordon, Kennedy, King, Landry, Martens, McMichael, Montero, Myers, Naughton, Nichols, Niskanen, Ozdemir, Penchansky, Posey, Rolnick, Ruddy, Sain, Schlabach, Smith, Thompson, Ulrich, Vrudny, Wojda; Cytron, Nairn, Spencer, Twite

In every historical period and cultural context, there are certain questions that 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 in theology and its major in theology with

a lay ministry concentration. 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 skills of analysis. Students also may choose to double-major in theology and another discipline. Students graduating with a major in theology will be proficient in their area of specialization. They will demonstrate an ability to reflect on theological and moral issues of contemporary society.

National Honor Society for Religious Studies and Theology
Theta Alpha Kappa is devoted to encouraging and rewarding excellence in theology and the study of religion. The Greek letters stand for theos (God), anthropos (humans), and koinonia (community). In addition to recognizing excellence through induction into TAK, the Society also sponsors an essay contest, the winners of which are published in the TAK journal.

An induction ceremony is held at St. Thomas each spring. Those invited to join must meet academic criteria based on the number of theology courses taken, their GPA in theology courses, and their overall GPA.

Study Abroad: Theology majors and minors are encouraged to study abroad. Specific courses taken abroad may substitute for St. Thomas requirements. The exchange with Australian Catholic University in Melbourne, Australia is particularly suitable. See the Chair of the department or a study abroad advisor in the International Education Center, or Academic Information & Programs in the front section of this catalog for program options.

Major in Theology

THEO 101 The Christian Theological Tradition (4 credits)
or
THEO 102 The Christian Theological Tradition: The Bible and the Early Church (2 credits) *and* THEO 103 The Christian Theological Tradition: St. Augustine to the Present (2 credits)

Plus:
THEO 215 Christian Morality (4 credits)
THEO 301 Theological Methods and Resources (4 credits)
THEO 480 Seminar for Theology Majors and Minors (4 credits) *or* THEO 481 Research Thesis for Majors (4 credits)

Plus:
Four credits in Old Testament (OT)
Four credits in New Testament (NT)
(one course must be THEO 205 or 210)
Four credits in systematic theology
Four credits in historical theology

Plus:
An additional eight elective credits in THEO courses

Major in Theology with a Ministry Concentration

The Lay Ministry Concentration is a specialization within the undergraduate theology major. It combines academic study (KNOW), observation of working ministers (SEE), and internship opportunities (DO), in order to provide students with the theological foundation, pastoral skills and spiritual formation necessary to assume entry-level positions in lay ecclesial ministry. Opportunities include pastoral ministry, youth ministry, religious education and faith formation, as well as a variety of support services for church and faith-based organizations.

Students who complete the program will have satisfied all of the theological competencies approved by the U.S. Conference of Bishops for lay ministers in the Roman Catholic Church, including the theology of revelation, God, church, sacraments and worship, morality and Catholic social teaching, ecumenism and interfaith relations. Ecumenical in nature and designed in cooperation with ministers from local Protestant churches, the program also welcomes students of other Christian traditions.

THEO 101 Christian Theological Tradition (4 credits)
THEO 205 Introduction to the Old Testament (4 credits) (or a 300-level course in Old Testament)
THEO 210 Introduction to the New Testament (4 credits) (or a 300-level course in New Testament)
THEO 215 Christian Morality (4 credits)
THEO 323 Church and Sacramentality (4 credits)
THEO 405 Spiritual Formation (0 credits)
THEO 406 Pastoral Ministry (4 credits)
THEO 407 Catechesis and Faith Formation (4 credits)

Plus four credits from the following:
THEO 200 Christian Belief: Ancient and Contemporary (4 credits)
THEO 220 Early Christian Theology (4 credits)
THEO 373 Person and Mission of Jesus (4 credits)

Plus eight credits from the following:
THEO 302 Second Vatican Council (4 credits)

THEO 308 Theology of the Protestant and Catholic Reformation (4 credits)
THEO 325 Catholic Social Traditions (4 credits)
THEO 310 Christian Worship (4 credits)

Plus four credits from the following:
THEO 417 Internship for Ministry (4 credits)
THEO 445 Theology and Education (4 credits)

Minor in Theology

THEO 101 The Christian Theological Tradition (4 credits)
or
THEO 102 The Christian Theological Tradition: The Bible and the Early Church (2 credits) *and* THEO 103 The Christian Theological Tradition: St. Augustine to the Present (2 credits)

Plus:
THEO 215 Christian Morality (4 credits)

Plus:
Four credits in Sacred Scripture
Eight additional credits in theology
Four credits in systematic theology *or* Four credits in historical theology

Note: At least eight of the credits used to fulfill the minor must be at the 300-level or above. The department recommends either THEO 301 or 480 be chosen as one of the two electives for the minor.

