

CHEMISTRY

Forensic Chemistry

College of Arts and Sciences • Department of Chemistry

Degrees Available at SIUE

- B.A. – Chemistry with a specialization in Forensic Chemistry
- B.S. – Chemistry with a specialization in Forensic Chemistry

Why Forensic Chemistry?

Do you envision yourself helping to solve crimes, but want to work in a laboratory environment? A forensic chemist typically analyzes evidence gathered from crime scenes, including trace samples of hair or blood or even fragments of glass and paint. The field encompasses a wide range of scientific knowledge and is ideal for students interested in chemistry, biology, materials science, and DNA analysis.

Forensic Chemistry at SIUE

In response to growing interest, SIUE's Department of Chemistry expanded its list of degree offerings to include specializations in forensic chemistry in 2010. With the guidance of the local Illinois State Police crime laboratory (the head of which is a SIUE alum), several classes have been tailored to equip a student for work in any crime lab — locally, regionally, or in federal labs run by the FBI. Specific courses recommended include forensic biology, environmental sciences, anthropology, criminal justice, and speech communications. All students graduate with a strong foundation in chemistry, which allows for wider career options in addition to the forensic chemistry specialization. As with other programs in the Department of Chemistry, SIUE is targeting the forensic chemistry specialization for certification by the American Chemical Society (ACS). The Department has extensive master's degree-level research facilities that are open to all undergraduates and laboratories are equipped for DNA analysis. Among the state-of-the-art equipment is a liquid chromatography-mass spectrometer (LC-MS), which allows for highly sensitive advanced separation and analysis of chemical components.

Career Outlook

Forensic chemists are naturally found working in local, state, or federal crime labs. According to the latest career surveys, the field is growing substantially, especially in the area of DNA analysis. Last year we had the largest graduate enrollment for Master only institutions in the country.

Admission Requirements

Students must meet all University admission requirements and the following additional Department requirements:

- At least three years of college preparatory mathematics (2 years of Algebra, 1 year of geometry) completed in high school
- Admission to a degree program in chemistry requires an application for a major and acceptance by the department

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Faculty

Distinguished Research Professors

O'Brien, Leah C., Ph.D.

1987, University of Arizona, Tucson

Patrick, Timothy B., Ph.D.

1967, West Virginia University

Professors

Eilers, James E., Ph.D.

1971, Case Western Reserve University

Johnson, Kevin A., Ph.D.

1996, Clemson University

Khazaeli, Sadegh, Ph.D.

1982, Michigan State University

Shaw, Michael J., Ph.D.

1993, University of British Columbia – Vancouver

Vandegrift, Vaughn. (Chancellor), Ph.D.

1974, Ohio University

Associate Professors

Dixon, Robert P. (Chair), Ph.D.

1993, University of Pittsburgh

Lu, Yun, Ph.D.

1996, Nankai University

Shabangi, Masangu, Ph.D.

1999, University of Toledo

Shabestary, Nahid, Ph.D.

1984, Michigan State University

Voss, Eric J., Ph.D.

1992, Northwestern University

Assistant Professors

De Meo, Cristina, Ph.D.

2001, University of Georgia – Athens

Navarre, Edward, Ph.D.

2002, University of Vermont

Wei, Chin-Chuan, Ph.D.

1998, City University of New York

Wiediger, Susan D., Ph.D.

1999, Rice University

Sample Four-Year Curriculum - BS

	FALL	SPRING
YEAR 1	CHEM 121a General Chemistry (4) CHEM 125a General Chemistry Lab (1) ENG 101 English Composition (3) MATH 150 Calculus (5) SPC 103 Interpersonal Communication Skills (3) Total 16	BIOL 150 Biol I CHEM 121b General Chemistry (4) CHEM 125b General Chemistry Lab (1) ENG 102 English Composition II (3) MATH 152 Calculus II (5) Total 17
YEAR 2	BIOL 151 Biol II PHYS 151 University Physics I (4) PHYS 151L University Physics Lab (1) CHEM 241a Organic Chemistry (3) CHEM 331 Quantitative Analytical Chemistry (3) CHEM 335 Quantitative Analytical Chemistry Lab (2) Total 17	BIOL 220 Genetics (4) CHEM 241b Organic Chemistry (3) CHEM 245 Organic Chemistry Lab (2) PHYS 152 University Physics II (4) PHYS 152L University Physics II Lab (1) PHIL 106 Critical Thinking or Math 106 Deductive Reasoning (3) Total 17
YEAR 3	BIOL 319 Cell and Molecular Biology (4) CHEM 361a Physical Chemistry (3) CHEM 365a Physical Chemistry Lab (2) CHEM 451a Biochemistry (3) Introductory Social Science (3) Introductory Fine Arts and Humanities (3) Total 18	BIOL 490 Forensics Biology (3) CHEM 361b Physical Chemistry (3) CHEM 365b Physical Chemistry Lab (1) CHEM 396 Introduction to Research (2) CHEM 439 Forensics Chemistry (3) CHEM 455 Experimental Methods in Biochemistry (2) Introductory Fine Arts and Humanities/Social Science (3) Total 17
YEAR 4	ENSC 428 Environmental Analysis (3) ENSC 428L Environmental Analysis Lab (1) CHEM 471 Principals of Toxicology (3) CHEM 496 Chemical Problems (2) STAT 244/380 Statistics/Statistics for Applications (3) Distribution Fine Arts and Humanities (3) Total 15	CHEM 431 Instrumental Analysis (3) CHEM 435 Instrumental Analysis Lab (1) CHEM 499 Senior Assignment (0) International Issues/International Culture (3) Interdisciplinary Studies (3) Distribution Social Science (3) Total 13

TRANSFER STUDENTS Maximize your transfer experience - complete the **bolded** courses/requirements pre-transfer **AND** satisfy the Illinois Articulation Initiative (IAI) General Ed Core or receive an AA, AS, or AAT (early childhood, special ed, or math) degree from an IAI community college. If 'Minor' requirements are shown, discuss careful course selection with the academic advising contact listed. Transfer Credit Equivalency Guides are located at siue.edu/transfer/

BA degree requires two semesters of same foreign language.

Exit Requirements

Satisfactory completion of all university, program and departmental requirements as outlined in the undergraduate catalog.

Application Deadline

Please contact the department for all appropriate application deadlines.

Academic Advising Information

Brian Hinterscher
 College of Arts and Sciences Undergraduate Advising
 Southern Illinois University Edwardsville
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 Edwardsville, IL 62026-1609
 618.650.5525

Contact Info

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