



2002-2004

UNIVERSITY OF  
ST. THOMAS

UNDERGRADUATE  
CATALOG



UNIVERSITY  
THOMAS  
MINNESOTA



#### Fall Semester 2002

September 4	Classes begin
September 10	Last day to register or add a class
September 17	Last day to drop a class without notation on record
October 9	Last day to designate grading option (S-D-R)
October 25	Fall semester break
October 28	2nd half-semester classes begin
October 28	Mid-term grades due
Nov. 18 - Dec. 6	January term and spring semester registration
November 13	Last day to withdraw from a class without a grade of "F"
November 28-29	Thanksgiving recess
December 2	Classes resume
December 2	Incompletes due from spring semester and summer sessions
December 2	1st half-semester grades due
December 13	Last day of classes
December 16	Study Day
December 17 - 20	Final examinations
December 20-21	Winter commencements
December 30	Final grades due

#### January Term 2003

January 6	Classes begin
January 10	Last day to register or add a class
January 10	Last day to drop a class without notation on record
January 15	Last day to designate grading option (S-D-R)
January 20	Martin Luther King Holiday
January 21	Last day to withdraw from a class without a grade of "F"
January 30	Last day of classes/examinations
February 7	January term grades due

#### Spring Semester 2003

February 3	Classes begin
February 7	Last day to register or add a class
February 14	Last day to drop a class without notation on record
March 14	Last day to designate grading option (S-D-R)
March 24 - 28	Spring semester break
March 31	Classes resume
March 31	2nd half-semester classes begin
March 31	Mid-term grades due
April 17	Last day to withdraw from a class without a grade of "F"
April 18 - 21	Easter break
April 22	Classes resume
April 22 - May 2	Early registration for summer sessionsy Day0ril 171st half-semester grades g752 92

## Fall Semester 2003 (tentative)

September 3	Classes begin
September 9	Last day to register or add a class
September 16	Last day to drop a class without notation on record
October 8	Last day to designate grading option (S-D-R)
October 24	Fall semester break
October 27	2nd half-semester classes begin
October 27	Mid-term grades due
Nov. 17 - Dec. 5	January term and spring semester registration
November 12	Last day to withdraw from a class without a grade of "F"
November 27 - 28	Thanksgiving recess
December 1	Classes resume
December 1	Incompletes due from spring semester and summer sessions
December 1	1st half-semester grades due
December 12	Last day of classes
December 15	Study Day
December 16 - 19	Final examinations
December 19-20	Winter commencements
December 29	Final grades due

## January Term 2004 (tentative)

January 2	Classes begin
January 8	Last day to register or add a class
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 17	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 2004 (tentative)

February 2	Classes begin
February 6	Last day to register or add a class
February 13	Last day to drop a class without notation on record
March 12	Last day to designate grading option (S-D-R)
March 22 - 26	Spring semester break
March 29	Classes resume
March 29	2nd half-semester classes begin
March 29	Mid-term grades due
April 9 - 12	Easter break
April 13	Classes resume
April 15	Last day to withdraw from a class without a grade of "F"
April 19 - 30	Early registration for summer sessions and fall semester
May 3	Incompletes due from fall semester and January term
May 3	1st half-semester grades due
May 14	Last day of classes
May 17	Study Day
May 18 - 21	Final examinations
May 21	Commencement Mass
May 22	Spring commencements
May 28	Final grades due

## Summer Sessions 2004 (tentative)

May 23 - July 5	First summer session
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## Mission

The University of St. Thomas is a comprehensive, co-educational, Catholic university. It seeks to develop morally responsible individuals who combine career competency with cultural awareness and

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, 53 percent of the undergraduates and 51 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 11,570 today. The undergraduate program currently enrolls approximately 5,400 students.

Adult students at the undergraduate level were served through New College, which opened in 1975. Now called the School of Continuing Studies, it continues to serve adult, part-time, and nontraditional students with degree and noncredit programs.

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.



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 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



Biology –A score of 5 or higher = one core course waived (if the student chooses to major in biology), in consultation with the chair of the department. Otherwise a score of 4 or higher = one natural science course (BIOL 101).

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

English –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 Option Credits

The Post-Secondary Enrollment Options program is a Minnesota State program which allows qualified high school students to earn credit toward their high school diplomas by attending colleges, universities, vocational-technical institutes and other post-secondary institutions. In order to participate, a student must be enrolled as a junior or senior at a Minnesota 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 nondegree 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 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 that there is space available after the degree-seeking students have registered. There are some courses which are not offered for PSEO students. For instance, they may not enroll in theology courses, since the state will not pay for religion courses. Applied music courses, such as instrumental or vocal lessons, are also not included in the program. PSEO students must register for credit; they may not audit a course.

Students must maintain at least a 2.50 grade point average in order to continue in the program.

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).

#### 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;



**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.

Arrangements may be made to take the General or Subject CLEP Examinations.

Website: [www.stthomas.edu/pc/testing](http://www.stthomas.edu/pc/testing)  
Testing registration line at 651-962-6791.

**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  
FINC 321 Financial Management  
MGMT 345 Operations 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 PSY 111 General Psychology

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

QMCS 420 Systems Analysis and Design I

QMCS 421 Systems Analysis and Design II

**Sociology**

SOC 100 Introduction to Sociology

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

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

Note: Once a student has matriculated, all coursework taken at St. Thomas or at another institution, regardless of grade, will be included in the student's transcript and will be considered when calculating the GPA.

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

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

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

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

### International Students

The university welcomes applications from prospective international students.

In addition to the Application for Admission, the Test of English as a Foreign Language (TOEFL) is required of all students for whom English is not their native language. The minimum acceptable score for this examination is 550 for the paper/pencil test or 213 for the computer-based test. 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 admis-

sion. For more information on the ELS Language Center at St. Thomas, please contact the Center Director, ELS Language Center, University of St. Thomas, Mail# CHC 203, 2115 Summit Avenue, St. Paul, MN 55105.

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

The University of St. Thomas has very limited funds for scholarships for international students and awards only a few partial tuition grants to incoming students. Selection is based on outstanding merit and need. To qualify for consideration for the following academic year, students must apply to the University of St. Thomas and have submitted an 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](http://www.stthomas.edu/international)  
e-mail: [international@stthomas.edu](mailto: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 insure proper and prompt payment of benefits due.

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

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.

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

Nondegree students are limited to enrolling for eight credits in any given semester. A maximum of 24 credits taken at St. Thomas on nondegree status may be applied to a degree program. A non-



## Scholarships

The University of Tennessee believes that students with a desire to attend college should have reasonable access to financial aid. All incoming freshmen accepted for admission to the University are competitively based on the applicant pool. Graduating high school students who are U.S. citizens or permanent residents who are accepted for

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. 2-6329.

**Army ROTC Scholarships**

St. Thomas has an Army ROTC Scholarship program.

For recipients of a four-year scholarship, St.

is responsible for the interest on the loan from the date of disbursement. Students have the option of paying the interest or deferring the interest while enrolled in school. If the interest is deferred, it will be capitalized when the loan enters repayment.

**Financial Aid Policy Regarding**

**Federal Perkins Loan Program**

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

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

**Federal PLUS Loan for Parents**

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

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

The PLUS loan has a variable interest rate which is capped at 9 percent. The interest rate is based on the T-bill rate and will change annually each July 1. To apply, a student must complete the Free Application for Federal Student Aid (FAFSA).

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

**Student Work Program**

Through a combination of federal, state and institutional funds, St. Thomas provides its students with the opportunity to apply for campus work to help pay college expenses. Most students can receive some type of student employment award.

Job openings are posted on the Human Resources Website: [www.hr.stthomas.edu](http://www.hr.stthomas.edu). Student

**Withdrawal**

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 will 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 new 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).

A student must withdraw officially through the MURPHY automated systems 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 Loan
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 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 Curriculum 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 Office of the Dean, College of Arts and Sciences.

- Actuarial Science (B.S.)
- Art History
- Biochemistry (B.S.)
- Biology
- Business Administration – Accounting
- Business Administration – Communication
- Business Administration – Entrepreneurship

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 – Legal Studies in Business  
 Business Administration – Marketing Management  
 Business Administration – Operations Management  
 Business Administration – Real Estate Studies (B.S.)  
 Catholic Studies  
 Chemical Dependency Counseling  
 Chemistry  
 Chemistry (B.S.)  
 Classical Civilization  
 Classical Languages  
 Communication  
 Community Health Education  
 Criminal Justice  
 Dance & Theatre Arts with a Theatre Specialization (K-12 teacher licensure)  
 East Asian Studies [ACTC]  
 Economics  
 Economics (B.S.)  
 Electrical Engineering (B.S.E.E.)  
 Elementary Education  
 English  
 English – Writing  
 Environmental Studies  
 French  
 Geography  
 Geology  
 German  
 Health Education (5-12 teacher licensure)  
 Health Education – non-licensure  
 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  
 Mechanical Engineering (B.S.M.E.)  
 Music  
 Music Business  
 Music Education (K-12 teacher licensure)  
 Music – Ethnomusicology  
 Philosophy  
 Physical Education (K-12 teacher licensure)  
 Physical Education Health Promotion (B.S.)

Physical Education Health Promotion – Science Emphasis (B.S.)  
 Physics  
 Physics (B.S.)  
 Political Science  
 Psychology  
 Psychology – Behavioral Neuroscience  
 Quantitative Methods and Computer Science  
 Russian  
 Russian, Central & East European Studies [ACTC]  
 Social Sciences  
 Social Work  
 Sociology  
 Spanish  
 Theater  
 Theology  
 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
- Secondary Education (taken in conjunction with a major from the previous list)

#### 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 Office of the Academic Dean.

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].

- Aerospace Studies
- American Cultural Studies
- Art History
- Biology
- Business Institutionstse – L 1 Tfcd nCuti 4a6 TD k02u802utu



Aquinas Scholars are also required to complete

Economics  
Electronic Music Production  
Engineering  
English  
English – Writing  
Environmental Studies  
Family Studies  
Film  
French  
Geography  
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  
Middle East 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]

#### 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.



## 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.

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

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

### Curricular Areas

#### Literature and Writing

(8 credits)

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

- a) students enroll in these two core courses:

ENGL 111 Critical Reading and Writing I:

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 course numbered at the 200- or 300-level, with the exception of ENGL 251, 252, 253, 300, 305, 321, 322, and 380.

#### 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 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 compo-

MATH 111	Calculus for Business and Social Science	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.
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

Faith and the Catholic Tradition  
(12 credits)

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

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

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

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

Students select three courses as follows:  
THEO 101 The Christian Theological Tradition  
THEO 200-level course  
THEO 300-level course

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

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

Students choose one of the following core-area courses:

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

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

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 151	Introduction to Art History I
ARTH 152	Introduction to Art History II
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
THR	111	Introduction to the Theater
THR	221	History of Theater I: Classical through 17th Century
THR	222	History of Theater II: 18th Century to Contemporary
THR	223	History of Theater III: American
THR	259	Film I: Introduction to Narrative and Non-Narrative World Cinema
THR	260	History of Film: The Silent Era
THR	261	History of Film: Sound Era, 1926 to Present Day
THR	297	Topics
THR	359	Film II: Film Theory and Criticism
THR	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 proficiency examination administered by the Department of Modern and Classical Languages. The student's previous work in the language will be considered. The Department of Modern and Classical Languages will make the final determination regarding the placement of students in foreign language courses.

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

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

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

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

Courses available to fulfill the requirement are:

ACST	200	Introduction to American Cultural Studies
ARTH	151	Introduction to Art History I

ARTH	152	Introduction to Art History II
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
COMM	230	Intercultural Communication
COMM	340	Rhetorical Dimensions of Race, Class, and Gender
ECON	345	Economics of Development and Growth
ECON	346	The Russian Economy and the Former Republics
ECON	346	The Japanese Economy
EDUC	212	Human Relations and Multicultural Education
ENGL	218	Literature by Women: Critical His- tory
ENGL	341	Literature by Women: Critical Questions
ENGL	395	Issues in Literature and Culture
GEOG	111	Human Geography
GEOG	113	World Geography
HIST	210	Modern Latin America, 1800 to Present
HIST	220	Introduction to Japanese History and Culture
HIST	340	Foundations of Chinese Civilization
HIST	341	The History of Modern China
HIST	345	Family and Women in Chinese History

ECON 311 Forecasting  
 ECON 315 Empirical Methods in Economics  
 ENGL 380 Issues in English Studies  
 ENGL 480 Literary Magazine Practicum  
 ENVR 151 Humans and the Environment  
 GEOG 221 Computer Skills in Geography  
 GEOG 222 Geographical Analysis  
 GEOG 321 Geographic Information Systems  
 GEOG 421 Advanced Geographic Information  
 Systems  
 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 3 Stacs MATH 303 eern\* [(PHYS)-944.4(112)-1111.2(Intr22673.9(TH)-574.5(303)-1111.2(eern\* [(PH

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 last 36 credits that a student takes for the degree must be taken through the University of St. Thomas. Credits earned at ACTC colleges and through 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. If a particular course carries more than four or fewer than four credits, it is so noted in the description.

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

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Class Schedule additional restrictions.

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

For 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 degree 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.

#### 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 is 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 on the automated MURPHY systems.

#### Audit

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

#### Changes in Registration

Changes in registration can be made on the automated MURPHY systems until the published deadlines for adding and/or dropping courses. After the published deadline, all changes are made by using the Change in Registration Form which is available at the Office of the University Registrar. 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 are described in the brochure Summary of Financial Procedures current academic year.

### 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 may 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 associated a grade point value.

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

Regular grades have the following characterization:

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

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

### S-D-R Grading

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

1. The S-D-R grading option is not available for courses taken to fulfill a requirement in the core curriculum.
2. No more than one-eighth of the credits taken through the undergraduate program may be taken on the S-D-R grading option.
3. A student must fill out a form at the Office of the University Registrar for any course to be taken on this basis. The exact deadline date is in the academic calendar for each term. If the course is part of the major or minor program (including allied requirements), the form must be signed by the department chair.
4. If a student receives a letter grade of C- or above, the mark of S (satisfactory) and credit will be given. If the grade of D, D+, or D- is received, the student has the option of: (1) accepting a mark of R with no effect on the GPA and no credit earned, or (2) earning the credit with the grade of D, D+, or D- 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. For Individual Study or Research courses, the mark of S is given for satisfactory work and the mark of R for unsatisfactory work. If a student wishes to be graded according to the regular system (A, B, C, D, F), this choice must be approved by the appropriate faculty supervisor and the department chair. In addition, this choice must be indicated on the form used to outline the individual study project.
3. Several other courses in various departments are routinely marked with S for satisfactory and R for unsatisfactory work. Examples of these courses are PHED 100 and ENGR 150. The grading system for these courses is indicated as part of the regular course description.
4. Courses which are routinely graded on the S-R system are not counted among the one-eighth of a student's courses for which the S-D-R grading system may be selected.

### Assignment and Removal of Incomplete

#### (I) Marks

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







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 Dean of the College of Arts and Sciences.

If a student's performance is judged not outstanding by the examination committee, the chair of the committee shall, with the concurrence of the

### Academic Counseling

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

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

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

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

### Faculty Advisers

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

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

### Academic Development Program

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

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

Participants in the program register for 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.





**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, ultimate frisbee and softball. 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, staff and alumni. 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 editors capture the school year's events in words and pictures. The yearbook is distributed at no cost to all full-time undergraduate students at the end of each year. Applications for Aquinas photographers and editors are made to the Center for Student Leadership and Activities.

**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](http://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 the curriculum handbook for Music Students available from the Department of 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 an improv comedy team, the OxyMorons. This team performs on the two campuses 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 Student Life Office**

The Dean of Student Life 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 Student Life 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

## Multicultural Student Services

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

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

## International Student Services

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 to academic, cultural, legal, and practical life at a US 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
- Monthly International Student Newsletter
- A Website with information on programs and services, immigration rules, activities and programs, and the newsletter:  
<http://department.stthomas.edu/oiss>
- Monthly International Tuesday Forums on international intercultural topics for U.S. and international students, staff and faculty
- Close cooperation with the Globally-Minded Student Association, with US and international members, which promotes interaction and interchange of ideas through social and cultural activities
- Cultural and educational programming
- Career and job-search workshops in cooperation with the UST Career Resource Center

## Housing

The University of St. Thomas has accommodations for approximately 1,880 students in its residence halls, apartments, and other university-owned housing.

The residence halls – Brady, Cretin, Dowling, Grace, Ireland, John Paul II, Murray – are managed by professional staff and undergraduate resident advisers. Apartments in Morrison Hall, 2171 and 2175 Grand Ave are also managed by the university Residence Life Office. St. John Vianney Hall is the

college seminary residence.

The residence halls have computer rooms, laundry rooms, study lounges, recreation rooms and a hall desk with some sports equipment, tools, vacuums and games available for student use. Koch Commons has a fitness center and a snack food outlet, the Pit Stop.

Upon admission to the undergraduate program, each student will receive an Application for On Campus Student Housing. Students desiring space in the residence halls must complete the application and return it to the Office of Admissions with a \$200 room deposit which is credited to the student's room and board charges during the first semester of residence. These applications are considered on the basis of date received.

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

For specific financial information, each student should refer to the Residence and Food Service Agreement and the Summary of Financial Procedures the current year. Both are available from the Office of Residence Life, Koch Commons. With the excep-

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, Freshens® smoothies, frozen yogurt, Pretzel Logic large fresh baked pretzels with various toppings, and snack items.

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

The Binz Cafe is located in the same building for those who wish to select refreshments, grill items and snacks.

Beaker's 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 grilled items, salad bar, soups and a variety of other food, snacks and beverage selections.

The Coffee Cart is located on the first floor next to the bookstore lounge area. It features Dunn Brothers coffee and espresso, pastries and snack items.

#### Student Health Service

An acute health care clinic, located in the lower level of Brady Residence Hall, is designed to competently meet students' individual clinical 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.

The service is available Monday through Friday 8:00 a.m. to 4:30 p.m. with extended hours until 6:30 p.m. on Tuesdays and Wednesdays. Appointments are encouraged, but walk-in consultations are available.

Most services of the center are provided free of charge. In cases of a serious illness, students will be transferred to one of the area hospitals where they will be treated with charges billed to their insurance company.

In conjunction with a national insurance company, the university offers a plan of health and medical insurance for students.

Submit your application for health insurance.



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

**The Luann Dummer Center for Women**

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

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

The center sponsors a number of grants to support students, faculty and staff. These include a scholarship for a Women's Studies major, research grants for undergraduate 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 hosts a number of guest lectures, teleconferences and student assemblies.

The auditorium in the John R. Roach Center (room 126) 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) is used for musical performances and community events. Musical concerts are also presented in the St. Thomas Aquinas Chapel.

The 3M Auditorium, located in the Owens Science Building, 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, squash courts, wrestling facility, a multi-purpose gymnasium and a fully-equipped training room. An aerobic-training fitness center is located in the Koch Commons.

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

A 400-seat baseball diamond 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 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, tradebooks, school and office supplies, computers and computer supplies, insignia clothing and gifts, candy, jewelry, tapes and CDs, cards, gifts and magazines.

The Minneapolis campus Bookstore, located in the 1000 LaSalle building, sells textbooks for classes taught on that campus. It also carries many of the same items mentioned above.

Call each store for hours of service.







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.



### Minor in Aerospace Studies

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

- 111 Foundations of the United States Air Force I (1 credit)
- 112 Foundations of the United States Air Force II (1 credit)
- 211 Evolution of USAF Air and Space Power I (1 credit)
- 212 Evolution of USAF Air and Space Power II (1 credit)

or

- 250 Five-Week Field Training\*  
\*Open only to students enrolled in Air Force ROTC

Plus:

- 321 Air Force Leadership Studies I
- 322 Air Force Leadership Studies II
- 421 National Security Affairs I
- 422 National Security Affairs II

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.

112 Foundations of the United States Air Force II 1 credit

Continuation of 111

Prerequisite: 111 or permission of instructor

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 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 dis-

322 Air Force Leadership and Management Studies II  
Continuation of 321.  
Prerequisite: 321 or permission of instructor

421 National Security Affairs I  
This course provides future Air Force officers with a background in the national security process, regional stud-

torical, literary, theological, and technological developments of a period. It also develops analT 9 0 0 9 121 7Islen

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.

211 Methods, Approaches, and Problems in Art History

An introduction to the methods and problems of art history, including the theoretical approaches to art and its history, the examination and analysis of the work and its medium, the role of the museum and gallery in the study of art, and bibliographic tools of the different disciplines of the field.

Prerequisite: 151 or 152 or permission of chair.

280 Sacred Architecture and Space

**310 Roman Art and Archaeology**

A survey of the art of the Roman Republic and Empire to the emperor Constantine in the early fourth century C.E. Issues include the use of art and architecture as an expression of imperial political programs, the creation of urban architecture and the everyday environment of the Romans, and Rome's relationship to Greece and the Near East. This course fulfills the Fine Arts requirement in the core curriculum.

**320 Art and Culture of Colonial Mexico**

In 1521, the Spaniard Hernando Cortés and his army conquered the Aztec city of Tenochtitlan and assumed control of a land that later came to be known as Mexico, initiating a period of transformation, innovation, and synthesis called the Colonial era (1524 to ca. 1810). The art and architecture created during this time reflects the processes of conflict, resistance, and adaptation that ensued as a result of the collision of two cultures. This course surveys the historical context in which the painting, sculpture, and architecture of Mexico were created, from the conquest to the rise of the independent Mexican nation. A knowledge of major works and monuments will be stressed; however, the emphasis of this course is placed on an understanding of the general concepts and issues that affected art and culture in the Colonial era. Both Spanish and pre-Columbian art and culture will be investigated in order to understand the unique context and characteristics of the visual culture of Mexico during this formative period. This course fulfills the Fine Arts and Human Diversity requirements in the core curriculum.

**330 Churches and Mosques in the First Millennium**

This course examines the formation and development of the first Christian and Islamic art and architecture during the first millennium C.E. of Europe and the Mediterranean. The class will examine the development of religious structures for these new religions, the role of visual images in both religious and secular contexts, and the influences that these cultures exerted on each other. Areas to be covered include: the Early Christian period; the Germanic, Celtic, Anglo-Saxon, Scandinavian cultures of the sixth to eighth centuries; the Carolingian and Ottonian periods; Byzantine art and architecture; Islamic art and architecture. This course fulfills the Fine Arts requirement in the core curriculum.

**335 Cathedrals, Monasteries, and Caliphates**

A survey of the arts in Europe during the Romanesque and Gothic periods, c. 1000-1400. Emphasis will also be given to contemporaneous currents in Byzantine and Islamic art and their influence on the art of the West. This course fulfills the Fine Arts requirement in the core curriculum.

**340 Southern Renaissance Art and Society**

A survey of the art and architecture of Italy, Spain and Portugal from the fourteenth through the sixteenth centuries. The course will focus on issues of style, patronage and iconography. This course fulfills the Fine Arts requirement in the core curriculum.

**342 Renaissance and Reformation in Northern Europe**

A survey of the art and architecture of northern Europe from the fourteenth through the sixteenth centuries. This course will examine the impact of the Protestant Reformation on the art of this era, and examine issues of style, patronage and iconography.

**345 Baroque and Rococo Art**

A survey of the art and architecture of western Europe in the seventeenth and eighteenth centuries. Emphasis will be given to issues of iconography, patronage, and style. This course fulfills the Fine Arts requirement in the core curriculum.

**347 Golden Age of Spain**

The sixteenth and seventeenth centuries were an age of great triumph for the kingdom of Spain. For a brief but glorious era, the Spanish empire was the most powerful force in the western world. Suffused in gold and riches from its colonies in the New World, Spanish culture prospered and flourished. It was during this intoxicating "Golden Age" that Spain's greatest artistic masterpieces were produced. This course explores the historical development of Spanish painting, sculpture, and architecture, focusing on the social, political, and religious issues that affected artistic production. Particular emphasis is placed on the key figures in the history of Spanish art: El Greco, Zubarán, Ribera, Velázquez, Murillo, Martínez Montañés, 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.

**350 Nineteenth Century: Neoclassicism to Symbolism**

A survey of the art of the nineteenth century in Europe, beginning with the study of the Neoclassical movement. The course will examine issues of patronage as well as stylistic and thematic aspects of and economic, political and sociological influences on the successive movements of Romanticism, Realism, Impressionism, Symbolism and Post-Impressionism. This course fulfills the Fine Arts requirement in the core curriculum.

**355 Twentieth Century: Cubism to Installation**

Twentieth Century art will examine the stylistic, thematic and iconographic aspects of the modern movements in Europe, beginning with Fauvism and other manifestations of European Expressionism, Cubism, Orphism, Futurism, De Stijl, Dada, Surrealism, Art Informal and Tachisme, Optical and Pop Art, Photo-Realism, Conceptual Art, and Neo-Expressionism. This course fulfills the Fine Arts requirement in the core curriculum.

391 Native American Art

An examination of the art of the Native Americans from the prehistoric period to the present within the context of distinct geographical regions: Woodlands, Plains, Plateau, Northwest, and Arctic. This course fulfills the Fine Arts and Human Diversity requirements of the core curriculum.

392 American Art

A survey of the painting, sculpture and household objects in the United States from the colonial period to the present time. Relationships to European and indigenous movements will be traced. This course fulfills the Fine Arts requirement in the core curriculum.

450 Modern Scandinavian Art History

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 addition, 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

475, 476 Experiential Learning

2 credits

477, 478 Experiential Learning

These courses allow students to gain credit for certain non-classroom experiences. (These do not include studio art courses.) Normally open to junior and senior students. Permission of the department chair is required. Credit for experience is normally sought prior to its occurrence. See the complete description of these courses at the beginning of the "Curricula" section of this catalog.

Prerequisite: previous course or courses in art history

480 Senior Presentation and Paper

0 credit

During the senior year or earlier, art history majors are expected to write a major research paper with an abstract and to describe the results of their research in a short oral presentation. The purpose of this paper and presentation is to allow the student to demonstrate competency in art historical methodology and to gain some experience from presenting the results to a group of peers.

Normally, this requirement is done in lieu of the regular paper assignment for one of the upper-level courses. The topic should be chosen in consultation with the instructor of the course by the end of the second week of the semester and should be completed no later than six weeks prior to graduation. In addition, students will present a short oral report on their research to a departmental symposium to be held prior to graduation. Registration for 480 should be made during the semester that the student anticipates writing the paper. A mark of pass or fail will be assigned upon completion.

483, 484 Seminar

2 credits

485, 486 Seminar

See the description of these courses at the beginning of the "Curricula" section of this catalog.

487, 488 Topics

2 credits

489, 490 Topics

The subject matter of these courses, announced in the ~~Class Schedule~~ <sup>Class Schedule</sup>, vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

491, 492 Research

2 credits





recognizing student research, and encouraging students to consider vocations in the field of biology. 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 Office of Academic Counseling. See Pre-Professional Programs in this catalog for coursework suggestions, internships, and other information.

#### Major in Biology

- 201 Diversity and Adaptation
- 202 Genetics and Population biology
- 204 Cellular and Molecular Biology
- 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:

- 210 Introduction to Laboratory Research (2 credits)
- 211 Introduction to Field Research (2 credits)
- 298 Topics
- 302 Animal Diversity
- 315 Biology of Plants
- 330 Animal Behavior
- 333 Ecology
- 349 Comparative Anatomy and Physiology I
- 350 Comparative Anatomy and Physiology II
- 353 Microscopic Anatomy
- 354 Neurobiology
- 356 Microbiology
- 360 Genetics
- 371 Cell Biology

E. See Pre-Professional Programs in this catalog for coursework suggestions, internships, and other information.

2

Allied requirements

CHEM 111 General Chemistry I

CHEM 112 General Chemistry II

CHEM 201 Organic Chemistry I

Plus one of:

MATH 303 Statistics for the Applied Sciences

QMCS 220 Statistics I

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

MATH 109 Calculus with Review II or MATH 113 Calculus I

PHYS 109 General Physics I or PHYS 111 Introduction to Classical Physics I

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

Major in Biochemistry (B.S.)

See College of Arts and Sciences Interdisciplinary Programs

Teacher Licensure





**354 Neurobiology**

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 204; completion or concurrent enrollment in CHEM 202, or permission of instructor

**356 Microbiology**

An in-depth study of the biology of microorganisms directed at gaining an understanding of the mechanisms that underlie the functions of bacteria and viruses. The importance of microorganisms as they relate to human disease, industry and the environment will be explored through lectures, readings from the literature and discussions. Laboratory includes an independent research project done in collaboration with the professor and peers. Four laboratory hours per week.

Prerequisite: A minimum grade of C- in 204; completion of or concurrent registration in CHEM 202

**360 Genetics**

Detailed consideration of specific topics in transmission, molecular, and population genetics. Eukaryotic and prokaryotic systems discussed. Genetic reasoning and analysis will be emphasized. Three laboratory hours per week.

Prerequisite: A minimum grade of C- in 204; CHEM 202

**371 Cell Biology**

An advanced investigation of topics in cell structure and the regulation of cellular activities, including signal transduction, protein transport, cell-cycle regulation, and cellular movement, emphasizing molecular mechanisms, current concepts and their experimental basis. Includes significant use of the primary literature. Four laboratory hours per week.

Prerequisites: A minimum grade of C- in 204; CHEM 202

**391, 392 Research****2 credits**

Original laboratory, field, library or other analytical investigation under the direction of a member of the biology faculty, culminating in either a written research paper or an oral presentation. Upper-class standing not required.

Prerequisite: 201

**415 Plant Physiology and Adaptations to Stress**

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 204; any 300-level BIOL course

**430 Behavioral Ecology**

The influence of natural selection on behavior in relation to ecological conditions. Emphasis is on integration of theoretical and experimental methods. Includes critical reading of papers from the primary literature and completion of a significant independent research project. Four laboratory hours per week.

Prerequisite: A minimum grade of C- in 330 or 333; QMCS 220 or MATH 303 strongly recommended

**434 Field Biology**

Principles of ecology applied to the study of plant and animal communities. Use of recent primary literature to learn and evaluate field techniques, data collection and data analyses. The laboratory includes a class research project as well as a significant individual research project. Four laboratory hours per week.

Prerequisite: A minimum grade of C- in 330 or 333; QMCS 220 or MATH 303 strongly recommended

**435 Aquatic Biology**

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 330 or 333; QMCS 220 or MATH 303 strongly recommended

462 Molecular Biology

An investigation of current concepts in molecular biology including gene expression and its regulation, the organization of genetic information, recombinant DNA techniques, oncogenes and genetic engineering. The laboratory consists of a collaborative research project. Four laboratory hours per week.

Prerequisite: A minimum grade of C- in 360 or 371

463 Immunology

A study of the mammalian immune system emphasizing the genetic and cellular basis of the immune response. Basic immunological concepts will be used to explore the mechanisms of transplantation rejection, autoimmunity, AIDS and other topics of interest. Laboratory will consist of an independent research project done in collaboration with the professor and peers. Four laboratory hours per week.

Prerequisite: A minimum grade of C- in 360 or 371

465 Developmental Biology

Examines current concepts of the mechanisms underlying developmental change and their experimental basis. Considers both genetic and environmental controls and their investigation in animal embryogenesis, metamorphosis, and cell-culture systems. Laboratory work comprises an experimental investigation and a written report that draws substantially from the primary literature. Four laboratory hours per week.

Prerequisite: A minimum grade of C- in 360 or 371, or permission of the instructor

471 Evolution

An advanced exploration of the major concepts in modern evolutionary biology, including adaptation and natural selection, evolutionary genetics and microevolution, paleontology and macroevolution, and molecular evolution. Three laboratory/recitation hours per week.

Prerequisites: A minimum grade of C- in 204; any 300-level BIOL course

475, 476 Experiential Learning

2 credits

477, 478 Experiential Learning

See the description of these courses at the beginning of the "Curricula" section of this catalog.

483, 484 Seminar

2 credits

485, 486 Seminar

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 ~~Class Schedule~~ <sup>Class Schedule</sup>. 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

487, 488 Topics

2 credits

489, 490 Topics

The subject matter of these courses, announced in the ~~Class Schedule~~ <sup>Class Schedule</sup>, 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. 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

491, 492 Research

2 credits

Same as for 493 and 494, except that written research paper is not a formal research paper.

493, 494 Research

Original laboratory, field, library, or other analytical investigation under the direction of a member of the faculty, culminating in the writing of a formal 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

495, 496 Individual Study

2 credits

497, 498 Individual Study

These courses provide a means for obtaining credit on a tutorial basis for courses not otherwise available at US 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

## Catholic Studies (CATH)

Thompson (chair), Joncas, Jordan, A. Kennedy, R. Kennedy, Reichardt, Ruddy; Lemmons (PHIL), Menssen (PHIL), Naughton (THEO), Sullivan (PHIL), Wojda (THEO)

The Department of Catholic Studies is designed to allow students to encounter the broad and diverse expressions of Catholic culture. While grounded in Catholic philosophy and theology, the 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 the Church's dynamic interaction with and interpenetration of cultures, traditions, and intellectual life throughout history. By examining the role the church has played in various cultures, students are challenged to take seriously Catholicism's transforming power in every aspect of intellectual, spiritual, and social life.

