

Academic Policies

Pre-professional Programs

General Information

St. Andrews offers both professional and pre-professional courses of study which encompass many careers. In most instances these courses have been compiled in conjunction with specific requirements of professional schools. Many professional schools require specific procedures in regard to entrance tests, application deadlines, and interviews. In many professions no specific undergraduate major must be followed, and students may major in any area of interest. Therefore some students may have a pre-professional advisor in addition to their academic advisor.

Pre-Law Certification Program, 18 credits

Designed specifically for students interested in a law career, this interdisciplinary program provides courses which improve students' critical thinking and reasoning skills, and which give a general introduction to American politics and government. Students may apply to the program any time after completing 27 credits at St. Andrews. Applications are available from the pre-law advisor, Professor Richard Prust.

The pre-law certification program consists of 18 credits chosen from the approved list below, in consultation with the student's pre-law advisor. Students must have a cumulative G.P.A. of 3.0 in the 6 courses. No more than 2 of the 6 courses may be taken as both pre-law certificate courses and as major courses.

Pre-Law Courses

ACCT 201 Principles of Accounting	3
ECON 201 Microeconomics, or ECON 202 Macroeconomics	3
BUS 301 Business Law	3
CW 221 Introduction to Creative Writing	3
CW 425 Creative Non-Fiction	3
His 102 Western Civilization II-Comparative Revolutions	3
His 201 American Civilization I	3
His 202 American Civilization II	3
Phil 203 Intro to Categorical Logic	2
Phil 205 Intro to Symbolic Logic	2
Phil 333 Philosophy of Law	3
Pol 201 Introduction to American Government	3
Pol 231 Introduction to Law	3
Pol 362 Constitutional Law	3
X99 Guided Independent Study in an appropriate area	3-4
X95 Internship in Law	3-4

Additionally, students may elect to pursue a major in pre-law in conjunction with a discipline. Contract majors in Pre-Law and Philosophy, History with an emphasis in Pre-Law, Politics and Law, Pre-Law and Business, and English with an emphasis in American Literature and Law are just a sample of the options available.

3-2 Engineering Program

Director: Allen Dotson

Mission

Successful completion of this degree program leads to a B.S. degree in mathematics from St. Andrews and a B.S. degree from N.C. State University in a field of engineering selected by the student. Accordingly, the program's mission is twofold. The program supports the Department of Mathematical Sciences' mission to enable the majors to develop critical thinking skills while mastering a broad spectrum of knowledge from the mathematical sciences. As with all mathematics majors at St. Andrews, the majors' studies focus on the mathematical sciences as both an object of study and a tool for application. The program also seeks to prepare its majors for the engineering requirements of N.C. State University. This supports the Department of Mathematical Sciences' mission to prepare its students for professional opportunities in careers.

Program of Study

Mathematics core requirements:

MAT 221 (Calculus I)

MAT 222 (Calculus II)

MAT 310 (Multivariable calculus)

MAT 312 (Linear Algebra)

MAT 340 (Differential Equations)

Chemistry core requirements:

CHE 210 (Essential Concepts of Chemistry)

CHE 210L (Essential Concepts of Chemistry Laboratory)

CHE 215 (Introduction to Structural Inorganic Chemistry I)

CHE 215L (Introduction to Structural Inorganic Chemistry Laboratory)

Physics core requirements:

PHY 211 (General Physics I)

PHY 212 (General Physics II)

Computer Science core requirement:

CIS 127 (Introduction to Programming and Abstraction)

Elective courses:

At least three courses chosen from:

All 300-400 level courses in mathematics, CIS, and chemistry

MAT 205 (Statistics I)

CIS 226 (Object Oriented Programming and Object Oriented Design)

Students may take all of these electives in a single discipline; for example, a student planning to study chemical engineering may take all three electives in Chemistry. Under the 3-2 Engineering Program, the engineering degree must be earned from N.C. State before the B.S. Degree in Mathematics will be awarded by St. Andrews. Note: Since N.C. State has extensive general education requirements, many of which can be met by prudent choices of breadth courses taken at St. Andrews, students interested in this program should contact the director of the program as soon as possible, to plan an efficient course of study. Please see the section of this catalog on the Department of Mathematical Sciences for more information.

