

SOUTHERN ARKANSAS UNIVERSITY

CHEMISTRY



Charlotte Armour
Lab Technician at Albemarle Corp.
B.S. in Chemistry, SAU '03



Steve Card
Environmental Manager
B.S. in Chemistry, SAU '83

COLLEGE OF SCIENCE AND TECHNOLOGY

Pre-Health Biochemistry Option • Forensic Science • Environmental Science • Business Option • Medical Technology

The B.S. in chemistry science option degree at Southern Arkansas University will open opportunities in many areas of interest. This degree is the stepping stone to graduate school or to becoming a professional chemist in fields such as environmental science, forensic science, medicine, petroleum, alternative energy, pharmacy, or maybe even in patent law. Many chemists are employed as forensic and environmental chemists and work in government agencies such as the CIA; the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF); the FBI; the USDA; the National Institute of Health (NIH); the Environmental Protection Agency (EPA); the National Science Foundation (NSF); and others.

The program at SAU provides a balanced curriculum of classroom instruction and practical laboratory experience. Students with a major in chemistry receive extensive hands-on experience with state of the art instrumentation, such as TOC, FTIR, and UV-Visible spectroscopy, X-ray methods, GC/

MS, and HPLC chromatography, and others. One of the department's strengths is the opportunity for student-faculty interaction that comes from small class sizes. Faculty members are involved with students from classroom interaction to directing student research projects. Faculty even connect with students at many social events sponsored by the department throughout the year.



Dr. Tim Schroeder
working with
students in a
chemistry
lab.

“Things I remember about SAU’s chemistry program are the small class sizes, hands-on experiences with expensive analytical equipment, and upper-level research opportunities.”

Steve Card
Environmental Manager, Albemarle Corp.

The Department of Chemistry and Physics is housed in the new University Science Center at SAU. This facility provides space for biology, chemistry, physics, and engineering. At 60,000 square feet, the building provides classrooms, laboratories, and research facilities to serve the University and the region. The University Science Center supports and enriches degree programs, pre-professional programs, and teacher training. The department is affiliated with the new Natural Resource Research Center which provides additional state of the art instrumentation and facilities to carry out scientific research.



Chemistry Major Science Option (B.S.)

Fall - Semester 1

ENGL 1113 Composition I	3
*MATH 1045 Pre-Calculus	5
HIST 1003 World History I or HIST 1013 World History II	3

CHEM 1023/1021 University Chemistry I/Lab	4
GSTD 1002 Freshman Seminar	2

Total Semester Hours **17**

Spring - Semester 2

ENGL 1123 Composition II	3
MATH 1525 Calculus I	5

HIST 2013 U.S. History I or HIST 2023 U.S. History II or PSCI 2003 American Government: National	3
CHEM 1123/1121 University Chemistry II/Lab	4

Total Semester Hours **15**

Fall - Semester 3

ENGL 2213 World Literature I or ENGL 2223 World Literature II	3
CHEM 3003/3001 Organic Chemistry I/Lab	4
BIOL 1103/1101 Intro to Biology/Lab	4
Social Science Choice	3

Total Semester Hours **14[#]**

Spring - Semester 4

Humanities choice	3
MATH 1545 Calculus II	5
CHEM 3103/3101 Organic Chemistry II/Lab	4
Humanities choice	3

Total Semester Hours **15**

Fall - Semester 5

CHEM 3212/3202 Quantitative Chemical Analysis /Lab	4
CHEM 3233/3231 Intermediate-Inorganic Chemistry/Lab	4
PHYS 2203/2201 University Physics I/Lab	4
Free Elective	3

Total Semester Hours **15**

Spring - Semester 6

CHEM 3113/3111 Instrumental Analysis/Lab	4
PHYS 2213/2211 University Physics II/Lab	4
CHEM Elective 3	3
CHEM 3073 Biochemistry I	3
CHEM 3051 Junior Seminar - Chemistry	1

Total Semester Hours **15**

Fall - Semester 7

CHEM 4403/4401 Physical Chemistry: Thermodynamics/Lab	4
MATH 2563 Calculus III	3
CST Electives	4
Free Elective	3

Total Semester Hours **14[#]**

Spring - Semester 8

CHEM 4412/4411 Physical Chemistry: Quantum & Kinetics/Lab	4
Free Elective	3
CST Electives	4
CHEM Elective	3
CHEM 4051 Senior Seminar - Chemistry	1

Total Semester Hours **15**

Total hours required for major – 120

*Taking both MATH 1023 College Algebra and MATH 1033 Plane Trigonometry is equivalent to MATH 1045 Pre-Calculus Mathematics.

#Scholarship requirements may require the student to enroll in a minimum number of hours each semester.