Courses in areas of theological study:
Sacred Scripture
THEO 205 Old Testament (4 credits) (OT)
THEO 210 New Testament (4 credits) (NT)
THEO 330 Wisdom Writings in the Biblical Tradition (4 credits) (OT)
THEO 335 Letters of St. Paul (4 credits) (NT)
THEO 340 The Gospel of John (4 credits) (NT)
THEO 343 Apocalyptic Literature (4 credits) (OT & NT)
THEO 345 Gospels of Matthew, Mark and Luke (4 credits) (NT)
THEO 350 Historical Literature of the Old Testament (4 credits) (OT)
THEO 352 The Pentateuch (4 credits) (OT)
THEO 353 Women and the Old Testament (4 credits) (OT)
THEO 356 Music and the Bible (4 credits) (OT & NT)
THEO 365 Prophetic Literature of the Old Testament (4 credits) (OT)
THEO 387 Topics in Scripture (4 credits) (OT or NT)
THEO 392 Topics in Scripture Theology-Half Course (2 credits)

Historical theology
THEO 220 Early Christian Theology (4 credits)
THEO 308 Theology of the Protestant and Catholic Reformation (4 credits)
THEO 310 Christian Worship (4 credits)
THEO 320 Readings from St. Thomas Aquinas (4 credits)
THEO 354 Women and the Christian Tradition (4 credits)
THEO 357 Sacred Music of the Catholic Heritage (4 credits)
THEO 359 Women in the Early Church (4 credits)
THEO 361 Black Religious Experience (4 credits)
THEO 362 American Catholicism (4 credits)
THEO 363 Theology and Politics (4 credits)
THEO 369 Salvation and Damnation: Theology of Luther and Calvin (4 credits)
THEO 371 History of Religion in America (4 credits)
THEO 383 Topics in Historical Theology-Half course (2 credits)
THEO 388 Topics in Historical Theology (4 credits)

Systematic theology
THEO 200 Christian Belief: Ancient and Contemporary (4 credits)
THEO 301 Theological Methods and Resources (4 credits)
THEO 302 The Second Vatican Council (4 credits)
THEO 305 Theologies of Justice and Peace (4 credits)
THEO 306 Christian Faith and the Management Professions (4 credits)
THEO 314 Christian Spirituality (4 credits)
THEO 315 Christian Marriage (4 credits)
THEO 323 Church and Sacramentality (4 credits)
THEO 331 Christianity and World Religions (4 credits)

THEO 332 Judaism (4 credits)
THEO 334 Islam (4 credits)
THEO 337 Evil and Suffering (4 credits)
THEO 346 Christian Faith and the Education Profession (4 credits)
THEO 360 Contemporary Catholic Theologians (4 credits)
THEO 364 Science and Christian Theology (4 credits)
THEO 373 The Person and Mission of Jesus Christ (4 credits)
THEO 374 Atheists and Apologists (4 credits)
THEO 378 Christian Faith and the Legal Profession (4 credits)
THEO 380 Grace, Hope and Eschatology (4 credits)
THEO 381 Topics in Systematic Theology-Half Course (2 credits)
THEO 386 Topics in Systematic Theology (4 credits)
THEO 394 Death and the Afterlife (4 credits)

Moral theology
THEO 215 Christian Morality (4 credits)
THEO 303 Theology and the Biomedical Revolution (4 credits)
THEO 325 The Catholic Social Traditions (4 credits)
THEO 366 Psychology and Moral Theology (4 credits)
THEO 379 Christian Faith and the Medical Profession (4 credits)
THEO 384 Topics in Moral Theology-Half Course (2 credits)
THEO 389 Issues in Christian Morality (4 credits)

Certificate In Lay Ministry

The Certificate in Ministry will consist of eight (8) four-credit undergraduate courses chosen from among the approved courses in the Concentration in Lay Ministry. The specific choice of courses will be done in consultation with an advisor, who may, on occasion, substitute other courses if the person's previous experience warrants it. Otherwise, courses will be chosen from the following list:

THEO 101 Christian Theological Tradition (4 credits)
THEO 205 Introduction to the Old Testament (4 credits) (or a 300-level course in Old Testament)
THEO 210 Introduction to the New Testament (4 credits) (or a 300-level course in New Testament)
THEO 215 Christian Morality (4 credits)
THEO 323 Church and Sacramentality (4 credits)

Plus four credits from the following:
THEO 200 Christian Belief: Ancient and Contemporary (4 credits)
THEO 220 Early Christian Theology (4 credits)
THEO 373 Person and Mission of Jesus (4 credits)

Plus eight credits from the following:
THEO 302 Second Vatican Council (4 credits)
THEO 308 Theology of the Protestant and Catholic Reformation (4 credits)
THEO 325 Catholic Social Traditions (4 credits)
THEO 310 Christian Worship (4 credits)

All of the courses in the Certificate program are part of the standard offerings of the Theology department, as described in the undergraduate catalogue of the University of St. Thomas. These courses are taught by St. Thomas faculty at the same level and with the same standards as the coursework for major in Theology. Thus, the coursework for the Certificate in Ministry would be applicable toward a Baccalaureate of Arts degree, should the student decide to complete his or her studies at that level. Because they will be applicable toward the Theology major, all program standards will be the same as for the major. This means that students must maintain a grade point average of 2.0 within the program. No course can be taken on a Pass/Fail basis. If the department passes any other regulations for the major, these would automatically apply to the certificate program as well.

Because the students for which this program is designed likely will come with very different educational backgrounds and ministerial experiences, an adviser (and/or the Concentration in Ministry director) will work with each individual student to select the coursework that best meets his or her needs. At the same time, insofar as their coursework will be chosen from the approved courses for the Concentration in Ministry, students will attain a common educational experience by the time they have concluded the program.