Faculty 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 32 credits: 20 credits in core courses and 12 credits in electives (eight elective credits for double majors). The minor consists of 16 credits: 12 credits in core courses and four elective credits. Many courses are cross-listed with another department. Students majoring or minoring in other disciplines are invited to take an occasional course in the program at any time.

## Major in Catholic Studies

- 240 Faith and Doubt
- 301 The Catholic Vision
- 312 Catholic Social Thought
- 334 Literature from a Christian Perspective
- 397 Topics

## Plus:

Twelve credits in electives chosen from three of the following four categories:

- CATH 222 The Catholic Literary Tradition: Medieval to Modern
- THEO 310 Christian Worship

An historically-based course from the Catholic Studies curriculum or a course approved by the chair  
An aesthetics course from the Catholic Studies curriculum or a course approved by the chair

## Minor in Catholic Studies

- 240 Faith and Doubt
- 301 The Catholic Vision
- 334 Literature from a Christian Perspective

## Plus:

Four credits chosen from the following five categories:

- CATH 222 The Catholic Literary Tradition: Medieval to Modern
- CATH 312 Catholic Social Thought
- THEO 310 Christian Worship

An historically-based course from the Catholic Studies curriculum or a course approved by the chair  
An aesthetics course from the Catholic Studies curriculum or a course approved by the chair

## 222 The Catholic Literary Tradition: Medieval to Modern (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

## 234 Love, Sex and Friendship (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





era to see how Christians have lived their faith under different circumstances. Theological topics explored include evangelization, Christology, sin, martyrdom, poverty, the Church, and the Eucharist. Students also study and critique specifically Latin American methods and approaches to the theological task itself. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: THEO 101

### 327 Theology of the Catholic Worker Movement (THEO 327)

Two Catholic laypeople, Dorothy Day and Peter Maurin, founded a movement in the 1930s aimed at applying traditional Christian thought to a profound political and cultural critique of modern American society. Still flourishing today, the Catholic Worker movement provides hospitality to the poor and a prophetic critique of the prevailing social order, based on a vision of all people as members of the mystical Body of Christ. This course examines the theoretical and practical implications of this movement, emphasizing its development of a theological politics and economics out of the traditional sources of Catholic theology; the Gospels, the Church Fathers, the saints, the liturgy, and papal social teaching. The course also examines criticisms of the movement from both within and without the Church. The course will include a field trip to a Catholic Worker community.

Prerequisite: THEO 101

### 334 Literature from a Christian Perspective (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

### 356 Music and the Bible (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



Major in Chemistry (B.S.) (ACS-certified)

- 111 General Chemistry I
- 112 General Chemistry II
- 201 Organic Chemistry I
- 202 Organic Chemistry II
- 300 Quantitative Analysis
- 320 Instrumental Analysis
- 331 Chemical Thermodynamics and Reaction Dynamics
- 332 Quantum Chemistry and Molecular Spectroscopy
- 340 Organic Spectroscopy (2 credits)
- 400 Advanced Inorganic Chemistry
- 440 Biochemistry I
- 481-484 Student Seminar Sequence (2 credits)
- 491 Research (2 credits) (or a summer research project sponsored by the department)

Plus four credits from:

- 250 Organometallic Chemistry (2 credits)
- 295 Topics (2-credit course offered in J-term)
- 420 Bioanalytical and Forensic Chemistry (2 credits)
- 430 Advanced Organic Chemistry (2 credits)
- 442 Biochemistry II\*
- 488 Topics (2-credit course offered in J-term)
- 494 Research

\*required for a B.S. in Chemistry with a biochemistry concentration, plus a research project in biochemistry

Allied requirements

- MATH 113 Calculus I (or equivalent)
- MATH 114 Calculus II

- 420 Bioanalytical and Forensic Chemistry (2 credits)
- 430 Advanced Organic Chemistry (2 credits)
- 440 Biochemistry I
- 442 Biochemistry II
- 491 Research (2 credits)\*\*
- 492 Research (2 credits)\*\*
- 493 Research\*\*
- 494 Research\*\*

\*Students should note that 332 is a prerequisite.

\*\*Many options are available to students interested in pursuing research. A full unit of research may be taken in one semester as 493 (a second full unit would be 494). A full unit also could be taken in two separate semesters as 491 followed by 492. It is even possible for a student to take one half-course of research through two one-quarter courses (391 followed by 392).

#### Allied requirements

MATH 113-114 Calculus I and II\*

PHYS 111-112 Introductory Physics I-II

\*Students not placing into MATH 113 must take MATH 108, 109 and 114 in order to satisfy the overall calculus requirement.

Note Math and physics requirements are as specified above plus MATH 200 and/or 201 are highly recommended. The ACS also requires familiarity with computer programming; although many chemistry courses make use of computers, the interested student is well-advised to take an additional course in quantitative methods and computer science.

#### Teacher Licensure

Elementary Education with a Co-major in Science and Mathematics for Elementary Education

stratosphere, the Greenhouse Effect and global warming, acid rain, smog, waste disposal, water pollution and the study of energy resources, both renewable and non-renewable. Lectures and laboratory. This course satisfies the lab science requirement in the core curriculum for non-majors.

#### 111 General Chemistry I (100)

This course and its sequence 112 provide a two-semester introduction to chemistry. Topics include atomic structure, molecular structure, chemical bonding, the periodic table, states of matter, reactions (types, energy changes, equilibrium and rates), properties of the common elements and their ions in aqueous solution, electrochemistry and nuclear chemistry. Lecture plus four laboratory hours per week.

Prerequisite: Math placement at 108 or above

#### 112 General Chemistry II

This course continues the study of chemistry begun in 111. See 111 for topics. Lecture plus four laboratory hours per week.

Prerequisite: A minimum grade of C- in 111

#### 201 Organic Chemistry I

Study of the various families of organic compounds. Emphasis is placed on structure determination, reaction mechanisms, stereochemistry and spectroscopy in addition to a survey of various reaction types. An introduction to biochemical topics is included. Lecture plus four laboratory hours per week.

Prerequisite: A minimum grade of C- in 112

#### 202 Organic Chemistry II

Continuation of 201.

Prerequisite: A minimum grade of C- in 201

#### 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 mechanism, and the role of organometallics in biochemistry and material science.

Prerequisite: 201

#### 295, 296 Topics

2 credits

#### 297, 298 Topics

The subject matter of these courses, announced in the ~~Class Schedule~~ <sup>Class Schedule</sup>, vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

#### 300 Quantitative Analysis

An introduction to quantitative chemical analysis. Topics include sample treatment, the statistical handling of data, equilibria governing acid/base relationships, complexation and redox reactions and the fundamentals underlying titrimetry, spectrophotometry, luminescence and potentiometric methods of analysis. Lecture plus four laboratory hours per week. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: A minimum grade of C- in 112/300

332 Quantum Chemistry and Molecular Spectroscopy

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.

Prerequisites: 202, MATH 114 and PHYS 112

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

es and write a short paper based on literature research. In 483, seniors meet in small groups with faculty and discuss articles from the chemical literature. In 484, seniors research a topic from the chemical literature and present it in both written and oral formats. Information about career opportunities for students holding a chemistry degree is presented throughout the seminar sequence. Required of all chemistry majors.

487, 488 Topics 2 credits

489, 490 Topics

The subject matter of these courses, announced in the ~~Class Schedule~~, vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

491, 492 Research

2 credits

493, 494 Research

See the description of these courses at the beginning of the "Curricula" section of this catalog.

495, 496 Individual Study

2 credits

497, 498 Individual Study

See the description of these courses at the beginning of the "Curricula" section of this catalog.

### Communication (COMM)

Endres (chair), Armada, Bruess, Cook, Friedline, Petersen, K. Sauter, Scully

The Department of Communication fosters in students an understanding of the nature of human communication by examining the processes by which people create, send, receive and are affected by 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 at St. Thomas.

### Communication Honor Society

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

The society recognizes communication majors who have demonstrated a commitment to the discipline. To be eligible, students must have completed 60 semester hours, 16 of those in communication; have an overall 3.00 GPA, with a 3.25 GPA within the major; and be a full-time student in good standing.

### Major in Communication

100 Public Speaking

120 Communication Theories and Methods

140 Rhetorical Criticism

160 Electronic Media Production

Note: Two of the above four courses must be completed before taking additional courses within the major.

480 Capstone Course in Communication

Note: Thirty-two credits in the major must be completed prior to enrolling in 480. With 28 credits completed, one concurrent registration is allowed.

### Plus two of:

Note: at least 8 of the 16 elective credits listed below must be at the 300- or 400-level

220 Small Group Communication

222 Interpersonal Communication

240 Persuasion

250 Argumentation and Advocacy

260 Audio Production

264 Electronic Media and Society

270 Videography: Television Production in the Field

320 Organizational Communication

322 Intercultural Communication



- 330 Investigating Communication
- 340 Rhetoric of Race, Class, and Gender
- 350 Modern American Rhetoric
- 360 Television Criticism
- 370 Advanced Video Production
- 440 Classical Rhetoric

Plus:

Eight additional credits which may be in courses from the list above, or any other departmental offering, including 215, 217, 315, 325, 365, 425, 455, 465, individual study, internships, or topics courses. (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 School of Education Department of Teacher Education

Minor in Communication

Three of:

- 100 Public Speaking
- 120 Communication Theories and Methods
- 140 Rhetorical Criticism
- 160 Electronic Media Production

Plus:

Eight additional credits in courses at the 200-level or higher, but not including 480.

#### 100 Public Speaking

Preparation, presentation, and evaluation of original speeches by each student throughout the semester; special emphasis given to selecting and researching topics, organizing evidence, analyzing audiences, sharpening style and tone, communicating ethically and listening critically.

#### 105 Communication in the Workplace

Introduction to basic communication theories and skills as they pertain to the business setting. Text, lecture, class discussion and exercises, and individual and group presentations will better prepare students to become more effective communicators at work. The course will focus on presentational skills, dyadic communication and interviewing, and group communication. This class is not open to Communication majors or minors.

#### 120 Communication Theories and Methods

This course will focus on the differing methods used by communication scholars to ask and answer questions about the nature of human interaction. Emphasis will be on the process of symbolic message exchange as it intersects all communication contexts. Various approaches to conceptualizing and measuring communication acts will be addressed in topic areas such as: perceptions and attributions; creating shared meaning; linguistic and non-verbal message systems; persuasive and ethical dimensions of communication; and the nature of inquiry. While lecture oriented, the class also may participate in discussions, experiential exercises, and group projects.

#### 140 Rhetorical Criticism

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.

#### 160 Electronic Media Production

Students will learn the process of producing electronically mediated messages in the studio and in the field. Students produce projects designed to develop their skills in the planning and execution of a variety of media genres. Students will operate studio and field equipment, act as talent, and do final editing of individual and team-produced work. Analysis and criticism of student produced programs is integral to the course.

#### 215 Oral Interpretation (THR 204)

Sense and sound of literature; analysis of selected works and projection of their meaning to an audience. Includes public performance and attention to Reader's Theater.

Prerequisite: 100 or sophomore standing

#### 217 Survey of Communication Disorders

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: 100 or sophomore standing

#### 220 Small Group Communication

This course covers the theory and principles of communication in task-oriented small groups, including role emergence and functions, leadership development, stages of decision-making, and development and effects of group culture. Students apply theory through participation in small group class projects.

Prerequisite: 120 or sophomore standing

#### 222 Interpersonal Communication

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: 120 or sophomore standing

#### 240 Persuasion

Study of the various strategies used to influence choice in modern society, including sources, content (such as evidence and argumentation) and audience factors (such as beliefs, attitudes, and values) which influence the persuasive process. Current research about attitude change is examined. Students apply theory through analysis of contemporary discourse and preparation of original projects.

Prerequisite: 140 or sophomore standing

#### 250 Argumentation and Advocacy

This course provides an introduction to practical reasoning in public controversy. Students will apply argumentation theories and methods to the analysis of public controversy and the development of their own oral advocacy skills. Topics include: Tests of evidence, invention, reasoning, oral presentation or arguments. Activities may include: Lecture, discussion, examinations, analysis papers, speaking assignments, small group discussion and presentation.

Prerequisite: 140 or sophomore standing

#### 260 Audio Production

An introduction to radio production. Students produce projects designed to acquaint them with the genres, styles and production techniques of audio in various media, with particular attention to the radio industry. Pre-pro-

**320 Organizational Communication**

This course will examine organizational structures and the dynamics of the communication process. Major components of this class include the analysis of organizational communication including culture, socialization, roles, leadership, formal and informal communication structures, and issues of cultural diversity. Students will be involved in activities such as applying theories, examining case studies, and analyzing communication in real-life organizations.

Prerequisite: 120 or junior standing

**322 Intercultural Communication**

Study of the influence of cultural values on social behavior; examination of theories of intercultural communication; emphasis on effective intercultural interaction. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 120 or sophomore standing

**325 Nonverbal Communication**

Exploration of the types, purposes and significance of nonverbal behavior in human communication. Topics include use of voice, face, eyes, gestures, posture, physical appearance, use of space, architecture, decor, and time. Emphasis on the application of nonverbal concepts to relational, workplace, and cultural contexts.

Prerequisite: 120 or junior standing

**330 Investigating Communication**

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: 120 or junior standing

**340 Rhetoric of Race, Class, and Gender**

Study of research and theories about the correlation between gender, race, class, and rhetorical practice, including the influence of historical and contemporary gender stereotypes and roles on rhetorical practice. Topics include the influence of gender stereotypes and roles on: credibility, legitimization, authority, "voice" in U.S. culture, and verbal and nonverbal behavior. Students are encouraged to analyze and evaluate their own rhetorical style in light of issues of race, class, and gender. This course fulfills a requirement in American Cultural Studies, Justice and Peace Studies, Women's Studies, and the Human Diversity requirement in the core curriculum.

Prerequisite: 140, junior standing, or permission of instructor

**350 Modern American Rhetoric**

This course focuses on the creation and use of rhetoric in public persuasion settings, including social movements and political campaigns. The diversity of rhetorical acts examined may include campaign ads, speeches, films, advertisements and nonverbal strategies. Topics of study include: The process by which rhetorical acts are created, ethical issues surrounding the creation and use of rhetorical acts, using rhetorical theory to inform rhetorical practice, and conducting rhetorical criticism to illuminate, analyze, interpret and evaluate a diversity of rhetorical acts.

Prerequisite: 140 or junior standing

**360 Television Criticism**

This course will provide students with the opportunity to understand television as a text situation in a cultural context. It will examine television from a critical perspective, review a wide variety of program genres and incorporate several theoretical orientations to the qualitative analysis of TV. Students, along with reading about and discussion of critical perspectives, watch programs such as comedies, dramas, news, advertisements, miniseries etc., and write several critical analyses of the programs.

Prerequisite: 160 or junior standing

**365 The Documentary in American Television**

A critical examination of the presence and prominence of the documentary as made for TV, from infancy of networks through the documentary renaissance of the 1970s and 1980s. This course will discuss and analyze the content, structure, style and journalistic integrity of video documentaries as well as the technological innovations which gave birth to an array of provocative, independent video documentaries. Emphasis on in-class viewing, critical discussion and guest lectures.

Prerequisite: 160 or junior standing



## Economics (ECON)

Langan (chair), Alexander, Blumenthal, Combs, Fairchild, Gray, Hartmann, Kim, Marcott, Papagapitos, Riley, Saavedra, Vincent, Walsh, Wilson

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

Major in Economics (B.S.)  
251 Principles of Macroeconomics  
252 Principles of Microeconomics

Plus:

MATH 114 Calculus II

MATH 200 Multi-Variable Calculus

MATH 210 Linear Algebra and Differential Equations

Note MATH 333 Applied Statistical Methods may be substituted for ECON 315

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 School of Education Department of Teacher Education

Minor in Economics

251 Principles of Macroeconomics

252 Principles of Microeconomics

Plus one of:

351 Macroeconomic Theory

352 Microeconomic Theory

Plus:

Twelve credits in elective economics courses numbered 300 and above.

101 The American Economy (251)

The organization and functioning of the American economy; the course is designed to provide general education in economics for the average citizen. Each semester, topics of current interest will be analyzed using the tools and viewpoint of economic theory and policies. Designed for non-economics and non-business students.

211 Current Economic Issues

Poverty, health care, tax reform, international trade, crime, income inequality, inflation, and business mergers are some of the contemporary topics that raise interesting questions for public policy and economic analysis. This course will focus on a series of these macroeconomic and microeconomic topics. The goal is to develop economic concepts and analytical tools within a context of direct application to economic issues. Consideration of equity or fairness will be included in discussions of public policy. Student preferences will be considered in selecting many of the issues. Not open to students who have completed 251 or 252. This course fulfills the Social Analysis requirement in the core curriculum.

251 Principles of Macroeconomics (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.

252 Principles of Microeconomics

An introduction to microeconomics: theory of household (consumer) behavior, theory of the firm, market structures, market failures, economic efficiency, factor markets, and income distribution. Students who enroll in this course are expected to be able to use high-school algebra. This course fulfills the Social Analysis requirement in the core curriculum.

295, 296 Topics

2 credits

297, 298 Topics

The subject matter of these courses, announced in the [Class Schedule](#), will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

301 History of Economic Thought

A survey of the content and method of economics and an analysis of the theories of the great economists from the ancient Greeks to the present; mercantilism, physiocracy, the classical school and its critics, particularly Marx; the marginalist school; Alfred Marshall and Keynes, recent developments in economic thought.

Prerequisites: 251 and 252

311 Forecasting

An introduction to techniques used in forecasting with emphasis on analyzing economic and business data. The emphasis is on time-series data, although cross-sectional analysis is also covered. Techniques presented include variants of moving averages, variants of exponential smoothing, regression and ARIMA processes. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisites: 251, 252 and QMCS 220

**315 Empirical Methods in Economics**

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: 251 and 252, QMCS 220 or MATH 303

**321 Law and Economics**

The relationship between legal and economic aspects of selected issues: property rights, liability laws, product safety legislation, discrimination, crime control, and related topics.

Prerequisites: 251, 252 or permission of instructor

**326 Industry Studies**

This course provides an analysis of a particular industry or sector of the U.S. economy. Among the topics included in the analysis will be: identification and description of the industry in question, past and present performance of the industry, the importance of the industry within the national and global economy, the level of competition present in the industry, and the role of government in this industry. Among the anticipated course offerings are Agricultural Economics, Economics of the Arts, Economics of Sports, Economics of Health Care, and Transportation Economics.

Prerequisites: 251 and 252

**332 Industrial Organization**

Relationship between market structure, behavior and performance of business enterprises; government intervention and regulation; antitrust and other public-policy issues.

Prerequisites: 251 and 252

**333 Regional and Urban Economics**

Principles underlying the location of economic activity; land-use patterns; transfer cost; location and structure of urban areas; growth of cities and regions; urban and regional problems and policies.

Prerequisite: 252

**335 Money, Financial Markets, and the Economy**

The nature, evolution, and functions of money; the role of depository financial institutions; structure of financial markets; principles of central banking; monetary theory and monetary policy; introduction to international banking and finance.

Prerequisites: 251 and 252

**337 Economics of the Public Sector**

This course examines the role of government in a modern economy. It develops a set of concepts that will allow students to evaluate policy alternatives. The following are among the particular topics likely to be addressed: externalities and environmental protection, education, the redistribution of income, health care, social insurance, taxation and tax reform, cost-benefit analysis, fiscal federalism, and state and local government finance. In each case, the focus is on whether intervention by government is appropriate, what the most effective form of any such intervention is, and how alternative policy interventions affect the private decisions made by citizens and business firms.

Prerequisite: 252

**339 Labor Economics**

Labor supply and demand; determinants of the wage structure; education and training decisions; the role of labor unions; mobility and migration, discrimination; public policies in labor markets.

Prerequisite: 252

**345 Economics of Development and Growth**

Nature and measures of economic growth and development; theories of growth; developed and less-developed nations; economic planning; selection and financing of projects for economic growth and human development; environment, resources, and limits to growth. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisites: 251, 252

**346 Country and Area Studies in Economics**

An analysis of the economic system(s) of a particular country or region of the world. Among the topics included in the analysis will be: functioning of key sectors of the system; the role of 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 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: 251 and 252



348 International Economics

Analysis of trade between nations and regions of the world; trade and trade policy; economic integration; foreign-exchange markets; global financial system and world payments; cross-border movement of resources; economic interdependency of nations and regions; the economic system in a global framework.

Prerequisites: 251 and 252

349 Comparative Economic Systems

Analysis of the tools used to evaluate alternative economic systems; study of the structure and performance of *laissez faire*, centralized planning, democratic socialism and market socialism; historical evolution of economic systems; consideration of efficiency, growth, and social welfare; case studies: United States., CIS, China, the new market economies of Central Europe, others.

Prerequisites: 251 and 252

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

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

487, 488 Topics 2 credits  
489, 490 Topics

The subject matter of these courses, announced in the ~~Class Schedule~~, vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

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

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

### Engineering (ENGR)

Bennett (chair), George, Greene, Hennessey, Jalkio, Zimmerman; Abraham, Cottles, Jaedike, Sparrow  
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
- A dual degree program in mechanical engineering and business
- A pre-engineering program
- A minor 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 a practical, values-based learning experience that produces well-rounded, entrepreneurial 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 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 outcome 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.

- 431 Design of Embedded Systems
- 480 Engineering Design Clinic I
- 481 Engineering Design Clinic II

Plus one of:

- ENGR 220 Engineering Mechanics I
- ENGR 361 Engineering Materials
- ENGR 381 Thermodynamics
- PHYS 226 Introduction to Modern Physics II
- QMCS 281 Object-Oriented Design and Programming

Allied Requirements

- MATH 113 Calculus I
- MATH 114 Calculus II
- MATH 200 Multi-Variable Calculus
- MATH 210 Linear Algebra and Differential Equations
- MATH 303 Statistics for the Applied Sciences
- PHYS 111 Introduction to Classical Physics I
- PHYS 112 Introduction to Classical Physics II
- PHYS 225 Introduction to Modern Physics I
- PHYS 341 Electricity and Magnetism
- QMCS 230 Software Design Using the JAVA Language

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.

Students must have completed ENGR 171 and 220 to be admitted to the major.

- 150 Introduction to Engineering (0 credit)
- 151 Introduction to Engineering Design (1 credit)
- 171 Engineering Graphics
- 220 Engineering Mechanics I
- 221 Engineering Mechanics II
- 320 Machine Design and Synthesis
- 350 Introduction to Electronics
- 361 Engineering Materials
- 371 Manufacturing Processes
- 381 Thermodynamics
- 382 Heat Transfer and Fluid Flow
- 410 Control Systems and Automation
- 480 Engineering Design Clinic I
- 481 Engineering Design Clinic II

Plus eight credits from the following:

- 225 Kinematics and Mechanism Design (2 credits)
- 351 Engineering Graphics TD [(225)-snstruomputnic8 9eSystems Laboratcien(351)-1833.80017G ed 71 cjj\$13.80017G 43017G ed -hApplications of Thermodynamics
- 44017G ed -h71 cjjSwith Plastics

### 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.

150	Introduction to Engineering (0 credit)
151	Introduction to Engineering Design (1 credit)
171	Engineering Graphics
220	Engineering Mechanics I
221	Engineering Mechanics II
320	Machine Design and Synthesis
350	Electrical Engineering Principles
361	Engineering Materials
371	Manufacturing Processes
381	Thermodynamics
382	Heat Transfer and Fluid Flow
410	Control Systems and Automation
480	Engineering Design Clinic I
481	Engineering Design Clinic II

Plus:

eight credits of ENGR electives

Plus:

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

Plus one of:

BLAW	301	Legal Environment of Business
BLAW	303	International Business Law

Allied requirements

CHEM	111	General Chemistry
COMM	105	Communications in the Workplace
ECON	251	Principles of Macroeconomics
ECON	252	Principles of Microeconomics
MATH	113	Calculus I
MATH	114	Calculus II
MATH	200	Multi-Variable Calculus
MATH	210	Linear Algebra and Differential Equations
MATH	303	Statistics for the Applied Sciences
PHYS	111	Introduction to Classical Physics I
PHYS	112	Introduction to Classical Physics II
QMCS	230	Software Design Using the JAVA Language

Pre-Engineering

See Affiliated Programs

Minor in Engineering

The engineering minor is designed for students with majors in the sciences, mathematics, 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.

150	Introduction to Engineering (0 credit)
151	Introduction to Engineering Design (1 credit)
171	Engineering Graphics
371	Manufacturing Processes

Plus eight credits from the following:

- 220 Engineering Mechanics I
- 221 Engineering Mechanics II
- 300 Manufacturing Management Systems
- 320 Machine Design and Synthesis
- 350 Introduction to Electronics
- 361 Engineering Materials
- 381 Thermodynamics
- 382 Heat Transfer and Fluid Flow
- 410 Control Systems and Automation

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. Offered in fall semester.

urement, incentive plans, managing for quality, statistical quality control, manufacturing cost concepts and engineering economics. Offered in fall semester.

Prerequisite: MATH 303 or permission of instructor

### 320 Machine Design and Synthesis

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, basis 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: 221 and MATH 210

### 330 Design with Microprocessors I

Introduction to computer architecture and assembly language programming. Topics include I/O and memory addressing modes, communication and bus protocols, A/D and D/A conversion, interrupts and common micro-controller peripherals. Tradeoffs between architectures and design approaches will be discussed.

Prerequisite: 230

### 331 Design with Microprocessors II

A continuation of 330.

Prerequisite: 330

### 340 Signals and Systems

Topics include Laplace, Fourier, and Z transforms, understanding of frequency domain characteristics, state space concepts, and modulation.

Prerequisite: 240

### 342 Electromagnetic Fields and Waves

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

### 345 Electronics I

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: 240 and PHYS 225

### 346 Electronics II

Continuation of 345.

Prerequisite: 345

### 350 Introduction to Electronics

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

### 351 Electronic Instrumentation and Control Laboratory

Provides an understanding of the fundamentals of electrical engineering. The course covers principles and applications of transducers, instrumentation systems, amplifiers and signal conditioners, impedance matching, frequency, time response and elementary feedback systems.

Prerequisite: 350

### 361 Engineering Materials

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. Offered in fall semester.

Prerequisites: 221, CHEM 111 and PHYS 111

### 371 Manufacturing Processes

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. Offered in spring semester.

Prerequisite: 361

### 381 Thermodynamics

A study of thermal and mechanical energy and their applications to technology. First law of thermodynamics (energy conservation); second law of thermodynamics (restrictions on energy transformations). Thermophysical properties of substances. Power producing devices and heat pumping devices. Humidity, dew point and other characteristics of non-reacting mixtures. Reacting mixtures (combustion of fuels).

Prerequisites: PHYS 112 and MATH 114

### 382 Heat Transfer and Fluid Flow

Modes of heat transfer: convection, conduction, and radiation. Coupling of convective heat transfer with fluid flow. Fundamentals of fluid flow: statics, boundary layers, pipe flows, pressure drop, and friction factor. Convective heat transfer at external surfaces and internal surfaces. Fluid-to-fluid heat exchangers and their design. Conduction in solids of various shapes; use of heat-conducting fins to improve the performance of heat exchangers. Radiation heat transfer between surfaces.

Prerequisite: 381

### 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. Offered in J-term.

Prerequisite: 382

### 410 Control Systems and Automation

An introduction to the scope of control systems in manufacturing and their implementation. The course focuses on analog and binary control loop theory, the use of transforms (Laplace and Z) to describe and solve analog control systems, and the use of Boolean algebra to describe and solve binary control systems. Simulation is emphasized as an important tool for plant design, layout and optimizing manufacturing methods.

Prerequisites: 350, MATH 210 and QMCS 230

### 420 Rapid Product Realization

Provides a basic understanding of computer-aided design and manufacturing (CAD/CAM) systems in modern manufacturing operations. Topics covered include solid modeling, computer simulation, and implementation of CAD/CAM systems.

Prerequisites: 171 and junior standing

### 430 Applications of Thermodynamics

Introduction to principle industrial applications of thermodynamics. The course will cover theory of operation and design considerations of these systems as well as examples of thermodynamic engineering design. Topics include heating, ventilation, and air conditioning systems (HVAC), engines, and turbomachinery.

Prerequisite: 382

### 431 Design of Embedded Systems

transducers; controllers; motors and actuators; microprocessor fundamentals and programming; data acquisition and feedback control.

Prerequisite: 410

475, 476 Experiential Learning

2 credits

477, 478 Experiential Learning

See the description of these courses at the beginning of the "Curricula" section of this catalog.

480 Engineering Design Clinic I

Serves as the first capstone course. Student design teams, under the direction of a faculty coordinator, will develop engineering solutions to practical, open-ended design projects conceived to demonstrate the value of prior basic science and engineering courses. Ethical, social, economic and safety issues in engineering practice will be considered as well.

Prerequisites: 320, 371, 382, 410 and MATH 303

481 Engineering Design Clinic II

The final capstone course for the application of previously learned engineering principles to the solution of real problems in an actual industrial setting. Student design teams will work under the direction of faculty advisers and industry liaisons. Opportunity will be provided for 4p



thoughtfully upon the writing process that works best for them. They will demonstrate broad knowledge of American and British literature.

All students majoring in English must take a minimum of sixteen credits in English courses at the 200-level or above at St. Thomas.

All students minoring in English must take a minimum of eight credits in English courses at the 200-level or above at St. Thomas.

The department offers courses for non-majors to fulfill the Literature and Writing component of the core curriculum, and the Human Diversity requirement.

#### English Honor Society

The national English honor society, formed a chapter at St. Thomas in 1988. The honor society brings together students and faculty with a love of literature, language and writing; it sponsors a variety of scholarships, holds regional and national conventions, and provides a forum for both creative and critical writing. Students who have a grade point average of at least 3.0 in English courses, rank at least in the highest 35 percent of their class in general scholarship, and who have completed at least three semesters of college are eligible to apply for membership.

#### Major in English

111 Critical Reading and Writing I: Fiction and Nonfiction Prose

112 Critical Reading and Writing II: Drama and Poetry

Note Qualified students may substitute 190 Critical Reading and Writing: Major Genres plus an additional upper-level course for 111 and 112

380 Issues in English Studies

Plus thirty-two credits beyond the 100-level:

minimum of 12 credits at 200-level

minimum of 16 credits at 300- and 400-level

minimum of 4 credits at 400-level

The following areas must be represented in these 32 credits (one course may satisfy more than one requirement)

4 credits in early literature

211, 214, 220, 221, 360, 361, 362, 364, 370, 371, and section 11 of 325, 390, 395

4 credits in American literature

214, 215, 370, 371, 372, 373, and section 21 of 217, 324, 325, 337, 341, 390, 395

4 credits in British literature

211, 212, 360, 361, 362, 364, 365, 366, 367, and section 31 of 324, 325, 341, 390, 395

4 credits in diversity literature

217, 218, 337, 341, and section 61 of 325, 390, 395

4 credits in writing

251, 252, 253, 300, 321, 322, 401, 402, 403

#### Major in English with Writing Emphasis

111 Critical Reading and Writing I: Fiction and Nonfiction Prose

112 Critical Reading and Writing II: Drama and Poetry

Note Qualified students may substitute 190 Critical Reading and Writing: Major Genres plus an additional upper-level course for 111 and 112

380 Issues in English Studies

Plus thirty-two credits beyond the 100-level:

minimum of 12 credits at 200-level

minimum of 16 credits at 300- and 400-level

minimum of 4 credits at 400-level

The following areas must be represented in these 32 credits (one course may satisfy more than one requirement)

4 credits in early literature

211, 214, 220, 221, 360, 361, 362, 364, 370, 371, and section 11 of 325, 390, 395

4 credits in American literature

214, 215, 370, 371, 372, 373, and section 21 of 217, 324, 325, 337, 341, 390, 395

4 credits in British literature

211, 212, 360, 361, 362, 364, 365, 366, 367, and section 31 of 324, 325, 341, 390, 395

4 credits in diversity literature

217, 218, 337, 341, and section 61 of 325, 390, 395

16 credits in writing

251, 252, 253, 300, 321, 322, 401, 402, 403, 480

#### 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 School of Education Department of Teacher Education

## Literary Studies

See College of Arts and Sciences Interdisciplinary Programs

## Minor in English

111 Critical Reading and Writing I: Fiction and Nonfiction Prose

112 Critical Reading and Writing II: Drama and Poetry

Note Qualified students may substitute 190 Critical Reading and Writing: Major Genres plus an additional upper-level course for 111 and 112

## Plus:

Eight credits at the 200-level

Eight credits at the 300-level

## 110 Intensive Writing

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.

## 111 Critical Reading and Writing I: Fiction and Nonfiction Prose

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.

## 112 Critical Reading and Writing II: Drama and Poetry

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: 111 or permission of department chair

## 190 Critical Reading and Writing: Major Genres

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, plus an additional upper-level course, fulfills the Literature and Writing requirement in the core curriculum. Offered only in fall semester.

