

CHEMISTRY

Biochemistry

College of Arts and Sciences • Department of Chemistry

Degrees Available at SIUE

- B.A., Chemistry with a specialization in Biochemistry
- B.S., Chemistry-ACS Certified Biochemistry

Why Biochemistry?

Biochemistry is the study of the chemistry of living things, includes the interaction of substances, properties and compounds. Biochemists can be found in multiple scientific fields, including agriculture, pharmaceutical industries, biotechnology and medicine.

Biochemistry at SIUE

The Department of Chemistry offers two degrees for students seeking to specialize in biochemistry. A bachelor's of arts degree offers a firm foundation of basic chemistry while a bachelor's of science degree is more rigorous and leads to certification by the American Chemical Society (ACS) as a professional biochemist. The department has well-equipped laboratories that are among the best in the country and open to both undergraduate and graduate students. Faculty members – not graduate students – teach all classes and mentor students both in the classroom and through multiple research opportunities. The result is a nurturing environment where students can excel in whatever chemistry/biochemistry discipline they elect to pursue.

Career Outlook

Those with degrees in biochemistry can be found in almost any scientific field and in a variety of career settings, including manufacturing, medicine, education, and biotech industries. The degree also serves as an excellent foundation for those interested in postgraduate careers in medicine, pharmacy, or environmental science.

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

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.

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Faculty

Distinguished Research Professor

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 - BA

	FALL	SPRING
YEAR 1	CHEM 121a General Chemistry I (4) CHEM 125a General Chemistry Lab I (1) ENG 101 Composition I (3) MATH 150 Calculus I (INSM) (5) Introductory Social Sciences (ISS) (3) Total 16	CHEM 121b General Chemistry II (4) CHEM 125b General Chemistry Lab II (1) ENG 102 Composition II (3) MATH 152 Calculus II (5) BIOL 150 Biol I Total 17
YEAR 2	CHEM 241a Organic Chemistry I (3) CHEM 331 Quant Analytical Chemistry (3) CHEM 335 Quant Analytical Chem Lab (1) PHYS 131a or PHYS 151/151L (5) BIOL 151 Biol II Total 16	CHEM 241b Organic Chemistry II (3) CHEM 245 Organic Chemistry Lab (2) PHYS 131b or PHYS 152/152L (DNSM) (5) BIOL 220 Genetics (4) Introductory Fine Arts & Humanities (IFAH) (3) Total 17
YEAR 3	CHEM 361a Physical Chemistry (3) CHEM 365a Physical Chemistry Lab (2) CHEM 451a Biochemistry (3) BIOL 319 Cell & Molecular Biology (4) Foreign Language 101 (4) Total 16	CHEM 451b Biochemistry (3) CHEM 455 Experimental Methods in Biochem (2) CHEM Lab Elective (2) Introductory Fine Arts & Humanities (IFAH) or Introductory Social Sciences (ISS) (3) Foreign Language 102 (IC) (4) Total 14
YEAR 4	CHEM Lecture Elective (3) CHEM Lab Elective (1-2) CHEM 459 - Special Topics in Biochemistry (3) CS 140 or STAT 107, 244, 380, or 480 (3-4) Distribution Fine Arts & Humanities (DFAH) (3) Intergroup Relations (IGR) (3) Total 16-18	CHEM 499 Special Topics in Organic Chemistry (0) BIOL or CHEM Elective (3) Distribution Social Sciences (DSS) (3) Interdisciplinary Studies (IS) (3) Elective (3) Total 12

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.

American Chemical Society (ACS) Certified Biochemistry Specialization (B.S)

Chemistry requirements

CHEM 361 a,b CHEM 365 a,b CHEM 396 CHEM 411

CHEM 415 CHEM 431 CHEM 435 CHEM 451a,b

CHEM 455 CHEM 459 CHEM 496 CHEM 499

Biology requirements

BIOL 150 BIOL 151 BIOL 220 BIOL 319

Academic Advising Information

Brian Hinterscher

College of Arts and Sciences Undergraduate Advising

Campus Box 1609

Edwardsville, IL 62026-1609

(618) 650-5525

Contact Info

Department of Chemistry

Science Building, Campus Box 1652

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