Applicants for the Ministry Certificate program should have at least 12 months of full-time or part-time professional ministry experience prior to admission. Prospective students will provide official high school transcript(s) or GED and official college transcript(s) (if any). They will also submit a writing sample, in which they reflect on their understanding of the vocation or theology of ministry, and a letter of recommendation from one of their supervisors in ministry. Students can transfer up to three courses approved by the program director.

THEO 101 The Christian Theological Tradition (4 credits) (THEO 102, 103)
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.
NOTE: Students who receive credit for THEO 101 may not receive credit for THEO 102 or 103.

THEO 102 The Christian Theological Tradition: The Bible and the Early Church (2 credits) (THEO 101)
The first half of THEO 101. This course is designed to acquaint students with the contents of the Bible and Christian history, especially in the context of the Catholic tradition, up through the Council of Chalcedon (but not including the work of St. Augustine). Through a 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. Offered in January term.
NOTE: Students who receive credit for THEO 102 may not receive credit for THEO 101.

THEO 103 The Christian Theological Tradition: St. Augustine to the Present (2 credits) (THEO 101)
The second half of THEO 101. This course is designed to acquaint students with the contents of the Bible and with Christian history, starting with St. Augustine, up to the present, especially in the context of the Catholic tradition. Through a 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.
Prerequisite: THEO 102
NOTE: Students who receive credit for THEO 103 may not receive credit for THEO 101.

THEO 200 Christian Belief: Ancient and Contemporary (4 credits)
This course introduces systematic theology, a discipline that tries to understand how Christian doctrines are interrelated with each other and with other beliefs about the world. It explores both traditional and contemporary interpretations of the most significant doctrines in Catholic and Protestant traditions, emphasizing the relationship of scripture, tradition, experience, and reason as sources for Christian theology. The course is structured on the classical "system" of the Nicene Creed, and will focus on the ongoing formation of the doctrines of God, Christ, the Spirit, creation, sin, salvation, and Church. Special emphasis will be given to the role of grace in history and human experience.
Prerequisite: THEO 101 (or 102 and 103)

THEO 205 Old Testament (4 credits)
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: THEO 101 (or 102 and 103)

THEO 210 New Testament (4 credits)
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: THEO 101 (or 102 and 103)

THEO 215 Christian Morality (4 credits)
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: THEO 101 (or 102 and 103)

THEO 220 Early Christian Theology (4 credits)
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: THEO 101 (or 102 and 103)

