University of Saint Francis™

Forensic Chemistry Program

Bachelor of Science Degree

University Profile

The University of Saint Francis was founded in 1890 and has a rich heritage of offering quality education. Rooted in the Catholic and Franciscan traditions of Faith and Reason, the University of Saint Francis engages a diverse community in learning, leadership and service.

The campus has 108 acres of rolling lawns and trees with 19 buildings and four residence halls that surround beautiful Mirror Lake.

Personal attention to students is what makes a USF education so meaningful and enriching to its approximately 2,000 students.

Forensic Chemistry Program

The Forensic Chemistry Program offered through the USF Department of Chemistry integrates traditional organic, inorganic, analytical, and biochemistry with math and specialized forensics courses. The curriculum provides our majors with expertise in analysis and proper handling of criminal evidence, presentation of evidence as expert witnesses, and elements of criminal law governing forensic procedures. Additionally, students may participate in research projects in forensic chemistry and have the option of participating in research projects in various scientific fields with faculty members.

This program is designed to prepare students for careers in criminal investigation, including forensic crime laboratories. The foundation of this program is a rigorous curriculum in chemistry which will provide the majors with the flexibility to pursue careers in other fields of chemistry if they choose, and to communicate with other scientists who may contribute to the analysis of criminal evidence. Internships in forensic laboratories and law enforcement offices are tremendous opportunities available to majors.

Forensic Chemistry Faculty

The chemistry and forensic science faculty are dedicated to excellent teaching. Small class sizes optimize interactions between professors and students. Learning occurs not only in the classroom, but also in the laboratory and in the field. Our chemistry faculty are experts in instrumental and quantitative analytical chemistry as well as molecular biochemistry, applied organic chemistry and inorganic chemistry. The forensic science faculty all possess advanced degrees in forensics or criminal justice and have experience working in crime labs and in the judicial system.

Research and Equipment

Students have the option to go beyond the minimum curriculum to participate in research projects with faculty researchers in molecular chemistry, biochemistry, mineral chemistry, and inorganic chemistry. Undergraduate research gives students an advantage when applying for professional positions or graduate school.

The collaborative research with faculty offers exciting opportunities for learning and engagement with the scientific community as well. Undergraduate research participants are often invited to travel with faculty to regional and national conferences and are welcome to formally present their work at such conferences.

The Chemistry Department's labs are stocked with modern scientific instruments designed to provide the student with hands-on experience. Instruments represent those typical of state and federal crime labs as well as more advanced state-of-the-art chemistry research labs. The instrument inventory includes a Nuclear Magnetic Resonance (NMR); gas chromatographs; mass spectrometers; spectrometers in the ultraviolet, visible light and infrared range; fluorescence spectrometers; atomic absorption spectrometers; and High Performance Liquid Chromatographs (HPLC).

Science Seminars

Forensic Science majors, along with other science majors, attend Seminar once a week for every semester they are on campus. Seminars consist of outside speakers such as research chemists, forensic scientists, physicians, veterinarians, research biologists, and others. Faculty members use Seminar to explain their research programs and offer the chance for students to participate directly in these projects or to propose their own research projects. Upper level students make presentations about research they have done or internships they have completed. There is no tuition charge for Seminar except for the one semester students are required to make a presentation. Seminar provides an opportunity to all science majors to interact and get to know the faculty as they attend Seminar each week.

Science Symposium Scholarship Opportunity

Twice a year for over 30 years the University of Saint Francis has offered the Three Rivers Science Symposium for qualified high school students to study cutting edge topics in the fields of science and math. This opportunity has cumulative scholarship potential should the student choose to matriculate at USF and major in the sciences. Past topics have included CSI, Forensics and Pheromones among others.

Sample Curriculum

(128 Hours)

Freshman Year

Fall (17 hours)

Principles of Chemistry I	4
Principles of Chemistry I Lab	Cr
Chemistry Seminar	Cr
Principles of Biology I	4
Principles of Biology I Lab	Cr
Rhetoric and Composition	3
iConnect	3
Introduction to Forensic Science	3

Spring (16 hours)

Principles of Chemistry II	4
Principles of Chemistry II Lab	Cr
Chemistry Seminar	Cr
Principles of Biology II	4
Principles of Biology II Lab	Cr
Algebra and Trigonometry	3
General Education Requirement	3
General Education Requirement	2

Sophomore Year

Fall (17 hours)

Organic Chemistry I	4
Organic Chemistry I Lab	Cr
Chemistry Seminar	Cr
Physics I	4
Physics I Lab	Cr
Calculus I	3
Criminal Evidence	3
General Education Requirement	3

Spring (16 hours)

Chemistry Seminar	Cr
Physics II	4
Physics II Lab	Cr
Calculus II	3
General Education Requirement	3
General Education Requirement	3
General Education Requirement	3

Junior Year

Fall (15 hours)

Analytical Chemistry	4
Analytical Chemistry Lab	Cr
Inorganic Chemistry	3
Chemistry Seminar	Cr
Expert Witness Testimony	2
General Education Requirement	3
Elective	3

Spring (16 hours)

Biochemistry	3
Biotechnology Lab	1
Chemistry Seminar	Cr
General Education Requirement	3
General Education Requirement	3
General Education Requirement	3
Elective	3

Senior Year

Fall (15 hours)

Chemistry Research	3
Chemistry Seminar	Cr
Forensic Microscopy	3
General Education Requirement	3
General Education Requirement	3
Elective	3

Spring (16 hours)

Instrumental Analysis	3
Chemistry Seminar	1
Forensics Practicum	3
Elective	3
Elective	3
Elective	3

Financial Aid

Financial aid is available in the form of scholarships, grants, loans, and work study. Over 95 percent of undergraduate students receive some form of financial assistance; most receive more than one type of aid. Early estimator packages are available for dependent students during the fall at www.sf.edu/financialaid.

All students are encouraged to complete the Free Application for Federal Aid (FAFSA). Priority deadline is no later than March 10.

For More Information

Contact the Office of Admissions at 260-434-3279 or 1-800-729-4732 or visit our website at www.sf.edu/sf/arts-sciences/chemistry.

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