## 205 Literature in Perspective

This course, whose subject will change from year to year, will reflect particular interests in a given theme, genre, author, or period. Subjects will be announced in the annual Class Schedule and will not duplicate existing courses. The course is designed for 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: 111 and 112 or 190

## 211 British Authors I

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: 111 and 112 or 190

## 212 British Authors II

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: 111 and 112 or 190

214 American Authors I

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: 111 and 112 or 190

215 American Authors II

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: 111 and 112 or 190

217 Multicultural Literature

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: 111 and 112 or 190

218 Literature by Women: Critical History

This course will focus on the history of literature by women. It will concentrate on the traditions in Britain and

295, 296 Topics

2 credits

297, 298 Topics

The subject matter of these courses, announced in the Class Schedule, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

Prerequisites: 111 and 112 or 190

300 Theory and Practice of Writing

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: 111 and 112 or 190; advanced writing skills

305 Linguistics: English Language

The study of the historical, structural, and semantic features of the English language; systems of English grammar.

Prerequisites: 111 and 112 or 190

321 Writing Poetry

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, readings to broaden possibilities of form and subject, and individual instruction. Open to students with some previous experience in writing poetry.

Prerequisite: 253 or permission of instructor.

322 Writing Fiction

This intermediate course 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: 253 or permission of instructor.

324 Genre Studies

This course will examine genre as an ordering principle in the study of literature. The particular genres to be studied will vary from year to year, namely, prose fiction, nonfiction prose, drama, and poetry. Credit may be earned more than once under this number for different emphases.

Prerequisites: 111 and 112 or 190

325 Special Studies in Genre, Region, or Theme

This course will offer an intensive (s56 TD 0.0795 TIT oist9-uh a) s56 TD 0rGsThis intermediate course explore

360 Chaucer and the Medieval Period

This course offers an intensive focus on the literature and culture of the medieval period. Such authors as the poet, medieval dramatists, and Malory will provide a context for reading Chaucer's *Canterbury Tales*. Critical approaches and issues will also be studied.

Prerequisites: 111 and 112 or 190

361 Shakespeare and the Early Modern Period

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: 111 and 112 or 190

362 Milton and Seventeenth-Century British Literature

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 *Lost Paradise*. Critical approaches and issues will also be studied.

Prerequisites: 111 and 112 or 190

364 Eighteenth-Century British Literature: The Age of Satire and the Novel

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: 111 and 112 or 190

365 The Romantic Age in Britain

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: 111 and 112 or 190

366 The Victorian Age in Britain

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: 111 and 112 or 190

367 Twentieth-Century British Literature

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: 111 and 112 or 190

370 Colonial and Early-American Literature

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: 111 and 112 or 190

371 Nineteenth-Century American Literature

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: 111 and 112 or 190

372 Modern American Literature

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: 111 and 112 or 190

373 Contemporary American Literature

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: 111 and 112 or 190

380 Issues in English Studies



Plus four credits in a regional course:

240 Geography of East and Southeast Asia

340 Geography of the U.S. and Canada

384 Field Study in Geography

Plus:

Eight elective geography credits

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 School of Education Department of Teacher Education

Minor in Geography

Eight credits in core courses

Eight credits in methods courses

Eight elective geography credits

111 Human Geography

This course explores the effects of social, economic, environmental, political, and demographic change from a



### 321 Geographic Information Systems

A sequel to 221, the theme of this course is how to perform data analysis using vector-based geographic information systems. Specific topics include spatial database operations, buffers, map overlay and address matching. The course illustrates the principles of Geographic Information Systems using workstation ArcInfo and a variety of real-world applications from demography to environmental studies. This course fulfills the second-level

## Geology (GEOL)

Lamb (chair), Hickson

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 offers 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

111 Introductory Physical Geology

or one of:

110 Geology of the National Parks

113 The Earth's Record of Climate

114 The Science of Natural Disasters

115 Environmental Geology

## Plus:

211 Mineralogy

260 Regional Geology and Field Methods

320 Sedimentology and Stratigraphy

340 Fundamentals of the Lithosphere I (Petrology)

360 Fundamentals of the Lithosphere II (Structural Geology)

430 Advanced Earth History

## Plus three of:

130 Earth History

252 Earth Surface Processes and Geomorphology

410 Hydrogeology

460 Advanced Field Methods

494 Research

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

or

MATH 108 and 109 Calculus with Review I and II

## Plus one of the following sequences:

CHEM 111 and 112 General Chemistry I and II

PHYS 111 and 112 Introduction to Classical Physics I and II

CHEM 111 General Chemistry I and PHYS 111 Introduction to Classical Physics I

For students wishing to pursue careers in paleontology, geobiology, or geomicrobiology:

BIOL 201 Diversity and Adaptation and 202 Genetics and Population

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

## 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 School of Education Department of Teacher Education.

Minor in Geology  
111 Introductory Physical Geology  
or one of:

130 Earth History

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.

211 Mineralogy

A systematic approach to mineral study involving crystallography, analysis of physical and chemical properties, mineral formation, and methods of identification and classification. The course includes fieldwork in northern Minnesota and an emphasis on understanding the development of local minerals in the context of the geologic history of Minnesota. Lecture and three laboratory hours per week.

Prerequisite: one of 102, 110, 111, 113, 114 or 115

252 Earth Surface Processes and Geomorphology

This course emphasizes the physical processes that are responsible for shaping the Earth's surface. The quality

410 Hydrogeology

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 110, 111, 113, 114 or 115; 360 recommended

421 Geophysics

Fundamental principles of geophysical methods commonly used for subsurface exploration, including: gravity, magnetic, seismic and electrical measurements. Emphasis on field procedures and interpretation techniques used for geologic investigations. Lecture and three laboratory hours per week.

Prerequisite: 360

430 Advanced Earth History

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: 360 or concurrent registration with 360

460 Advanced Field Geology

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: 260 and permission of the instructor

475, 476 Experiential Learning

2 credits

477, 478 Experiential Learning

See the description of these courses at the beginning of the “Curricula” section of this catalog.

483, 484 Seminar

2 credits

485, 486 Seminar

See the description of these courses at the beginning of the “Curricula” section of this catalog.

487, 488 Topics

2 credits

489, 490 Topics

The subject matter of these courses, announced in the ~~Class Schedule~~ <sup>Class Schedule</sup>, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the “Curricula” section of this catalog.

491, 492 Research

2 credits

493, 494 Research

See the description of these courses at the beginning of the “Curricula” section of this catalog.

495, 496 Individual Study

2 credits

497, 498 Individual Study

See the description of these courses at the beginning of the “Curricula” section of this catalog.

Health and Human Performance

Parsley (chair), Carey, Derry, Duoos, Grochowski; Flood, Hodgson, Mathre, Ofstead, Oliphant, Roney, Skrypek, Stenzel, Sweeney, Tallman, Tschida

The Department of 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

PHED 421 Athletic Training Techniques (2 credits)  
 PHED 426 Biomechanics  
 PHED 430 Measurement and Evaluation (2 credits)  
 PHED 431 Exercise Physiology (2 credits)  
 PHED 432 Advanced Exercise Physiology  
 PHED 433 Exercise in Special Populations (2 credits)  
 PHED 449 Health Promotion Seminar (2 credits)

Plus one of:

PHED 450 Health Promotion Internship I  
 PHED 451 Health Promotion Internship II extended (6 credits)

Allied requirements

BIOL 101 General Biology  
 BUS 201 Ethics and Practice: Foundations of Business  
 CHEM 100 Chemistry in our World  
 COMM 105 Communication in the Workplace  
 MKTG 300 Principles of Marketing

Plus one of:

ENGL 251 Writing in the Academy  
 ENGL 252 Written Nonfiction Prose

Note: Eighty-four credits are required outside the areas of PHED and HLTH.

Major in Physical Education Health Promotion ... Science Emphasis (B.S.)

This program is designed for students interested in applying to a masters of physical therapy (MPT) program. The University of St. Thomas has a cooperative program with the College of St. Catherine in that the College of St. Catherine holds four places per year for qualified UST students. Completion of this degree also enables students to apply to other MPT schools throughout the country. Students not accepted into a MPT program will be deemed and prepared to work in the field of Health Promotion.

HLTH 345 Nutrition for Health and Fitness  
 HLTH 350 Personal Health and Wellness  
 PHED 113 Introduction to Health Promotion (2 credits)  
 PHED 250 Emergency Care  
 PHED 420 Kinesiology  
 PHED 421 Athletic Training Techniques (2 credits)  
 PHED 426 Biomechanics  
 PHED 430 Measurement and Evaluation (2 credits)  
 PHED 431 Exercise Physiology (2 credits)  
 PHED 432 Advanced Exercise Physiology  
 PHED 433 Exercise in Special Populations (2 credits)  
 PHED 449 Health Promotion Seminar (2 credits)

Plus one of:

PHED 450 Health Promotion Internship I  
 PHED 451 Health Promotion Internship II extended (6 credits)

Allied requirements

BIOL 201 Diversity and Adaptation  
 BIOL 101 Kinesiology  
 PHED 449 Health Promotion Seminar (2 credits)  
 PHED 450 Health Promotion Internship I  
 PHED 451 Health Promotion Internship II extended (6 credits)  
 Plus one of:

## Application Procedure for St. Catherine's MPT 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
HLTH	350	Personal Health and Wellness
HLTH	353	Consumer, Community and Environmental Health
HLTH	375	Lifelong Stress Management (2 credits)
HLTH	400	Epidemiology
HLTH	440	Health Education: Curriculum, Assessments, and Administration
HLTH	450	Health Education: Methods, Resources, and Partnerships
HLTH	462	Human Sexuality Education
HLTH	464	Critical Issues in Health Education

## Allied Requirements

BIOL	101	General Biology
PHED	410	Anatomy and Physiology

## Plus one of:

PSY	111	General Psychology
SOC	100	Introduction to Sociology

## Plus one of:

CHEM	100	Chemistry in Our World
CHEM	101	Environmental Chemistry

## Plus one of:

COMM	100	Public Speaking
COMM	105	Communication in the Work Place

## Plus:

American Red Cross Instructor Certifications: First Aid, CPR, HIV/AIDS

## Minor in Community Health Education

HLTH	350	Personal Health and Wellness
HLTH	353	Consumer, Community and Environmental Health
HLTH	441	Community Health Education: Curriculum, Assessments, and Administration
HLTH	451	Community Health Education: Methods, Resources, and Partnerships
HLTH	470	Health Internship I

## Plus one of:

HLTH	345	Nutrition
HLTH	462	Human Sexuality

## Physical Education Courses (PHED)

100 Foundations for Fitness 0 credit

This course seeks to improve the student's knowledge and understanding of the role of physical activity and how it contributes to one's lifelong health and wellness; and to develop personal fitness that will enable the student to effectively integrate physical activity into her or his lifestyle. The course includes lecture and discussion sessions, a battery of physical assessments, and a selection of higher-intensity fitness activities (e.g. aerobic dance, strength training, circuit training and jogging). Students choose from among the various physical-fitness activity offerings with guidance from the physical education staff. The course emphasizes discussion topics such as stress, nutrition, components of fitness, and drug and alcohol abuse.

The primary purpose of this course is to provide the student with the knowledge, skills, and techniques necessary to become a physically educated person; that is, a person who is able to design and maintain a lifestyle of fitness and wellness. Implied is the philosophy that students will learn to perform physical skills that contribute to personal participation in social and recreational activities – not the skills learned in competitive sports. St. Thomas graduates should not only be able to communicate the components of health-related fitness and wellness, but have the ability to assess, design, implement and maintain their personal fitness and wellness program. Ultimately, St. Thomas graduates will become advocates for the benefits of a healthy and active lifestyle. This course fulfills the Health and Fitness requirement in the core curriculum.



104 Physical Education Curriculum, Instructions, and Assessment (K-12)

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, teaching 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.

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.

204 Physical Education Methods for Elementary Level

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.

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.

206 Principles of Aerobic Training

2 credits

This course provides an overview of the principles of aerobic conditioning and the various methods used to train diverse populations, i.e., children, adults, elderly, athletes, and non-athletes. Students will be provided with the opportunity to gain practical, hands-on experience in assessing, designing, implementing and evaluating cardiovascular training programs for a variety of clients.

215 Rhythms and Dance

2 credits

This course is designed to introduce future elementary and secondary physical education teachers to rhythms and dance education. Students will participate in and learn how to instruct rhythm activities, folk dance, square dance, creative dance, aerobic dance, and popular dance.

250 Emergency Care

#### 405 Physical Education Methods for Teaching Aquatics/First Aid

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 precourse 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-

- 451 Health Promotion Internship II extended 6 credits  
The health promotion intern will obtain practical experience at the clinical, exercise corporate health promotion, or community health promotion level. The internship will be under the supervision of an experienced exercise fitness specialist. Students will assist in the marketing and management of health promotion programs including the administration of a variety of assessments as prescribed by the exercise fitness specialist. Individual research project(s) will be assigned. A minimum of 400 hours of clinical experience will be required in at least one or more of the following areas: 1) clinical exercise and fitness; 2) corporate health promotion; 3) health promotion and education. Grading will be on an S/R basis.  
Prerequisites: Current CPR and first aid cards and permission of the instructor (6 months prior to registration)
- 475, 476 Experiential Learning 2 credits  
477, 478 Experiential Learning  
See the description of these courses at the beginning of the "Curricula" section of this catalog.
- 483, 484 Seminar 2 credits  
485, 486 Seminar  
See the description of these courses at the beginning of the "Curricula" section of this catalog.
- 487, 488 Topics 2 credits  
489, 490 Topics  
The subject matter of these courses, announced in the ~~Class Schedule~~ <sup>Class Schedule</sup>, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.
- 491, 492 Research 2 credits  
493, 494 Research  
See the description of these courses at the beginning of the "Curricula" section of this catalog.
- 495, 496 Individual Study 2 credits  
497, 498 Individual Study  
See the description of these courses at the beginning of the "Curricula" section of this catalog.

## Health Courses (HLTH)

- 345 Nutrition for Health and Fitness  
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.
- 350 Personal Health and Wellness  
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.
- 353 Consumer, Community and Environmental Health  
Health education as it relates to the consumer, the community, and the environment. Units of study include: consumerism, quackery, control and prevention of infectious and non-infectious diseases, community health services and resources, and current environmental issues.  
Prerequisite: Sophomore standing
- 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.
- 400 Epidemiology  
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 status 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: One BIOL course
- 440 Health Education: 5-12 Curriculum, Assessment and Administration  
Learners will explore effective strategies for development and evaluation of 5-12 health education curriculum with emphasis on comprehensive school health education concepts. This exploration will include growth and developmental concerns, innovative learning theories, client-centered and proactive learning, dynamic partner-

ships 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. This course fulfills the second-level Computer Competency requirement in the core curriculum.

#### 441 Community Health Education: Curriculum, Assessment and Administration

Learners will explore effective strategies for development and evaluation of Community Health Education curriculum with emphasis on comprehensive health education concepts. This exploration will include growth and developmental concerns, innovative learning theories, client-centered and proactive learning, and dynamic partnerships with clients, work sites, and communities (including medical, business, and health agencies). There is an emphasis on interactive and interdisciplinary learning paradigms, global networking, appreciation for diversity, and current mind-body approaches to health care. There will be opportunities for learners to actively engage in review and development of authentic assessment strategies with emphasis on knowledge over information. Learners will also evaluate health delivery programs in the field and demonstrate effective in-service strategies and networking. Included in this course are opportunities to explore and assess various resources from medical insurance, health agency, business and private organizations that could effectively be used in community health settings. Within this course, learners will engage in virtual administration and leadership approaches in the enhancement of total quality community health education programs. Off-campus observations and presenting of health issues in community settings are required. This course fulfills the second-level Computer Competency requirement in the core curriculum.

#### 450 Health Education: 5-12 Methods, Resources and Partnerships

Learners will identify, practice, and demonstrate effective methods of facilitating 5-12 health education. Off-campus observations and teaching of health lessons in elementary, middle and secondary school settings are included in the requirements. An off-campus tutorial experience with elementary or middle school aged learners is required. Learners will also explore and assess various educational resources from medical, insurance, health agency, business and private organizations that effectively could be used with 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 organizations that effectively could be used with 5-12 learners in the development of total quality community health education programs.

, practice information.

471 Health Internship II extended	6 credits
The community health education intern will obtain health education experience at a medical clinic, community center, or public health center. The internship is under the supervision of an experienced health education specialist and the course professor. Interns will engage in the development and delivery of health education programs. Each intern will complete an individual research project relevant to the clinic or center's clientele. The intern will complete a minimum of 400 internship hours.	
Prerequisite: Permission of instructor	
475, 476 Experiential Learning	2 credits
477, 478 Experiential Learning	
See the description of these courses at the beginning of the "Curricula" section of this catalog.	
483, 484 Seminar	2 credits
485, 486 Seminar	
See the description of these courses at the beginning of the "Curricula" section of this catalog.	
487, 488 Topics	2 credits
489, 490 Topics	
The subject matter of these courses, announced in the <del>Class Schedule</del> <sup>Class Schedule</sup> , vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.	
491, 492 Research	2 credits
493, 494 Research	
See the description of these courses at the beginning of the "Curricula" section of this catalog.	
495, 496 Individual Study	2 credits
497, 498 Individual Study	
See the description of these courses at the beginning of the "Curricula" section of this catalog.	

#### History (HIST)

Wright (chair), Chrislock, Delehanty, Fitzharris, Howe, Hwa, Klejment, Mega; Schruck, 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 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

One of:

- 111 Origins of the Modern World to 1550
- 112 The History of the Modern World since 1550

Plus one of:

- 113 Early America in Global Perspective
- 114 The Modern U.S. in Global Perspective

(no more than one additional 100-level course may be applied to major)

Plus one thematic course from:

- 326 English Law and Government Before the American Revolution
- 345 Family and Women in Chinese History
- 360 Early American Thought and Culture
- 361 American Thought and Culture Since the Civil War
- 363 Business in American Life
- 365 U.S. Constitutional History
- 366 The Catholic Church in the United States
- 368 Women in the United States



311 The Dawn of a New Era: Europe from 1215 to 1450

Medieval Christendom in the 13th century: papacy; mendicant orders; universities; heresy; Inquisition. Growth of secular culture. The western monarchies. Political and economic crises of the 14th century. Ecclesiastical crises of the late middle ages. Recovery and renaissance in the 15th century. Europe's medieval expansion.

312 Early Modern Europe: 1450-1750

Europe from the 15th century to the 18th century studied with particular reference to the background, development and results of religious reformations.

313 Europe 1750 to 1945

An examination of the 18th century legacies of competition for empire, the Enlightenment, and the French and Industrial Revolutions with emphasis on the emerging ideologies of the 19th century including nationalism. A study of imperialism leads to the origins and outbreak of World War I. Major themes of the 20th century include the Russian Revolution and the Soviet State, the rise of Fascism, politics of the inter-war period, and the origins,



### 345 Family and Women in Chinese History

This course examines Chinese family and women prior to the early twentieth century. It studies the nature of the traditional Chinese family, the role of different women in the Confucian patriarchal family and how Confucian values affect their lives. Topics include Confucian ritual text concerning family and women; Confucian female educational text; women's marriage, life and work in the family; famous women in Chinese history; constraints on women's body and mind such as footbinding, widow chastity and concubinage; the social environment and women's own perceptions of themselves. The course is both topically and chronologically arranged to reflect changing perceptions and practices. This course fulfills the Human Diversity requirement in the core curriculum.

### 347 The Modernization of Taiwan, Hong Kong, and China

This course examines the unconventional patterns of economic modernization and political transformation of the Greater China Zone – Taiwan, Hong Kong and China. It studies Taiwan's transformation from a poor and embattled island in 1949 to a prosperous and democratic state. It traces Hong Kong's growth from a colonial port to a "special entity" within China, and it studies China's paradoxical development of both market economy and Socialism. It also examines the intricate political and economic relationships among Taiwan, Hong Kong and China, the issue of Taiwan independence or its unification with China and the concern over stability and balance

368 Women in the United States

An overview of the changing social, cultural and political roles of women from the 17th century to the present. Topics include: family economy, industrialization of home and workplace, servitude and slavery, voluntary associations, women's rights, the development of women's professions, and an evaluation of various approaches to equalizing opportunity for women. This course fulfills the Human Diversity requirement in the core curriculum.

369 African-American History

A survey of the African-American experience from the beginnings of the trans-Atlantic slave trade to the present. Topics will include: African backgrounds and the origins of the slave trade; the history and development of slavery in the U.S.; the failure of post-Civil War Reconstruction and the rise of Jim Crow; the civil rights movement of the 1950s and 1960s; and contemporary issues in race relations and civil rights. Particular emphasis will be placed upon African-American contributions to American history and culture. This course fulfills the Human Diversity requirement in the core curriculum.

371 History of U.S. Foreign Policy

Historical analysis of principles and conduct of U.S. foreign policy; emergence of the United States as a world power; isolationism; interventionism; development of the cold war. Emphasis may vary from year to year.

372 The United States and Vietnam

The causes, events, personalities and consequences of U.S. involvement in the controversial Vietnam War. Background on Vietnamese culture, nationalism, colonial status under French and Japanese rule, and development of two distinct governments and societies. Role of culture, politics and military strategy in defining the U.S. commitment in Vietnam. Issues of controversy and role of media and public opinion in policy formulation. Historical models used in explaining the nature of the war. The aftermath of the war. Extensive use of documentary films and printed primary sources. This course fulfills the Human Diversity requirement in the core curriculum.

376 Minnesota History

Minnesota from the French explorations of the 17th century to the present, with an examination of political, social and economic development and with intensive research in selected topics of local history.

377 The History of the Twin Cities

This course explores the development of the Twin Cities metropolitan region from pre-European contact to the present. Emphasis is on the impact that increasing urbanization of the seven-county region has had on those who have lived, worked and played here.

382 Careers in History



Major in Journalism and Mass Communication

All journalism and mass communication majors must take these four courses:

- 100 Mass Communication and Society
- 105 Visual Communication
- 110 Media Writing and Information Gathering
- 480 Media Ethics

Plus:

One of the concentrations below

Concentration in Advertising

- 240 Advertising Principles
- 445 Advertising Campaign Strategies

Plus one of the following concentrations:

Creative

- 340 Advertising Copywriting

Plus two of:

- 220 Design Concepts of Communication
- 225 Writing and Designing for the Web
- 420 Graphic Design Studio
- 440 Advanced Advertising Copywriting

Account Services

Three of:

- 300 Mass Communication Research
- 340 Advertising Copywriting
- 345 Media Planning

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.

- 300 Mass Communication Research
- 305 Gender, Race and Mass Media
- 402 Society, Culture and the Media
- 404 Media Structure and Power

Plus one of:

- 301 Journalism History
- 302 Literary Journalism
- 304 Media Law

Minor in Print Journalism

- 100 Mass Communication and Society
- 110 Media Writing and Information Gathering
- 210 Reporting for Print Media
- 211 Editing
- 410 Advanced Reporting

Minor in Broadcast Journalism

- COMM 160 Electronic Media Production
- JOUR 100 Contemporary Mass Communication
- JOUR 110 Media Writing and Information Gathering
- JOUR 260 Broadcast Reporting
- JOUR 460 Advanced Broadcast Reporting

Minor in Public Relations

- 100 Mass Communication and Society
- 110 Media Writing and Information Gathering
- 250 Public Relations Principles
- 350 Public Relations Writing
- 450 Advanced Public Relations

Minor in Advertising

- 100 Mass Communication and Society
- 110 Media Writing and Information Gathering
- 240 Advertising Principles

Plus one of:

- 220 Design Concepts of Communication
- 340 Advertising Copywriting
- 345 Media Planning

Plus one of:

- 420 Graphic Design Studio
- 440 Advanced Advertising Copywriting
- 445 Advertising Campaign Strategies

Minor in Visual Communication  
 100 Mass Communication and Society  
 105 Visual Communication

Plus two of:  
 220 Design Concepts of Communication  
 225 Writing and Designing for the Web  
 230 Photojournalism

Plus one of:  
 330 Advanced Photojournalism  
 420 Graphic Design Studio

Minor in Media Studies  
 100 Mass Communication and Society  
 300 Mass Communication Research  
 402 Society, Culture and the Media  
 404 Media Structure and Power

Plus one of:  
 301 Journalism History  
 302 Literary Journalism  
 304 Media Law  
 305 Gender, Race and Mass Media  
 480 Media Ethics

**100 Mass Communication and Society**

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.

**105 Visual Communication**

Introduction to the history, theory and principles of communicating visually through art, illustration, photography, design, typography, film, video and other visual forms.

**110 Media Writing and Information Gathering**

Basic techniques for gathering information and presenting it in writing for the various mass media. Strategies for gathering and assessing information, including use of databases, public documents, libraries and interviews. Writing news and feature articles, news releases, and newsletter, broadcast and ad copy.

Prerequisite: 100

**210 Reporting for Print Media**

This course concentrates on print media reporting, emphasizing interviewing, sources and honing news judgment. Development of observational skills, story organization and clear writing. Students write complex news stories, and spot news and develop several major writing projects, including magazine articles.

Prerequisite: 110

**211 Editing**

Preparation of copy for publication; evaluation of news; headline writing; news display, including typography; picture editing; and editing magazines.

Prerequisite: 110

**215 Journalistic Writing in the Workplace**

The course focuses on the fundamentals of gathering and writing information through observation, interviews and research. The emphasis is on clear, concise and straightforward writing of news releases, reports, letters, office memoranda and other kinds of writing in a business setting. In addition, the course includes rewriting and editing of the student's own and others' work and preparation of copy for publication. For non-majors only.

**220 Design Concepts of Communication**

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: 105 or ARTH 350 or ARTH 355 or permission of department chair

**225 Writing and Designing for the Web**

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: 105 or ARTH 350 or 355

230 Photojournalism

An entry-level course on still photography as used in the mass media. Imparts mechanical skills to practice photography, creates an awareness of the aesthetics involved and introduces principles of communicating via photojournalism. Students supply own camera. Lecture and laboratory.

Prerequisite: 105 or permission of department chair

240 Advertising Principles

An attitudinal approach to the principles and practices of advertising in today's society. Correlation between advertising and sales, marketing, economics and research. Newspaper, magazines, radio, television and graphics as advertising channels.

Prerequisite: 100 or permission of instructor

250 Public Relations Principles

Public Relations in the modern world of communication, marketing, business and institutions. A case history approach to public relations as a career and how public relations fits into the total picture of communication.

Prerequisite: 100 or permission of instructor

260 Broadcast Reporting

The nature and execution of broadcast news, including the preparation and writing of news and features for broadcast, with special emphasis on writing and reporting for television.

Prerequisite: 110

295, 296 Topics

2 credits

297, 298 Topics

The subject matter of these courses, announced in the Class Schedule, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

300 Mass Communication Research

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: 110 or permission of instructor

301 Journalism History

European background of the American press system; development of American journalism; historical relationship of the news media to political, social and economic trends; the news media as a cultural institution; rise of the broadcast media.

Prerequisite: Juniors and seniors only

302 Literary Journalism

A look at journalistic writing style as a literary prose form, with emphasis upon late 19th- and 20th-century American writing, and upon the tradition of literary journalism. Newspaper and magazine articles from both centuries and book-length works from the past 50 years will be read and discussed. Students will have the option of writing a research essay or a literary journalistic article for the final project.

Prerequisite: Juniors and seniors only

303 Newsroom Management

Examines the general economic realities of the media business, investigates the nature of relationships within the newsroom, explores priorities and goal-setting in the newsroom, reviews techniques and methods of managing and encouraging employees. The course also identifies the moral and legal dilemmas and guiding principles of newsroom managers.

Prerequisite: Seniors only or permission of department chair

304 Media Law

Freedom and responsibility of the news media viewed as public institutions; constitutional and legal developments with emphasis upon landmark court decisions; interpretation of current areas of tension.

Prerequisite: Juniors and seniors only

305 Gender, Race and Mass Media

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: 100 or permission of instructor

**311 Persuasion in Writing**

Effective writing based upon principles of rhetoric. Student writing directed to the execution of editorials, advertising copy and promotion.

Prerequisites: Juniors and seniors only; 110 or permission of instructor

**316 Environmental Reporting**

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: 110 or permission of instructor

**330 Advanced Photojournalism**

A realistic journalistic application of color and black and white 35 mm photography. Emphasis on original conceptualization and timely execution in the following subject areas: news, sports, feature, fashion and commercial illustrations using print and/or multi-media presentations.

Prerequisite: 230

**340 Advertising Copywriting**

The acquisition of advertising copywriting skills as applied to the creative advertising process. The dovetailing of creative copy with the marketing and media strategies. Execution of advertising copy.

Prerequisites: 110 and 240

**342 Culture, Consumption and Communication**

An introduction to a cultural approach to consumption and mass communication examining the way in which personal and cultural identity is linked to consumption practices. The course provides an understanding of the formation of cultural meanings and practices in a cross-cultural perspective. Participants develop skills in interpreting research for message development and critique.

Prerequisite: 100 or permission of instructor; junior or senior standing

**345 Media Planning**

Students will develop an understanding of the use of mass media as advertising vehicles, the language of media planning, key media information sources, and how to develop a media plan.

Prerequisites: 110 and 240

**350 Public Relations Writing**

This course provides practical experience in public relations writing including: news releases, position statements, brochure writing, features, query letters and a variety of other public relations writing forms. The emphasis is on weekly assignments which are critiqued by the instructor and discussed in class. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisites: 110 and 250

**370 Magazine Writing**

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; 110 or permission of instructor

**402 Society, Culture and the Media**

Society, Culture and the Media examines the role media play in social and cultural formations. The course looks beyond the media as transmitters of information to their broadest social and cultural effects. Students study media as agents of enlightened social modernism, as political and economic institutions, as purveyors of popular culture, and as aspects of cultural and subcultural rituals. History, political economy, critical studies, cultural anthropology, semiotics and sociology are among the areas from which approaches for studying the media are considered in the course.

Prerequisite: 300 or permission of instructor

**404 Media Structure and Power**

Examines recent changes in mass media structures. Readings focus on how changes in ownership, media regulation and new technology have affected media-organizations and their performance. Subjects and issues covered include: media ownership trends, including internationalization and their effect on content; media monopolies; the effects of new media technology; the effects of advertising on news; media choice in society; the media's role in the political system; and the increasing globalization of mass media.

Prerequisite: 300 or permission of instructor



410 Advanced Reporting

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: 210 and permission of department chair

420 Graphic Design Studio

Mathematics (MATH)

Shakiban (chair), Dokken, Herman, Johnson, Kemper, Kroschel, McLean, Scholz, Shemyakin, Shepard-Loe, Shvartsman, Turcajova, Van Fleet, Yang, Youn; Komro, Sullivan

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 teach

Applied Mathematics Program

300 Differential Equations and Applied Mathematics

310 Modern Linear Algebra

315 Applied Mathematics and Modeling I

316 Applied Mathematics and Modeling II

Plus one of:

303 Statistics for the Applied Sciences

313 Probability

Plus one of:

385 Mathematical Methods of Numerical Analysis

419 Complex Variables

Statistics Program

310 Modern Linear Algebra

313 Probability

314 Mathematical Statistics

333 Applied Statistical Methods: Regression, Time Series, Forecasting

385 Mathematical Methods of Numerical Analysis

Plus:

QMCS 320 Statistics II

Teacher Licensure

**108 Calculus With Review I (105, 111, 113)**

The first course of a two-course sequence designed to integrate introductory calculus material with the algebraic and trigonometric topics necessary to support that study. Review topics include: number systems, basic algebra, functions, the Cartesian coordinate system, graphing and inverse functions. Calculus topics include limits, continuity, derivatives for algebraic functions, applications of derivatives and more graphing. This course is intended only for students planning to take 109 and does not satisfy 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

**109 Calculus With Review II (105, 111, 113)**

The second course of a two-course sequence designed to integrate introductory calculus material with the algebraic and trigonometric topics necessary to support that study. Review topics include: exponential and logarithmic functions, trigonometric functions and their inverses and associated graphs. Calculus topics include: derivatives of the transcendental functions, applications of those derivatives and an introduction to integration. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: a grade of C- or better in 108

**111 Calculus for Business and Social Science (108, 109, 113)**

An introductory course in calculus with motivation and examples drawn from business and the social sciences whenever possible. Does not include the calculus of trigonometric functions.

Prerequisite: a grade of C- or above in 105 or a satisfactory score on the mathematics placement examination (Four years of high school mathematics, including college algebra, also are recommended as background for this course.) Students intending to continue in calculus are strongly advised to take 113.

**113 Calculus I (108, 109, 111)**

An introductory course in calculus: limits; derivatives and integrals of algebraic, exponential, logarithmic and trigonometric functions of one real variable; applications primarily in the natural sciences. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: a grade of C- or above in 105 or a satisfactory score on the mathematics placement examination (Four years of high school mathematics, including college algebra and trigonometry, also are recommended as background for this course.)