THEO 301 Theological Methods and Resources (4 credits)
This course explores 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. It examines both ancient and contemporary formulations of theological knowledge, requirements for theological scholarship, and consideration of certain key theological questions.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 302 The Second Vatican Council (4 credits)
This course examines the roots of Vatican II in the unfinished work of the First Vatican Council, together with the movements and events in the period between the councils. In addition, it analyzes major documents of the Second Vatican Council with special attention to the dogmatic and pastoral constitutions of the Church.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 303 Theology and the Biomedical Revolution (4 credits)
This course examines the contributions of Christian faith to reflecting upon, understanding, and resolving issues and ethical questions raised by revolutionary developments in the life sciences, e.g. innovative birth technologies, genetic manipulation and control, human experimentation, the prolonging of life and allocation of scarce medical resources.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 305 Theologies of Justice and Peace (4 credits)
An examination of the views of various religions and ideologies on issues of justice and peace, with special attention to the Catholic and other Christian teachings on such issues as war and peace, violence, economic justice, the environment, criminal justice, and social justice. Special attention is given to how fundamental presuppositions and principles of each group studied affect their views on justice and peace, and contribute to or hinder dialogue and peaceful interaction with other groups. In addition to Christianity, students will study (at least) one Far Eastern worldview (e.g. Buddhism, Hinduism, Jainism), one tribal religion (Native American, African tribal), Islam, and one secular worldview (e.g. Marxism, capitalism, secular humanism). Students are required to investigate one worldview in depth through a semester-long research project. This course fulfills the Human Diversity requirement in the core curriculum.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 306 Christian Faith and the Management Professions (4 credits) (equivalent to CATH 306)
What is a good manager and how does he or she contribute to the common good? This course pursues these questions within the Christian social tradition broadly understood through an exploration of the theological relationship between work as a vocation and leisure as contemplation. Within this theological context, the course examines the financial, organizational, technological, and cultural forces that managers and organizations encounter daily.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 308 Theology of the Protestant and Catholic Reformation (4 credits)
An investigation of the origins of the Protestant tradition through the writings of Martin Luther, John Calvin, Ulrich Zwingli, and the Radical reformers, among others. This course also examines the Roman Catholic response, especially as articulated by Ignatius of Loyola, Teresa of Avila, and the Council of Trent. Attention will be given to the theological issues which emerged, as well as views on marriage and family life, religious and political authority, and the status of women.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 310 Christian Worship (4 credits)
A study of Christian communal worship from historical, social science, and theological perspectives. This course examines worship as the sanctification of time, space, and life. It also includes a comparison and contrast of Eastern (Orthodox) and Western (Lutheran, Anglican, Reformed, Baptist, Methodist, Quaker, Frontier, Pentecostal) worship practices with those of Roman Catholics.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 314 Christian Spirituality (4 credits)
This course 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: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 315 Christian Marriage (4 credits)
This course is designed to acquaint students with the theology of Christian marriage, understood as covenant relationship and as sacrament, that is, an effective sign of God's love in our world. Primary though not exclusive emphasis will be on the Roman Catholic tradition. Students will also examine contemporary cultural attitudes toward sexuality, marriage, and the family in the light of Christian theology.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 318 Theology from Augustine to Aquinas (4 credits)
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: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 320 Readings from St. Thomas Aquinas (4 credits)
An introduction to the theology of St. Thomas Aquinas, his influence and his contemporary significance.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 323 Church and Sacramentality (4 credits)
A study of past and present models of the Church, and of sacramentality as a central expression of Christian communities. Sacramentality recognizes God's transformation of human beings through effective signs, such as Baptism and Eucharist. This course examines the implications of various models of Church and sacramentality for the status and functions of laity, forms of ministry and authority, and the relationship between the churches.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 325 The Catholic Social Traditions (4 credits)
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: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 330 Wisdom Writings in the Biblical Tradition (4 credits)
This course introduces students to the structure and contents of some of the major wisdom writings of the Bible, such as Proverbs, Job, Ecclesiastes, Sirach (Ecclesiasticus), and Wisdom of Solomon. Special emphasis is given to the intellectual climate and essential controversies of ancient Israel which produced the wisdom movement and its literature. One of the aims of the course is for students to experience the unique relevance of this ancient quest for wisdom in today's climate of secularity and skepticism.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 331 Christianity and World Religions (4 credits)
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: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 332 Judaism (4 credits)
An examination of Judaism, its history, literature, religious concepts, practices and personalities. This course fulfills the Human Diversity requirement in the core curriculum.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 334 Islam (4 credits)
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: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 335 Letters of St. Paul (4 credits)
Through a careful reading of the authentic letters of Paul, as well as some of the letters attributed to him, this course explores the religious and cultural world of Paul and the Christian communities with whom he interacted. It will also investigate some of the major theological themes of his letters and inquire into Paul's understanding of the ethical life of first-century Christian communities. Finally, the course will examine the impact of Paul's theological and ethical teaching for modern Christian life.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 337 Evil and Suffering (4 credits)
This course analyzes some of the most profound evils of the modern era, and attempts to relate them to traditional and contemporary discussions of divine and human 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; slave trade; genocidal colonization in Africa, Asia, and the Americas; 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: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 340 The Gospel of John (4 credits)
This course focuses on the gospel of John and the New Testament letters attributed to John. Employing a variety of historical and literary critical methods, the course investigates Johannine literature's unique portrait of Jesus, the theological themes of the gospel, and the worldview and social situation of the community of Christians from which this literature emerged. It also explores some of the ways the gospel of John has been interpreted over the centuries, with special attention to the question of the gospel's attitude toward Judaism and the historical impact of that stance.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 343 Apocalyptic Literature (4 credits)
This course examines some of the apocalyptic literature of the Bible, specifically the books of Daniel and Revelation, as well as non-biblical Jewish and Christian apocalyptic literature of the same periods. It explores a variety of ways of interpreting apocalyptic literature with special attention given to the meaning and significance of its mythical imagery and symbolism. It also examines the nature and function of apocalypticism as a worldview and as a theological response to universal and compelling questions such as the justice of God and the problem of evil.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 345 Gospels of Matthew, Mark and Luke (4 credits)
This course introduces students to the major methods of modern biblical criticism (for example, source criticism, form criticism, historical criticism, redaction criticism, literary criticism, and sociological analysis) and develops expertise in the application of each of these methods to the synoptic gospels (Matthew, Mark and Luke-Acts). Students will learn the major theological teachings, social and historical contexts, and literary features of each of the synoptic gospels.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 346 Christian Faith and the Education Profession (4 credits) (equivalent to CATH 346)
This course explores education through its grounding in the Christian understanding of God and the human person. Theological topics relevant to education include: the nature of truth, the relationship between faith and reason, and freedom in moral and intellectual formation. We will also examine questions about faith-based education in a pluralistic context and the relevance of an interdisciplinary search for truth. In light of the growing trend toward academic specialization, this course aims to help students learn how various disciplines are integrated in the search for wisdom.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 350 Historical Literature of the Old Testament (4 credits)
Many books of the Old Testament, such as Joshua, Judges, 1 & 2 Samuel and 1 & 2 Kings, contain ancient Israel's own understanding of its history. This course examines books such as these in order to examine their historical content, and to develop an appreciation for the way history was told in the ancient world. Students will learn to apply certain methods of biblical study to the texts. In addition, several major themes in the biblical histories will be explored, such as prophecy, monarchy and developments in Israelite worship. One aim of the course is to examine the relationship between the memorable story telling in these texts and the theological message for both the ancient and modern audience.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 352 The Pentateuch (4 credits)
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: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 353 Women and the Old Testament (4 credits)
This course explores 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 course investigates 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 studies 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 (or 102 and 103) and one 200-level THEO course

THEO 354 Women and the Christian Tradition (4 credits)
This course explores the ways in which the Judeo-Christian religious tradition has profoundly influenced our society's definition of women. It 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. Students 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 (or 102 and 103) and one 200-level THEO course

