

# BIOLOGICAL SCIENCES

## Medical Technology



College of Arts and Sciences • Department of Biological Sciences

### Degrees Available at SIUE

- B.A., B.S., Biological Sciences

### Why Medical Technology?

Medical technologists play a pivotal role in the care of patients. While not involved in direct patient care, medical technologists use both science and technology to develop and evaluate accurate laboratory tests. Their responsibilities encompass all clinical laboratory disciplines, such as clinical chemistry, urinalysis, hematology, serology, immunology, blood and organ banking, microbiology, parasitology, and nuclear medicine. Medical technologists work in a variety of settings, from hospitals and patient clinics to universities, independent laboratories, pharmaceutical companies and government agencies.

### Medical Technology at SIUE

SIUE's Department of Biological Sciences divides its medical technology program into rigorous coursework and onsite, practical experience in a working clinical laboratory. The program is designed for students who seek to become certified medical technologists through the American Society of Clinical Pathologists. During the first three years of the program, students gain extensive knowledge in biology, chemistry, physics, and mathematics. Actual clinical study is conducted during the last year in a laboratory setting at one of the University's affiliated hospital schools of medical technology in Springfield or St. Louis. Acceptance to this last year of study is competitive and not guaranteed to all students in the program. Credits are earned offsite through courses such as blood banking, chemistry, coagulation, hematology, microbiology, seriology and urinalysis. Upon successful completion of the clinical lab coursework, students earn a BS degree in Biology/Medical Technology and are eligible for board-certification examination.

### Career Outlook

According to the American Society of Clinical Pathology, medical technologists are in high demand, with many hospitals and healthcare-related industries seeking to fill numerous vacancies in the field. Graduates who successfully obtain certification from the ASCP are the most likely to gain employment in the industry of their choice.

### Admission Requirements

Students admitted to programs offered in the Department of Biological Sciences shall have met the University admission requirements and the following additional Department requirements:

- completion of all Academic Development courses required by the University
- completion of any courses required to address Department of Biological Sciences high school deficiencies
- maintenance of a cumulative grade point average of at least 2.0 in all courses
- application to a major and acceptance by the department

### Exit Requirements

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

### Other Biology Programs at SIUE

Integrative Biology, Genetic Engineering, Medical Sciences, Ecology, Evolution & Environment, Secondary Education Certification, Combined Bachelor of Science and Doctor of Dental Medicine Program

### Faculty

#### Professors

**Ralph W. Axtell, Ph.D.**

1958, University of Texas – Austin

**Richard B. Brugam, Ph.D.**

1975, Yale University

**Paul W. Ferguson (Provost), Ph.D.**

1981, University of California – Davis

**Dennis J. Kitz, Ph.D.**

1980, University of Iowa

**Kevin G. Krajniak, Ph.D.**

1990, University of Georgia

**Steven A. McCommas, Ph.D.**

1982, University of Houston

**Aldemaro Romero (Dean), Ph.D.**

1984, University of Miami

**Kurt E. Schulz, Ph.D.**

1991, University of Wisconsin - Madison

**Paul E. Wanda, Ph.D.**

1978, Pennsylvania State University

#### Associate Professors

**Elaine M. AbuSharbain, Ph.D.**

1992, Southern Illinois University Carbondale

**Paul E. Brunkow, Ph.D.**

1996, Arizona State University

**David D. Duvernell, Ph.D.**

1998, Virginia Tech

**Elizabeth J. Esselman, Ph.D.**

1996, The Ohio State University

**LuciAnn P. Kohn, Ph.D.**

1989, University of Wisconsin

**Zhi-Qing Lin, Ph.D.**

1996, McGill University

**Peter R. Minchin, Ph.D.**

1984, University of Tasmania

**William A. Retzlaff, Ph.D.**

1987, Clemson University

**Christopher W. Theodorakis, Ph.D.**

1994, University of Tennessee

#### Assistant Professors

**Kelly J. Barry, Ph.D.**

1992, University of Hawaii

**Richard L. Essner, Jr., Ph.D.**

2003, The Ohio State University

**Thomas J. Fowler, Ph.D.**

1993, The Ohio State University

**David H. Jennings, Ph.D.**

1997, University of Colorado

**Faith L.W. Liebl, Ph.D.**

2005, University of Illinois at Chicago

**Darron R. Luesse, Ph.D.**

2006, Indiana University, Bloomington

**Vance J. McCracken, Ph.D.**

2001, University of Illinois at Urbana-Champaign

**Jason Williams, Ph.D.**

2005, Miami University

SOUTHERN ILLINOIS UNIVERSITY  
**EDWARDSVILLE**

COLLEGE OF ARTS & SCIENCES

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## Sample Four-Year Curriculum - BS

	FALL	SPRING
YEAR 1	ENG 101 English Composition I (3) <b>CHEM 121A</b> General Chemistry I (INSM) (4) <b>CHEM 125A</b> General Chemistry Lab I (1) <b>MATH 125</b> Pre-Calc Math (INSM) (3) International Issues (II) or International Culture (IC) (3) Introductory Social Sciences (ISS) (3) Total 17	<b>BIOL 150</b> Biology I (4) <b>CHEM 121B</b> General Chemistry II (DNSM) (4) <b>CHEM 125B</b> General Chemistry Lab II (1) ENG 102 English Composition II (3) PHIL 106 Critical Thinking or MATH 106 Deductive Reasoning (3) Total 15
YEAR 2	<b>BIOL 151</b> Biology II (4) <b>CHEM 241A</b> Organic Chemistry I (3) Distribution Social Sciences (DSS) (3) SPC 103 Interpersonal Communication (IGR)* (3) <b>STAT 107</b> Concepts of Statistics or STAT 244 - Statistics (3-4) Total 16-17	<b>BIOL 220</b> Genetics (4) <b>CHEM 241B</b> Organic Chemistry II (3) <b>CHEM 245</b> Organic Chemistry Lab (2) Introductory Fine Arts & Humanities (IFAH) (3) <b>PHYS 131a</b> College Physics I (5) Total 17
YEAR 3	BIOL 319 Cell & Molecular Biology (4) BIOL 350 Microbiology (4) CHEM 351 Biochemistry (3) Intro Fine Arts & Humanities (IFAH) or Social Science (ISS) (3) <b>PHYS 131b</b> College Physics II (5) Total 19	BIOL 340 Physiology (4) BIOL 335 Introduction to Immunology (3) Distribution Fine Arts & Humanities (DFAH) (3) Interdisciplinary Studies (IS) (3) Total 13
YR 4	Hospital Clinical Education 18	Hospital Clinical Education (18)

\* Students pursuing a bachelor of arts degree will complete one year of foreign language in lieu of SPC 103/104/105 and PHIL 106/MATH 106

**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/](http://siue.edu/transfer/)

BA degree requires two semesters of same foreign language.

### Academic Advising Information

College of Arts and Sciences Undergraduate Advising  
 Southern Illinois University Edwardsville  
 Campus Box 1609, Edwardsville, IL 62026-1609  
 618.650.5525  
 bhinter@siue.edu

### Contact Info

Department of Biological Sciences  
 College of Arts and Sciences  
 Southern Illinois University Edwardsville  
 Campus Box 1651, Edwardsville, IL 62026  
 618.650.3927