**114 Calculus II**

Techniques of integration; applications of integration; infinite series; L'Hospital's rule; improper integrals. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: a grade of C- or above in 113 or 109 (or 111, with permission of the department chair)

**121 Structures of Elementary Mathematics**

An examination of the mathematical underpinnings of the elementary school curriculum with an emphasis on the understanding of mathematical concepts. Topics will include foundations of integer and rational arithmetic, notions of place-value and base, number sense and estimation, functions and their applications, Euclidean geometry, and mathematical problem-solving. This course satisfies the core curriculum requirement for the third course in the Natural Sciences and Mathematical and Quantitative Reasoning, and is also recommended as the second course in mathematics for prospective elementary teachers.

Prerequisite: 100

**128 Introduction to Discrete Mathematics**

A survey of basic discrete mathematical concepts. Topics include: Boolean algebra, logic, analysis of algorithms, mathematical induction and matrices. Focus on applications to computer science.

Prerequisite: 111 or 113 or 109 (may be taken concurrently with consent of the instructor)

**200 Multi-Variable Calculus**

Vector algebra in two and three dimensions, partial derivatives, multiple integrals, line integrals, surface integrals, Green's Theorem, Stoke's Theorem, divergence theorem. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: a grade of C- or higher in 114

**210 Linear Algebra and Differential Equations**

The course will introduce the student to linear algebra, differential equations and applications of linear algebra to differential equations. Topics to be covered will include: vector spaces, matrices, determinants, eigenvalues and eigenvectors, linear transformations, systems of ordinary differential equations, 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 114

### 259 Elements of Geometry and Statistics

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: 100 and 121

295, 296 Topics

2 credits

297, 298 Topics

The subject matter of these courses, announced in the ~~Class Schedule~~ <sup>Class Schedule</sup>, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

### 300 Differential Equations and Applied Mathematics

Linear ordinary differential equations and systems; standard methods of solution; Laplace transforms; series solution; introduction to nonlinear differential equations and dynamical systems. Models and applications in the physical, biological, behavioral, and social sciences.

Prerequisites: 200 and 210 or permission of the department chair

### 301 Abstract Algebra I

Properties of sets, relations and mappings; introduction to groups, rings and fields. Offered in fall semester.

Prerequisite: 210

### 302 Abstract Algebra II

Topics in modern algebra with applications. Includes material selected from the theory of groups, rings, and fields; linear algebra; Boolean algebra and discrete structures.

Prerequisite: 301

### 303 Statistics for the Applied Sciences (313, 314)

Probability, Estimation, Hypothesis Testing, Analysis of Variance, Regression Analysis, Topics selected from Experimental Design, Statistical Process Control, Non-Parametric Methods, Factor Analysis as time permits. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: 200

### 310 Modern Linear Algebra

Linear algebra and applications. Topics include linear equations, matrix theory, linear spaces, linear mappings, canonical forms, and inner product spaces. Applications chosen from such topics as numerical linear algebra, least squares, hermitian and positive definite matrices, and electrical networks.

Prerequisite: 210

### 313 Probability (303)

Probability theory in discrete and continuous sample spaces; random variables and distribution functions; moments; the moment-generating function; functions of random variables; law of large numbers; central limit theorem. Offered in fall semester.

Prerequisites: 200

### 314 Mathematical Statistics (303)

Populations and random sampling; sampling distributions. Theory of statistical estimation; criteria and methods of point and interval estimation. Theory of testing statistical hypotheses; non-parametric methods. Offered in spring semester.

Prerequisite: 210 and 313

### 315 Applied Mathematics and Modeling I

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: 200 and 210, or permission of instructor

### 316 Applied Mathematics and Modeling II

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: 200 and 210, or permission of instructor

**317 Real Analysis**

Topology of the real numbers. Functions of one real variable. Rigorous development of continuity and uniform continuity; differentiability; uniform convergence. Sequences and series. Offered fall semester.

Prerequisites: 200 and 210

**325 Geometry**

Axioms for geometries; geometrical transformations and their invariants; non-Euclidean geometries; additional topics. Offered in spring semester.

Prerequisites: 200 and 210 or permission of the instructor

**333 Applied Statistical Methods: Regression, Time Series, Forecasting**

Regression and exponential smoothing methods; Stochastic Time Series: auto- and cross-correlation, autoregressive moving average models; application to forecasting.

Prerequisites: 303 or 314 or permission of instructor

**385 Mathematical Methods of Numerical Analysis**

Rigorous mathematical treatment of standard topics in numerical analysis including solutions to linear and non-linear 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: 317 and QMCS 230 or permission of instructor

**400 Dynamical Systems and Chaos**

An introduction to discrete and continuous dynamical systems and applications with topics including: iterated mappings in one and two dimensions, phase-plane theory, nonlinear differential equations, and chaos. Additional topics will be chosen from among bifurcations, stability, attractors, Lyapunov functions, Julia sets and Mandelbrot sets.

Prerequisite: 300 or 317 or permission of instructor

**419 Complex Variables**

Analytic functions; theorems of Cauchy; Laurent series; residue calculus; entire and meromorphic functions; conformal mapping.

Prerequisite: 317

**420 Topology**

Properties of Euclidean spaces; general spaces; mappings; separation properties; connectedness; compact metrizable spaces.

Prerequisite: 317

**450 Advanced Mathematics: Exploration and Exposition**

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.

**475, 476 Experiential Learning**

20 credits

**477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Curricula" section of this catalog.

**483, 484 Seminar**

2 credits

**485, 486 Seminar**

See the description of these courses at the beginning of the "Curricula" section of this catalog.

**487, 488 Topics**

2 credits

**489, 490 Topics**

The subject matter of these courses, announced in the Class Schedule, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

**491, 492 Research**

2 credits

**493, 494 Research**

See the description of these courses at the beginning of the "Curricula" section of this catalog.

**495, 496 Individual Study**

2 credits

**497, 498 Individual Study**

See the description of these courses at the beginning of the "Curricula" section of this catalog.



## Latin (LAT)

The courses in Latin are offered with the following objectives:

1. To give students the necessary grasp of the language to read the works of Latin authors, and to read them with some degree of appreciation
2. To acquaint students with the unique character of Roman culture and its contribution to succeeding ages
3. To improve students' understanding of the structures of language.

These objectives are pursued with a view to the needs of students who are preparing to do graduate work in the field of Latin, who are preparing to teach Latin in secondary schools, or who are seeking a background for the study of theology, philosophy, history, law, science, English or the Romance languages.

The major engages students in the study of the language, literature and culture of ancient Rome. It pre-



421 Vergil

Reading of extensive selections from the Latin and of the entire poem in English translation. Discussion of the sources, themes and techniques of the epic.

Prerequisite: 212 or 255 or equivalent

430 Caesar and Cicero

Extensive reading of the Gallic War and of the Orations of Cicero. A study of the character and career of each author.

Prerequisite: 212 or 255 or equivalent

475, 476 Experiential Learning

2 credits

477, 478 Experiential Learning

See the description of these courses at the beginning of the "Curricula" section of this catalog.

483, 484 Seminar

2 credits

485, 486 Seminar

See the description of these courses at the beginning of the "Curricula" section of this catalog.

487, 488 Topics

2 credits

489, 490 Topics

The subject matter of these courses, announced in the Class Schedule, vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

491, 492 Research

2 credits

493, 494 Research

See the description of these courses at the beginning of the "Curricula" section of this catalog.

495, 496 Individual Study

2 credits

497, 498 Individual Study

See the description of these courses at the beginning of the "Curricula" section of this catalog.

Greek (GRK)

Through courses in Greek, the student learns to read classical Greek, and at the intermediate level begins reading selections from ancient Greek authors. In addition to facility in reading classical Greek, the student gains an awareness of the unique character of classical Greek culture and its contribution to succeeding ages.

Minor in Greek

Sixteen credits in Greek language

Plus:

Eight additional credits in Greek, Latin, ancient history, ancient philosophy, classical art, mythology or classical literature in translation.

111 Elementary Greek I

A beginning course, with emphasis on reading classical Greek prose in passages of increasing complexity. Introduction to essential forms, syntax and vocabulary. Practice in reading Greek aloud and composing simple sentences. Exploration of the social and cultural context of the Greek language.

112 Elementary Greek II

Continuation of 111.

Prerequisite: 111

211 Intermediate Greek I

342 Greek Reading and Exegesis: John

Careful reading of the Gospel of John in Greek combined with theological commentary from the Greek text, adapted to intermediate-level Greek students.

Prerequisite: 112 or equivalent (Recommended: THEO 205 or THEO 210)

475, 476 Experiential Learning

2 credits

477, 478 Experiential Learning

See the description of these courses at the beginning of the "Curricula" section of this catalog.

112 Elementary French II

Continuation of 111.

Prerequisite: 111 or its equivalent

211 Intermediate French I

Introduction to cultural and literary materials along with rapid review of basic skills in reading, speaking, writing and understanding oral French.

Prerequisite: 112 or its equivalent

212 Intermediate French II

Continuation of 211 with emphasis on oral and written use of complex sentence structure.

Prerequisite: 211 or its equivalent

295, 296 Topics

2 credits

297, 298 Topics

The subject matter of these courses, announced in the ~~Class Schedule~~ <sup>Class Schedule</sup>, vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

300 Advanced Oral and Written French I

A course required for all potential majors or co-majors as a preliminary to the upper-division courses they may take, as well as for any student wishing to investigate fine points of grammar and inherently intricate areas of pronunciation and intonation.

Prerequisite: 212

301 Chansons et Poesie

Individualized and group exercise in oral expression and comprehension – beginning with song texts and moving to a study of the elements of French versification with intensive use of cassettes for transcription.

Prerequisite: 300 or equivalent

302 Advanced Oral and Written French II

Intensive practice in both oral and written French using selected materials to acquire a high level of oral comprehension and communication as well as competence in writing French.

Prerequisite: 300 or its equivalent

309 Introduction to French Literature I

Excerpts of French literature from the Middle Ages to the Age of Reason will be studied. Emphasis will be placed on reading skills and the tools for literary analysis. Recommended as a prerequisite for upper-level literature courses.

Prerequisite: 300 or equivalent

310 Introduction to French Literature II

Excerpts of 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: 300 or equivalent

311 French Civilization I

An introduction to the most significant historical, cultural, social, religious and economic realities of France from the prehistoric period through the middle of the 17th century.

Prerequisite: 300 or equivalent

312 French Civilization II

An introduction to the most significant historical, cultural, social, religious and economic realities of France from the 17th century to the present.

Prerequisite: 300 or equivalent

370 French Phonetics

2 credits

A course designed to improve pronunciation and intonation by means of phonetic transcription and language tapes. May be taken in conjunction with 371.

Prerequisite: 300 or equivalent

371 Individualized French Conversation

2 credits

Individualized French conversation practice in comprehension and speaking involving group and individualized activities. This course may be repeated.

Prerequisite: 300 or permission of instructor

401 French Theater

Intensive study of the trends in French theater with analysis and interpretation of selected works from the seventeenth century to the present.

Prerequisite: 300 or equivalent

402 The French Novel

In depth study of selected works of fiction primarily from the 19th and 20th centuries.

Prerequisite: 300 or equivalent

475, 476 Experiential Learning 2 credits

477, 478 Experiential Learning

See the description of these courses at the beginning of the "Curricula" section of this catalog.

483, 484 Seminar 2 credits

485, 486 Seminar

See the description of these courses at the beginning of the "Curricula" section of this catalog.

487, 488 Topics 2 credits

489, 490 Topics

The subject matter of these courses, announced in the ~~Class Schedule~~ <sup>Class Schedule</sup>, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

491, 492 Research 2 credits

493, 494 Research

See the description of these courses at the beginning of the "Curricula" section of this catalog.

495, 496 Individual Study 2 credits

497, 498 Individual Study

See the description of these courses at the beginning of the "Curricula" section of this catalog.

German (GER)

The department strives to offer a diversified program capable of accommodating a variety of student interests and professional goals connected with German studies. The aims of the department are:

1. To give a command of the German language for use in professional and academic life
2. To acquaint students with the history, literature and culture of the German-speaking countries
3. To familiarize students with the role these countries and their culture play in the world today.

Lectures, reports, and discussion in courses numbered above 300 will be conducted in German.

Major in German

Four years of high school German or the completion of German 212

300 Introduction to German Studies

Plus:

Twenty-four additional credits numbered above 300

At least eight of these 28 credits must be completed at the University of St. Thomas.

At least eight of these 28 credits must be literature courses.

No more than 12 credits may be in the area of advanced language skills development.

Elective courses for the major in German should be selected in consultation with a member of the German faculty.

Plus:

Four credits in European history

Recommended:

Courses in a second foreign language.

The department strongly urges all students planning to major in German to spend some time, usually one semester, studying in a German-speaking country. See a member of the German faculty for information on study-abroad opportunities for St. Thomas students in Germany or Austria.

Minor in German

Four years of high school German or the completion of 212 or equivalent

Plus:

300 Introduction to German Studies

Plus:

Eight additional credits numbered above 300

At least four of these 12 credits must be a literature course.

Elective courses for the minor in German should be selected in consultation with a member of the German faculty.

111 Elementary German I

Introduction to fundamentals of language structure and vocabulary. Practice in speaking, reading, writing and understanding.

112 Elementary German II

Continuation of 111.

Prerequisite: 111 or equivalent

211 Intermediate German I

Review of fundamentals. Study of cultural texts with practice in speaking, reading, writing and understanding.

Prerequisite: 112 or equivalent

212 Intermediate German II

Continuation of 211.

Prerequisite: 211 or equivalent

295, 296 Topics

2 credits

297, 298 Topics

The subject matter of these courses, announced in the ~~Class Schedule~~ <sup>Class Schedule</sup>, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

300 Introduction to German Studies

Intended as an introduction to more advanced work in German, this course, which is required of all majors and minors, will offer an overview of the evolution of German culture and civilization (society, politics, the arts) within an historical context. The course will also contain a review of advanced grammar and offer students an opportunity to improve their reading, writing, and speaking skills.

Prerequisite: 212 or equivalent

311 Conversation and Composition

Advanced practice in speaking and writing German in formal and informal situations. Instruction in the social patterns that govern language usage in various situations and discussion of contrasting linguistic and social practices among the German-speaking nations and among the regions within those nations.

Prerequisite: 300

315 Influential Ideas in Non-fictional German

A study of the initiation and development of influential ideas on the part of German-speaking thinkers such as Hildegard von Bingen, Luther, Angeles Silesius, Novalis, Büchner, Marx, Nietzsche and Freud. Works selected have had a profound impact not only in German-speaking areas, but also on a worldwide scale. In addition, students will read selections from the writings and speeches of influential German political figures, past and present.

Prerequisite: 300

320 Contemporary Germany and Current Events

Examinations of the development of the Federal Republic of Germany since 1949, and examination, evaluation and discussions of events as they develop during the course of the semester. Course materials include German pamphlets, newspapers, magazines, speeches by leading figures, and materials from the Internet. Attention is given to domestic developments in the Federal Republic of Germany as well as to international events as they concern Germany.

Prerequisite: 300

341 Highlights of German Literature I

A survey of German literature from 1770 to 1890. The course will focus on important works by Goethe and Schiller, German Romanticism, and the literature of the later-19th century.

Prerequisite: 300

342 Highlights of German Literature II

Continuation of 341 with emphasis on literary developments in the 20th century. The course will focus on the period preceding World War I, on literary developments during the Weimar Republic, and on the attempts by postwar German authors to deal with the legacy of the World War II. The course also will discuss more recent literature.

Prerequisite: 300

345 Austria: The Golden Age

The course will examine historical and cultural developments in Austria from 1815 to 1918 with special emphasis on the literature and culture of turn-of-the-century Vienna. Students will read works by important Austrian writers such as Stifter, Nestoy, Schnitzler, Hofmannsthal, Freud and Stefan Zweig; listen to music by composers such as Schubert, Mahler and Lehar; and discuss relevant topics such as the Habsburg Empire, Biedermeier culture, art nouveau and operetta.

Prerequisite: 300

401 German Poetry

A critical study of selections from important German poets.

Prerequisite: 300

410 The German Opera

Operas of the German masters from Mozart to Weill are studied. The primary emphasis is given to the German texts of the operas, but students are given the opportunity to listen to German language recordings of the operas and to investigate the unity of poetry and music. Attention is given to the literary trends of the times.

Prerequisite: 300

440 Introduction to Business German and German Business

An introduction to the vocabulary of business and economics in German. A survey of German business structure, economic principles, business-government-union interrelationships and international trade status. Readings, discussions and tests are primarily in the German language.

Prerequisite: 300

475, 476 Experiential Learning

2 credits

477, 478 Experiential Learning

See the description of these courses at the beginning of the "Curricula" section of this catalog.

483, 484 Seminar

2 credits

485, 486 Seminar

See the description of these courses at the beginning of the "Curricula" section of this catalog.

487, 488 Topics

2 credits

489, 490 Topics

The subject matter of these courses, announced in the ~~Class Schedule~~ <sup>Class Schedule</sup>, vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

491, 492 Research

2 credits

493, 494 Research

See the description of these courses at the beginning of the "Curricula" section of this catalog.

495, 496 Individual Study

2 credits

497, 498 Individual Study

See the description of these courses at the beginning of the "Curricula" section of this catalog.

International Business ... Language Intensive

Students seeking a good mastery of a language (French, German, Spanish) and training in one or more business areas may enroll in this major which is administered by the Department of Modern and Classical languages.

A program of study abroad is strongly recommended.

International Business ... French Intensive

300 Advanced Oral and Written French

One course in French on contemporary France

Plus:

Twenty additional credits in French courses numbered above 300, including literature and civilization, selected in consultation with the French section coordinator

International Business ... German Intensive

300 Introduction to German Studies

440 Introduction to Business German and German Business

Plus:

Twenty additional credits in German courses numbered above 300

International Business ... Spanish Intensive

300 Oral and Written Spanish

320 Business Spanish

Plus:

Twenty additional credits in Spanish courses numbered above 300

Allied requirements for all languages

Twenty credits in business administration



## Russian (RUSS)

The objectives of the Russian program are to provide students the opportunity:

1. To learn the basics of Russian language for reading and for communicating in everyday situations
2. To acquire an elementary knowledge of the culture of the people using this study of the language – at home or abroad – for purposes of business, government work, teaching, literacy or linguistic studies
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 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 212 or equivalent

Plus:

Two advanced Russian language or literature courses

### 111 Elementary Russian I

Introduction to the Russian sound system and grammar encompassing reading, writing, speaking and listening skills. Some exposure to Russian culture. Offered in fall semester.

### 112 Elementary Russian II

Continuation of 111 with further development of same skills. Offered in spring semester.

Prerequisite: 111 or permission of instructor

### 211 Intermediate Russian I

Continuation of 112 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: 112 or permission of instructor

### 212 Intermediate Russian II

Further development of skills begun in 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: 211 or permission of instructor

## Spanish (SPAN)

The basic aim of the department is to give students a command of Spanish and a knowledge of Hispanic culture in order to fulfill professional and personal endeavors. This aim is pursued with a view to the needs of students who desire to do graduate work, enter international business, teach, travel or read great literature in the original.

Students majoring in Spanish must take a minimum of twelve credits in Spanish at the 300-level or above at St. Thomas.

Students minoring in Spanish must take a minimum of eight credits in Spanish at the 300-level or above at St. Thomas.

Major in Spanish

In consultation with their major field adviser, students must complete twenty-eight credits in courses numbered 300 and above with a minimum of six credits in each of the following areas:

Oral and Written Spanish – 300 (required); 301, 305, 310, 315, 320, 330, 396, 440

Culture/Civilization – 331, 332, 397

Literature – 335, 340, 341, 380, 381, 385, 390, 398, 405, 410

Students in teacher licensure programs should include a course in linguistics.



Minor in Spanish

In consultation with their major field adviser, students must complete sixteen credits in upper-division courses (300 or above) including:

Oral and Written Spanish – 300 (required); 301, 305, 310, 315, 320, 330, 396, 440

Culture/Civilization – 330 (recommended); 331, 332

Literature – 335 (recommended); 340, 341, 380, 381, 385, 390, 398, 405, 410

111 Elementary Spanish I

Pronunciation, essentials of grammatical structures, aural-oral practice, writing, reading of simple Spanish prose, introduction to the culture of the Spanish-speaking world.

112 Elementary Spanish II

Continuation of 111. Emphasis on grammatical structure, aural-oral practice, writing, reading. Continuation of Hispanic culture.

Prerequisite: 111 or its equivalent

211 Intermediate Spanish I

Designed to increase listening, speaking, reading, and writing skills in Spanish. Intensive review of grammatical structures of Elementary Spanish I and II. Continued exposure to Hispanic culture.

Prerequisite: 112 or its equivalent

212 Intermediate Spanish II

Continuation of 211. Emphasis on Hispanic culture, conversation, writing, and expansion of vocabulary based on thematic discussions and cultural readings.

Prerequisite: 211 or its equivalent

295, 296 Topics

2 credits

297, 298 Topics

The subject matter of these courses, announced in the ~~Class Schedule~~ <sup>Class Schedule</sup>, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

300 Oral and Written Spanish

Conversation and composition through the study of contemporary issues in Hispanic societies. Emphasis on review of basic structures and expansion of vocabulary. Writing of basic structures in expository prose.

Prerequisite: 212 or its equivalent

301 Advanced Oral and Written Spanish

Intensive practice in both oral and written Spanish using selected materials to acquire a high level of oral comprehension and communication as well as competence in writing Spanish.

Prerequisite: 300 or its equivalent

305 Spanish Oral Expression

The aim of this course is to develop aural and oral skills through the analysis and interpretation of representative cultural expressions of the Spanish-speaking world.

Prerequisite: 300 or its equivalent

310 Advanced Spanish Writing

This writing course aims to improve technique, expand syntactic depth and increase vocabulary. Students will write essays in a variety of forms. The goal of the course is to learn good writing through a process approach involving stages of idea development, re-evaluation of ideas and rewriting of the text.

Prerequisite: 300 or its equivalent

315 Hispanic Linguistics

An introduction to both contemporary and historical Hispanic linguistics. Descriptive Spanish phonetics and phonology. History of the Spanish language with emphasis on historical sound-change phenomena. Systematic study of dialectal variation in both Spain and Spanish America. Offered in fall semester.

Prerequisites: Eight credits numbered 300 or above

320 Business Spanish

Practice in the language skills and vocabulary needed to conduct business in the Hispanic world; an overview of political, economic, social and cultural factors which affect business in the Hispanic countries. Offered in fall semester.

Prerequisites: Eight credits numbered 300 or above

### 330 Temas Hispánicos

This course focuses on the integration of the various components that have forged the diverse Spanish and Spanish American cultures. Lectures and class discussions are based on major topics that relate to the foundations of the Hispanic world. This course meets the civilization distribution area for minors; it contributes to the language area for majors.

Prerequisite: 300

### 331 Survey of Spanish Culture and Civilization

A study of the evolution of the civilization of Spain from the time of early human settlements through the present. This course examines socio-economic developments, political movements and artistic creations within an historical context. Offered in fall semester.

Prerequisites: Eight credits numbered 300 or above

### 332 Survey of Latin American Culture and Civilization

Physical and human geography. History of Latin America from pre-Hispanic civilizations through independence. Political problems. Rural Latin America. Latin American society, cultural values. Religion. Economic problems. Offered in spring semester.

Prerequisites: Eight credits numbered 300 or above

### 335 Introduction to Spanish Literature

An introduction to Spanish and Spanish American narrative, drama and poetry. Strongly recommended for students who minor in Spanish. The course is designed to teach students the skills of critical reading and literary analysis.

Prerequisites: Eight credits numbered 300 or above

### 340 Survey of Spanish Literature I

Readings in Spanish literature from the Picaresque through the Golden Age.

Prerequisites: Eight credits numbered 300 or above

### 341 Survey of Spanish Literature II

Readings in Spanish literature from the 18th through the 20th centuries.

Prerequisites: Eight credits numbered 300 or above

### 380 Spanish-American Literature I

Readings in Spanish-American literature from the colonial period through the 19th century.

Prerequisites: Eight credits numbered 300 or above

### 381 Spanish-American Literature II

Readings in 20th century Spanish-American literature.

Prerequisites: Eight credits numbered 300 or above

### 385 Modern Spanish-American Short Story

Intensive readings in the modern Spanish-American short story from Horacio Quiroga to the contemporary period (Rulfo, Fuentes, Cortazar, Onetti, Borges, etc.).

Prerequisites: Eight credits numbered 300 or above

### 390 Contemporary Spanish-American Novel

Latin American society as reflected by a study of major contemporary Spanish-American novelists. Selected works from some of the following authors: Asturias, Cortazar, Carpentier, Fuentes, Garcia Marquez, Rulfo, Vargas-Llosa.

Prerequisites: Eight credits numbered 300 or above

### 405 Spanish Genre Studies

An examination of particular genres of Spain and Spanish America during defined literary periods. Topics will vary with each offering and may include the 19th-century novel, 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 300 or above

### 410 Hispanic Women Writers

An exploration of the writings of selected Spanish/Spanish American women authors, highlighting both their literary significance as well as their importance as an expression of the cultural milieu of their countries and times. Content of the course will vary with each offering.

Prerequisites: Two courses numbered 300 or above

### 440 Advanced Spanish Oral Expression

This course is intended to stimulate creative, critical thinking in Spanish through activities which require students to argue, persuade, analyze, and interpret other points of view. The course is geared toward the advanced level of the ACTFL guidelines for speaking.

Prerequisites: Eight credits numbered 300 or above

475, 476	Experiential Learning	2 credits
477, 478	Experiential Learning	
See the description of these courses at the beginning of the "Curricula" section of this catalog.		
483, 484	Seminar	2 credits
485, 486	Seminar	
See the description of these courses at the beginning of the "Curricula" section of this catalog.		
487, 488	Topics	2 credits
489, 490	Topics	

MUSC 411 History and Literature of Music I  
 MUSC 412 History and Literature of Music II  
 MUSN 1xx Ensemble participation (see note below)  
 MUSP 102 or 103 Skills for Piano Proficiency  
 MUSP 2xx Eight semesters of performance studies in the same performance medium (2 credits per semester)  
 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)

Guidelines for choosing an ensemble:

Every music major is required to register for and successfully complete an ensemble during each semester of full-time enrollment. A minimum of eight semesters of ensemble participation is required for graduation regardless of full- or part-time status. (Students majoring in music register for ensembles on an audit basis.)

If principal instrument is:

Piano –at least two semesters in 171; at least two semesters in 172; at least two semesters in one of: 143, 160, 181, 185, 186, 190; two semesters may be in 161, 182, 183

Voice –voice majors whose emphasis is in an area other than Liturgical Music must participate in a minimum of eight semesters in 140, 142, 143, or 160

Woodwind, brass, or percussion –at least eight semesters in 185 or 186

Orchestral string –at least eight semesters in 181

Guitar –at least six semesters in 173; at least two semesters in 174

Other instruments –at least eight semesters chosen from: 143, 160, 171, 172, 181, 185, 190

Allied requirements

PHYS 105 Musical Acoustics

Four credits in Art History or Theater

Concentration in Liturgical Music

(Available only to students whose principal instrument is voice, keyboard, guitar, or by special permission of the

MUSC 112 Introduction to Music (students testing out of 112 take MUSC 115)

MUSC 113 Theory I

MUSC 212 Theory II

MUSC 213 Theory III

MUSC 312 Theory IV

MUSC 351 Introduction to Conducting (2 credits)

MUSC 411 History and Literature of Music I

MUSC 412 History and Literature of Music II

MUSP 231 Performance Studies (14 credits over seven semesters)

MUSR 200 Piano Proficiency (0 credit)

MUSR 270 Level I Recital (0 credit)

MUSR 350 Level II Recital (0 credit)

Plus ensemble participation for eight semesters (audit):

Plus one of:

ARTH 280 Sacred Architecture and Space  
ARTH 335 Cathedrals, Monasteries, and Caliphates  
ARTH 340 Southern Renaissance Art and Society  
ARTH 342 Renaissance and Reformation in Northern Europe

Recommended:

MUSC 352 Choral Conducting

Concentration in Music Business

This emphasis allows a person to have a solid music foundation while pursuing a related field in business. The seminar and internship included in this emphasis help the student focus on the type of music business that is of interest to him/her.

MUSC 112 Introduction to Music (students testing out of 112 take MUSC 115)

MUSC 113 Theory I

MUSC 212 Theory II

MUSC 213 Theory III

MUSC 312 Theory IV

MUSC 411 History and Literature of Music I

MUSC 412 History and Literature of Music II

MUSC 480 Music Business Seminar

MUSN 1xx Ensemble participation (see note under Major in Music)

MUSP 102 or 103 Skills for Piano Proficiency

MUSR 200 Piano Proficiency

MUSP 2xx Six semesters of performance studies in the same performance medium (2 credits per semester)

MUSR 270 Level I Recital (0 credit)

MUSR 350 Level II Recital (0 credit)

Allied requirements

ECON 252 Principles of Microeconomics

ENTR 300 Entrepreneurship for Non-majors

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

Four credits in Art History or Theater

Major in Music Education

Instrumental and Classroom Music (K-12)

Vocal and Classroom Music (K-12)

See School of Education Department of Teacher Education

Minor in Music

MUSC 112 Introduction to Music (students testing out of 112 take MUSC 115)

MUSC 113 Theory I

MUSC 412 History and Literature of Music II

MUSN 1xx Four semesters in appropriate ensemble for principal instrument

MUSP 1xx Four semesters (50-minute lessons) in same performance medium (1 credit per semester)

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  
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

Plus two of:

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

Music Courses (MUSC)

112 Introduction to Music (115, 217, 219)

An introduction to the history, literature, and theory of music. This course establishes fundamental theoretical concepts and skills, provides an historical overview of western art music, and includes an introduction to world music. Meaning, expression, and music in culture are explored through discussion, critical listening, reading, and writing. Offered fall semester.

113 Theory I

Basic materials and structures of music, approached through analysis and experience. This course is the first of four-semester sequence that integrates sight-singing and ear-training with the analysis of harmony, form and con-

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 train-

219 Music in the United States (112)

A survey of music heard in the United States from pre-Revolutionary days to the present, including discussions of the popular, folk and concert music. Particular emphasis will be given to forms of music which are unique to this country because of the diversity of its population. Designed for the non-major. This course fulfills the Fine Arts requirement in the core curriculum. Offered in fall semester.

220 Digital Recording and Sampling

2 credits

Recording music and sound effects into the Macintosh and combining the results with MIDI sequences will be covered in this course. Students will sample both live sounds and material from compact-disc libraries, then edit them and finally place them alongside instrumental MIDI tracks. Subjects covered: digital recording theory and practice, digital media, evolution of digital technology, new equipment, musical applications. This course partially fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: 150

222 The Theology of American Popular Music

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.

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 instru-



300 Introduction to Piano Pedagogy

2 credits

This class will survey methods and materials for piano study at various levels of advancement. Discussions will include principles of technique, learning theories, musicianship and performance skills. Class members will be required to observe piano lessons. Although the course is designed primarily for music majors (pianists), other qualified students may be admitted with the consent of the instructor.

303 Music Notation on Computer

2 credits

Develop skills in using music publishing software. Intended for composers, music educators, choral and instrumental conductors and anyone interested in producing print-quality music using the Macintosh or IBM. This course partially fulfills the second-level Computer Competency requirement in the core curriculum.

307 Guitar Pedagogy

2 credits

Historical overview of teaching methods beginning through advanced primers and student repertoire, exposure to all types of notational systems and discussion of professional teacher preparation.

312 Theory IV

Continuation of 213. Offered in fall semester.

Prerequisite: 213, or successful placement test

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

480 Music Business Seminar

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.

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

487, 488 Topics 2 credits  
 489, 490 Topics

The subject matter of these courses, announced in the ~~Class Schedule~~ <sup>Class Schedule</sup>, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

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

495, 496 Individual Study 2 credits  
 497, 498 Individual Study  
 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: 140, 142, 143, 160, 185, 186. A total of four semesters in 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~~ <sup>Handbook</sup> for Music Students available from the Department of Music office.) Music majors audit all ensembles.

140 Women's Choir 1 credit  
 A vocal ensemble that explores the wide variety of secular and sacred repertoire composed for women's voices. Major performances are given each semester and may include exchange/joint concerts with other choirs. Three rehearsals a week. Membership by audition. Four semesters of participation fulfill the Fine Arts requirement in the core curriculum.

142 Chamber Singers 1 credit  
 A mixed vocal ensemble of 20-30 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.

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.

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.