THEO 356 Music and the Bible (4 credits) (equivalent to CATH 356)
This course explores the social, cultural and religious contexts for music-making among biblical peoples and the primitive Christian communities. Students will learn to do detailed analysis of psalm and canticle texts in the Old Testament and acclamations, infancy canticles, God-hymns, Christ-hymns and psalmody in the New Testament. Implications for present-day worship and spirituality will also be addressed.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 357 Sacred Music of the Catholic Heritage (4 credits) (equivalent to CATH 357)
Music both expresses and shapes religious experience. This course explores the practice and theory of music-making in Catholic worship and devotion. Special emphasis will be given to the study of Gregorian chant as foundational for Roman Rite worship music, the historical development of other forms of Catholic church music, and contemporary issues of music, culture and spirituality.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 359 Women in the Early Church (4 credits)
The literature of early Christianity is filled with ambiguity concerning women's role in the churches and in the story of salvation. Women's subordination was justified on the basis of Eve's role in bringing evil and sin into the world. At the same time, women were presented as heroines and models of the ideal Christian life. They held roles of leadership within early church communities, even while early church writers argued against their right to do so. This course will examine a wide range of primary texts by and about women in the early Christian churches in order to explore the relationship between faith and culture as the context for understanding women's role and status in the early church. It will also look at ways in which these texts might be relevant for the modern context. This course fulfills the Human Diversity requirement in the core curriculum.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 360 Contemporary Catholic Theologians (4 credits)
This course concentrates on the study of two to four influential Catholic systematic theologians of the 20th and 21st centuries within their historical, cultural, and philosophical contexts. The course will alternate between the study of the prominent themes and concerns of the modern and post-modern world, and the theologians' varied responses to these issues through substantial primary text reading and discussion. The Second Vatican Council's impact upon systematic work will be measured as well.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 361 Black Religious Experience (4 credits)
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: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 362 American Catholicism (4 credits)
This course emphasizes 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 the theological concerns which created a pluralism among American Catholics that makes the Church of the United States truly Catholic.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 363 Theology and Politics (4 credits)
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 (or 102 and 103) and one 200-level THEO course

THEO 364 Science and Christian Theology (4 credits) (equivalent to CATH 364)
This course is an introduction to the interrelationship between Christian theology (the understanding of the Christian faith), and the natural sciences. It explores the relationship between scientific and theological methods and modes of knowledge, and considers some of the central topics of Christian theology – God, creation, providence, resurrection, and afterlife – in the light of modern scientific evidence and theories.
Prerequisites: THEO 101 (or 102 and 103) and one 200-level THEO course, PHIL 115, some college-level background in science, preferably biology, physics, or chemistry

THEO 365 Prophetic Literature of the Old Testament (4 credits)
This course examines biblical prophetic activity and prophetic texts within their ancient Near Eastern context. Biblical texts will include both narratives about the prophets, and collections of oracles in the prophetic books. The course includes an examination of the nature and function of prophetic activity from a cross-cultural perspective, the historical background of the prophets, as well as the literary forms and Israelite traditions utilized in the oracles. It will be seen that this background is essential to any discussion of the theology of the prophets.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 366 Psychology and Moral Theology (4 credits) (equivalent to CATH 366)
Although the fields of psychology and moral theology are in some ways similar in that they each address questions of human nature and human growth, they are also quite distinct in their conceptions of the human person. This course will explore some of the relationships between psychology and moral theology, especially in matters of human wellness and personal well-being. Areas of disparity between the disciplines as well as points of commonality and fruitful exchange will be discussed.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 369 Salvation and Damnation: Theology of Luther and Calvin (4 credits)
How are humans saved? Do we have a free will? Does God choose some to be saved and others to be damned? This course examines the answers offered to these questions by two influential Protestant reformers: Martin Luther and John Calvin. It also explores their views on marriage and family life, work, religious and political authority, and the status of women.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 371 History of Religion in America (4 credits)
This course traces the evolution of religion in the territories that constitute the United States of America today. This collection of believers (Native, Catholic, Protestant, Jewish, Muslim, *etc.*) initially emerged from the complex encounters between the indigenous Native American residents and a triduum of European explorers (Spanish, French, and English). Ultimately it not only incorporated several additional imported communities and belief systems, but also created a unique blend of the sacred and the secular. Attention will be given to the social dynamics of these communities, their understanding of God, and the theologies that developed. The polemic and harmonious relationships of these communities will serve as a backdrop to the development of key concepts (religion, culture, belief, common good, values, *etc.*) as they appear in the religious vocabulary of citizens of the USA.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 373 The Person and Mission of Jesus Christ (4 credits)
This course explores New Testament understandings of some of the titles of Jesus, such as Christ, Lord, and Savior, and investigates the development of Christological doctrine in the early centuries of Christianity. Consideration will also be given to some modern Christological questions.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 374 Atheists and Apologists (4 credits)
This course explores the problem of religious belief in a secular society by focusing on the effects of the empirical and human sciences on the classical understanding of God. Considering original thinkers, such as Descartes, Kant, Hegel, Marx, Darwin, Nietzsche, and Freud, the course will explore the emergence of several types of atheism and the intellectual defense of religious belief. Students will do a detailed reading of selected texts, which may include theological, philosophical, scientific, and literary works.
Prerequisites: THEO 101 (or 102 and 103) and one 200-level THEO course and PHIL 115

