

Bachelor of Arts (BA)**Forensic Science Option**

Forensic science is the application of scientific principles to civil and criminal laws, and as such, plays a vital role in the criminal justice system. Forensic science is a very broad field that includes areas such as ballistics, crime scene investigation, DNA analysis, forensic toxicology, fingerprint analysis, forensic drug analysis and digital forensic analysis, just to name a few. Forensic chemists typically analyze non-biological evidence and controlled substances found at crime scenes or taken from crime suspects in order to identify and quantify these materials and to match evidence to crime suspects or criminal activity. They use a variety of sophisticated lab techniques, including gas chromatography, infrared spectroscopy, microscopy, spot testing and mass spectroscopy and apply knowledge from diverse areas, such as chemistry, biology, and genetics, to help solve crimes. They are often called to testify in court as expert witnesses. Most forensic scientists are employed in crime labs associated with local, state or federal law enforcement agencies. Those interested in a challenging and rewarding career that provides financial security, promotes self-respect and offers the opportunity to work on stimulating projects should consider a career in forensic science.

Becoming Career Ready...

/ Faculty with experience, including current and former forensic professionals, work closely with students preparing them for the forensics field. Faculty-mentored research will help you develop the professional skills needed for success in a competitive job market and/or advanced study in graduate and professional programs.

/ The Forensic Science curriculum prepares graduates for careers in forensic science or chemistry and also provides an excellent basis for graduate and professional areas of study. Example job titles include forensic science technician, forensic scientist, crime lab technician, and criminalist.

/ 100% of Southeast programs offer real-world experience. Forensic Science students earn this experience through hands-on experience and training in our forensic education lab, i.e. our "mock" crime lab, using the same methods, chemical instruments, and tools used by forensic professionals. This lab was fully equipped with a \$700,000 grant from the federal government.

/ The BA Chemistry: Forensic Science option will provide you with the coursework and experiential preparation recommended by the American Academy of Forensic Sciences and favored by forensic laboratory directors.

/ The path to a successful career starts with you! You can maximize your career development by working closely with Career Services and Southeast faculty – they are here to help you connect your passions, interests and skills to jobs and opportunities in the field. Career Services provides professional career counseling and coaching, resume critiques, practice interviews, job search strategies, career events, networking opportunities and more.

Internships, Employment Opportunities, Graduate Schools and Programs of Recent Graduates:

- Arkansas State Crime Laboratory
- Illinois State Police Forensic Sciences Command
- Missouri State Highway Patrol Crime Laboratory Division
- Saint Louis Metropolitan Police Department
- US Army Criminal Investigation Laboratory
- US Bureau of Alcohol, Tobacco, Firearms, and Explosives
- United States Drug Enforcement Administration
- Numerous state and local forensic laboratories nationwide
- Biokyowa
- Buzzi Unicem USA
- Eli Lilly
- Exxon Mobil
- Monsanto
- Pharmacia (currently part of Pfizer)
- PPG Industries
- Proctor and Gamble
- Sigma-Aldrich
- Numerous additional chemical companies
- John Hopkins University
- Purdue University
- University of Illinois (School of Medicine, Graduate School)
- University of Notre Dame
- University of Wisconsin – Madison
- Washington University
- Numerous additional top-tier chemistry graduate and professional schools

Special Options with Chemistry

Southeast offers a Master of Natural Science in Applied Chemistry with a Forensic Chemistry option.

Career Information

To learn more about career opportunities in chemistry visit:
<https://www.acs.org/content/acs/en/careers/college-to-career.html>.

According to the United States Bureau of Labor Statistics, there were 15400 forensic science related jobs in 2016. This number is expected to increase by 17% by 2026. Source:
<https://www.bls.gov/ooh/life-physical-and-social-science/forensic-science-technicians.htm#tab-6>.

Transfer and Dual Credit Students

If you have dual credit or transfer credit, please visit our transfer course equivalencies guide at semo.edu/transfercredit.

To learn more
Office of Admissions
(573) 651-2590
admissions@semo.edu
semo.edu

To explore
the College of Science,
Technology, Engineering and
Mathematics online, visit
semo.edu/stem

For advising
Center for Academic Advising
semo.edu/advising

Bachelor of Arts (BA)

This is a guide based on the 2019-2020 Undergraduate Bulletin and is subject to change. The time it takes to earn a degree will vary based on several factors such as dual enrollment, remediation, and summer enrollment. Students will meet with an academic advisor each semester and use Degree Works to monitor their individual progress.