- 160 Concert Choir 1 credit  
A mixed vocal ensemble that performs a variety of secular and sacred repertoire from the Middle Ages to the 20th century. Choral literature performed includes unaccompanied works as well as works with professional chamber orchestra. Major performances are given each semester and may include exchange/joint concerts with other choirs. Tours locally, nationally and internationally. Three rehearsals a week. Membership by audition. Four semesters of participation fulfill the Fine Arts requirement in the core curriculum.
- 161 String Ensembles 1 credit  
Formation of string trios, quartets, quintets. Ensembles meet once a week and are coached by a member of the string faculty. Membership by audition.
- 162 Flute Ensembles 1 credit  
Formation of trios, quartets and other small ensembles, dependent upon personnel available. Ensembles may include piccolo, soprano flutes, alto flute and bass flute. Ensembles meet once a week and are coached by a member of the woodwind faculty. Membership by audition.
- 163 Clarinet Ensembles 1 credit  
Formation of small ensembles involving various members of the clarinet family. Ensembles meet once a week and are coached by a member of the woodwind faculty. Membership by audition.
- 164 Saxophone Ensembles 1 credit  
Formation of small ensembles involving various members of the saxophone family. Ensembles meet once a week and are coached by a member of the woodwind faculty. Membership by audition.
- 165 Chamber Wind Ensembles 1 credit  
Formation of mixed woodwinds, brass and percussion. Ensembles meet once a week and are coached by a member of the faculty. Membership by audition.
- 166 Brass Choir 1 credit  
Formation of small and large ensembles using only brass and sometimes percussion instruments. The choir, directed by a member of the brass faculty, gives regularly scheduled public performances. Membership by audition.
- 167 Percussion Ensembles 1 credit  
A variety of mallet and stick instruments are used to form these ensembles. Ensembles meet once a week and are coached by a member of the percussion faculty. Membership by audition.
- 169 African Music Ensemble 1 credit  
This course provides a non-Western music performance experience. The repertoire to be studied includes traditional genres such as Adowa, Agbadza, Gota, Kpanlogo, Boboobo, and includes contemporary compositions. Three main areas in the ensemble are drumming, flutes and vocal. No prior experience is necessary for this ensemble. An audition is required.
- 170 Handbell Choir 1 credit  
This instrumental ensemble performs with both English and Dutch handbells. Repertoire consists of arrangements for two to five octaves from a variety of musical periods and styles as well as music composed specifically for the expanding contemporary handbell literature. Performances include monthly appearances in chapel liturgical settings as well as regular campus and public performances. No previous handbell experience necessary but ability to read music is required. Membership by audition or permission of instructor.
- 171 Piano Ensembles 1 credit  
Study and performance of duets and two-piano music. One major performance per semester. Membership by audition.
- 172 Accompanying Ensembles 1 credit  
Qualified pianists have the opportunity to accompany solo vocalists and solo instrumentalists through individual instruction. Membership by audition.
- 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.
- 174 Guitar Small Ensemble 1 credit  
The study and performance of music for guitar and diverse instruments, including bass and drums. At least one major performance per semester.
- 181 Orchestra 1 credit  
Study and performance of music from early Baroque through contemporary. Basic orchestral performance skills and player responsibilities are discussed for ensemble playing. Four major performances a year. Membership by audition.

- 182 Instrumental Jazz Ensemble 1 credit  
Study and performance of instrumental jazz in various styles with exposure to improvisation. Formal concert is presented each semester, and informal campus appearances occur on a regular basis. Membership by audition.
- 183 Jazz Singers 1 credit  
Study and performance of vocal jazz in various styles. Group is limited in size, thus allowing each member to develop independence in singing and microphone technique. Membership by audition.
- 185 Symphonic Band 1 credit  
Study and performance of original works for wind-band; transcriptions, manuscripts, and solo repertoire with band accompaniment. Three rehearsals per week; regular series of concerts, including regional, national and international tours. Private lessons recommended. Membership by audition. Four semesters of participation fulfill the Fine Arts requirement in the core curriculum.
- 186 Symphonic Wind Ensemble 1 credit  
This course is designed for the advanced woodwind, brass and percussion student. A select group of approximately forty musicians studies and performs music primarily written for the wind ensemble genre. Literature studied and performed comes from a diversity of cultures and style periods. The Wind Ensemble gives public performances on a regular basis throughout the school year including regional, national and international tours. Meets three times a week. Membership by audition. Four semesters of participation fulfill the Fine Arts requirement in the core curriculum.
- 190 Music Theater Production 1 credit  
Musical and dramatic preparation of a musical show or opera, leading to complete performance with costumes, set and orchestra. Participation by audition.
- 191 Music Theater Scenes 1 credit  
not peaa.

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

- |                           |          |
|---------------------------|----------|
| 121 Harpsichord: elective | 1 credit |
| 122 Lute: elective        | 1 credit |
| 128 Recorder: elective    | 1 credit |
| 131 Piano: elective       | 1 credit |
| 133 Voice: elective       | 1 credit |
| 135 Organ: elective       | 1 credit |
| 136 Flute: elective       | 1 credit |
| 137 Oboe: elective        | 1 credit |
| 138 Clarinet: elective    | 1 credit |
| 139 Bassoon: elective     | 1 credit |
| 141 Saxophone: elective   |          |

139Gmve

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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.

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.

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.

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: 270

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.

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: 350

#### Philosophy (PHIL)

Atkinson (chair), Barnes, Clemenson, Coulter, Deavel, Degnan, Discher, Evans, Giebel, Grant, Heaney, Hubbard, Long, Kemp, Kronen, Laumakis, Lemmons, Menssen, Nash-Marshall, Sullivan, van Ingen, Vlahovic, Weitzman, Winter

The philosophy program offers students the opportunity to study principal figures in the major periods of the history of philosophy (ancient, medieval, modern, and contemporary). Special attention will be given to the thought of Aristotle and St. Thomas Aquinas.

Graduates with a major in philosophy should be able to present and defend philosophical positions using standard logical techniques, to formulate effective criticisms of opposing arguments, and to explain the relevance of such positions to broader questions in philosophy or related disciplines.

The two core curriculum requirements, Philosophy of the Human Person and Introductory Ethics, are intended to introduce all students to the fundamental philosophical questions about human nature and conduct, and to help them develop basic skills in critical reasoning.

Philosophy Honor Society

Phi Sigma Tau a society whose objectives are to serve as a means of awarding distinction to students having

Schedule. These courses may meet a requirement in Philosophy Through the Ages, depending on choice of materials. All 400-level course require a major paper to be presented and defended in some public forum.

Minor in Philosophy

115 Philosophy of the Human Person

214 Introductory Ethics

Plus:

Twelve additional credits in philosophy chosen in consultation with the chair of the department.

115 Philosophy of the Human Person

An examination of fundamental conceptions of the human person in ancient, medieval and modern philosophy. Possible topics include: the existence and immortality of the human soul, free will and determinism, the immateriality of the intellect, the relationship between mind and body, and the relevance of different conceptions of the human person for ethics and religion. Attention is given to relevant issues of human diversity. The development of logical and critical thinking receives special attention. This course, with PHIL 214, fulfills the Moral and Philosophical Reasoning requirement in the core curriculum.

200 Ancient Philosophy

A survey of the roots of philosophical inquiry in the classical period. The pre-Socratics, Plato, Aristotle, the Stoics. Satisfies requirement in ancient philosophy.

Prerequisite: 115

202 Medieval Philosophy

An investigation of major philosophical problems in their medieval context. Possible topics include: faith and reason, free will, the role of authority, and the existence of God. Satisfies requirement in medieval philosophy.

Prerequisite: 115

204 Modern Philosophy

An examination of major philosophers of the early modern period from René Descartes to Immanuel Kant, with emphasis on methodology and claims to knowledge. Satisfies requirement in modern philosophy.

Prerequisite: 115

206 Continental Philosophy and Existentialism

An examination of major Continental philosophies of the nineteenth and twentieth centuries, with special attention to existentialism and phenomenology. Satisfies requirement in contemporary philosophy.

Prerequisite: 115

208 Indian Philosophy

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: 115

210 Chinese Philosophy

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: 115

214 Introductory Ethics

An inquiry into the rational foundations and methods of ethics, with attention to the application of ethical principles to areas of personal conduct, institutional behavior and public policy, and diversity within and across cultures. This course, with PHIL 115, fulfills the Moral and Philosophical Reasoning requirement in the core curriculum.

Prerequisite: 115

220 Logic

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. Required of majors, recommended for minors.

Prerequisite: 115

234 Love, Sex and Friendship (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: 115



240 Faith and Doubt (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: 115

250 Christian Mysteries from a Philosophical Viewpoint (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: 115

260 Philosophy of Science and Nature

**356 Contemporary Social Issues**

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. Satisfies requirement in contemporary philosophy.

Prerequisite: 214

**357 Political Philosophy**

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. May satisfy a requirement in Philosophy through the Ages, depending on choice of materials.

Prerequisite: 214

**358 Environmental Ethics (ENVR 301)**

Consideration of the ethical issues arising from human interaction with the environment, including population pressure, pollution, conservation and preservation. Focus is on the grounds of our obligation to resolve such issues; the question of what persons and things are worthy of moral consideration; and the respective roles of individuals, organizations and government in addressing environmental problems. Case studies will be used to trace the implications of various ethical and political theories. Satisfies requirement in contemporary philosophy.

Prerequisites: 214 and ENVR 151

**359 Philosophy of Law**

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. May satisfy a requirement in Philosophy through the Ages, depending on choice of materials.

Prerequisite: 214

**360 Philosophy of Religion**

This course examines such topics as the nature and existence of God, the problem of evil, the compatibility of free-will with divine foreknowledge, the rationality of religious belief, and the relation between morality and religion. Attention will be paid to main figures in the western tradition as well as to contemporary authors. May satisfy a requirement in philosophy through the Ages, depending on choice of materials.

Prerequisites: 115 and one other PHIL course

**370 Twentieth-Century Analytic Philosophy**

An introduction to the analytic tradition founded by Frege, Russell, and Wittgenstein, with special emphasis on the core areas of language and philosophy of logic. Possible topics include theories of truth, the meaning of "meaning," logical empiricism and recent criticisms, and logical paradox. Satisfies requirement in contemporary philosophy.

Prerequisite: 220

**380 Epistemology**

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. May satisfy a requirement in Philosophy through the Ages, depending on choice of materials.

Prerequisite: 220

483, 484 Seminar 2 credits

485, 486 Seminar

See the description of these courses at the beginning of the "Curricula" section of this catalog.

487, 488 Topics 2 credits

489, 490 Topics

The subject matter of these courses, announced in the ~~Class Schedule~~ <sup>Class Schedule</sup>, vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

491, 492 Research 2 credits

493, 494 Research

See the description of these courses at the beginning of the "Curricula" section of this catalog.

495, 496 Individual Study 2 credits

4497, 498 Individual Study

See the description of these courses at the beginning of the "Curricula" section of this catalog.

### Physics (PHYS)

Johnston (chair), Feng, Lane, Ohmann, Tommet; Blilie, Koser, Nesmelova, Rada

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 3.00 overall
- 5) Present their research at a scientific meeting beyond the St. Thomas community

#### Major in Physics (B.S.)

111 Introduction to Classical Physics I

112 Introduction to Classical Physics II

225 Introduction to Modern Physics I

226 Introduction to Modern Physics II

300 Physics Seminar I (1 credit)

301 Physics Seminar II (1 credit)

323 Methods of Experimental Physics

331 Theoretical Mechanics

341 Electricity and Magnetism

342 Electromagnetic Waves

347 Optics

410 Statistical Mechanics and Thermodynamics

431 Quantum Mechanics

Allied requirements

102 Physics as a Liberal Art II (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: 101 or high school physics

104 Astronomy

Introduction to physical principles and their application to astronomy for non-science majors. Emphasis is on comprehension of ideas and principles. Topics include the motions of the sun, moon, stars and planets; properties of the solar system; the stars including giants, dwarfs, pulsars and black holes; nebulae, galaxies and quasar cosmology and life. The course consists of lecture, discussion and laboratory.

Prerequisite: Three years of high school mathematics

105 Musical Acoustics

An introductory course intended for non-science majors; treats fundamental principles of physics and acoustics as they relate to musical sounds and musical instruments. The course consists of lecture, discussion and laboratory. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisites: High school algebra and a music background (one year practice, instrument or voice, or one course)

109 General Physics I (111)

This course and its continuation 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.

110 General Physics II (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 109 or 111

111 Introduction to Classical Physics I (109)

This course and its continuation 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

112 Introduction to Classical Physics II (110)

Continuation of 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 111 and MATH 114

225 Introduction to Modern Physics I

This course and its continuation 226 serve as an introduction to modern physics. The topics of this first course are quantum theory of light, particle nature of matter, wave aspects of particles, quantum mechanics in one-dimension, statistical physics, lasers, solid state physics. The course consists of lecture, discussion and laboratory. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisites: A minimum grade of C in both 112 and MATH 200

226 Introduction to Modern Physics II

Continuation of 225. Topics include atomic structure, molecular structure, relativity, nuclear physics, elementary particles, other topics of contemporary interest. The course consists of lecture, discussion and laboratory. This course fulfills the second-level Computer Competency requirement in the core curriculum.

Prerequisite: A minimum grade of C in both 112 and MATH 200

295, 296 Topics

2 credits

297, 298 Topics

The subject matter of these courses, announced in the [Class Schedule](#), will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

- 300 Physics Seminar I 1 credit  
 This course and 301 are a sequence of two courses taken during the spring semesters of the junior and senior year. 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 225 or 226
- 301 Physics Seminar II 1 credit  
 Continuation of 300  
 Prerequisite: A minimum grade of C in either 225 or 226
- 323 Methods of Experimental Physics  
 Introduction to some of the standard tools of experimental physics. Topics include: data acquisition and instrument control, data analysis, error analysis, vacuum techniques, Monte-Carlo techniques, timing and detection techniques, and experiment design. The course consists of lecture, discussion and laboratory.  
 Prerequisite: A minimum grade of C in either 225 or 226 and in either ENGR 240 or 350
- 331 Theoretical Mechanics  
 Newtonian dynamics of particles and systems of particles; conservation laws; moving coordinate systems; central force motion; collisions and scattering; plane and general motion of rigid bodies; free, forced and coupled oscillations; Lagrangian dynamics. Lecture and discussion.  
 Prerequisites: A minimum grade of C in either 225 or 226 and in MATH 210
- 341 Electricity and Magnetism  
 Electrostatic and magnetostatic fields in vacuum and material media; energy and force relations; methods for the solution of static problems; fields and currents in conducting media; Maxwell's equations and time-dependent fields. Lecture and discussion.  
 Prerequisites: A minimum grade of C in either 225 or 226 and in MATH 210
- 342 Electromagnetic Waves (ENGR 475)  
 A continuation of electricity and magnetism with a view of Maxwell's equations and the resulting wave equation, traveling wave solutions and applications, radiation, interference and diffraction, optics, wave guides. Lecture and discussion.  
 Prerequisite: A minimum grade of C in 341
- 347 Optics  
 The nature of light. Geometrical optics, image formation, and optical instruments. Interference, diffraction, and polarization. Lasers, holography, and other aspects of physical optics. Lecture, discussion, and laboratory.  
 Prerequisite: A minimum grade of C in either 225 or 226
- 410 Statistical Mechanics and Thermodynamics  
 Concepts and laws of thermodynamics and of statistical mechanics. Applications of these to various systems, including gases, liquids, solids and chemical systems. Lecture and discussion.  
 Prerequisite: A minimum grade of C in 225, 226, and MATH 210
- 431 Quantum Mechanics  
 Application of quantum mechanics to advanced problems in modern physics; perturbation theory; spin and its effects; identical particles; many-electron atoms; topics in scattering theory and nuclear physics. Lecture and discussion.  
 Prerequisite: A minimum grade of C in 225, 226, and MATH 210
- 483, 484 Seminar 2 credits  
 485, 486 Seminar  
 See the description of these courses at the beginning of the "Curricula" section of this catalog.
- 487, 488 Topics 2 credits  
 489, 490 Topics  
 The subject matter of these courses, announced in the [Class Schedule](#), will vary from year to year, but will
- 485, 486 Seminar



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.

#### 101 American Government and Politics

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.

#### 105 Politics and Government in Comparative Perspective

An introduction to concepts basic to an understanding of politics and government, such as power, authority and legitimacy. A comparative examination of political processes, decision-making institutions and policy issues in the contemporary world. Countries surveyed will include the United States, the United Kingdom, Russia or China. **Note:** This course does not fulfill the core curriculum requirement in the core curriculum.



303 Urban and Metropolitan Politics and Government

An examination of the nature and role of urban and metropolitan places in American civic life. The evolution of cities from villages to metropolitan areas is examined. Topics examined include: the structure of American urban government, the role of community-based organizations in urban governance, the city as a vehicle for social segregation, the city as an economic entity and the relationship between cities and an increasingly global society.

305 Congress and the Presidency

373 Political Thought from Marx to the Present

Using original sources and secondary texts, this course examines some major trends in political theory from Karl Marx to the present. Although the emphasis may shift, topics to be covered include: developments in Liberalism from J.S. Mill to Rawls; developments in western Marxism; post-modernist political thought; participatory democracy; and feminist political theory.

375 American Political Thought

## Psychology (PSY)

Giebenhain (chair), Amel, Buri, Chalkley, Johnson, Mabry, Robinson-Riegler, Scott, Tauer, WilliamsMorris

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 write a research paper written in accordance with guidelines set forth by the American Psychological Association (APA). They will be trained in those

QMCS 220 Statistics I

Students should take the following courses in the following order:

MATH 101 (or 108-109 or 111 or 113)

QMCS 220

PSY 212

These courses should be taken early in the college career, since they are prerequisites for some required courses in psychology. A student should consult early with her/his department adviser to have her/his plan approved.

Concentration in Behavioral Neuroscience

111 General Psychology

212 Research Methods in Psychology

422 History and Systems (to be taken during the senior year)

Plus one of:

200 Psychology of Infancy and Childhood

202 Lifespan Development (students may not receive credit for both 202 and 200)

203 Psychology of Adolescence

204 The Psychology of Adulthood and Aging

Plus one of:

121 Social Psychology

301 Psychopathology

302 Personality Theories

Plus:

206 The Brain and Human Behavior

207 Alcohol, Other Drugs and Behavior

322 Sensation and Perception

401 Physiological Psychology

Plus:

Two elective courses in psychology

Allied requirements

All of the following or an adequate substitute approved by the chair:

BIOL 101 General Biology or 105 Human Biology

Plus:

MATH 101 Finite Mathematics

(or MATH 108-109, 111 or 113; students should take highest level for which eligible)

QMCS 220 Statistics I

Students should take the following courses in the following order:

MATH 101 (or 108-109 or 111 or 113)

QMCS 220

PSY 212

These courses should be taken early in the college career, since they are prerequisites for some required courses in psychology.

Recommended:

Those students planning to pursue graduate study in behavioral neuroscience should consider:

493, 494 Research

Additional courses in biology and chemistry (consult the Behavioral Neuroscience adviser)

Teacher Licensure

Elementary Education with a Specialty in Social Studies (5-8)

Co-major in Social Studies (5-12) and a Co-major in Secondary Education

- 206 The Brain and Human Behavior
- 207 Alcohol, Other Drugs and Behavior
- 212 Research Methods in Psychology
- 275 Cognition
- 288 Psychology of Marriage and the Family

Plus two of:

- 301 Psychopathology
- 302 Personality Theories
- 308 Motivation and Emotion
- 313 Psychological Testing
- 321 Current Research Issues in Social Psychology
- 322 Sensation and Perception

204 The Psychology of Adulthood and Aging

Theories of and research in physical, emotional, social, personality and intellectual development in adulthood and in old age. This course will emphasize the psychological adjustment to the stresses and decisions ( marriage, retirement, bereavement) the individual encounters during those developmental stages.

Prerequisite: 111

205 Psychology of Women

An examination of physiological, experiential, and social factors affecting the psychological development of women and their status as adults. Topics include: biological and social learning factors in the development of sex roles and other prescribed behavior patterns, the development of performance and intellectual skills, achievement motivation, identity and self-esteem, changing concepts of sex roles, women and psychological disorders, global women's issues. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 111

206 The Brain and Human Behavior

An examination of brain systems that subserve human behavior. Topics include: human development, consciousness, social behavior, cognition, emotion and abnormal behavior.

Prerequisite: 111

207 Alcohol, Other Drugs and Behavior

The course surveys some basic facts and principles of administration, absorption, transport, action, deactivation and elimination of drugs. Various classes of drugs; their effects on mood, behavior, and consciousness; their use and misuse; and phenomena of chemical dependency and its treatment modalities are discussed. Lectures, rea

### 313 Psychological Testing

This course provides an overview of the principles of testing and measurement, particularly as they relate to the practice of psychology and education. The course examines the theories underlying individual and group-administered tests in such areas as intelligence, aptitude, achievement, interests, personality, neuropsychological and educational tests. Various controversial issues in the field of testing will also be addressed including ethics, bias, computer-based assessment, and testing of special populations.

Prerequisite: 212

### 321 Current Research Issues in Social Psychology

Discussion of several specific research issues in contemporary social psychology. The course includes presentation of computer applications. An original research project is required. Four lectures and three laboratory hours per week.

Prerequisites: 121 and 212

### 322 Sensation and Perception

A study of the structure and function of sensory systems, the information that these systems provide the brain, and the subsequent interpretation of sensory information that we call perception. The course focuses on visual perception (e.g. brightness, color, form, depth, movement, constancy, illusions) and auditory perception (detection, discrimination, loudness, pitch) and incorporates art and music. Four lectures and three laboratory hours per week.

Prerequisite: 212

### 323 Learning and Memory

The basic concepts involved in simple associative learning are presented, along with theoretical and applied concerns. The analysis and modification of animal and human behavior by means of classical and instrumental conditioning are discussed. The course also will trace the history of the study of learning from its roots in philosophy to the current cognitive approach.

Prerequisite: 212

### 325 Research Issues in Cognition

This course will explore research issues in cognitive psychology, with special emphasis on cognitive psychology methodology, current research issues, hands-on research, and discussion/analysis 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: 212 and 275

### 342 Industrial/Organizational Psychology

This course presents basic concepts of psychology as they apply everyday in the workplace. Topics to be covered include measurement and its applications in the workplace (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: 111 and junior standing

### 400 Seminar in Cognitive and Language Development

Current theory and research regarding children's understanding, thinking processes, and language acquisition are discussed. Topics include knowledge acquisition, concept formation, grammatical development, and the nature of developmental change.

Prerequisites: 200 and one additional PSY course or permission of the instructor

### 401 Physiological Psychology

A study of the interrelationships of the nervous system and behavior. Topics include knowledge of the brain, sensory systems, and the effects of drugs on behavior.

Prerequisite: 212

424 Clinical Psychology

Study of the clinical application of psychological processes in the evaluation, diagnosis and treatment of behavioral disorders.

Prerequisites: 301 and three psychology courses or permission of instructor

428 Theories of Counseling and Psychotherapy

Theories and procedures of counseling and psychotherapy are discussed, including psychoanalysis, client-centered therapy, cognitive therapy, behavior therapy, and others.

Prerequisites: 301 and three psychology courses or permission of the instructor

475, 476 Experiential Learning

2 credits

477, 478 Experiential Learning



### Computer Science (CS)

A traditional computer-science path that emphasizes low-level computing fundamentals as well as high-level design issues.

420 Systems Analysis and Design I

450 Database Design

Plus one of:

300 Computer Organization

340 Digital Electronics and Microprocessors

### Computer Information Systems (CIS)

A management information systems path emphasizing high-level design issues and designer/user interaction.

420 Systems Analysis and Design I

450 Database Design

Plus one of:

421 Systems Analysis and Design II

425 Information Resource Management

### Quantitative Methods (QM)

A path emphasizing the role of statistics, mathematics and operations research as well as the use of computers in solving problems in organizations.

410 Operations Research I

Plus two of:

320 Statistics II

411 Operations Research II

420 Systems Analysis and Design I

450 Database Design

### Allied requirements

MATH 128 Introduction to Discrete Mathematics

Plus one of:

MATH 109 Calculus with Review II

MATH 111 Calculus for Business and Social Science

MATH 113 Calculus I

Plus one of:

COMM 100 Public Speaking

COMM 105 Communication in the Workforce/Review II

Plus one of:

- 230 Software Design Using JAVA Language
- 238 Software Design using Business Languages

Plus three of:

- 215 Rapid Application Development
- 281 Object-Oriented Design and Programming
- 420 Systems Analysis and Design I
- 425 Information Resource Management
- 450 Database Design

Minor in Quantitative Methods and Computer Science ... for mathematics

This minor is intended to support majors in mathematics and those interested in statistics and operations research.

- 230 Software Design Using JAVA Language

Plus four of:

- 220 Statistics I
- 281 Object-Oriented Design and Programming
- 320 Statistics II
- 330 Graphics and Numerical Methods
- 410 Operations Research I
- 411 Operations Research II

#### 110 Introduction to Information Processing (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.

#### 120 Computers in Elementary Education and LOGO

This course is intended for elementary education majors. Topics will include the role of the computer in elementary education, computer applications in science and mathematics, software packages for use in elementary school classrooms, Computer-Assisted Instruction (CAI), multimedia, telecommunication and LOGO programming, experiments and examples. LOGO will be used to teach programming concepts and to solve problems in math and science using LOGO's arithmetic, graphic and animation capabilities. This course fulfills the 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

#### 201 Introductory Statistics II (220)

2 credits

This course is for students desiring to satisfy the coverage of QMCS 220 (a full semester of statistics), but who have taken less than one full semester of statistics. Review of basic statistical techniques (confidence intervals, hypothesis testing, regression), multiple regression, contingency tables, analysis of variance, sampling, plus emphasis on use of statistical packages and design of a statistical study.

Prerequisite: 206 or at least .35 semester, but less than one semester, of statistics

#### 215 Rapid Application Development

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: 110

#### 216 Quantitative Techniques in Business (110)

2 credits

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

### 220 Statistics I (201)

Introductory applied statistics: sampling, descriptive (exploratory) statistics, probability, sampling distributions, estimation and hypothesis testing, non-parametrics, simple and multiple linear regression, introduction to analysis of variance; use of statistical packages. This course fulfills the 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, 101, or 105, or 109, 111 or 113

### 230 Software Design Using the JAVA Language

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.

### 238 Software Design Using Business Languages

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.

### 281 Object-Oriented Design and Programming

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

### 350 Data and File Structures

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.

Prerequisites: 281 and MATH 128

### 360 Operating Systems Design

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 multiprocessor operating systems.

Prerequisite: 281; Recommended: 300

### 370 Telecommunications and Teleprocessing

The fundamental concepts of telecommunications and networking for voice, data and video, including hardware, media, signaling and digital switching, open-system interconnection model, standards and protocols, local and wide-area networks and inter-networking.

Prerequisites: 230 or 238 and MATH 128

### 371 Advanced Voice and Data Communications

Analysis of voice, data and video telecommunication requirements, network configuration, network operations, network monitoring and optimization, documentation and legal issues.

Prerequisite: 370

### 380 Artificial Intelligence and Robotics

Theory and implementation techniques using computers to solve problems, play games, prove theorems, recognize patterns, create artwork and musical scores, translate languages, read handwriting, speak and perform



### Sociology Honor Society

The Chapter of Minnesota 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  
Kinney (director)

100 Introduction to Sociology  
210 Research Methods in Sociology  
220 Sociological Analysis  
470 Sociological Theory

Plus one of:

365 Social Psychology  
366 Self and Society

Plus:

Sixteen additional credits in Sociology (eight of which must be 300-level or higher)

Strongly recommended:

MATH 101 Finite Mathematics

In addition, it is recommended that students take the following courses in this order:

MATH 101 (or adequate substitute)  
SOC 210 Research Methods in Sociology  
SOC 220 Sociological Analysis

Finally, it is recommended that students begin the SOC 210/220 sequence during their sophomore year. This sequence must be completed by the end of the junior year. Students who have a double major in sociology and psychology and complete SOC 210, PSY 212, and QMCS 220 do not need to take SOC 220.

Major in Sociology: Criminal Justice  
To be appointed (director)

The program in Criminal Justice provides students with an understanding of the entire criminal justice system while at the same time allowing them to take specific courses in a area of special interest.

The program emphasizes the interrelationships among the various components of the criminal justice system (i.e., law enforcement, prosecution, courts and corrections) and examines how they deal with adult offenders and juvenile delinquents.

The major reflects the interdisciplinary nature of criminal justice. It provides a distinctive specia-

Plus one of:

SOC 405 Internship in Criminal Justice

SOC 498 Individualized Study (for in-career students only)

Strongly recommended:

MATH 101 Finite Mathematics

SOC 251 Race and Ethnicity

In addition, it is recommended that students take the following courses in this order:

MATH 101 Finite Mathematics (or adequate substitute) in freshman year

## 110 Social Problems

Contemporary American society is confronted with a number of serious problems. This course explores the causes, effects and proposed solutions to some of the major social problems currently facing Americans. Special attention is given to issues confronting core institutions such as poverty, racism, sexism, drug and alcohol abuse, crime,



### 304 Adolescence in Society

The transition between childhood and adulthood is examined using a general sociological framework and including life course, socioeconomic, and systems theories. Particular attention is given to the social construction of adolescence; institutional contexts (family, education, employment) of adolescent relationships with parents, peers, and others; gender and sexual socialization in society; cultures of achievement and risk; social diversity. This course meets a requirement in Family Studies.

Prerequisite: 100 or permission of the instructor

### 310 Juvenile Delinquency

An examination of juvenile delinquency and society's response to delinquent youth. Major topics include the historical foundations of delinquency, sociological and social psychological causes of delinquency, and the legal response to delinquents.

Prerequisite: 100 or 200 or sophomore standing

### 320 Criminology

The nature and extent of crime and victimization in American society. Theories of crime from a sociological and social psychological perspective. An examination of specific types of criminal behavior.

Prerequisites: 210 and 310 or permission of instructor

### 321 Marriages and Families

Examination of changing families in a changing society. Topics include the single life, dating and choosing a partner; parenting and raising children; communication, power, and satisfaction; family crisis and resiliency; and social policies and the future of the family in society. This course meets a requirement in Family Studies.

Prerequisite: 100 or permission of the instructor

### 330 Religion and Society

Theoretical and empirical examination of the sociological dimensions of religion, with a special emphasis on the religious situation in America. Topics include cultural contexts, affiliation patterns, organizational structures, individual religiosity and the emergence of new forms.

Prerequisite: 100 or sophomore standing

### 332 Urban Sociology

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**360 Health Care and Medicine**

An examination of the social nature of disease and illness and the social organization of health care and the medical professions. Topics include medical education, access to health care, the growth of alternative health care systems and comparative issues in health and medical care.

Prerequisite: 100 or sophomore standing

**365 Social Psychology**

A general survey of major social psychological theories and research, with a strong emphasis on the sociological perspective. Topics include selfhood, socialization, conformity/deviance, attitudes, gender roles, and inter-group/intragroup dynamics. Practical applications are a central focus. This course meets a requirement in the Business Administration concentration in Leadership and Management.

Prerequisite: 100 or sophomore standing

**366 Self and Society**

An examination of the various social forces that shape societies and the individuals in them. Includes the influence of "micro" elements of social structure (such as socialization processes and small groups), "macro" elements of social structure (organizations, communities and society), and important sociological concepts (inequality, power, conflict, social control, etc.).

Prerequisite: 100 or sophomore standing

**386 Organizations in Society**

This course provides students with knowledge about the importance and role of organizations in the social world, social processes that occur in organizational settings, and the impact that organizations have on our everyday lives. Key topics include conflict in organizations, social control in organizational settings, the "McDonaldization" of 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: 100 or sophomore standing

**388 Deviant Behavior**

Study of different types of deviant behavior. Examines the prevalence of deviance, the reasons why it exists and the relationship between deviance and social control.

Prerequisite: 100 or sophomore standing

**405 Internship in Criminal Justice**

This course is designed to provide the student with an opportunity to apply academic training in a criminal justice setting. Students will spend a minimum of 10 hours per week in an agency or organization directly involved in some aspect of criminal justice. Students will be supervised by an on-site supervisor. They also will participate in a weekly meeting with other interns and a St. Thomas faculty member.

Prerequisites: 200, 210, 320, and permission of the instructor

**470 Sociological Theories**

Study of sociological theory as a tool for understanding society and social interaction. Examination of both classical roots and contemporary schools, including functionalism, conflict, symbolic interaction, phenomenology, and rational choice, as well as contemporary challenges such as feminism and postmodernism. Emphasis on applications of sociological theories to contemporary social issues and everyday life. Normally offered in the fall semester.

Prerequisite: 100

**475, 476 Experiential Learning**

2 credits

**477, 478 Experiential Learning**

See the description of these courses at the beginning of the "Curricula" section of this catalog.

**480 Seminar in Criminal Justice**

Criminal justice seminars provide majors with the opportunity to engage in advanced sociological and critical analysis of some aspect of the criminal justice system. This course number may be repeated, since focus of seminar changes.

Prerequisite: 200, 320 or permission of instructor

**483, 484 Seminar**

2 credits

**485, 486 Seminar**

See the description of these courses at the beginning of the "Curricula" section of this catalog.

**487, 488 Topics**

2 credits

**489, 490 Topics**

The subject matter of these courses, announced in the ~~Class Schedule~~ **Class Schedule**, vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.



