

Pre-Professional Programs

POLS 495, 496 Individual Study (2 credits)

POLS 497, 498 Individual Study (4 credits)

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

Pre-Professional Programs

A carefully-crafted baccalaureate degree can prepare a student for entrance to a professional school. The following information will guide students toward the major field programs and supplementary courses that will prepare them for the various professional schools.

Preparation for the Catholic Priesthood

Cross-College Program

Preparation for entering a postgraduate seminary takes place best in a college-level seminary. St. John Vianney college seminary, located on the St. Thomas campus, provides an integrated program of spiritual and apostolic formation, along with the academic coursework available through the university.

Seminarians may major in a variety of fields. However, they must complete certain prerequisites in philosophy, theology and languages according to the direction of their diocese.

In addition to the usual major field and graduation requirements for the University of St. Thomas that provide in large measure the balance needed for the study of theology, St. John Vianney students will be expected to complete the following academic requirements in compliance with the Program of Priestly Formation:

Thirty credits of philosophy

Sixteen credits of theology

Language requirements: Latin or Spanish if determined by the student's diocese.

Interested students should contact the rector, Rev. William Baer, at St. John Vianney Seminary:

wjbaer@stthomas.edu

Pre-Engineering (PNGR)

Cross-College Program

Tommet (PHYS), Marsh (CHEM), Jalkio (ENGR), advisory committee

Besides offering degree programs in electrical and mechanical engineering, the University of St. Thomas offers a choice of pre-engineering programs to provide the student with a broad range of engineering fields. The program prepares for all engineering fields which include: aeronautical, aerospace, agricultural, architecture, biomedical, chemical, civil, computer, electrical, engineering science, geological, industrial, materials science, mechanical, metallurgical, mineral and nuclear.

The programs of study are arranged so that a student may transfer to an engineering school with a maximum number of acceptable credits and yet, if a change in major is made while at the university, a maximum number of credits will be applicable to the St. Thomas requirements for graduation. In addition to the liberal arts, courses prerequisite to an engineering school program are available in areas of mathematics, physics, chemistry, computer programming, and engineering. There are few significant differences in courses taken in the first two years of undergraduate study toward any type of engineering field. All pre-engineering students take mathematics, physics, and chemistry courses, along with a seminar introducing them to the various fields of engineering and to the work of engineers.

A Liberal Arts-Engineering (3-2) program is offered formally in cooperation with the University of Notre Dame, Washington University in St. Louis, and the University of Minnesota, and informally with virtually any other engineering school. The student will normally spend three years at St. Thomas and, upon approval of St. Thomas and acceptance by the engineering school, two additional years at the engineering school in an engineering field. Upon satisfying the requirements for graduation of both institutions, the student will receive a bachelor of arts (B.A.) degree from the University of St. Thomas and a bachelor of science degree in the selected field of engineering from the engineering school.

A four-year (4-2) program is offered formally in cooperation with the University of Minnesota, and informally with virtually any other engineering school. The student normally spends four years at St. Thomas and graduates with a major in 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 (4 credits)

CHEM 112 General Chemistry II (4 credits)

ENGR 150 Introduction to Engineering (0 credit)

ENGR 151 Introduction to Engineering Design (1 credit)

MATH 113 Calculus I (4 credits)
 MATH 114 Calculus II (4 credits)
 MATH 200 Multi-Variable Calculus (4 credits)
 MATH 210 Linear Algebra and Differential Equations (4 credits)
 PHYS 111 Introduction to Classical Physics I (4 credits)
 PHYS 112 Introduction to Classical Physics II (4 credits)
 QMCS 230 Software Design Using the JAVA Language (4 credits)

At least three additional courses are required. Which technical courses are needed will depend upon the field of engineering. Students must discuss their program with a pre-engineering adviser.

Pre-Health Professions

Cross-College Program
 Ovechka, adviser

The pre-health professions adviser will help students interested in any of the health professions to plan a specific program of coursework in preparation for a professional school.