CURRICULUM CHECKLIST

"Critical Courses" are italicized and bolded. Data shows that students who have completed this course in the first two years and have earned the noted grade are most likely to complete this program of study.

Required Courses:

- ___ *CH185 General Chemistry (5)*
- ___ *CH186 Foundations of Inorganic Chemistry (3)*
- ___ CH187 Inorganic Chemistry and Qualitative Analysis Laboratory (2)
- ___ CH271 Foundations of Analytical Chemistry (5)
- ___ CH306 Survey of Physical Chemistry (3)
- ___ CH313 Physical Chemistry Laboratory (3)
- ___ *CH340 Essentials of Organic Chemistry (5)*
- ___ CH498 Professional Presentation in Chemistry (1)
- ___ CH531 Foundations of Biochemistry (3)
OR
- ___ UI331 Foundations of Biochemistry (3)
- ___ UI443 Professional Experience in Chemistry (3)

Forensic Science Option

- ___ CH420 Forensic Chemistry (4)
- ___ CJ100 Introduction to Criminal Justice (3)
- ___ CJ350 Criminalistics (3)
- ___ FS550 Crime Laboratory I: Microscopy (2)
- ___ FS552 Crime Laboratory II: Blood and Fluids (2)

Choose one of the following courses:

- ___ CH575/075 Chemical Instrumentation (4)
- ___ EV460 Introduction to Toxicology (3)

Additional Requirements – 13 Hours Required

- ___ *MA139 Applied Calculus (3)*
- ___ PH120/020 Introductory Physics I (5)
- ___ PH121/021 Introductory Physics II (5)

Note: Completion of an experiential learning project (undergraduate research or internship) in the major is required. The departmental advisor should be consulted for information about this requirement.

General Education Requirements – some requirements may be fulfilled by coursework in major program

- Social and Behavioral Sciences – 6 hours
- Constitution Requirement – 3 hours
- Written Communication – 6 hours
- Oral Communication – 3 hours
- Natural Sciences – 7 hours (from two disciplines, one to include a lab)
- Mathematics – 3 hours
- Humanities & Fine Arts – 9 hours (from at least two disciplines)
- Additional requirements – 5 hours (to include UI100 for native students)
- Civics examination

SAMPLE FOUR-YEAR PLAN

	Fall Semester	Spring Semester		
	Course #	Hrs	Course #	Hrs
FIRST YEAR	UI100	3	<i>CH186</i>	3
	EN100	3	CH187	2
	<i>CH185/CH085/CH005</i>	5	General Education	3
	<i>MA139</i>	3	General Education	3
			General Education	3
Total	14	Total	14	
Milestone: maintain 2.0 cumulative GPA				

SECOND YEAR	CH271/071	5	PH121/021	5
	PH120/020	5	General Education	3
	<i>CH340/040</i>	5	General Education	3
			General Education	3
			Elective	3
Total	15	Total	17	
Milestone: maintain 2.0 cumulative GPA				

(summer courses are encouraged to avoid 18 hour semesters)

THIRD YEAR	CH306	3	CH313	3
	CJ100	3	CJ350	3
	General Education	3	UI443	3
	General Education	3	General Education	3
	Elective	3	Elective	3
Total	15	Total	15	
Milestone: maintain 2.0 cumulative GPA				

FOURTH YEAR	CH420	4	CH498	1
	CH531 or UI331	3	EV460 or CH575/075	3-4
	FS550	2	FS552	2
	Elective	3	General Education	3
	Elective	3	Elective	3
		Elective	2-3	
Total	15	Total	15	
Milestone: maintain 2.0 cumulative GPA				

A "Milestone" signifies a significant stage for a student in the completion of a degree.

Degree requirements for all students: a minimum of 120 credit hours, completion of the General Education program, completion of 39 senior division hours (300-599), Writing Proficiency Exam (WP003).

Refer to the Undergraduate Bulletin or Degree Works for additional graduation requirements for your program.

A minimum 2.0 GPA in the major and overall are required to graduate with a BA in Chemistry degree.