3-2 Computer Science Program

Director: Allen Dotson

Mission

Successful completion of this degree program leads to a B.S. degree in mathematics from St. Andrews and a B.S. degree in computer science from N.C. State University. Accordingly, the program's mission is twofold. The program supports the Department of Mathematical Sciences' mission to enable the majors to develop critical thinking skills while mastering a broad spectrum of knowledge from the mathematical sciences. As with all mathematics majors at St. Andrews, the majors' studies focus on the mathematical sciences as both an object of study and a tool for application. The program also seeks to prepare its majors for the computer science requirements of N.C. State University. This supports the Department of Mathematical Sciences' mission to prepare its students for professional opportunities in careers.

Program of Study

Mathematics core requirements:

MAT 221 (Calculus I)

MAT 222 (Calculus II)

MAT 310 (Multivariable calculus)

MAT 312 (Linear Algebra)

MAT 340 (Differential Equations)

Chemistry core requirements:

CHE 210 (Essential Concepts of Chemistry)

CHE 210L (Essential Concepts of Chemistry Laboratory)

CHE 215 (Introduction to Structural Inorganic Chemistry I)

CHE 215L (Introduction to Structural Inorganic Chemistry Laboratory)

Physics core requirements:

PHY 211 (General Physics I)

PHY 212 (General Physics II)

Computer Science core requirement:

CIS 127 (Introduction to Programming and Abstraction)

Elective courses:

At least three courses chosen from:

All 300-400 level courses in mathematics, CIS, and chemistry

MAT 205 (Statistics I)

CIS 226 (Object Oriented Programming and Object Oriented Design)

Students may take all of these electives in computer and information science, but this is not required. Under the 3-2 Computer Science Program, the computer science degree must be earned from N.C. State before the B.S. Degree in Mathematics will be awarded by St. Andrews. Note: N.C. State has extensive general education requirements, many of which can be met by prudent choices of breadth courses taken at St. Andrews. Also, most of the computer and information science courses offered by St. Andrews fulfill requirements of the B.S. degree in computer science at N.C. State. Students interested in this program should contact the director of the program as soon as possible, in order to plan an efficient course of study. Please see the section of this catalog on the Department of Mathematical Sciences for more information.

Pre-Veterinarian Program

Mission

Veterinarian school is a post-baccalaureate program requiring an undergraduate degree for admission. The mission of the St Andrews Pre-Veterinarian program is to prepare students with the knowledge and skills necessary to gain acceptance in a veterinary school of their choice and to later excel in this field as a professional. This begins with a strong foundation in the sciences, which emphasizes the theoretical, conceptual, and experimental basis of these fields. This knowledge is the cornerstone for future success in every veterinary school. In addition St Andrews cultivates the less tangible qualities and characteristics that admission officers are seeking because they ensure success in the highly challenging field of veterinary science. Through a distinctive, well-rounded liberal education, and the numerous opportunities beyond the classroom such as internships and study abroad, St Andrew students develop invaluable characteristics such as community awareness, creativity, and problem-solving abilities.

Program of Study

Pre-Vet is not defined as separate field of study, nor is it restricted to a single, specific major at St Andrews. The majority of students in the pre-vet program usually major in Biology or Chemistry, but the completion of other majors does not exclude a student from successfully applying to a veterinary program. Students interested in becoming a veterinarian first discuss this career choice with the pre-vet advisor. They learn what the minimal and recommended requirements are for admission in a veterinary program, from course work to national exams. In consultation with the advisor, they choose a major and plan out their course work each semester to meet the goals of preparing for the specific veterinary schools of their choice, in addition to completing the major and general education requirements. Throughout their four years at St Andrews, the student will also discuss various opportunities with their advisor, such as internships, and important deadlines for national exams and applications.