Plus one of:

- 221 History of Theater I: Classical through 17th Century
- 222 History of Theater II: 18th Century to Contemporary

Plus one of:

- 204 Oral Interpretation
- 253 Creative Dramatics and Children's Theater

Minor in Theater History/Theory-Criticism

- 221 History of Theater I: Classical through 17th Century
- 222 History of Theater II: 18th Century to Contemporary
- 412 Drama: Theory and Criticism

Plus two of:

- COMM 264 Electronic Media and Society
- COMM 440 Classical Rhetoric
- THR 223 History of Theater III: American
- THR 359 Film II: Textual Analysis

Minor in Film

- 259 Film I: Introduction to Narrative and Non-Narrative World Cinema

222 History of Theater II: 18th Century to Contemporary

Examination of 18th, 19th and 20th century world theater with special attention to both the contemporary and historic perspectives. Deals with major movements and styles of modern theater. This course fulfills the Fine Arts requirement in the core curriculum.

223 History of Theater III: American

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.

231 Dance for Musical Theater

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: 214 or permission of instructor

253 Creative Dramatics and Children's Theater

The combination of creative dramatics and children's theater enables students to investigate techniques of teaching drama to children; the course provides an understanding of children's needs and the psychology of play. The second half of the course will be devoted to producing a children's play or several final production projects.

259 Film I: Introduction to Narrative and Non-Narrative World Cinema

Analysis of the structure and social impact of film as an art form; extensive use of films in class; concentration on the fiction, documentary and animated film. This course fulfills the Fine Arts requirement in the core curriculum.

260 History of Film: The Silent Era

Examines the growth of popular film from the 16th century Italian camera obscura to the rise of Hollywood and

## 360 Film III: Super 8 Film-making

The course makes available to each class member all necessary Super 8 equipment, but assumes no prior knowledge of camera use, editing, sound recording, animation or projection. These areas are covered in the class through specific assignments, class discussions and special workshops conducted by professional filmmakers. Prerequisite: 259 or equivalent is recommended but not required

## 375 Methods of Teaching Theater and Dance

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.

## 412 Drama: Theory and Criticism

Study in abstract and applied dramatic theory. Selected playwrights and bodies of criticism that surround their work are examined closely in relation to various theoretical systems. Aristotle through post-modern. This course fulfills the Fine Arts requirement in the core curriculum.

## 475, 476 Experiential Learning

2 credits

## 477, 478 Experiential Learning

See the description of these courses at the beginning of the "Curricula" section of this catalog.

## 483, 484 Seminar

2 credits

## 485, 486 Seminar

See the description of these courses at the beginning of the "Curricula" section of this catalog.

## 487, 488 Topics

2 credits

## 489, 490 Topics

The subject matter of these courses, announced in the ~~Class Schedule~~ <sup>Class Schedule</sup>, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

## 491, 492 Research

2 credits

## 493, 494 Research

See the description of these courses at the beginning of the "Curricula" section of this catalog.

## 495, 496 Individual Study

2 credits

## 497, 498 Individual Study

See the description of these courses at the beginning of the "Curricula" section of this catalog.

## Theology (THEO)

Nichols (chair), Anthony, Boyle, Brady, Cavanaugh, Cory, Gavrilyuk, Hallman, Hollerich, Horn, Hughes, Joncas, Jordon, Kennedy, King, Landry, Martens, Myers, Niskanen, Patton, Penchansky, Posey, Schlabach, Smith, Stevenson, Thompson, Ulrich, Windley-Daoust, Wojda; Cytron, McMichael, Snyder, 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. 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 devoted to encouraging and rewarding excellence in theology and the study of religion. The Greek letters stand for the (God), 0556 TD -0.0122 Tw(God), 184 Tilts(onsfgy) The

#### 101 The Christian Theological Tradition

This course is designed to acquaint students with the contents of the Bible and with Christian history, especially in the context of the Catholic tradition. Through careful reading of a core of common texts and a variety of written assignments, students are expected to attain a basic understanding of human experience in the light of major areas of theology, including revelation, God, creation, Jesus and the Church.

#### 200 Christian Belief Today

This course introduces systematic theology, a discipline that tries to understand how Christian doctrines are inter-related 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: 101

#### 205 Old Testament

An intensive reading and discussion of the Old Testament, also known as the Hebrew scriptures. The course investigates methods of biblical interpretation and the literature and theologies of the Israelite people in their ancient Near Eastern context. In addition, this course explores the Old Testament as a foundational document for the Jewish and Christian traditions (both ancient and modern) in the development of doctrine, in the expressions of worship and in the articulation of moral principles.

Prerequisite: 101

#### 210 New Testament

This course involves the student in an intensive historical, literary and theological reading of major portions of the New Testament in the Jewish and Greco-Roman contexts and from the perspective of modern methods of biblical interpretation. In addition, the course explores the New Testament as a foundational document for modern Christian traditions in the development of doctrine, in the expressions of worship and in the articulation of moral principles.

Prerequisite: 101

#### 215 Christian Morality

This course is an introduction to the principles, methods and topics of Christian theological ethics. The following themes will be addressed: the relation of Christian faith to moral reflection and decision making (both individual and social); the contribution of the Christian tradition to the understanding of the human person (including freedom, sin, conscience, character and grace); the role of the believing community in its relation to culture;



### 305 Theologies of Justice and Peace

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: 101 and one 200-level THEO course

### 306 Christian Faith and the Management Professions (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: 101 and one 200-level THEO course

### 308 Theology of the Protestant and Catholic Reformation

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: 101 and one 200-level THEO course

### 309 The Virtues

In current Roman Catholic and Protestant moral theology the tradition of the virtues has re-emerged as a significant focus of discussion. This course proposes to direct students to at least three aspects of this conversation: the warrant for retrieving the language of the virtues; the important historical contributions to that discussion; and the contemporary implications for current moral theology. Special attention is given to the cardinal virtues as well as the theological virtues of faith, hope and charity.

Prerequisite: 101 and one 200-level THEO course

### 310 Christian Worship

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: 101 and one 200-level THEO course

### 313 Christian Sacramentality

A study of sacramentality as an essential component of the Christian life. This course examines the historical development of Christian Initiation, Eucharist, Penance, Anointing of the Sick, Matrimony, and Holy Orders as effective signs of the human-divine transformative encounter. It also includes a systematic reflection on sacramentality as proposed by ancient, medieval, Reformation, and contemporary theologians.

Prerequisite: 101 and one 200-level THEO course

### 314 Christian Spirituality

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: 101 and one 200-level THEO course

### 315 Christian Marriage

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: 101 and one 200-level THEO course

**318 Theology from Augustine to Aquinas**

A study of the development of Christian theology from St. Augustine to St. Thomas Aquinas. Attention will be given to the formation of the classical Christian views of faith/reason, grace/nature, God/creation.

Prerequisite: 101 and one 200-level THEO course

**320 Readings from St. Thomas Aquinas**

An introduction to the theology of St. Thomas Aquinas, his influence and his contemporary significance.

Prerequisite: 101 and one 200-level THEO course

**322 Theologies of Global Economics**

This course will critically examine how the theologies of major world religions have influenced the development of the economic systems of the nations, analyzing the perspectives offered by major ancient and modern world-views of the Far East, Middle East, and West. Special attention, in the context of modern theories of globalization, will be given to Catholic social teaching as expounded in the papal encyclicals, to Mahatma Gandhi, and to liberation theologies. The great religions of the world prescribe moral precepts that ought to govern social life including the ordinary business of making choices under the constraints of means that are scarce in relation to ends. Through extensive reading, writing, lectures, and class discussion, the course will consider questions such as the following: Why are some nations more developed than others? Have theologies any role to play in the economic development of nations?

Prerequisite: 101 and one 200-level THEO course

**325 The Catholic Social Traditions**

This course examines Catholic reflection on social structures and patterns of moral behavior as they are expressed in economic, social and political contexts. Focus topics might include: social virtues, the role of religion in the public realm, understanding of the person in relation to society and the state, the defense of the dignity of the person, the promotion of the common good, the use of force and the meaning of justice within and between communities. Possible sources for this course might include selections from classic biblical, patristic and medieval texts; papal, conciliar and episcopal documents; writings of modern and contemporary Catholic social theorists; and social movements inspired by the tradition.

Prerequisite: 101 and one 200-level THEO course

**326 Church in Latin America (CATH 326)**

This course affords the opportunity to study Christian theology and practice in a context of great suffering and struggle. The course analyzes the various forms that Christianity has taken in Latin American history, with special emphasis on the period of the Spanish Conquest and the twentieth century. This course covers the outline of the history of the Church in Latin America, but more importantly examines the theological issues raised in each era to see how Christians have lived their faith under different circumstances. Theological topics explored include evangelization, Christology, sin, martyrdom, poverty, the Church, and the Eucharist. Students also study and critique specifically Latin American methods and approaches to the theological task itself. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 101 and one 200-level THEO course

**327 Theology of the Catholic Worker Movement (CATH 327)**

Two Catholic laypeople, Dorothy Day and Peter Maurin, founded a movement in the 1930s aimed at applying traditional Christian thought to a profound political and cultural critique of modern American society. Still flourishing today, the Catholic Worker movement provides hospitality to the poor and a prophetic critique of the prevailing social order, based on a vision of all people as members of the mystical Body of Christ. This course examines the theoretical and practical implications of this movement, emphasizing its development of a theological politics and economics out of the traditional sources of Catholic theology; the Gospels, the Church Fathers, the saints, the liturgy, and papal social teaching. The course also examines criticisms of the movement from both within and without the Church. The course will include a field trip to a Catholic Worker community.

Prerequisite: 101 and one 200-level THEO course

**330 Wisdom Writings in the Biblical Tradition**

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: 101 and one 200-level THEO course

**331 Christianity and World Religions**

This course is a comparison of the teachings and practices of Christianity with the teachings and practices of selected non-Christian religions, for example, American Indian (Lakota), Judaism, Islam, Hinduism and Buddhism. The aim of the course will be to clarify similarities and differences between Christianity and other religions, to reflect on the problem posed by religious pluralism in modern culture, and to develop a Christian theology of world religions. This course fulfills the Human Diversity requirement in the core curriculum.

Prerequisite: 101 and one 200-level THEO course



**350 Historical Literature of the Old Testament**

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: 101 and one 200-level THEO course

**352 The Pentateuch**

Critical and in-depth investigations of various Pentateuchal traditions: Primeval Stories; Patriarchs; Exodus; Sinai Covenant; Laws; Entry into Canaan. Particular emphasis will be focused on their origin, transmission, mutual relationships and final theological unity.

Prerequisite: 101 and one 200-level THEO course

**353 Women and the Old Testament**

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 women as evil (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: 101 and one 200-level THEO course

**354 Women and the Christian Tradition**

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: 101 and one 200-level THEO course

**356 Music and the Bible (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: 101 and one 200-level THEO course

**357 Sacred Music of the Catholic Heritage (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: 101 and one 200-level THEO course

**358 The Church**

A study of past and present models of the Church. This course will examine the implications of these models for the status and functions of laity, forms of ministry and authority, and the relationship between the churches.

Prerequisite: 101 and one 200-level THEO course

**359 Women in the Early Church**

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: 101 and one 200-level THEO course



## 373 The Person and Mission of Jesus Christ

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: 101 and one 200-level THEO course

## 374 Atheists and Apologists

This course explores the problem of religious belief in a secular society by looking at the rise of modern atheism from the 17th century to the present day. Focusing on original thinkers of major significance, both the case for the emergence of several types of atheism and the intellectual defense of religious belief written in order to counter them will be considered. Students will do a close, detailed reading of selected texts; these texts may include theological, philosophical, scientific, and literary works.

Prerequisites: 101 and one 200-level THEO course and PHIL 115

## 375 Theology in the Enlightenment

An analysis of the effects of the empirical and human sciences on the classical understanding of God. This course focuses on the theological formulations of Descartes, Kant, Hegel and Marx, with attention given to Darwin, Nietzsche and Freud. It also includes a study of theological responses to modernity: Denzinger Theology, Schleiermacher, Blondel, de Chardin, Rahner and Lonergan.

Prerequisite: 101 and one 200-level THEO course

## 376 Women Mystics

By close reading of texts written in various centuries by women mystics of the times, it is possible to determine the social settings and contexts and to discuss how their mystical lives made them a powerful voice in the church of that time. The course will explore the contemporary possibilities of the mystical/spiritual life as one of the authentic roads to authority, challenging or working with hierarchical structures, which alone can become reductionistic. It may also examine why mysticism includes or excludes women in given traditions, and how it influences both the role of women and the possibilities for alternative or unique forms of religious experience.

Prerequisite: 101 and one 200-level THEO course

## 377 Ireland: Understanding Celtic Spirituality

Ireland represents a fascinating combination of adaptations to Christianity in its spiritual practices, including asceticism, monastic movements, and a cult of the saints that is truly inspirational. The common and constant interaction between lay people, hermits, monks, and saints gave rise to missionary work, soul-friendships, and the development of guides for spiritual living. Through readings and visits to monasteries, hermitages, and other early sacred sites, students will be able to examine the distinctive qualities that Celtic culture brought to Christian theology and to people's live faith experience in Ireland and better appreciate the impact that Celtic spirituality has had both yesterday and today.

Prerequisite: 101 and one 200-level THEO course

## 380 Grace, Hope and Eschatology

This course explores the connections among the life of grace, Christian hope and the traditional "last things" – death, judgment and eternal life – using the death-resurrection of Jesus as the foundation and point of departure for study.

Prerequisite: 101 and one 200-level THEO course

## 382 Death and the Afterlife

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: 101 and one 200-level THEO course

## 387 Topics in Scripture

The subject matter of this course, announced in the [Class Schedule](#), 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: 101 and one 200-level THEO course

## 388 Topics in Historical Theology

The subject matter of this course, announced in the [Class Schedule](#), 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: 101 and one 200-level THEO course



Actuarial Science (ACSC)  
Youn (MATH), director, Herman (MATH)



MKTG 300 Principles of Marketing  
QMCS 280 Object-Oriented Design and Programming  
QMCS 450 Database Design

Minor in Actuarial Science

ACSC 320 Risk Management and Insurance  
MATH 113 Calculus I  
MATH 114 Calculus II

Plus one of:

ACSC 264 Theory of Interest  
FINC 325 Investments

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  
ACSC 351 Foundations of Actuarial Mathematics  
ACSC 464 Mathematical Finance  
ECON 252 Principles of Microeconomics  
FINC 321 Financial Management or FINC 300 Finance for non-Business Majors  
MATH 200 Multi-Variable Calculus  
MATH 313 Probability or MATH 303 Statistics for the Applied Sciences

#### 264 Theory of Interest

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

Prerequisite: MATH 114.

#### 320 Risk Management and Insurance

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

#### 351 Foundations of Actuarial Mathematics

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

Prerequisite: 264 and MATH 313.

#### 352 Actuarial Contingencies

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

Prerequisite: 351

#### 464 Mathematical Finance

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 convexity 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

American Cultural Studies (ACST)  
Banfield (MUSC), director

American Cultural Studies is an interdisciplinary minor in which students will have the opportunity to develop

## 200 Introduction to American Cultural Studies

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 America 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.

## Biochemistry

Emms (BIOL), Boyd (CHEM), chairs; Advisory committee: Chaplin (BIOL), Glorvigen (CHEM), Marsh (CHEM), Verhoeven (BIOL), committee chair

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 and chemistry 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.

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.

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  
BIOL 202 Genetics and Population Biology  
BIOL 204 Cellular and Molecular Biology  
CHEM 111 General Chemistry I  
CHEM 112 General Chemistry II  
CHEM 201 Organic Chemistry I  
CHEM 202 Organic Chemistry II  
CHEM 440 Biochemistry I  
CHEM 442 Biochemistry II

Plus one of:

CHEM 331 Chemical Thermodynamics and Reaction Dynamics  
CHEM 332 Quantum Chemistry and Molecular Spectroscopy

Plus:

Twelve additional credits numbered BIOL 295 or higher.

Note: Four credits must be at the 400-level, excluding Research. Four credits may be in Research at the 300-level.

Four additional credits in CHEM, selected in consultation with the adviser.





## Language Courses

JAPN	111	Elementary Japanese I
JAPN	112	Elementary Japanese II
JAPN	211	Intermediate Japanese I
JAPN	212	Intermediate Japanese II
JAPN	311	Advanced Japanese

Chinese language courses are available at Hamline University.

## Environmental Studies (ENVR)

Hoffman (POL), director; Governance Committee: Degnan (PHIL), Evarts (BIOL), Hickson (GEOL), Ippoliti (CHEM), Kelley (GEOG), Lorah (GEOG), Neuzil (JOMC), Sathe (ACCT), Scott (PSY), Smith-Cunnen (SOC), Vincent (ECON), Werner (GEOG)

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

151	Humans and the Environment
212	Social Dynamics and the Environment
301	Environmental Ethics
351	Environmental Policy Formation
401	Field Seminar

Plus:

BLAW	351	Environmental Law
		or ECON 252 or POL 205 (with approval of program director)
GEOL	115	Environmental Geology or one of GEOL 110, 111, 113, 114

Plus one of:

BIOL	102	Conservation Biology
BIOL	201	Diversity and Adaptation

Plus either:

CHEM	101	Environmental Chemistry
		or
CHEM	111	General Chemistry I and 112 General Chemistry II

Plus one of:

MATH	303	Statistics for the Applied Sciences
QMCS	220	Statistics I

Plus:

Concentration area in one of the natural sciences

Major in Environmental Studies: Concentration Area in Social Science, Business, or Humanities

- 151 Humans and the Environment
- 212 Social Dynamics and the Environment
- 301 Environmental Ethics
- 351 Environmental Policy Formation
- 401 Field Seminar

Plus one of the three sequences below:

- BIOL 102 Conservation Biology
- CHEM 101 Environmental Chemistry
- GEOL 111 Introductory Physical Geology or one of GEOL 110, 113, 114, 115
- GEOL 252 Geomorphology

or

- BIOL 201 Diversity and Adaptation
- BIOL 202 Genetics and Population Biology
- CHEM 101 Environmental Chemistry
- GEOL 115 Environmental Geology or one of GEOL 110, 111, 113, 114

or

- BIOL 102 Conservation Biology
- CHEM 111 General Chemistry I
- CHEM 112 General Chemistry II
- GEOL 115 Environmental Geology or one of GEOL 110, 111, 113, 114

Plus one of:

- MATH 303 Statistics for the Applied Sciences
- QMCS 220 Statistics I

Plus:

Concentration area in one of the social sciences, business, or humanities

Minor in Environmental Studies

- 151 Humans and the Environment
- 212 Social Dynamics of the Environment
- 301 Environmental Ethics
- 351 Environmental Policy Formation

Plus:

- BLAW 351 Environmental Law
- or ECON 252 or POL 205 (with approval of program director)

151 Humans and the Environment

A study of the interaction of humans and the environment over time and space; a broad introduction that integrates a variety of social-science perspectives into an understanding of the environment and the relations between humans and nature. Specific topics include ecology, population, economic development, resources and sustainable development. This course fulfills the second-level Computer Competency requirement in the core curriculum.

212 Social Dynamics and the Environment

An emphasis on the ways in which people have created, and attempted to solve, environmental problems in different cultural and historical contexts. Examines the roles of the entire spectrum of actors and human communities, including individuals, families, groups and formal organizations, neighborhoods, cities and nations. Students examine how individual dynamics (such as altruism and economic self-interest) and collective dynamics (such as competition, cohesion, social definitional processes and global interdependence) direct humans in their interactions with the environment.

Prerequisite: 151

295, 296 Topics

301 Environmental Ethics (PHIL 358)

Consideration of the ethical issues arising from human interaction with the environment, including population pressure, pollution, conservation and preservation. Focus on the grounds of our obligation to resolve such issues; the question of what persons and things are worthy of moral consideration; and the respective roles of individuals, organizations and government in addressing environmental problems. Case studies will be used to trace the implications of various ethical and political theories.

Prerequisite: 151 and PHIL 214

351 Environmental Policy Formation

An examination of environmental policy outcomes generated by institutions and organizations, including legis-



Plus three of:

COMM 425 Family Communication  
ENTR 349 Family Business Management  
FAST 495, 496 Individual Study (2 credits)  
FAST 497, 498 Individual Study  
HIST 345 Family and Women in Chinese History  
HLTH 462 Human Sexuality Education  
PSY 200 Psychology of Infancy and Childhood  
PSY 203 Psychology of Adolescence  
PSY 204 The Psychology of Adulthood and Aging  
PSY 288 Psychology of Marriage and the Family  
SOWK 210 Relationship, Intimacy, and Sexuality  
SOC 303 Aging and the Lifecourse  
SOC 304 Adolescence in Society  
SOC 321 Marriage and the Family  
THEO 315 Christian Marriage

295, 296 Topics

2 credits

297, 298 Topics

The subject matter of these courses, announced in the [Class Schedule](#), vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

400 Seminar in Family Studies

This advanced capstone course for the Family Studies minor is a multidisciplinary seminar taken after the learner has completed at least four courses in the Family Studies minor. The course will incorporate a variety of meth-

HIST 314 Modern Europe since 1945  
HIST 340 Foundations of Chinese Civilization  
HIST 341 History of Modern China  
HIST 345 Family and Women in Chinese History  
HIST 347 The Modernization of Taiwan, Hong Kong, and China  
HIST 371 History of U.S. Foreign Policy

POL 225 Introduction to World Politics  
POL 320 American Foreign Policy  
POL 326 International Law and Organizations  
POL 350 Comparative Politics of the New Europe  
POL 352 Third World Politics and Government  
POL 424 Seminar in International Politics

praxis”) as one works for justice and peace; recognize the important role of each; and develop the skills to use them. They will understand the principles of active nonviolence and how it operates to promote social change; be familiar with several historical examples of its use; know its strengths and limitations; know how to judge when its use is appropriate; and be capable of engaging in it personally or of advising others who are doing so. They will be capable of engaging in respectful dialogue with people who value and propose responses to violence and injustice that differ widely from their own responses. They will understand and be able to use conflict resolution skills in personal life, in small group dynamics, and in inter-group and international conflicts. They will have developed the personal skills and confidence needed to work effectively in organizations committed to justice and peace.

While the two core courses for the minor integrate all four of these stages, JPST 250 concentrates on descriptive analysis and THEO 305 concentrates on normative analysis. The additional three core courses for the major, JPST 450, 470, and 472 concentrate on action possibilities.

JPST 250 and THEO 305 require extensive student writing and discussion.

Major in Justice and Peace Studies

JPST	250	Introduction to Justice and Peace Studies
JPST	340	Active Nonviolence
JPST	470	Conflict Resolution
JPST	472	Justice and Peace Senior Seminar
THEO	305	Theologies of Justice and Peace

Plus significant experience:

May include analysis for course credit (through 475-478 Experiential Learning) or be noncredit.

Appropriate experience of poverty and injustice includes: appropriate foreign study, especially in connection with the experience of poverty or oppression. Examples: Ireland with study of Northern Ireland; programs through the Center for Global Education at Augsburg's program in Cuernavaca, Mexico; UMAIE and HECUA foreign programs in Scandinavia and Latin America; the Metro Urban Studies Term (MUST) in the Twin Cities through HECUA; January term or summer session programs, such as those arranged through Campus Ministry and VISION at San Lucas Toliman, Guatemala and elsewhere; alternative spring break programs, such as those arranged through Campus Ministry and VISION at Turtle Mountain Indian Reservation in North Dakota, Appalachia, Twin Cities urban plunge and others. Various Twin Cities programs through VIA, such as the Loaves and Fishes program and work in shelters.

Plus four additional credits in descriptive analysis

Examples of appropriate courses include:

BIOL	103	Nature and Society
COMM	340	Rhetoric of Race, Class, and Gender
ECON	211	Current Economic Issues
ECON	301	History of Economic Thought
ECON	337	Economics of the Public Sector
ECON	339	Labor Economics
ECON	345	Economics of Development and Growth
ECON	349	Comparative Economic Systems
ENVR	151	Humans and the Environment
ENVR	212	Social Dynamics and the Environment
GEOG	111	Human Geography
GEOG	113	World Geography
HIST	210	Modern Latin America, 1800 to the Present
HIST	358	Twentieth-Century United States
HIST	368	Women in the United States
HIST	372	The United States and Vietnam
IDSC	472	MUST Seminar: Field Studies in the Twin Cities (HECUA)
POL	225	Introduction to World Politics
POL	314	Constitutional Rights and Liberties
POL	326	International Law and Organizations
POL	350	Comparative Politics of the New Europe
POL	352	Third World Politics and Government
PSY	121	Social Psychology
SOC	110	Social Problems
SOC	251	Race and Ethnicity
SOC	255	Gender in American Society
SOC	365	Social Psychology
SOWK	340	Human Behavior and the Social Environment

Plus four additional credits in normative analysis

Examples of appropriate courses include:

BLAW 303 International Business Law

BLAW 351 Environmental Law

BLAW 352 Gender Issues and the Law

BUS 201 Ethics and Practice: Foundations of Business

CATH 312 Catholic Social Thought

ENVR 301 Environmental Ethics

IDSC 291 The Anatomy of Violence

295, 296 Topics

2 credits

297, 298 Topics

The subject matter of these courses, announced in the ~~Class Schedule~~ ~~Class Schedule~~, vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

340 Active Nonviolence

Active nonviolence as a means for societal defense and social transformation analyzed through case studies of ac

495, 496 Individual Study  
 497, 498 Individual Study  
 See the description of these courses at the beginning of the "Curricula" section of this catalog.

2 credits

### Legal Studies

Hatting (POL), 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  
 BLAW 302 Business Law for Accounting  
 BLAW 303 International Business Law  
 BLAW 304 Real Estate Law  
 BLAW 351 Environmental Law  
 BLAW 352 Gender Issues and the Law  
 BLAW 401 Legal Research, Advocacy, and Dispute Resolution  
 BLAW 402 Law of Electronic Commerce  
 ECON 321 Law and Economics  
 HIST 326 English Law and Government before the American Revolution  
 HIST 365 U.S. Constitutional History  
 IDSC 340 Criminal Law and the Social Order  
 JOUR 304 Media Law  
 PHIL 357 Political Philosophy  
 PHIL 359 Philosophy of Law  
 POL 312 Judicial Process  
 POL 313 Constitutional Law and Politics  
 POL 314 Constitutional Rights and Liberties  
 POL 326 International Law and Organizations  
 POL 414 Seminar in Law and Judicial Politics  
 THEO 397 Topics courses that involve a legal aspect (consult Legal Studies adviser)

### Literary Studies

Mikolajczak (ENGL) and Moorman (M&CL), directors

Students wishing an excellent preparation for the many occupations in which the ability to use language effectively is absolutely essential may be interested in the following major, which is not basically career-oriented.

The primary aims of the major in literary studies are to extend to highly motivated students the opportunity:

1. To deepen their mastery of two languages
2. To provide them with double evidence that literature, as the highest form of language art, is based on the skillful use of adequately developed languages in the creation of an esthetic world of the human spirit
3. To enable them to experience firsthand that much is lost in the translation of a great literary work
4. To help them appreciate more deeply that literature transcends national and cultural boundaries.

#### Major in Literary Studies

##### Prerequisite:

At least three high school years of a second language, accepted for this major by the Department of Modern and Classical Languages. Either 212 in that language, or its equivalent, must also be taken.

##### Option I (administered by the Department of Modern and Classical Languages):

Twenty credits in courses numbered 300 or higher in the literature of a non-English language, chosen in consultation with the chair of the Department of Modern and Classical Languages

Plus:

Sixteen credits in courses numbered 300 or higher in English literature, chosen in consultation with the chair of the Department of English

Option II (administered by the Department of English):

Twenty credits in courses numbered 300 or higher in English literature, chosen in consultation with the chair of the Department of English

Plus:

Sixteen credits in courses numbered 300 or higher in the literature of a non-English language, chosen in consultation with the chair of the Department of Modern and Classical Languages

Plus:

(required under both options)

Four credits in European history

Recommended:

An additional four credits in European history, four credits in aesthetics, and courses in a third language, preferably a classical language if the second language is modern

Courses such as phonetics, conversation, composition and civilization (if not based on literature) will not count as courses in literature.

### Middle East Studies (ACTC)

Farlow (POL), director

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 East Studies considers the following concepts: 1) the Middle East has global significance and is vital to the national interests of many countries, including the United States; 2) increasing numbers of Americans have some Middle Eastern ethnic or religious 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.

The minor in Middle East 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, economic situation, 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 East studies minor provides valuable preparation for careers in government service, research, non-governmental organizations, journalism, education, and consulting in international business. Acquiring some Middle East expertise will make ACTC students more credible candidates for internships with organizations related to the Middle East. The availability of the minor would support honors research programs at the ACTC colleges.

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. In addition, students may enroll in Arabic language classes through the ACTC language contract with the University of Minnesota. Elementary and intermediate Hebrew are offered at Macalester College.

Minor in Middle East Studies

POL 3580H Politics and Society in the Middle East

Plus 20 credits in area courses

2 courses selected from the social sciences

2 courses selected from the humanities

1 elective chosen from either area

Plus language courses

Students may substitute two courses in a Middle East 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 East studies minor with a major in business, journalism, or political science. A program of study abroad or an internship in the Middle East is recommended strongly and will receive credit toward the minor. All options should be discussed with the student's advisor.

The following courses have been approved with the understanding that their content is focused on the Middle East. Locations: A-Augsburg; C-St. Catherine; H-Hamline; M-Macalester; T-St. Thomas.

#### Language Courses

CLAS 50M-01	Elementary Hebrew I
CLAS 50M-03	Elementary Hebrew II
CLAS 50M-07	Intermediate Hebrew I
CLAS 50M-09	Intermediate Hebrew II

#### Required Foundational Course

POL 3580H	Politics and Society in the Middle East
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#### Social Sciences Courses (Student must select at least two courses from this group):

POL 268-468A	Regional Political Dynamics in the Middle East
POL 459A	Politics and Society in the Middle East Today
POL 335C	Nationalism, War and Revolution in the Middle East
SOCI 35M	Images of Women in the Middle East
CORE 399C	Search for Justice in the Middle East

#### Humanities Courses (Students must select at least two courses from this group):

ENG 270T	Romance and Resistance: 20th Century Arabic Writers
HIS 63M	Jewish History

Note: The four courses listed below (INS 225, REL 33, REL 198, and THEO 334) are considered to be equivalent in content. Students may receive credit for only one.

INS 225A	Introduction to Islam
REL 33M	Islam
REL 1980H	Islam and the New World Order
THEO 334T	Islam

Note: The three courses listed below (REL 475, REL 146, and THEO 332) are considered to be equivalent in content. Students may receive credit for only one.

REL 475A	Judaism
REL 1460H	Introduction to Judaism
THEO 332T	Judaism

THEO 333T	Contemporary Judaism
REL 3110H	Jewish Ethics
REL 34M	Introduction to Jewish Life and Thought
REL 42M	Women in Judaism
REL 50M	Topics: The Evolution of the Jewish Mind
THEO 370C	Jewish Studies

#### Internships and Study Abroad

Internships and opportunities for study abroad are available 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.

#### Renaissance Program

Coulter (PHIL), director

The Renaissance Program is an interdisciplinary program which provides students the opportunity of combining the distinct learning experiences of a concentration in a liberal or non-business related field with exposure to career-related studies and significant work experience. It targets students majoring in the liberal arts who want preparation for their career search.

Specifically, the Renaissance Program has a three-fold set of objectives for each of its students.

1. Participants elect a major field of study from any of the liberal arts disciplines, namely, from the humanities, social sciences, natural sciences and the like. Majors in the Division of Business or the Department of Health and Human Performance are excluded from this program.
2. Participants take the Renaissance Program Professional Minor, composed of a set of six courses selected by each student according to personal interest and career-plan, from a broad range of pre-professional and professional areas.
3. Participants complete one internship in a career-related field. Students are encouraged to be creative and to search for unique ways to lead the





Concentration in Social Sciences

Sixteen credits from the list of approved courses in Track #2, plus four credits from Track #1, as approved by adviser

Plus:

Eight additional credits in courses selected from either Track #1 or Track #2

Note Students are strongly recommended to take a third year of Russian or any other east European language. A program of study abroad in Russia or one of the central or east European countries, during a semester, a January term, or during the summer, is strongly encouraged. All options should be discussed with the student's adviser.