THEO 378 Christian Faith and the Legal Profession (4 credits) (equivalent to CATH 378)
If to work is to share in the creative activity of God, then what specific challenge does this pose for an attorney given the grinding realities of the legal profession? If to be a professional is to live out a tripartite relationship between self, client, and a higher standard, then how does an attorney determine, much less respond to such a standard? Through a close reading of a variety of theological texts, treatises, case studies and rules of professional conduct, this course will address these questions and, in so doing, attempt to fashion a paradigm for the Christian practice of law. Within this paradigm, emphasis will be placed on the meaning of justice, law, rights and responsibilities. An ethic of care that fosters the development of a compassionate world and a common life will be emphasized.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 379 Christian Faith and the Medical Profession (4 credits) (equivalent to CATH 379)
What is a good doctor? This course pursues this question and possible answers to it, from a historical, moral, and theological point of view. Reading and discussion will be guided by a detailed investigation of the scientific/technological, economic, and cultural forces that are presently complicating our traditional understanding of medical practice. Emphasis throughout will be on the Christian tradition of moral inquiry as a resource for responding to this question.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 380 Grace, Hope and Eschatology (4 credits)
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: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 381 Topics in Systematic Theology-Half Course (2 credits)
This course will consider particular topics in systematic theology. Topics covered will vary from section to section, but will not duplicate existing courses. Because topics vary, the course may be taken more than once. Intended primarily for January term. This course fulfills HALF (2 credits) of the 300-level requirement for Faith and the Catholic Tradition.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 383 Topics in Historical Theology-Half Course (2 credits)
This course will consider particular thinkers, texts, themes, or movements in the history of theology. Topics covered will vary from section to section, but will not duplicate existing courses. Because topics vary, the course may be taken more than once. Intended primarily for January term. This course fulfills HALF (2 credits) of the 300-level requirement for Faith and the Catholic Tradition.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 384 Topics in Moral Theology-Half Course (2 credits)
This course considers particular topics in moral theology. Topics covered will vary from section to section, but will not duplicate existing courses. Because topics vary, the course may be taken more than once. Intended primarily for January term. This course fulfills HALF (2 credits) of the 300-level requirement for Faith and the Catholic Tradition.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 386 Topics in Systematic Theology (4 credits)
The subject matter of this course, announced in the annual Class Schedule, will vary from year to year, but will not duplicate existing courses in systematic theology. The course will consider particular topics, which will be offered at least every two years, on a rotating basis. Topics will include: Theologies of Global Economics, the Church in Latin America, Theology of the Catholic Worker Movement, Women Mystics, Ireland: Understanding Celtic Spirituality, and Newman and the Catholic Revival.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 387 Topics in Scripture (4 credits)
The subject matter of this course, announced online Class Schedule, will vary from year to year, but will not duplicate existing courses in scripture. The course introduces students to major methods of biblical criticism and helps students develop expertise in the application of appropriate methods to a given scriptural book or topic. The topic could consist in a focus on a particular text, such as Psalms or the Catholic Epistles, or on a theme related to scriptures, such as Biblical Ethics or History of Biblical Interpretation. The course may be taken more than once.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 388 Topics in Historical Theology (4 credits)
The subject matter of this course, announced in the annual Class Schedule, will vary from year to year, but will not duplicate existing courses in historical theology. The course will consider particular historical thinkers, texts, themes or movements and help students to develop expertise in the theological consideration and analysis of them. This course may be taken more than once.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 389 Issues in Christian Morality (4 credits)
This course focuses on the historical development and contemporary discussion of a specific moral issue – to be announced in the annual Class Schedule – addressed within the Christian theological tradition. Examples of such issues include, but are not limited to: war and peace, sex and the body, wealth and poverty, family and society. Emphasis will be on the foundations (biblical, traditional) and development of a distinctively Christian approach to the issue. Substantial attention will be devoted to modern challenges. This course may be taken more than once.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 392 Topics in Scripture Theology-Half Course (2 credits)
This course will consider selected topics, themes, or texts in the Christian scriptures, and will introduce students to the major methods of biblical criticism. Topics covered in this course will vary from section to section, but will not duplicate existing courses. Because topics vary, the course may be taken more than once. Intended primarily for

January term. This course fulfills HALF (2 credits) of the 300-level requirement for Faith and the Catholic Tradition.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 394 Death and the Afterlife (4 credits)
This course explores Christian and non-Christian conceptions of death and afterlife. It focuses on Christian theological views, but also considers Jewish, Muslim, Hindu, and Buddhist conceptions. Specific topics addressed will be ideas of judgment, heaven, purgatory, hell, reincarnation, and accounts of near-death experiences.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

THEO 395, 396 Special Seminar (2 credits)
THEO 397, 398 Special Seminar (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/. The odd number is used if the course will fulfill a core curriculum requirement for Human Diversity or Computer Competency.
Prerequisite: THEO 101 (or 102 and 103) and one 200-level THEO course

Note: 400-level courses cannot be used to fulfill the core curriculum requirements in Faith and the Catholic Tradition.