To aid students in making an informed choice of a health professions career, there are four non-credit health professions internships:

BIOL 215 Regions Hospital Volunteer Program (0 credit)
 BIOL 217 Students and Physicians Program (0 credit)
 BIOL 218 Pre-Dental Internship Program (0 credit)

Pre-dentistry

Most schools of dentistry require a minimum of three years of college coursework prior to admission to their programs. The University of Minnesota School of Dentistry requires at least 87 semester credits. However, the majority of first-year dental students complete four or more years of college.

Specifically required or highly recommended courses vary from one dental school to another. The University of Minnesota School of Dentistry requires study in each of the following subjects:

two semesters of biology
 two semesters of general chemistry
 two semesters of organic chemistry
 one semester of biochemistry
 two semesters of physics
 two semesters of English
 one semester of psychology
 college algebra, pre-calculus, computer science or statistics

Pre-medicine

Most medical schools require a baccalaureate degree before entrance into their programs.

Two semesters of study in each of the following subjects are required for admission to most medical schools:

biology
 general chemistry
 organic chemistry
 physics
 English

A number of medical schools also require one semester of calculus or other college-level mathematics or statistics. The University of Minnesota (Twin Cities and Duluth) also require one semester of biochemistry. Medical schools generally do not require a specified undergraduate major.

The health professions adviser is available to help students choose the specific coursework necessary to meet admissions requirements, explain admissions procedures, provide information to students about career alternatives, *etc.* Students interested in a career in medicine should consult with the health professions adviser early in their freshman year to plan an appropriate four-year program.

Pre-pharmacy

Required courses vary from one school to another, and students are encouraged to research various programs early in their undergraduate program. The Pharm.D. program at the University of Minnesota requires completion of the following courses:

one semester of biology
 two semesters of anatomy and physiology
 one semester of microbiology
 two semesters of general chemistry
 two semesters of organic chemistry
 two semesters of physics
 one semester of calculus
 two semesters of behavioral science
 two semesters of English
 one semester of economics
 one semester of public speaking

Pre-Professional Programs

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 course-work:

- two semesters of biology
- two semesters of general chemistry
- one semester of organic chemistry
- one semester of biochemistry
- one semester of mathematics
- two semesters of physics
- one semester of genetics
- one semester of microbiology
- two semesters of English

Four courses from history and social sciences, arts and humanities are also required. No more than two of these courses should be from one single department.

Other Pre-Health Professions

Many courses are offered at St. Thomas to prepare students for admission to the following health professional schools: chiropractic, optometry, osteopathic medicine, physical therapy, physician assistant, podiatric medicine, and public health.

Students are encouraged to research the programs at each professional school and to seek the guidance of the pre-health professions adviser.

Pre-Law

Cross-College Program
Hattig (POL) and Marsnik (BLAW) advisers

The best preparation for the study of law is a rigorous undergraduate program that combines depth of study in a major field with breadth of study in the liberal arts. The only true criterion for choice of a major is that it challenge the student's intellectual capabilities.

Regardless of major, pre-law students should include as wide a selection of the following courses, listed alphabetically by departmental designation, as their degree program allows. Each is beneficial for:

A. Increasing the student's knowledge of law

- BLAW 301 Legal Environment of Business (4 credits)
- BLAW 303 International Business Law (4 credits)
- BLAW 401 Legal Research, Advocacy, and Dispute Resolution (4 credits)
- ECON 321 Law and Economics (4 credits)
- ECON 332 Industrial Organization (4 credits)
- HIST 326 English Law and Government before the American Revolution (4 credits)
- HIST 365 U.S. Constitutional History (4 credits)
- IDSC 340 Criminal Law and the Social Order (4 credits)
- JOUR 304 Media Law (4 credits)
- POLS 205 Introduction to the American Public Policy Process (4 credits)
- POLS 312 Judicial Process (4 credits)
- POLS 313 Constitutional Law and Politics (4 credits)
- POLS 314 Constitutional Rights and Liberties (4 credits)
- POLS 326 International Law and Organizations (4 credits)
- POLS 414 Seminar in Law and Judicial Politics (4 credits)