Basic science courses that meet the minimal requirements for most veterinary programs:

BIO 201 and 204 Concepts in Biology 1 & 2

BIO 327 Genetics

CHE 210 & CHE 210L Essential Concepts of Chemistry

CHE 215 & CHE 215L Introduction to Structural Inorganic Chemistry

CHE 220 & CHE 350 Introductory Organic Chemistry

PHY 201 and 202 College Physics, or PHY 211 & 212 General Physics

MAT 205 Statistics and/or MAT 221 Calculus

Recommended courses (may be required for certain schools):

BIO 221 Anatomy and Physiology

BIO 351 Mammalian Physiology

BIO 353 Zoology

BIO 365 Microbiology

CHE 365 Biochemistry I: Biomolecules

Pre-Medical Program

Pre-Med Advisor: Michael Morton

Mission

Medical schools, in their many different forms, are post-baccalaureate programs requiring an undergraduate degree for admission. The mission of the St. Andrews Pre-

Medical Program is to prepare students with the knowledge and skills necessary to gain acceptance in a medical school of their choice and to later excel as a professional. There are many different career options available for students interested in pursuing careers in health care. Students might consider eventually studying medicine, nursing, physical therapy, pharmacy, dentistry, or physician assisting among many other fields. Depending on the student's interests, they might choose different paths of study while at St. Andrews. The future medical professional needs to possess a diverse educational background so that they can bring a variety of talents and interests to the profession of their choice. A student may choose any major course of study but should be aware that medical schools are looking for students with a strong foundation in natural sciences (biology, chemistry, mathematics, and physics), highly developed communication skills, and a solid background in the social sciences and humanities. St. Andrews also cultivates the less tangible qualities and characteristics that admission officers are seeking because they ensure success in the highly challenging fields of health care. Though a distinctive, well-rounded liberal education and the numerous opportunities beyond the classroom such as internships and study abroad, St. Andrews students develop invaluable characteristics such as community awareness, creativity, and problem-solving abilities.

Program of Study

Pre-Med is not defined as a separate field of study, nor is it restricted to a single, specific major at St. Andrews. The majority of students in the Pre-Med Program usually major or minor in a natural science, but the completion of other majors does not exclude a student from successfully applying to medical school. Students interested in health related fields should first discuss their career choice with the Pre-Med Advisor. In consultation with the advisor, they choose a major and plan out their course work each semester to meet the goals of preparing for the specific medical schools of their choice, in addition to completing their major and general education requirements. Regardless of what major a student interested in health care chooses to study at St. Andrews, the first two years of study should concentrate on the traditional basic science disciplines with a special emphasis on laboratory experiences that form an integral part of the science education process. This will allow the students to be properly prepared for taking the Medical College Admission Test (MCAT) at the end of their junior year. The MCAT consists of four sections: 1) verbal reasoning, 2) physical sciences, 3) biological sciences and 4) writing abilities. The General Education program at St. Andrews helps prepare students for sections 1 and 4 while courses in the natural sciences help prepare students for sections 2 and 3. Throughout their four years at St. Andrews, the student will also discuss various opportunities with their advisor, such as internships, and important deadlines for national exams and applications.

Basic science courses that meet the minimal requirements for most medical school programs:

BIO 201 and 204 Concepts in Biology 1 & 2

BIO 327 Genetics

CHE 210 & 210 L Essential Concepts of Chemistry

CHE 215 & 215L Introduction to Structural Inorganic Chemistry

CHE 220 & CHE 350 Introductory Organic Chemistry

PHY 201 & 202 College Physics

or PHY 211 & 212 General Physics

MAT 205 Statistics

and/or MAT 221 Calculus

Recommended courses (May be required for certain schools):

BIO 221 Anatomy and Physiology I

BIO 351 Mammalian Physiology

BIO 365 Microbiology

CHE 365 Biochemistry I: Biomolecules

SS 227 Community Health, First Aid and CPR