Courses available for this program

Letter following the course number indicates the institution offering the course:

- A Augsburg College
- C The College of St. Catherine
- H Hamline University
- M Macalester College
- T University of St. Thomas

Language courses

- RUSS 111T Elementary Russian I
- RUSS 112T Elementary Russian II
- RUSS 211T Intermediate Russian I
- RUSS 212T Intermediate Russian II
- RUSS 31M Advanced Russian I
- RUSS 32M Advanced Russian II
- RUSS 33M Advanced Russian Conversation

Note Overlapping courses are shown in parentheses

Track #1: Humanities concentration

- HIST 348A Russia and Soviet Union in 20th Century (HIST 3730H, HIST 333T)
- HIST 3370H Modern Russia from the Empire to Revolution (HIST 60M)
- HIST 3710H The Rise and Fall of the Soviet Union
- HIST 3730H Heart of Europe: Central and Eastern Europe in 20th Century (HIST 348A, HIST 333T)
- HIST 55M History and Philosophy of Socialism
- HIST 60M State and Society in Tsarist Russia (HIST 3370H)
- HIST 62M History of the Soviet Union and Its Successors
- HIST 313T Europe 1750 to 1945
- HIST 331T Eastern Europe, 1699-1914
- HIST 333T Eastern Europe, 1914 to Present (HIST 348A, HIST 3730H)
- HIST 464T Seminar in European History

Russian literature

- RUSS 51M 19th Century Literature in Translation
- RUSS 52M 20th Century Literature and Culture in Translation
- RUSS 63M Orientalism and Empire: Russia's Literary South
- RUSS 67M Dostoevsky and Gogol

Advanced language

- RUSS 41AM Russia in Russian—Speaking/Listening
- RUSS 41BM Russia in Russian—Reading/Writing
- RUSS 88M Senior Seminar (taught in Russian - Humanities track only)

Culture

- RCEE 88M Senior Seminar
- RUSS 50-01M Topics (subject matter will vary)
- RUSS 55M Russian Culture
- RUSS 56M Soviet Mass Culture
- RUSS 64M Culture and Revolution

Human Rights

- IS 50M Topics: Human Rights

Theology

- REL 420A The Russian Orthodox Church
- REL 66M The Russian Religious Experience

Track #2: Social sciences concentration

ECO	317A	Comparative Economic Systems (ECON 25M, ECON 349T)
ECO	495A	Topics
ECON	25M	Comparative Economic Systems (ECO 317A, ECON 349T)
ECON	35M	Economics of the Transition
ECON	346T	Topics: Country and Area Studies in Economics
ECON	349T	Comparative Economic Systems (ECO 317A, ECON 25M)
POL	351A	Topics in Communist/Post-Communist Systems
POL	363A	Russian and Chinese Foreign Policy
POSC	220C	Introduction to Comparative Government
POSC	225C	Introduction to World Politics
POL	3620H	Government and Politics of Eastern and Central Europe
POL	350T	Comparative Politics of the New Europe
POL	424T	Seminar in International Politics
POL	454T	Seminar in Comparative Politics

Business/Management

BUS	364A	East-West Trade
BADM	350C	International Marketing and Management

Social Sciences

Langan (ECON), Wright (HIST), Farlow (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 – 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 and 112 The Modern World Since 1550

or

HIST 113 Early America in Global Perspective and 114 The Modern U.S. in Global Perspective

Plus:

ECON 251 Principles of Macroeconomics

ECON 252 Principles of Microeconomics

ECON One additional course in economics numbered above 300

HIST One additional history course numbered above 300

POL 105 Politics and Government in Comparative Perspective

POL Two additional political science courses

SOC 100 Introduction to Sociology

SOC 210 Research Methods in Sociology

SOC One additional sociology course numbered above 300

Plus:

Twelve additional credits in courses numbered above 300 from one of the following departments: Economics, History, Political Science, or Sociology. The choice of these courses is subject to the approval of the department involved.

Plus one of:

MATH 101 Finite Mathematics

MATH 111 Calculus for Business and Social Science

MATH 113 Calculus I

QMCS 220 Statistics I

Urban Studies

Hoffman (POL), director

Urban Studies is an interdisciplinary field of inquiry which treats the city as responsible for the creation of unique patterns of social and physical organizations. The minor provides students with an opportunity to study the “urban way of life” using the insights generated by the traditional social science disciplines. By exposing themselves to such variety, students obtain a more comprehensive and integrated view of the city than is possible within a single discipline. The minor is recommended for those students interested in entering careers or fields of academic study relating to urban issues and problems. These include fields such as public administration, urban

planning, transportation, and planning. The minor also is recommended for students with career interests in the non-profit sector as well as for those interested in private sector careers which require substantial interaction with the public sector. Students are also encouraged to participate in the HECUA (Higher Education Consortium for Urban Affairs) programs. Descriptions of the HECUA programs are located under that title in this catalog.

Minor in Urban Studies

- ECON 252 Principles of Microeconomics
- ECON 333 Regional and Urban Economics
- HIST 377 The History of the Twin Cities
- POL 303 Urban and Metropolitan Politics and Government
- SOC 332 Urban Sociology

Women's Studies (WMST)

Manske (BIOL), 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.

Major in Women's Studies

- 205 Foundations in Women's Studies
- 480 Women's Studies Seminar

Plus:

One Internship course (designated as Individual Study)

At least eight credits in Humanities

At least eight credits in the Social Sciences and Natural Sciences

Four credits in Multicultural or Ethnic Studies

Eight elective credits chosen from the Humanities and/or the Social Sciences and Natural Sciences

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

- 205 Foundations in Women's Studies

Plus:

Eight credits in Humanities

Eight credits in Social Sciences and Natural Sciences

Recommended:

- 480 Women's Studies Seminar

Note: The seminar can count as one of the humanities, social science, or natural science courses.

205 Foundations in Women's Studies

This multi-disciplinary course is designed to raise awareness of women's status and women's diversity; to critically examine disciplines and social practices through the lens of feminist theory; to recover past achievements of women and survey the work that women do now; to expand perspectives; and to provide a basis for critical evaluation of future learning. Available each semester on at least one consortial campus, usually offered at UST Spring semester. This course fulfills the Human Diversity requirement in the core curriculum.

295, 296 Topics

2 credits

297, 298 Topics

The subject matter of these courses, announced in the Class Schedule, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

475, 476 Experiential Learning

2 credits

477, 478 Experiential Learning

See the description of these courses at the beginning of the "Curricula" section of this catalog.

480 Women's Studies Seminar

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: 205

483, 484 Seminar

2 credits

485, 486 Seminar

See the description of these courses at the beginning of the "Curricula" section of this catalog.

487, 488 Topics

2 credits

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

College of Business

W. Raffield, interim associate dean; Fisher, director of student services

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. 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.

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 course work applied to a business major must be equivalent to current College of Business courses.

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 will not fulfill current requirements.

Major in Business Administration (B.A.)

One of the business concentrations of:

- Accounting –see description under Department of Accounting
- Business Communication see description under Department of Management
- Entrepreneurship see description under Department of Entrepreneurship
- Finance –see description under Department of Finance
- General Business
- Human Resource Management see description under Department of Management
- International Business
- Leadership and Management see description under Department of Management
- Legal Studies see description under Department of Legal Studies in Business
- Marketing –see description under Department of Marketing
- Operations Management see description under Department of Management
- Real Estate Studies (B.S.) see description under Department of Finance

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.

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

Plus one of:

BLAW 301 Legal Environment of Business  
BLAW 303 International Business Law

Allied requirements

ECON 251 Principles of Macroeconomics  
ECON 252 Principles of Microeconomics  
QMCS 220 Statistics I

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 one of:

MATH 101 Finite Mathematics  
MATH 109 Calculus with Review II  
MATH 111 Calculus for Business and Social Science  
MATH 113 Calculus I

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

Plus one of:

COMM 100 Public Speaking  
COMM 105 Communication in the Workplace  
COMM 322 Intercultural Communication  
ENGL 200 or above  
JOUR 215 Journalistic Writing in the Workplace  
JOUR 311 Persuasion in Writing

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 the director of Student Services to discuss those possibilities.

ACCT 205 Introduction to Accounting  
BLAW 303 International Business Law  
BUS 200 Community Service (0 credit)  
BUS 201 Ethics and Practice: Foundations of Business  
FINC 321 Financial Management  
MGMT 301 Management of Organizations and Processes  
MGMT 430 International Management  
MGMT 480 Integrative Issues of Business and Organizations  
MKTG 300 Principles of Marketing  
MKTG 330 International Marketing

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, international political science. (Three of the following core courses must be completed before taking IBUS courses: ACCT 205, FINC 321, MKTG 300, MGMT 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  
IBUS 460 Transnational Business Issues in Finance or Accounting  
IBUS 470 Transnational Issues in International Business

Allied requirements

COMM 230 Intercultural Communication  
ECON 251 Principles of Macroeconomics  
ECON 252 Principles of Microeconomics  
ECON 348 International Economics  
LANG Three semesters beyond 211\*  
QMCS 220 Statistics I

\*Students for whom English is a second language will take three semesters of ENGL numbered 200 or higher.



Plus one of:

MATH 101 Finite Mathematics  
MATH 109 Calculus with Review II  
MATH 111 Calculus for Business and Social Science  
MATH 113 Calculus I

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

Recommended:

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

Minor in Business Administration

BUS 200 Community Service (0 credit)  
BUS 201 Ethics and Practice: Foundations of Business

Plus one of:

ECON 251 Macroeconomics  
ECON 252 Microeconomics

Plus:

Sixteen credits selected from the College of Business with approval of the Business Minor adviser. Approval must be on file before the minor is official.

Note: Students must complete a minimum of 12 credits in Business Administration beyond BUS 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.

Business (BUS)

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

483, 484 Seminar 2 credits  
485, 486 Seminar

See the description of these courses at the beginning of the "Curricula" section of this catalog.

487, 488 Topics 2 credits

489, 490 Topics

The subject matter of these courses, announced in the ~~Class Schedule~~ <sup>Class Schedule</sup>, vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

491, 492 Research 2 credits

493, 494 Research

See the description of these courses at the beginning of the "Curricula" section of this catalog.

495, 496 Individual Study 2 credits

497, 498 Individual Study

See the description of these courses at the beginning of the "Curricula" section of this catalog.

#### International Business (IBUS)

450 Transnational Business Issues in Management, Marketing, or Business Law

This course is to be taken abroad. It is strongly suggested that this course be taken in the language of the country. Final determination as to the specific course and language will be decided before the course is taken in consultation with the international business adviser.

Prerequisite: Approval of international business adviser

460 Transnational Business Issues in Finance or Accounting

This course is to be taken in the country of choice. International accounting and finance practices are significantly different from those in the U.S. Therefore, the student should be extremely careful in choosing the course. Selection will be made only in consultation with the international business adviser.

Prerequisite: Approval of international business adviser

470 Transnational Issues in International Business

This 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 international business adviser

#### Accounting (ACCT)

QMCS 220 Statistics I

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

Plus one of:

MATH 101 Finite Mathematics

MATH 109 Calculus with Review II

MATH 111 Calculus for Business and Social Science

MATH 113 Calculus I

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

Plus one of:

COMM 100 Public Speaking

COMM 105 Communication in the Workplace

JOUR 215 Journalistic Writing in the Workplace

205 Introduction to Accounting

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:

418 Controllership

2 credits

An examination of the controller function. This course will examine, through case study, how a controller assembles financial and other information for operating managers. Topics might include product line analysis, variance analysis, use of accounting data for planning, supervision of budgeting process, and analysis of internal statements.

Prerequisite: ACCT 317

419 Advanced Income Tax (ACCT 314)

2 credits

A study of the basic principles of business taxation using a code section approach. This course deals primarily with the federal tax law as it relates to corporations and partnerships. The study of S corporations is included in this course.

Prerequisite: ACCT 315

Entrepreneurship (ENTR)

Cornwall (chair), Carlock, Carter, Ebben, Folker, Johnson, Sarafolean

The concentration in entrepreneurship is designed for students who are considering owning their own business at some point in their career, are interested in working in a small or family-owned business, or are interested in working in corporate ventures.

Students completing a concentration in entrepreneurship will have the skills necessary to start a business venture within five years of graduation. They will have the skills necessary to play a meaningful role in the management of a small or family-owned business or corporate venture, and in their communities.

Concentration in Entrepreneurship

ACCT 205 Introduction to Accounting  
BUS 200 Community Service (0 credit)  
BUS 201 Ethics and Practice: Foundations of Business  
ENTR 200 Foundations in Entrepreneurship  
ENTR 450 Entrepreneurship: Management and Strategy  
FINC 321 Financial Management  
MGMT 301 Management of Organizations and Processes  
MKTG 300 Principles of Marketing

Plus one of:

BLAW 301 Legal Environment of Business  
BLAW 303 International Business Law  
BLAW 304 Real Estate Law

Plus three of:

Plus one of:

390 Diversity Issues in Entrepreneurship

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

450 Entrepreneurship: Management and Strategy

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, MGMT 301, and MKTG 300

Finance (FINC)

Vang (chair), Barabanov, Beckmann, Cha, Daugherty, Gahlon, Hamilton, Jaiswal-Dale, Jithendranathan, Karvel, Mohanty, Samarakoon, Shovein, M. Sullivan, Williams

Students who concentrate in finance receive preparation for the financial service industries or for financial departments of non-financial corporations. Financial service industries would include banks, insurance companies, and

Plus one of:

COMM 100 Public Speaking  
COMM 105 Communication in the Workplace  
ENGL 200 or above  
JOUR 215 Journalistic Writing in the Workplace  
JOUR 311 Persuasion in Writing

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 student 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.

ACCT 205 Introduction to Accounting  
BLAW 304 Real Estate Law  
BUS 200 Community Service (0 credit)  
BUS 201 Ethics and Practice: Foundations of Business  
FINC 200 Real Estate Principles  
FINC 321 Financial Management  
FINC 360 Real Estate Property Management  
FINC 460 Real Estate Finance and Investments  
FINC 461 Real Estate Appraisal  
FINC 470 Real Estate Development  
MGMT 301 Management of Organizations and Processes  
MKTG 300 Principles of Marketing

Allied Requirements

ECON 251 Principles of Macro-Economics  
ECON 252 Principles of Micro-Economics  
ECON 333 Regional and Urban Economics  
QMCS 220 Statistics I

Plus one of:

MATH 101 Finite Mathematics  
MATH 109 Calculus with Review II  
MATH 111 Calculus for Business and Social Science  
MATH 113 Calculus I

Plus one of:

COMM 100 Public Speaking  
COMM 105 Communication in the Workplace

Plus:

Eight credits chosen from the following lists in consultation with the Real Estate adviser.

General Real Estate (apply to all areas)

COMM 220 Small Group Communication  
COMM 222 Interpersonal Communication  
COMM 240 Persuasion  
COMM 325 Nonverbal Communication  
ENTR 200 Foundations of Entrepreneurship  
ENTR 252 Creating the 21st Century  
ENTR 360 Creativity and Change  
MKTG 310 Professional Selling

Brokerage/Investment

QMCS 215 Rapid Application Development

Mortgage Finance

FINC 430 Financial Intermediaries

Appraisal

ECON 311 Forecasting  
MKTG 340 Marketing Research  
QMCS 215 Rapid Application Development

Property Management  
ECON 311 Forecasting  
GEOG 221 Computer Skills in Geography  
GEOG 321 Geographic Information Systems  
GEOG 330 Geography for Business and Planning  
GEOG 430 Urban Geography  
MKTG 360 Retailing and Retailing Services



#### 440 Advanced Investments

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

#### 442 Fixed Income Securities

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

#### 450 International Financial Management

The management of foreign and multinational financial operations. On the basis of international finance theory, students will learn foreign exchange risk management, foreign investment analysis, the financing of foreign operations, comparative accounting, international banking and international tax management.

Prerequisites: FINC 324, MATH 109 or 111 or 113

#### 460 Real Estate Finance and Investment

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

#### 461 Real Estate Appraisal

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

#### 470 Real Estate Development

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

#### 480 The Chief Financial Officer

Case studies on the control and treasury functions, and an examination of the information gathering, analytical and decision-making process required of the CFO. Students prepare case briefs for class discussions and formal presentations. Case assignments require students to write extensively and challenge their analytical ability. It is recommended that finance majors take this course in their final semester.

Prerequisites: FINC 324, MATH 109 or 111 or 113

### Legal Studies in Business (BLAW)

Kunkel (chair), Erstling, Marsnik

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 Legal Studies in Business 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 Legal Studies in Business

ACCT 205 Introduction to Accounting

BLAW 401 Legal Research, Advocacy, and Dispute Resolution

BUS 200 Community Service (0 credit)



Plus one from each of the following:

COMM 100 or 105 Public Speaking or Communication in the Workplace

COMM 220 or 320 Small Group Communication or Organizational Communication

Plus eight additional credits:

COMM 200 or above

Allied requirements

ECON 251 Principles of Macroeconomics

ECON 252 Principles of Microeconomics

QMCS 220 Statistics I

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 one of:

Plus one of:

COMM 100 Public Speaking  
COMM 105 Communication in the Workplace  
COMM 322 Intercultural Communication  
ENGL 200 or above  
JOUR 215 Journalistic Writing in the Workplace  
JOUR 311 Persuasion in Writing

Plus two of:

CATH 306 Christian Faith and the Management Professions (THEO 306)  
COMM 320 Organizational Communication  
PSY 111 General Psychology  
SOC 100 Introduction to Sociology  
SOC 251 Race and Ethnicity  
SOC 365 Social Psychology

Concentration in Leadership and Management

Plus one of:  
COMM 100 Public Speaking

Plus one of:

- COMM 100 Public Speaking
- COMM 105 Communication in the Workplace
- COMM 322 Intercultural Communication
- ENGL 200 or above
- JOUR 215 Journalistic Writing in the Workplace
- JOUR 311 Persuasion in Writing

### 300 Management for Non-Business Majors

This course presents a theory of management. Starting with the functions of management (planning, organizing, staffing, directing, and controlling), it examines the nature of structure, authority, accountability, responsibility, motivation and the concept of leadership, and the role of the professional manager. Not open to business majors. Offered in spring semester.

Prerequisite: Junior standing.

### 301 Management of Organizations and Processes

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: BUS 201, ACCT 205, and junior standing

### 345 Operations Management

An examination of the concepts and techniques utilized in the management of manufacturing and service operations. The focus is on the tactical tools of operations management systems. Topics covered include the management of process, technology, production, quality, inventory, workforce and facilities in operating systems. Offered in fall semester.

Prerequisite: MGMT 301

### 346 Materials Management

This course provides the conceptual and analytic framework for the materials management function of businesses. It focuses on the development and the implementation of the materials portion of the operations system. Many of the topics will require the use of computers and the use of operations management software. Offered in fall semester.

Prerequisite: MGMT 301

### 347 Systems and Theories in Operations Management

This course emphasizes operations systems and theories found in today's businesses. It provides both the conceptual frameworks for these systems and theories, and requires the students to experience real work examples via plant tours and on-site visits. Topics may include theory of constraints, supply chain management, value chain management, distribution and logistics, lean/agile/flexible operations systems, philosophy and techniques of JIT and other current inventory management techniques. Offered in spring semester.

Prerequisite: MGMT 301

### 380 Organizational Change and Development

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. Offered in spring semester.

Prerequisites: BUS 201 and junior standing

### 382 Management and Leadership

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 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: BUS 201 and junior standing

### 384 Project Management

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 project) and the behavioral dynamics that need to be managed to achieve success. The use of project management skills as applied to new product launches (marketing) or installation of software information systems is







## Teacher Education (EDUC)

Rigoni (chair), Brownstein, Hunter, Nistler, Payne, Reif, Smith, Taylor, Warring

Note: The Teacher Education program is presently completing its alignment with state licensure standards. As a result, the actual program requirements may vary slightly from the curricula listed in this catalog. Consult a Teacher Education adviser for the latest information on a particular program.

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 National Council for the Accreditation of Teacher Education (NCATE) and the North Central Association of Colleges and Secondary Schools and are designed to meet or exceed Minnesota State Board of Teaching licensure requirements.

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. Recent state licensure rule changes make careful planning particularly important. Handbooks and School of Education catalog supplements outline specific departmental policies and are available in the Teacher Education Department office in Opus Hall.

### Admission to the Program

Students normally begin their application for admission to the Teacher Education program during their sophomore year, while enrolled in Block I (EDUC 210 and 212). Candidates typically complete their application during Block II (EDUC 330). Criteria for admission to the education program include:

- cumulative grade point of 2.75 or above;
- positive recommendations from major/co-major adviser, education adviser, and interview team;
- evidence of a positive initial clinical experience;
- completion of the Praxis I – Pre-Professional Basic Skills Test (PPST)

Persons seeking licensure to teach in the state of Minnesota must complete all three components (reading, writing, and mathematics) of the PPST prior to program admission. Students must pass all three components in order to apply for licensure in the State of Minnesota. Contact the department office in Opus Hall for information about test dates and fees.

### Retention in the Program

Students accepted into the department must maintain a cumulative grade point average of 2.75 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 unprofessional actions or unsatisfactory progress toward meeting state mandated licensure standards.

## Program Options

### Plan A

Elementary/middle level and secondary/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 completing their undergraduate degree. Students who seek the B option should consult with the department chair at least one semester prior to graduation. Students must be fully admitted to the undergraduate Department of Teacher Education prior to application for Plan B. This is not an option for students with majors that do not stand alone, such as physical education, social studies, and SMEE.





Major in Elementary Education with a 5-8 Specialty in Science

Block I

EDUC 210 Education's Place in Society

EDUC 211 Field Experience: Introductory (K-12) (0 credit)

EDUC 212 Human Relations and Multicultural Education

Block II

EDUC 330 Psychology for Teaching and Learning

EDUC 331 Field Experience: Middle Level (5-8) (0 credit)

EDUC 350 Language Development, Literacy, and Literature I

Block III

EDUC 369 Field Experience: Primary Level (K-4) (0 credit)

EDUC 370 Language Development, Literacy, and Literature II

EDUC 371 Teaching Mathematics and Technology

EDUC 372 Teaching Science and Healthy, Active Living

EDUC 373 Teaching Social Studies and Fine Arts

EDUC 374 Seminar in Middle Level Specialty Area (0 credit)

Block III

EDUC 372 Teaching Science and Healthy, Active Living  
 EDUC 373 Teaching Social Studies and Fine Arts  
 EDUC 374 Seminar in Middle Level Specialty Area (0 credit)  
 Block IV  
 EDUC 456 Inclusive School Communities (2 credits)  
 EDUC 460 Student Teaching and Seminar (6 credits)  
 EDUC 461 The Teacher as Educational Advocate

Plus:

ECON 211 Current Economic Issues  
 GEOG 113 World Geography  
 HIST 113 Early America in Global Perspective  
 MATH 100 Mathematical Sampler  
 MATH 121 Structures of Elementary Mathematics  
 POL 101 American Government and Politics

Plus:

Two laboratory sciences (one each chosen from two different fields)  
 or  
 IDSC 150 and one recommended additional lab science

Plus:

A second major (which may incorporate courses from the middle level concentration requirements)  
 Demonstrated competence on all required state standards

Major in Elementary Education with a K-8 Specialty in World Languages and Cultures

Block I

EDUC 210 Education's Place in Society  
 EDUC 211 Field Experience: Introductory (K-12) (0 credit)  
 EDUC 212 Human Relations and Multicultural Education

Block II

EDUC 330 Psychology for Teaching and Learning  
 EDUC 331 Field Experience: Middle Level (5-8) (0 credit)  
 EDUC 350 Language Development, Literacy, and Literature I

Block III

EDUC 369 Field Experience: Primary Level (K-4) (0 credit)  
 EDUC 370 Language Development, Literacy, and Literature II  
 EDUC 371 Teaching Mathematics and Technology  
 EDUC 372 Teaching Science and Healthy, Active Living  
 EDUC 373 Teaching Social Studies and Fine Arts  
 EDUC 374 Seminar in Middle Level Specialty Area (0 credit)

Block IV

EDUC 456 Inclusive School Communities (2 credits)  
 EDUC 460 Student Teaching and Seminar (6 credits)  
 EDUC 461 The Teacher as Educational Advocate

Plus:

Successful completion of a minor or equivalent in one or more of the following languages:

French  
 German  
 Spanish

Plus:

MATH 100 Mathematical Sampler  
 MATH 121 Structures of Elementary Mathematics

Plus:

Two laboratory sciences (one each chosen from two different fields)  
 or  
 IDSC 150 and one recommended additional lab science

Plus:

A second major (which may incorporate courses from the middle level concentration requirements)  
 Demonstrated competence on all required state standards



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:

Plus:

Demonstrated competence on all required state standards

To complete a major in English, the following courses are required:

The "Four additional upper division credits in COMM or ENGL selected in consultation with adviser" would be an upper division ENGL course (COMM 340, 350, or 440 may be substituted)

To complete a major in Communication, the following courses are required:

Twelve additional upper division COMM credits

COMM 480 Capstone Course in Communication

Dance and Theatre Arts with a Theatre Specialization (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

EDUC 211 Field Experience: Introductory (K-12) (0 credit)

EDUC 212 Human Relations and Multicultural Education

Block II

EDUC 330 Psychology for Teaching and Learning

EDUC 331 Field Experience: Middle Level (5-8) (0 credit)

Block III

EDUC 383 Field Experience: Secondary (9-12)

THR 375 Methods of Teaching Theater and Dance

Note: This course substitutes for EDUC 381 and 382

Block IV

EDUC 456 Inclusive School Communities (2 credits)

EDUC 460 Student Teaching and Seminar (6 credits)

EDUC 461 The Teacher as Educational Advocate

Plus:

THR 105 Stagecraft

THR 214 Beginning Acting

THR 215 Beginning Directing

THR 221 History of Theater I: Classical through 17th Century

THR 222 History of Theater II: 18th Century through Contemporary

THR 223 History of Theater III: American

THR 231 Dance for Musical Theater

THR 253 Creative Dramatics

THR 412 Drama: Theory and Criticism

Plus:

Participation in at least two mainstage productions

Health Education (5-12)

Major in Health Education 5-12

Block I

EDUC 210 Education's Place in Society

EDUC 211 Field Experience: Introductory (K-12) (0 credit)

EDUC 212 Human Relations and Multicultural Education

Block II

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)

HLTH 440 Health Education : 5-12 Curriculum Assessment and Administration

HLTH 450 Health Education: 5-12 Methods, Resources and Partnerships

Note: These courses substitute for EDUC 381 and 382

Block IV

EDUC 456 Inclusive School Communities (2 credits)

EDUC 460 Student Teaching and Seminar (6 credits)

EDUC 461 The Teacher as Educational Advocate

Plus:

BIOL 101 General Biology  
HLTH 345 Nutrition for Health and Fitness  
HLTH 350 Personal Health and Wellness  
HLTH 353 Consumer, Community and Environmental Health  
HLTH 375 Lifelong Stress Management (2 credits)  
HLTH 400 Epidemiology  
HLTH 462 Human Sexuality Education  
HLTH 464 Critical Issues in Health Education  
PHED 410 Human Anatomy and Physiology

Plus one of:

PSY 111 General Psychology  
SOC 100 Introduction to Sociology

Plus one of:

CHEM 100 Chemistry in our World  
CHEM 101 Environmental Chemistry

Plus one of:

COMM 100 Public Speaking

Plus either:

MATH 303 Statistics for the Applied Sciences and one additional MATH course numbered 300 or above  
or

MATH 313 Probability and 314 Mathematical Statistics

Plus:

Demonstrated competence on all required state standards

#### Music Education

Music Education: Instrumental and Classroom Music K-12

Major in Music Education

Block I

EDUC 210 Education's Place in Society

EDUC 211 Field Experience: Introductory (K-12) (0 credit)

EDUC 212 Human Relations and Multicultural Education

Block II

EDUC 330 Psychology for Teaching and Learning

EDUC 331 Field Experience: Middle Level (5-8) (0 credit)

Block III

EDUC 260 Elementary Classroom Music Pedagogy (2 credits)

EDUC 360 Secondary Classroom Music Pedagogy (2 credits)

Note: These courses substitute for EDUC 381 and 382

EDUC 369 Field Experience: Primary Level (K-4) (0 credit)

Block IV

EDUC 456 Inclusive School Communities (2 credits)

TEGR 580 Student Teaching and Seminar (6 graduate credits)

TEGR 581 The Teacher as Educational Advocate (3 graduate credits)

See note below about completion of licensure plan B

Plus:

EDUC 214 Teaching Techniques Woodwind Instruments I (2 credits)

EDUC 216 Teaching Techniques Woodwind Instruments II (2 credits)

EDUC 218 Teaching Techniques Brass Instruments (2 credits)

EDUC 220 Teaching Techniques Percussion Instruments (2 credits)

EDUC 222 Teaching Techniques String Instruments I (2 credits)

EDUC 224 Teaching Techniques String Instruments II (2 credits)

Plus:

MUSC 112 Introduction to Music (students testing out of 112 take 115)

MUSC 113 Theory I

MUSC 212 Theory II

MUSC 213 Theory III

MUSC 312 Theory IV

MUSC 351 Introduction to Conducting (2 credits)

MUSC 353 Instrumental Conducting

MUSC 411 History and Literature of Music I

MUSC 412 History and Literature of Music II

MUSN See ensemble participation under the Major in Music in the department section of this catalog

MUSP 102 or 103 Skills for Piano Proficiency (0 credit)

MUSP 2xx Six semesters of performance studies in the same performance medium (12 credits)

MUSR 200 Piano Proficiency (0 credit)

MUSR 270 Level I Recital (0 credit)

MUSR 350 Level II Recital (0 credit)

PHYS 105 Musical Acoustics

An additional thirteen credits taken in Graduate Education (Plan B) complete licensure. These credits may apply towards a master's degree.

MUS 516 Developing the Child Voice (2 credits)

MUS 561 Teaching World Music (2 credits)

TEGR 580 Student Teaching and Seminar (6 credits)

TEGR 581 The Teacher as Educational Advocate (3 credits)

Plus:

Demonstrated competence on all required state standards

Music Education: Vocal and Classroom Music K-12  
Major in Music Education

Block I

- EDUC 210 Education's Place in Society
- EDUC 211 Field Experience: Introductory (K-12) (0 credit)
- EDUC 212 Human Relations and Multicultural Education

Block II

- EDUC 330 Psychology for Teaching and Learning
- EDUC 331 Field Experience: Middle Level (5-8) (0 credit)

Block III

- EDUC 260 Elementary Classroom Music Pedagogy (2 credits)
- EDUC 360 Secondary Classroom Music Pedagogy (2 credits)

Note: These courses substitute for EDUC 381 and 382

- EDUC 369 Field Experience: Primary Level (K-4) (0 credit)

Block IV

- EDUC 456 Inclusive School Communities (2 credits)
- TEGR 580 Student Teaching and Seminar (6 graduate credits)
- TEGR 581 The Teacher as Educational Advocate (3 graduate credits)

See note below about completion of licensure

Plus:

- EDUC 226 The Woodwind Family in Classroom Teaching (2 credits)
- EDUC 228 The Brass and Percussion Families in Classroom Teaching (2 credits)
- EDUC 230 The String Family in Classroom Teaching (2 credits)
- EDUC 362 Teaching Techniques for Voice

Plus:

- MUSC 112 Introduction to Music (students testing out of 112 take 115)
- MUSC 113 Theory I
- MUSC 212 Theory II
- MUSC 213 Theory III
- MUSC 312 Theory IV
- MUSC 351 Introduction to Conducting (2 credits)
- MUSC 352 Choral Conducting
- MUSC 411 History and Literature of Music I
- MUSC 412 History and Literature of Music II
- MUSN 142, 160 Chamber Singers, Concert Choir (minimum of six semesters)
- MUSN 143 Liturgical Choir (maximum of two semesters)
- MUSP 102 or 103 Skills for Piano Proficiency (0 credit)
- MUSP 2xx Six semesters of performance studies in the same performance medium (12 credits)
- MUSR 200 Piano Proficiency (0 credit)
- MUSR 270 Level I Recital (0 credit)
- MUSR 350 Level II Recital (0 credit)
- PHYS 105 Musical Acoustics

Plus:

Four credits of MUSP 133 (1/2 hour lesson) if voice is not principal instrument

Plus:

An additional thirteen credits taken in Graduate Education (Plan B) complete licensure. These credits may apply towards a master's degree.

- MUS 516 Developing the Child Voice (2 credits)
- MUS 561 Teaching World Music (2 credits)
- TEGR 580 Student Teaching and Seminar (6 credits)
- TEGR 581 The Teacher as Educational Advocate (3 credits)

Plus:

Demonstrated competence on all required state standards

Physical Education (K-12)

Major in Physical Education

Block I

- EDUC 210 Education's Place in Society
- EDUC 211 Field Experience: Introductory (K-12) (0 credit)
- EDUC 212 Human Relations and Multicultural Education

Block II

- EDUC 330 Psychology for Teaching and Learning
- EDUC 331 Field Experience: Middle Level (5-8) (0 credit)

Block III

- EDUC 369 Field Experience: Primary Level (K-4) (0 credit)
- PHED 204 Physical Education Methods for Elementary School
- PHED 304 Physical Education Methods for Middle School
- PHED 404 Physical Education Methods for Secondary School
- PHED 405 Physical Education Methods for Teaching Aquatics/First Aid

Note: These courses substitute for EDUC 381 and 382

Block IV

- EDUC 456 Inclusive School Communities (2 credits)
- EDUC 460 Student Teaching and Seminar (6 credits)
- EDUC 461 The Teacher as Educational Advocate

Plus:

- BIOL 101 General Biology
- HLTH 350 Personal Health and Wellness
- PHED 104 Physical Education Curriculum, Instruction, and Assessment
- PHED 215 Rhythms and Dance (2 credits)
- PHED 311 Motor Development (2 credits)
- PHED 351 Teaching of the Special Needs Student (2 credits)

CHEM 484 Seminar (1 credit)  
GEOL 111 Introductory Physical Geology or one of GEOL 110, 113, 114, 115  
MATH 113 Calculus I  
MATH 114 Calculus II  
PHYS 104 Astronomy  
PHYS 111 Introduction to Classical Physics I  
PHYS 112 Introduction to Classical Physics II

Plus four credits from:

CHEM 320 Instrumental Analysis  
CHEM 332 Quantum Chemistry and Molecular Spectroscopy  
CHEM 391 Research (1 credit)  
CHEM 440 Biochemistry I

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  
CHEM 482 Seminar (0 credit)  
CHEM 483 Seminar (0 credit)

Plus:

Eight additional credits from the list above

or

Eight credits from the B.A. Major Field Optional Courses List (see Department of Chemistry)

Science (5-8) plus 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.