B. Fostering critical thinking about society

- ENGL 402 Writing Literary Nonfiction (4 credits)
- HIST 361 American Thought and Culture Since the Civil War (4 credits)
- PHIL 357 Political Philosophy (4 credits)
- PHIL 359 Philosophy of Law (4 credits)
- POLS 373 Political Thought from Marx to the Present (4 credits)
- POLS 375 American Political Thought (4 credits)

C. Providing useful skills and improving analytical ability

- ACCT 205 Introduction to Accounting (4 credits)
- COMM 100 Public Speaking (4 credits)
- COMM 250 Argumentation and Advocacy (4 credits)
- ECON 251 Principles of Macroeconomics (4 credits)
- ECON 252 Principles of Microeconomics (4 credits)
- ENGL 251 Writing in the Academy (4 credits)
- ENGL 252 Writing Nonfiction Prose (4 credits)

ENGL 403 Analytical and Persuasive Writing (4 credits)
 JOUR 311 Persuasion in Writing (4 credits)
 MATH 101 Finite Mathematics (4 credits) *or* MATH 113 Calculus I (4 credits)
 PHIL 220 Logic (4 credits)

Psychology (PSYC)

College of Arts and Sciences
 Department of Psychology
 Johnson (chair), Amel, Bock, Buri, Chalkley, Giebenhain, Prichard, Robinson-Riegler, Scott, Tauer

The courses and programs offered by the Department of Psychology are meant to be a part of a liberal arts education, teaching the basic principles and theory of psychology, the scientific study of human behavior, mental processes, and emotions. The psychology programs are designed to prepare students with the analytical and technical skills necessary for graduate study in psychology and for careers in human services and other occupations for which a psychology background is valuable. Courses are offered that introduce psychology to non-majors, enabling students to make practical applications of psychology to their own lives.

Students who graduate with a major in psychology will be able to produce a research paper written in accordance with American Psychological Association (APA) guidelines. They will be trained in those research and statistical skills frequently employed in the field of psychology. They will be able to complete an independent research project, and write a synthesis of the psychological literature in an area of psychological interest.

Students majoring in psychology must successfully complete a minimum of twenty-four credits in psychology at St. Thomas.

The department also offers General Psychology (PSYC 111) for students to fulfill the Social Analysis component of the core curriculum.

Psychology Honor Society

Psi Chi, the National Honor Society in psychology, was founded in 1929 for the purpose of encouraging, stimulating, and maintaining excellence in scholarship and advancing the science of psychology. The St. Thomas chapter was established in 1997. Students who have a grade point average of at least 3.00 in psychology, rank in the highest 35 percent of their class, and who have completed at least three semesters of college coursework, including nine hours in psychology, are eligible to apply for membership.

The Department of Psychology also recognizes selected students each year for outstanding research, service, and academic achievements.

Major in Psychology

PSYC 111 General Psychology (4 credits)
 PSYC 212 Research Methods in Psychology (4 credits)
 PSYC 422 History and Systems (4 credits) (to be taken during the senior year)

Plus two laboratory courses from:

PSYC 321 Current Research Issues in Social Psychology (4 credits)
 PSYC 322 Sensation and Perception (4 credits)
 PSYC 323 Learning and Memory (4 credits)
 PSYC 401 Physiological Psychology (4 credits)
 PSYC 415 Research Issues in Cognition (4 credits)

Plus four credits from the following:

PSYC 200 Psychology of Infancy and Childhood (4 credits)
 PSYC 202 Lifespan Development (4 credits) (students may not receive credit for both 202 and 200)
 PSYC 203 Psychology of Adolescence (4 credits)
 PSYC 204 The Psychology of Adulthood and Aging (4 credits)

Plus four credits from the following:

PSYC 121 Social Psychology (4 credits)
 PSYC 301 Psychopathology (4 credits)
 PSYC 302 Personality Theories (4 credits)

Plus four credits from the following:

PSYC 206 The Brain and Human Behavior (4 credits)
 PSYC 315 Cognition (4 credits)
 PSYC 400 Seminar in Cognitive and Language Development (4 credits)

Plus twelve elective credits in psychology

A total of 44 credits in psychology are required for the major. Twenty of the 44 credits in psychology must be 300- or 400-level courses.