THEO 405 Spiritual Formation (0 credits)
Person involved in lay ministry can provide appropriate spiritual leadership only if they themselves pursue a vibrant, adult faith life. This zero credit course introduces student to resources and religious practices from a variety of faith traditions that will contribute to their own spiritual development. Through group discussion and reflective assignments, they will also have opportunities to reflect upon their gifts, strengths and limitations for lay ministry. Required of all students completing the ministry concentration. Enrollment in the lay ministry program or permission of instructor required.
Prerequisite: Enrollment in lay ministry program or permission of instructor

THEO 406 Pastoral Ministry (4 credits)
This course explores some of the issues and challenges that pastoral leaders face in diverse ministries in local faith communities. Participants will examine the theological foundations of pastoral ministry that emerge from church teaching and magisterial documents; explore their own realities as emerging pastoral leaders; identify the functions of pastoral leadership; assess their preparation and gifts for pastoral leadership; practice a process of theological reflection that enhances the way they minister; and be able to identify the pertinent knowledge, competencies and spirituality needed to be effective pastoral ministers. Participants will also have an opportunity to examine, in more depth, ministry to a particular population in a faith community (e.g., needs addressed by your ministry, family ministry, ministry to the bereaved, ministry to young adults, ministry to the poor and marginalized, etc.) and determine how the faith community assess and responds to specific pastoral needs. Through the study of church documents and pastoral resources interviews with pastoral leaders, observations of pastoral ministry in local churches, library research, self-assessment inventories, reflective assignments, and case studies, participants in this course will articulate a theological foundation for their own vocation and identify a plan for their own continued personal, spiritual, and professional growth as pastoral leaders. This course in intended for students pursuing the concentration in lay ministry. Field observation is required.
Prerequisites: four college-level courses in theology

THEO 407 Catechesis & Faith Formation (4 credits)
Ecumenical in nature, this course is designed to help students connect the knowledge and skills they have gained in previous theology courses to the practice of catechetical ministry and adult faith formation in a parish or church setting. Students will investigate various strategies for evangelization, particularly for outreach to people of diverse backgrounds. They will learn how one's faith development is related to the various stages of events in one's life and investigate ways to relate church teachings and Christian scriptures to the faith development and formation of both youth and adults. To this end, they will study relevant catechetical documents and learn how to assess catechetical and faith formation programs for their appropriateness to a particular community of faith. Emphasis will be placed on the Rites of Christian Initiation of Adults as paradigmatic for Christian formation across the life span. This course is intended for students pursuing the concentration in lay ministry. Field observation is required
Prerequisites: Four college-level courses in theology

THEO 417 Internship in Ministry (4 credits)
This internship complements the student's academic work by providing supervised ministerial experience. Working with an on-site ministry staff person, the student will apply his or her academic training to a chosen area of ministry. A minimum of 10 hours per week at the selected agency or church is required, as well as a weekly seminar session led by a UST Theology faculty member.
Prerequisite: Completion of 24 credits in theology, including THEO 101 (or 102 and 103) and 215

THEO 445 Theology and Education (4 credits)
A study of topics and procedures for teaching religion. Using previously acquired theological knowledge, the course examines 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: THEO 101 (or 102 and 103)

THEO 475, 476 Experiential Learning (2 credits)
THEO 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

THEO 480 Seminar for Theology Majors and Minors (4 credits)
A capstone experience for theology majors and minors. The subject matter of this course, announced in the annual Class Schedule, will vary from year to year, but will not duplicate already existing theology courses. Students explore, in seminar format, a particular theological theme or issue from the perspective of at least three of the four sub-disciplines of theology (biblical, systematic, historical, moral). Under the guidance of the instructor, students will complete a major research project.
Prerequisites: a minimum of sixteen credits in theology, including THEO 101 (or 102 and 103)

THEO 481 Research Thesis for Majors (4 credits)
An independent research thesis for majors to be completed 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 faculty members. The research thesis is best suited to students who intend to pursue an academic career in theology. See the department chair for further information.

THEO 483, 484 Seminar (2 credits)
THEO 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

THEO 487, 488 Topics (2 credits)
THEO 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses. Descriptions of these courses are available at www.stthomas.edu/registrar/onlineschedule/.

THEO 491, 492 Research (2 credits)
THEO 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

THEO 495, 496 Individual Study (2 credits)
THEO 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

Urban Studies

College of Arts and Sciences
Interdisciplinary Program
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 (4 credits)
ECON 333 Regional and Urban Economics (4 credits)
HIST 377 The History of the Twin Cities (4 credits)
POLS 303 Urban and Metropolitan Politics and Government (4 credits)
SOCI 332 Urban Sociology (4 credits)

Women's Studies (WMST)

College of Arts and Sciences
Interdisciplinary Program
Jordon (THEO), director

The Associated Colleges of the Twin Cities (ACTC) offer a cooperative major in Women's Studies. Women's Studies is an interdisciplinary program which takes gender as its critical term of inquiry, exploring it as a social construct and analyzing its impact on traditional disciplines. As an interdisciplinary major and minor, Women's Studies spans the curriculum, incorporating many disciplines in a diverse and stimulating package of courses. Courses consider historical and contemporary contexts from multicultural and multiracial perspectives, and focus on the intersections of race, class, gender, ethnicity, sexuality, religion, and culture.

Students in the program learn how to analyze social forces and assumptions that have shaped women's lives on individual, national, and global levels. This flexible program of study combines theoretical, practical and research components and provides preparation for both advanced study and professional work, for example, in organizations focusing on women, in human relations departments of corporations, and in health or legal professions.