Block I

EDUC 210 Education's Place in Society  
EDUC 211 Field Experience: Introductory (K-12) (0 credit)  
EDUC 212 Human Relations and Multicultural Education

Block II

EDUC 330 Psychology for Teaching and Learning  
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)  
EDUC 355 Reading for the 5-12 Teacher

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

EDUC 456 Inclusive School Communities (2 credits)  
EDUC 460 Student Teaching and Seminar (6 credits)  
EDUC 461 The Teacher as Educational Advocate

Plus:

BIOL 201 Diversity and Adaptation  
BIOL 202 Genetics and Population Biology  
CHEM 111 General Chemistry I  
CHEM 112 General Chemistry II  
GEOL 111 Introductory Physical Geology  
GEOL 130 Earth History  
GEOL 15M Oceanography (at Macalester)  
GEOL 211 Mineralogy  
GEOL 252 Earth Surface Processes and Geomorphology  
GEOL 340 Fundamentals of the Lithosphere I (Petrology)  
GEOL 360 Fundamentals of the Lithosphere II (Structural Geology)  
GEOL 421 Geophysics  
PHYS 104 Astronomy

Plus one of:

PHYS 109 General Physics I  
PHYS 111 Introduction to Classical Physics I

Plus:

Demonstrated competence on all required state standards

To complete a major in Geology, consult the chair of the department

Science (5-8) plus 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.

Block I

EDUC 210 Education's Place in Society

EDUC 211 Field Experience: Introductory (K-12) (0 credit)

EDUC 212 Human Relations and Multicultural Education

Block II

EDUC 330 Psychology for Teaching and Learning

EDUC 331 Field Experience: Middle 9 (eachingwmBdiaboarning)]TRead11.2330

Block II



Plus:

CHEM 111 General Chemistry I  
CHEM 112 General Chemistry II  
ENGR 350 Introduction to Electronics  
GEOL 111 Introductory Physical Geology or one of GEOL 110, 113, 114, 115  
MATH 113 Calculus I  
MATH 114 Calculus II  
MATH 200 Multivariable Calculus  
MATH 210 Linear Algebra and Differential Equations  
PHYS 104 Astronomy  
PHYS 111 Introduction to Classical Physics I  
PHYS 112 Introduction to Classical Physics II  
PHYS 225 Introduction to Modern Physics I  
PHYS 226 Introduction to Modern Physics II  
PHYS 323 Methods of Experimental Physics

Plus:

Four additional credits in PHYS courses other than 101

Plus either:

BIOL 101 General Biology  
or the three-course sequence  
BIOL 201 Diversity and Adaptation  
BIOL 202 Genetics and Population Biology  
BIOL 204 Cellular and Molecular Biology

Plus:

Demonstrated competence on all required state standards

To complete a major in Physics (B.A.), the following courses are required:

PHYS 300 Physics Seminar I (1 credit)  
PHYS 301 Physics Seminar II (1 credit)

Plus:

eight credits in courses above PHYS 301

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.

Block I

EDUC 210 Education's Place in Society  
EDUC 211 Field Experience: Introductory (K-12) (0 credit)  
EDUC 212 Human Relations and Multicultural Education

Block II

EDUC 330 Psychology for Teaching and Learning  
EDUC 331 Field Experience: Middle Level (5-8) (0 credit)  
EDUC 355 Reading for the 5-12 Teacher

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

EDUC 456 Inclusive School Communities (2 credits)  
EDUC 460 Student Teaching and Seminar (6 credits)  
EDUC 461 The Teacher as Educational Advocate

Plus:

POL 105 Politics and Government in Comparative Perspective  
PSY 111 General Psychology  
SOC 100 Introduction to Sociology  
SOC 301 General Anthropology

Plus one of:

ECON 101 The American Economy  
ECON 211 Current Economic Issues  
ECON 251 Principles of Macroeconomics

Plus one of:

- HIST 111 Origins of the Modern World to 1550
- HIST 112 The Modern World Since 1550

Plus one of:

- HIST 113 Early America in Global Perspective
- HIST 114 The Modern U.S. in Global Perspective

Plus one of:

- HIST 210 Modern Latin America, 1800 to the Present
- HIST 220 Introduction to Japanese History and Culture
- HIST 340 Foundations of Chinese Civilization
- HIST 341 The History of Modern China
- HIST 345 Family and Women in Chinese History
- HIST 347 The Modernization of Taiwan, Hong Kong, and China

Plus one of:

- GEOG 111 Human Geography
- GEOG 113 World Regional Geography

Plus:

Twenty-four additional credits in courses in any one of the Social Science disciplines (Economics, Geography, History, Political Science, Psychology, Sociology). Choice of these courses are subject to the approval of the department involved. (As part of the student outcomes assessment program at the university, all majors in social studies with a history concentration will be required to take the major field examination in history.)

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.

World Language and Cultures ut of the1EK7(3 /F3 1 Tf19 0 0 9 123.1017 699.224s u 0.13721 Tc 0.025 Tw 6254)25.9S outco

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

#### 210 Education's Place in Society

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 211

#### 211 Field Experience: Introductory (K-12)

0 credit

This is a 30-hour guided, reflective, in-school field experience intended to allow students to explore the professional realities of schools and education.

#### 212 Human Relations and Multicultural Education

Designed to engage teachers in a dialogue concerning the issues of cultural diversity in schools, its impact on the learning process and the construction of human relations. Emphasis will be placed on an education that is multicultural, gender fair, and disability aware. It examines issues such as racism, sexism, oppression, prejudice, and discrimination. The course aims to equip the participants with pedagogic practices and instructional techniques, including issues such as within Reggio Emilia/active-

- 260 Elementary Classroom Music Pedagogy 2 credits  
This course introduces contemporary elementary music pedagogy to prospective music educators. Both content and method will be addressed in this course as students learn to design a curriculum that includes specific objectives and teaching strategies to help students master those goals. Specific media including the child voice, movement, recorder, and Orff instruments are used to address the diversity of cultures as well as learning styles and developmental stages present in each class. Artistic teaching and learning of culturally sensitive material are stressed at all levels by faculty members who themselves teach children. EDUC 260 and 360 fulfill the Block III requirement. Offered fall semester in odd-numbered years.
- 295, 296 Topics 2 credits  
297, 298 Topics  
The subject matter of these courses, announced in the ~~Class Schedule~~ <sup>Class Schedule</sup>, vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.
- 330 Psychology for Teaching and Learning  
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: 210 and concurrent registration with 331
- 331 Field Experience: Middle Level (5-8) 0 credit  
This is a 15-hour guided, reflective, in-school field experience intended to introduce students to middle level settings and students. This experience introduces the middle level as a pedagogical bridge between the elementary and the secondary learner.
- 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.
- 350 Language Development, Literacy, and Literature I  
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: 210 and 212
- 355 Reading for the 5-12 Teacher  
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.
- 360 Secondary Classroom Music Pedagogy 2 credits  
Students in this course will learn to design middle- and senior-high-school curricula that include, but are not limited to, performance opportunities. Participation in small ensembles for voices and instruments will be augmented by guitar study as means for developing music literacy. Music literature, history, and theory will be approached from a participatory perspective; students will learn how to use the material as a resource for individual creative work that speaks to the diversity of environments and cultures represented in today's classrooms. EDUC 260 and 360 fulfill the Block III requirement. Offered spring semester in even-numbered years.
- 362 Teaching Techniques for Voice 2 credits  
Students will study the structure and function of the mouth, the nasopharyngeal cavity, the larynx and the breathing mechanism as these relate to the acoustical principles governing the human voice, including the psychology and the aesthetics involved in singing. The uses and merits of a variety of methods and exercises are discussed as they pertain to studio and classroom use. Solo and ensemble literature appropriate for young singers also are covered. Includes teaching individuals and groups, observation of master teachers, and journaling. Offered fall semester in even-numbered years.
- 369 Field Experience: Primary Level (K-4) 0 credit  
This is 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.

370 Language Development, Literacy, and Literature II

This course is Part II of a two-course literacy block designed to introduce the pre-service teacher to the theory

**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: 210, 212, 330, plus unconditional admission to the teacher education program; concurrent registration with 382 and 383

- 01 Communication Arts and Literature
- 02 Mathematics
- 03 Science
- 04 Social Studies
- 05 Theater and Dance

**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, 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 a clinical experience.

Prerequisites: 210, 212, 330, plus unconditional admission to the teacher education program; concurrent registration with 381 and 383

- 01 Communication Arts and Literature
- 02 Mathematics
- 03 Science
- 04 Social Studies
- 05 Theater and Dance

**383 Field Experience: Secondary (9-12)** 0 credit  
 This is 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.

**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

**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: 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 456, 461

- 01 (K-8)
- 02 (5-12)
- 03 (K-12)

**461 The Teacher as Educational Advocate**  
 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 at the culminating experience.

Prerequisites: Acceptance into Education program; completion of Blocks I, II and III; senior status; concurrent registration with 456, 460

462 Student Teaching and Seminar Dual License Extended Term	10 credits
<p>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.</p> <p>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 456, 461</p>	
475, 476 Experiential Learning	2 credits
477, 478 Experiential Learning	
See the description of these courses at the beginning of the "Curricula" section of this catalog.	
483, 484 Seminar	2 credits
485, 486 Seminar	
See the description of these courses at the beginning of the "Curricula" section of this catalog.	
487, 488 Topics	2 credits
489, 490 Topics	
<p>The subject matter of these courses, announced in the Class Schedule, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.</p>	
491, 492 Research	2 credits
493, 494 Research	
See the description of these courses at the beginning of the "Curricula" section of this catalog.	
495, 496 Individual Study	2 credits
497, 498 Individual Study	
See the description of these courses at the beginning of the "Curricula" section of this catalog.	

Special Education (SPUG)

M. Brown, director

- 405 Basic Skills Instruction: Mild/Moderate Handicaps (SPED 705)  
 Research supported instructional interventions and progress monitoring strategies emphasizing practical knowledge, theoretical foundations and classroom skills for the instruction of students with mild/moderate handicaps in the basic skills: reading, written expression, spelling and mathematics.  
 Prerequisite: Permission of the chair
- 414 Collaboration Skills for School Professionals (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.
- 450 Survey of Exceptionality (SPED 750)  
 Provides an overview of special education and specific categories of exceptionality. Examines the theories, legal mandates, definitions and terminology related to special education. Characteristics of 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.
- 452 Fundamentals of Emotional and Behavioral Disorders (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.

**453 Fundamentals of Developmental Disabilities (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.

**478 Fundamentals of Preschoolers (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.

**485 Behavior Management (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.

**486 Fundamentals of Learning Disabilities (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.



Social Work (SOWK)

Recommended:

CDC 300 Introduction to Chemical Dependency  
CDC 305 Chemical Dependency and the Family  
IDSC 291 The Anatomy of Violence  
SOWK 210 Relationship, Intimacy and Sexuality  
SOWK 290 Death, Dying and Bereavement  
SOWK 414 School Social Work

Students should select elective courses in consultation with their adviser.

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. Formal application for a minor must be approved by the School of Social Work.

281 Introduction to Social Work  
340 Human Behavior and the Social Environment  
391 Social Policy for Social Change

Plus two of:

PSY 202 Lifespan Development  
PSY 207 Alcohol, Other Drugs and Behavior

### 355CT Communication and Interviewing Skills

This course is the first of a four-course practice sequence. The primary focus is on communication theory and skills as applied to social work with individuals, families, small groups, communities and organizations. There is an emphasis on self-awareness, beginning assessment skills and diversity issues. An integrative approach to generalist social work practice provides the context for intervention on individual, environmental and societal levels. Prerequisite or concurrent registration: 281 or consent of the instructor

### 375, 376, 378CT Junior Fieldwork in Social Work

Junior fieldwork complements the student's academic work through practical experience in a social-work agency, institution or department. Under the supervision of an agency field instructor, the student learns beginning social-work tasks and functions while applying theory to actual social-work situations. Students participate in an on-campus seminar with other junior social-work majors while in placement. The placement is 10 hours per week during fall and spring semesters, totaling 200 hours. Fall 378 is only open to students going abroad spring semester. Also offered in Weekend College, with placement during fall and winter trimesters. This course fulfills the second-level Computer Competency requirement in the core curriculum. Prerequisite: 281 or consent of the instructor

### 380 Social Research: Designs and Statistical Applications (INDI 380C)

The purpose of this, small group assessment students gain knowledge and skills in the area of social research. The purpose of this, small group assessment students gain knowledge and skills in the area of social research. The purpose of this, small group assessment students gain knowledge and skills in the area of social research. Prerequisite: 281 or consent of the instructor

406CT Senior Fieldwork in Social Work  
Prerequisite: Concurrent registration in 402

414 School Social Work (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

The minor in Chemical Dependency Counseling is designed to provide students majoring in other social

## 355 Practicum 1

2 credits

Students survey the continuum of care by examining a range of treatment resources. Attention is focused on the various treatment philosophies and therapeutic approaches that are observed in these agencies. Students select an agency, interview for an internship position and then spend ninety hours at the agency. During these hours students are provided direct experience in the procedures that the agency uses to screen, intake and orient clients to the agency's services. College faculty lead weekly supervision sessions designed to help students as they begin developing their professional identities.

Prerequisite: Completion or current registration for all CDC 300-level courses

## 405 Native Americans and Chemical Dependency

Students examine the effects of alcohol and drug use on Native American cultures. Students' own attitudes toward Native American cultures are examined. An historical review of the United States governmental policies and laws toward Native American cultures are explored. A practical application of Native American spiritual beliefs are examined in relationship to recovery from chemical dependency.

Prerequisite: 300 or permission of instructor

## 425 Practicum 2

2 credits

Students engage in a 200-hour clinical experience at a chemical dependency facility. Under the direct supervision of faculty or qualified clinical staff, students learn to provide client assessment interviews, treatment planning strategies and client-education sessions. In addition students begin participating in a variety of group and individual counseling sessions as they develop more fully their counseling skills. Supervision groups are designed by the faculty to help students integrate various theories of practice with direct application in their clinical experiences.

Prerequisite: 355

## 435 Chemical Dependency and Dual Disorders

Students examine the therapeutic interventions developed for the treatment of chemical dependency and their efficacy on the treatment of concurrent addictive behavior patterns and other mental illnesses. Special attention is focused on personality, mood and anxiety disorders and the following potential addictive behavior patterns; gambling, sexual activity, and eating.

Prerequisite: 300 and PSY 202

## 455 Practicum 3

8 credits

Students engage in a 600-hour clinical experience at a chemical dependency facility. They continue to sharpen their client assessment, treatment planning and education skills while developing their capability of delivering a variety of individual and group counseling strategies. In addition students expand their case management skills by providing timely crisis intervention skills, seeking appropriate consultation, making useful referrals, and working with an expanding and more complex caseload of clients. Regular supervision provided by faculty helps students to process their clinical experiences while focusing their attention on the therapeutic needs of the clients.

Prerequisite: 355, 405, 425, and 435

## Interdisciplinary Courses (IDSC)

Vice president for academic affairs, director

### 150 Development of the Natural World

This is an interdisciplinary course which examines our universe and integrates the sciences of biology, chemistry, physics, geology and astronomy. The nature of the cosmos and the Big Bang theory are first introduced, followed by a study of the basic principles of gravity, energy, thermodynamics, electromagnetic radiation, and the structure of matter, including chemical bonding and the Periodic Table. The nature and formation of the stars and planets is followed by a focus on the earth, including plate tectonics and geologic cycles. An introduction to biochemical systems includes a look at cells, biochemical molecules, genetics and evolution. An integrated unit on ecosystems ties together much of the previous work. The scientific method is emphasized throughout the course. The course consists of lecture, discussion and laboratory activities. This course fulfills the laboratory science requirement.





472 MUST Seminar: Field Studies in the Twin Cities (HECUA)

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.

473 MUST: Urban Studies Internship (HECUA)

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.

474 MUST: Urban Studies Internship Seminar (HECUA)

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.

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.

475, 476 Experiential Learning 2 credits

477, 478 Experiential Learning

See the description of these courses at the beginning of the "Curricula" section of this catalog.

479, 480 Honors Seminar 2 credits

These interdisciplinary seminars are intended to develop integrating insights through an analysis of topics chosen from different disciplines. Often they are taught by two faculty members or by a visiting lecturer who holds one of the endowed chairs at the university. Although these seminars are part of the Aquinas Scholars program, any student who receives the permission of the instructor(s) may enroll on a space-available basis. (IDSC 479 is used if the seminar has been approved to partially fulfill a requirement in the core curriculum.)

481 Seminar in International Studies

Directed readings and discussions on political, economic and historical aspects of the international system and the completion of a major research paper on a specific topic to be chosen in consultation with the instructor. The seminar will feature guest lecturers in political science, economics and history.

483, 484 Seminar 2 credits

485, 486 Seminar

See the description of these courses at the beginning of the "Curricula" section of this catalog.

487, 488 Topics 2 credits

489, 490 Topics

The subject matter of these courses, announced in the ~~Class Schedule~~, vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Curricula" section of this catalog.

491, 492 Research 2 credits

493, 494 Research

See the description of these courses at the beginning of the "Curricula" section of this catalog.

495, 496 Individual Study 2 credits

497, 498 Individual Study

See the description of these courses at the beginning of the "Curricula" section of this catalog.

Higher Education Consortium for Urban Affairs (HECUA)

Toffolo (POL), adviser; A. Hubbard (International Education Center) co-adviser

The Higher Education Consortium for Urban Affairs (HECUA) provides students the opportunity to explore urban settings to study the underlying causes of social inequality, as well as successful community building and social change strategies in both the United States and in other countries. Students earn sixteen semester credits in the semester-long programs and four credits in January term programs. Open to all majors.

City Arts (spring semester)

City Arts explores the relationship between the arts, culture and social change. Field study and internship provide direct access to the arts community of the Twin Cities. The four courses below are taken as an integrated whole in this semester-long off-campus study program.

- IDSC 466 City Arts: Reading Seminar
- IDSC 467 City Arts: Field Seminar
- IDSC 468 City Arts: Internship
- IDSC 469 City Arts: Internship Seminar

Metro Urban Studies Term (MUST) (fall and spring semesters)

Through a combination of seminars, field study and a professional internship in the Twin Cities, students explore the realities of social inequalities in urban America and strategies for bringing about change. The four courses below are taken as an integrated whole in this semester-long off-campus study experience.

- IDSC 471 MUST Seminar: Research on Urban Issues
- IDSC 472 MUST Seminar: Field Studies in the Twin Cities
- IDSC 473 MUST: Urban Studies Internship
- IDSC 474 MUST: Urban Studies Internship Seminar

Community Internships in Latin America (CILA) (fall semester)

CILA combines an internship, independent study and seminars on community participation and development in the Latin American urban setting. Based in Quito, Ecuador, students live with local families and are involved in field projects in outlying areas.

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 Physics, 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  
 CHEM 112 General Chemistry II  
 ENGR 150 Introduction to Engineering (0 credit)  
 ENGR 151 Introduction to Engineering Design (1 credit)  
 MATH 113 Calculus I  
 MATH 114 Calculus II  
 MATH 200 Multi-Variable Calculus  
 MATH 210 Linear Algebra and Differential Equations  
 PHYS 111 Introduction to Classical Physics I  
 PHYS 112 Introduction to Classical Physics II  
 QMCS 230 Software Design Using the JAVA Language

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

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 216 Basic Nursing Skills Training Program (0 credit)  
 BIOL 217 Students and Physicians Program (0 credit)  
 BIOL 218 Pre-Dental Internship Program (0 credit)

#### Pre-dentistry

Schools of dentistry (including the University of Minnesota) generally require a minimum of three years of college coursework prior to admission to their programs. Most accepted applicants (85%) have completed four years of college. While a baccalaureate degree generally is not required, 75% of students in dental schools have received a baccalaureate degree or higher.

Specifically required or highly recommended courses vary from one dental school to another. The School of Dentistry at the University of Minnesota requires study in each of the following subjects:

three 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  
 a course in public speaking (recommended)  
 college algebra or pre-calculus (by college credit or college validation) or computer science or statistics

#### Pre-medicine

Most medical schools require a minimum of three years of undergraduate work before entrance to their programs and the three medical schools in Minnesota all require a baccalaureate degree. Specifically required or highly recommended courses vary from one medical school to another.

Two semesters of study in each of the following subjects are required for admission to many medical schools

Particular medical schools may require more coursework in these subject areas or in other disciplines:

- biology
- general chemistry
- organic chemistry
- physics
- English

A number of medical schools also require one to two semesters of calculus or other college-level mathematics or statistics. The University of Minnesota (Twin Cities and Duluth) also require one semester of biochemistry. Medical schools generally do not require 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:

- three semesters 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:

- biology
- general chemistry
- organic chemistry
- biochemistry
- mathematics
- physics
- genetics
- microbiology
- English

Four courses from history and social sciences, arts and humanities are also required.

#### Other Pre-Health Professions

Many courses are offered at St. Thomas to prepare students for admission to the following health professional schools: chiropractic, optometry, 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 a pre-health professions adviser.

#### Pre-Law

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
- BLAW 303 International Business Law
- BLAW 401 Legal Research, Advocacy, and Dispute Resolution
- ECON 321 Law and Economics
- ECON 332 Industrial Organization

## Affiliated Programs

HIST	326	English Law and Government before the American Revolution
HIST	365	U.S. Constitutional History
IDSC	340	Criminal Law and the Social Order
JOUR	304	Media Law
POL	205	Introduction to American Public Policy Process
POL	312	Judicial Process
POL	313	Constitutional Law and Politics
POL	314	Constitutional Rights and Liberties
POL	326	International Law and Organizations
POL	414	Seminar in Law and Judicial Politics

### B. Fostering critical thinking about society

HIST	361	American Thought and Culture Since the Civil War
PHIL	357	Political Philosophy
PHIL	359	Philosophy of Law
POL	373	Political Thought from Marx to the Present
POL	375	American Political Thought

### C. Providing useful skills and improving analytical ability

ACCT	205	Introduction to Accounting
COMM	100	Public Speaking
COMM	250	Argumentation and Advocacy
ECON	251	Principles of Macroeconomics
ECON	252	Principles of Microeconomics
JOUR	311	Persuasion in Writing
MATH	101 or 113	Finite Mathematics or Calculus I
PHIL	220	Logic

## Study Abroad Programs (SABD)

Stevenson (International Education Center), director

The University of St. Thomas encourages its students to incorporate international experience into their academic plans and offers a wide variety of overseas opportunities that serve as an integral part of a student's degree program. These opportunities encompass a wide range of options, including length of stay (semester, academic year, January or summer), course selection and geographic locale. The staff of the International Education Center assists students in identifying study, work or travel programs appropriate to the individual's desires and goals.

Students may not apply for nor participate in a Study Abroad program while on academic or disciplinary probation.

### Year/Semester Abroad

#### London Business Semester

The University of St. Thomas sponsors a special fall semester program in London for business majors and minors. Students, accompanied by one or more St. Thomas business faculty members, take regular St. Thomas business and liberal arts courses, as well as complete the BUS 200 Community Service requirement.

#### Liberal Arts Semester in Paris

A spring semester program in Paris, led by a St. Thomas faculty member, offers students the opportunity to fulfill core curriculum requirements in the humanities (e.g. fine arts, philosophical and moral reasoning, faith and the Catholic tradition, historical studies, language and culture). Participants must complete at least one semester of French before beginning the program and continue to study French while abroad.

#### Catholic Studies in Rome

Students in Catholic Studies may participate in St. Thomas' program in Rome for one or two semesters. Students are enrolled at the Angelicum, a pontifical university where they take courses in Catholic social thought, theology, and social justice, as well as Italian language. A St. Thomas faculty member directs the program on site.

#### Glasgow English Semester

English majors and minors, accompanied by a St. Thomas faculty member, study at the University of Glasgow in the spring. Students take two courses in English and/or English or Scottish Literature and one or two courses in another subject area (typically history, theology, or fine arts).

#### Exchanges with other universities

St. Thomas students may study at one of the following universities through established exchange programs:

Australia:	Curtin University, Perth
England:	Lancaster University, London School of Economics
Egypt:	American University in Cairo
Germany:	University of Trier, Fachhochschule Trier

Ireland:	University College, Cork
Japan:	Osaka Gakuin University Sophia University, Tokyo
Scotland:	University of Glasgow
Uruguay:	Catholic University

In addition, the university participates in consortia and affiliations offering programs in the following locations:

Argentina:	La Plata
Austria:	Vienna
China:	Beijing
Denmark:	Copenhagen
Ecuador:	Quito
England:	London
France:	Aix-en-Provence Avignon Dijon Nantes Paris Toulon
Germany:	Berlin Freiburg
Guatemala:	Guatemala City
Italy:	Milan Rome
Japan:	Nagoya
Netherlands:	Leiden
Norway:	Oslo
Spain:	Granada Madrid Salamanca Seville
Wales:	Carmarthen

Note: Students may seek approval for other countries from the Study Abroad Petition Committee.

#### Participation in Year/Semester Programs

To participate in the University of St. Thomas study abroad programs, students must have a 2.5 minimum grade point average, be in good academic and disciplinary standing at St. Thomas, and have at least sophomore standing. All students must apply to the International Education Center for program approval by October 15 for spring semester participation, and by March 15 for fall semester or year-long programs. The overseas study program must include study of the native language in non-English-speaking countries.

#### Financial Aid

Financial aid in the form of grants, loans, and scholarships applies to the cost of semester and year of study abroad programs. Students should discuss their eligibility with the Study Abroad Coordinator and the Study Abroad Liaison in the Office of Student Financial Services.

#### Short-term Study Abroad

The University of St. Thomas offers a number of two-to-four week, faculty-led programs during January or summer term. A majority of the January Term Abroad programs are sponsored by UMAIE, a ten-member consortium that offers courses to Africa, Asia, Australia, Europe, South America and Hawaii each January.

#### January Term Abroad

All courses for the following January are announced in February. Enrollment period extends from early April through late October. 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. See Study Abroad Website for current year course listing: <[www.stthomas.edu/studyabroad](http://www.stthomas.edu/studyabroad)>

#### Summer Term Abroad

Students may study abroad during the summer through an affiliate or approved program, or by participating in a faculty-led course (similar to January Term Abroad). Students must apply by early March for all programs. See Study Abroad Website for current year course listing: <[www.stthomas.edu/studyabroad](http://www.stthomas.edu/studyabroad)>

#### 300 Study Abroad

Students participating in the University of St. Thomas overseas study program register for this interdisciplinary listing for the first semester they are abroad. For program information see the Special Programs section of this catalog. Permission of the Director of International Education required.

301 Study Abroad

A continuation of 300. Permission of the Director of International Education required.

Superior Studies At Wolf Ridge  
Hoffman (POL), director

Superior Studies at Wolf Ridge is a consortium of seven private colleges and universities in Minnesota that provides a field campus for Environmental Studies programs in Minnesota and surrounding states. Participating institutions include St. Olaf College, St. John's University, the College of St. Benedict, Gustavus Adolphus College, Hamline University, and Concordia College-Moorhead.

The program offers academic courses taught by faculty from the participating institutions, field trips to sites of environmental significance in northeastern Minnesota and Ontario, natural resource-related jobs and research opportunities for students, and wilderness experiences including backpacking, canoeing, kayaking, snowshoeing, and dogsledding. Courses are offered during both summer sessions, the Fall term and January interim session.

Academically, the program stresses environmental inquiry from the perspectives of different disciplines. It incorporates the rich ecology of the Northwoods and the contemporary issues facing Northern Minnesota into the student's coursework through regular fieldtrips and field instruction. Organized outdoor trips provide significant personal experiences and the opportunities to develop skills and confidence in wilderness travel through one-day to one-week trips into the Boundary Waters Canoe Area Wilderness, Lake Superior kayak water trails, and the Superior Hiking Trail. In addition, students are able to arrange personal trips if they possess the necessary skills.

All of the Superior Studies teaching faculty are members of one of the consortium institutions.

Specific courses to be taught in the program vary by semester. Representative courses include: Introduction to Environmental Studies, Conservation Biology (with lab), Environment and Literature, Endangered Cultures, Individualized Physical Education: Health, Fitness, and Lifelong Skills, Seminar on Sustainability, the Environmental Imagination, Environmental Ethics, Environmental Policy, Theology and the Moral Life: Environmental Stewardship, American Environmental History: Great Lakes Region, and Environmental Education.

Work-study jobs and internships are also available through the program. All financial aid is applicable to the program.

Students receive elective credit for all courses taught in the program. Students should consult with departmental and program advisers regarding major and minor field credit.

See the director regarding program costs and applicable fees.

Washington Semester  
Farlow (POL), adviser

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

## 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 administrative officer of the university is the president. He is responsible to the board of trustees for the functioning of the university and the administration of its policies. He presides at the meetings of the university faculty, university faculty senate, and the academic council.

Under the direction of the governing board, the president of the university must make sure that adequate means exist for communication, decision-making, and governance.

The president delegates appropriate authority to the president/rector, responsible for the administration of the Saint Paul Seminary School of Divinity; the vice president for finance and administration, responsible for the fiscal and business matters of the university; the vice president for non-academic student affairs; the



Stanley S. Hubbard  
President and Chief Executive Officer  
Hubbard Broadcasting, Inc.  
St. Paul, Minnesota

David A. Koch  
Chairman  
Graco, Inc.  
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Vice President for Strategic Initiatives  
Delta Dental Plan of Minnesota  
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Former President and CEO  
CBS, Inc.  
New York, New York

Rev. Edward A. Malloy, C.S.C.  
President  
University of Notre Dame  
Notre Dame, Indiana

Rev. Bryan Massingale  
Professor  
St. Francis Seminary  
Milwaukee, Wisconsin

Rev. Kevin McDonough  
Vicar General  
Archdiocese of Saint Paul and Minneapolis  
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Harry G. McNeely, Jr.  
President and Chief Executive Officer  
Space Center Enterprises and McNeely Foundation  
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Arnold P. Mikulay  
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John M. Morrison  
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Central Financial Services, Inc.  
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The Honorable Diana E. Murphy  
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Executive Vice President's Office

Judith A. Dwyer, Ph.D.  
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Marla J. Friederichs  
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Loren Heeringa  
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To be appointed  
Special Assistant for Mission to the Executive Vice  
President

To be appointed  
Special Assistant for Diversity to the Executive Vice  
President

Sister Margaret Wick, OSF  
Interim Director, Institutional Research and Planning

Nancy McGrath  
Assistant to the Executive Vice President

Academic Affairs

To be appointed  
Vice President for Academic Affairs

Angeline Barretta-Herman, Ph.D.  
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Joseph L. Kreitzer, Ph.D.  
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College of Arts and Sciences  
Thomas B. Connery, Ph.D.  
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Peter F. Parilla, Ph.D.  
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Walter J. Skierski, Lt. Col., USAF  
Chair, Department of Aerospace Studies

Susan V. Webster, Ph.D.  
Chair, Department of Art History

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Christopher J. Thompson, Ph.D.  
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Organization and Personnel

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Sister Mary Catherine Shambour, OSB, M.A. Director, Russian, Central and East European Studies	Patrick J. Schiltz Associate Dean
Jill Manske, Ph.D. Director, Women's Studies Program	School of Social Work Barbara W. Shank, Ph.D. Dean
College of Business To be appointed Dean	Serene B. Thornton, M.S.W. Director, Undergraduate Programs
William D. Raffield, Ph.D. Interim Associate Dean	Mari Ann Graham, Ph.D. Director, Graduate Programs
Richard S. Sathe, Ed.D. Chair, Department of Accounting	Graduate School of Professional Psychology To be appointed Dean
Jeffrey R. Cornwall, D.B.A. Chair, Department of Entrepreneurship	Graduate Programs in Software To be appointed Director
David O. Vang, Ph.D. Chair, Department of Finance	Programs in Engineering and Technology Management Ronald J. Bennett, Ph.D. Director
Richard G. Kunkel, J.D. Chair, Department of Legal Studies in Business	Academic Support Services John P. Krebsbach, D.M.A. Associate Dean for Academic Advising
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School of Continuing Studies Gene A. Scapanski, Ph.D. Dean	David F. Moore Director, Reading and Study Skills Center
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Jeanne P. McLean, Ph.D. Academic Dean	Sarah A. Stevenson, Ph.D. Director, International Education
School of Education Miriam Q. Williams, Ph.D. Dean	Robert J. Riley, Ph.D. Director, Faculty Development
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Michael D. Brown, Ed.D. Chair, Department of Special Education	
David P. Rigoni, Ed.D. Chair, Department of Teacher Education	

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