Chemistry is the branch of natural science that deals with the properties and classification of matter, the changes that matter undergoes, and the energy associated with these changes. Research by chemists increases our knowledge about chemicals and their roles in the natural world, and has led to the discovery and development of new and improved products and advances in medicine, agriculture, food processing and other fields. If you are interested in a rewarding career that provides financial security, promotes self-respect and gives you the opportunity to work on stimulating and breakthrough projects, then a career in chemistry may be right for you.

Students completing this degree option will complete coursework and experiential preparation recommended by the American Academy of Forensic Sciences and favored by forensic laboratory directors who make hiring decisions in forensics. Students will earn a chemistry degree while gaining added knowledge, expertise, and experience required to be successful in the world of forensic science.

Chemistry students will...

- Gain a rigorous foundation in chemistry, science, math and forensic sciences in the context of a broad university education.
- Interact closely with experienced faculty in and out of the classroom who are recognized for their writing, training, professional affiliations, and expertise.
- Study in the state-of-the-art, first-rate learning environment provided by the newly renovated Magill Hall of Science, including dedicated forensic science laboratories.
- Have opportunities to pursue research and scholarship that develop independent thinking and problem solving
- Connect with a network of forensic science alumni and gain opportunities for mentoring and internships.

Career Planning

Career preparation is part of the mission of Southeast. 100% of programs offer our students an internship, study-abroad program, clinical opportunity, student teaching or research internship.

Approximately 35-40% of chemistry graduates pursue graduate or professional programs of study immediately upon graduation. The others pursue employment opportunities in chemistry or other fields. Employment opportunities for chemists exist in a variety of fields, such as biotechnology, biochemistry, chemical manufacturing, environmental monitoring and compliance, industrial hygiene, materials science, pharmaceutical manufacturing, product development, quality control, sales (pharmaceuticals, chemicals, instruments), and technical management.

The Office of Career Services in Academic Hall 057 can provide students with professional career counseling and coaching, resume critiques, practice interviews, job search strategies, career events, networking opportunities, and more.

| Demonstrated Career Proficiency is a Requirement of all Southeast Students |
|-----------------------------|------------------------------------------------------------------|
| CL001                       | First Semester                                                   |
|                             | Students connect academic career planning by completing an online career assessment |
| CL002                       | Second Semester                                                  |
|                             | Students learn more about resources available to enhance academic and career planning |
| CL003                       | Junior Year                                                       |
|                             | Students learn about continued career planning, job search strategies, and networking |
| CL004                       | Senior Year                                                       |
|                             | Students learn about resume development, professional communication, interviewing, and transitioning to the first job from college |

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
- Bickioway
- 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, the Forensic Chemistry Track.
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)
- CH40 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:
- 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.

University Studies Requirements (not already listed above):
- UI100 First Year Seminar, EN100 English Composition, Artistic Expression, Written Expression, Oral Expression, Literary Expression, Behavioral Systems, Living Systems, Development of a Major Civilization, Economic Systems, Political Systems, Social Systems,

SAMPLE FOUR-YEAR PLAN

Fall Semester | Course # | Hrs | Spring Semester | Course # | Hrs
--- | --- | --- | --- | --- | ---
UI100 | 3 | CH186 | 3 |
EN100 | 3 | CH187 | 2 |
CH185/CH805/CH905 | 5 | Artistic Expression | 3 |
MA139 | 3 | Literary Expression | 3 |
 | | Written Expression | 3 |
Total | 14 | Total | 14 |
Milestone: maintain 2.0 cumulative GPA

CH271 | 5 | PH121/021 | 5 |
PH120/020 | 5 | Behavioral Systems | 3 |
CH340 | 5 | Living Systems | 3 |
 | | Elective | 3 |
Total | 15 | Total | 17 |
Milestone: maintain 2.0 cumulative GPA

CH306 | 3 | CH313 | 3 |
CJ100 | 3 | CJ350 | 3 |
Social Systems | 3 | UI443 | 3 |
Political Systems | 3 | Develop of a Major Civ | 3 |
 | | Elective | 3 |
Total | 15 | Total | 15 |
Milestone: maintain 2.0 cumulative GPA

CH420 | 4 | CH498 | 1 |
CH531 or UI331 | 3 | EV460 or CH575 | 3-4 |
FS550 | 2 | FS552 | 2 |
Elective | 3 | Economic Systems | 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 University Studies program, completion of 39 senior division hours (300-599), career proficiency (CL001-004), Writing Proficiency Exam (WP003), and completion of the Measure of Academic Proficiency and Progress (MAPPP) at the senior level. 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.

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