Women's Studies majors and minors are encouraged to study abroad. Specific courses taken abroad may substitute for St. Thomas requirements. See the Chair of Women's Studies, a study abroad advisor in the International Education Center, or Academic Information & Programs in the front section of this catalog for program options.

Major in Women's Studies

WMST 205 Foundations in Women's Studies (4 credits)
WMST 327 Feminist Theory (4 credits)
WMST 480 Women's Studies Seminar (4 credits)

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
Four elective credits chosen from the Humanities and/or the Social Sciences and Natural Sciences

Note: 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

WMST 205 Foundations in Women's Studies (4 credits)

Plus:
Eight credits in Humanities
Eight credits in Social Sciences and Natural Sciences

Recommended:
WMST 480 Women's Studies Seminar (4 credits)

Note: The seminar can count as one of the humanities, social science, or natural science courses.

Transfer students:
Students who transfer to St. Thomas and wish to complete a major or minor in Women's Studies are urged to consult with the director of Women's Studies immediately upon transfer.

The Women's Studies Program has an articulation agreement with Century College that governs Century College students with a Women's Studies certificate who transfer to St. Thomas. Transfers from other colleges and universities must consult with the director of Women's Studies for approval of course for the major or minor.

WMST 205 Foundations in Women's Studies (4 credits)
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 consortial campus, usually offered at UST Spring semester. This course fulfills the Human Diversity requirement in the core curriculum.

WMST 295, 296 Topics (2 credits)
WMST 297, 298 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses.

WMST 327 Feminist Theory (4 credits)
This interdisciplinary feminist theory course is designed as a mid-level course to serve as a bridge between the Foundations in Women's Studies course and the Senior Seminar. The content of the course will focus on theorizing around multiple differences of gender, race, ethnicity, class, and sexuality. As an interdisciplinary course, it provides an overview of historical and ideological trends in feminist thought around these differences. The focus may vary, and

may include feminist theories from the fine arts, history, literary studies, philosophy, psychology, the sciences, and sociology.

WMST 475, 476 Experiential Learning (2 credits)
WMST 477, 478 Experiential Learning (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

WMST 480 Women's Studies Seminar (4 credits)
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.
Prerequisite: WMST 205

WMST 483, 484 Seminar (2 credits)
WMST 485, 486 Seminar (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

WMST 487, 488 Topics (2 credits)
WMST 489, 490 Topics (4 credits)
The subject matter of these courses will vary from year to year, but will not duplicate existing courses.

WMST 491, 492 Research (2 credits)
WMST 493, 494 Research (4 credits)
See the description of these courses at the beginning of the "Curricula" section of this catalog.

WMST 495, 496 Individual Study (2 credits)
WMST 497, 498 Individual Study (4 credits)
See the description of these courses at the beginning of the "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 College of St. Catherine
H Hamline University
T University of St. Thomas

Note: 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
THTR 299C Women and Film
THEO 338C* Women and the Bible
THEO 385C* Sexuality and Spirituality
THEO 390C* Women Mystics
ENG 3570H* Women and Literature
PHI 1200H* Introduction to Feminist Theory
REL 3250H* Women and Religion
ARTH 297T Women in the Ancient World
COMM 340T* Rhetorical Dimensions of Race, Class and Gender
ENGL 218T* Literature by Women: Critical History
ENGL 295T Twentieth-century Arabic Writers
ENGL 297-02T Documenting Arab Lives
ENGL 341T* Literature by Women: Critical Questions
THEO 353T Women and the Old Testament
THEO 354T* Women and the Christian Tradition
THEO 359T Women in the Early Church

Social Science and Natural Science
INS 233A Women: A Cross Cultural Perspective
INS 265A* Women in American Culture
PSYC 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 1530H Human Evolution
BIO 1510H* Human Biology, A Feminine Perspective
EDUC 3750H Herstory of Education
POL 3430H Gender Politics
SOC 3330H Sex Roles
SOC 3370H* Marriage and the Family
BLAW 352T Gender Issues and the Law
HIST 368T* Women in the United States
IDSC 291T* The Anatomy of Violence
IDSC 312T Gender and Science
JOUR 305T Gender, Race and Mass Media
PSYC 205T* Psychology of Women
SOCI 255T* Gender in American Society
SOCI 304T Adolescence in Society
SOCI 321T* Marriage and the Family

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 3330H* North American Indians
SOC 3350H* Sociology of Race and Ethnicity
ARTH 285T Arts of Africa and the African Diaspora
ARTH 289T Asian Art
COMM 230T* Intercultural Communication
MUSC 216T Jazz in America
SOCI 251T* Race and Ethnicity
SOCI 301T* Cultural Anthropology

Organization and Personnel

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 executive 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/chief academic officer who is responsible for all academic units and academic support services; the executive vice president/chief administrative officer who is responsible for the day-to-day administrative operations of the university including fundraising; the vice president for mission; the vice president/rector, responsible for the administration of the Saint Paul Seminary School of Divinity; the vice president for finance and administration; the vice president for student affairs; the vice president for information resources and technologies; and the vice president for university and government relations.

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1960-1974

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1956-1999

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1976-2002

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Professor Emeritus of Management
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Robert E. Veverka
Assistant Professor of Business Administration
1976-1989

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1963-1995

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1967-1996

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1954-1990

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1976-2001

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Associate Professor of Management
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1976-1987

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