

CHEMISTRY, BS

Students pursuing a degree in chemistry typically have interests in science and/or the health professions. The chemistry BS degree is suitable for students who are primarily interested in attending a health professional school upon graduation.

Admission into the Major

Students are expected to formally declare a major no later than the fourth semester of full-time enrollment (or at 61 semester hours for transfer students). Students can declare a major by completing the Change of Major/Minor Application online under the Student tab of myBama.

Special Opportunities

Students pursuing this track may participate in Student Affiliates of the American Chemical Society, the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers, and Gamma Sigma Epsilon, as well as the pre-medical organizations.

Pre-health Professional Preparation

Students completing chemistry BS degree will have fulfilled all chemistry, biology, math, and physics requirements for admission to pre-health professional programs (medical, dental, optometry, pharmacy, veterinary, etc., schools).

Undergraduate Research

The Department of Chemistry and Biochemistry offers two undergraduate research courses designed to provide students with a hands-on experience at the forefront of chemistry. These courses include:

Code and Title	Hours
CH 396 Undergrad Research	1-3
CH 398 Undergrad Research	1-3
CH 399 Undergrad Research	1-3
CH 497 Intro To Research	1-3
CH 498 Intro To Research	1-3
CH 499 Intro To Research	1-3

In each course, students work directly with a faculty member on a research project. Chemistry majors and minors and students with an interest in chemistry are encouraged to become involved in undergraduate research through these courses. Students should receive approval from the faculty mentor before registering for a research course. Students may find descriptions of faculty research interests on the Department of Chemistry website. Students may contact potential research mentors directly or seek advice on possible mentors from their academic advisors.

Students earning the bachelor of science (BS) degree with a major in chemistry must complete all University, College and departmental degree requirements. These include the general education requirements, the following major requirements, all requirements for an approved minor and other sufficient credits to total a minimum of 120 applicable semester hours.

Code and Title	Hours
Major Courses	
CH 101 or CH 117 General Chemistry	4
CH 102 or CH 118 General Chemistry	4

CH 223	Quantitative Analysis	4
CH 231	Elem Organic Chemistry I	3
CH 232 & CH 237	Elem Organic Chem II and Elem Organic Chem Lab	5
CH 338	Elem Organic Chem Lab II	2
CH 340 & CH 343	Elem Physical Chem and Elem Phy Chem Lab	4
CH 461	Biochemistry I	3
CH 462	Biochemistry II	3
CH 463	Biochemistry Laboratory	3
Credit Hours Subtotal:		35

Ancillary Courses

Grades in ancillary courses are not computed into the major GPA. The major in chemistry culminating in the BS degree requires the successful completion of the following courses outside the major:

Select one of the following:	4	
BSC 114 Principles Of Biology I & BSC 115 and Laboratory Biology I		
BSC 118 Honors General Biology I		
Select one of the following:	4	
BSC 116 Principles Biology II & BSC 117 and Laboratory Biology II		
BSC 120 Honors Gen Biology II		
Select one of the following:	4	
MATH 125 Calculus I		
MATH 145 Honors Calculus I		
Select one of the following:	4	
PH 101 General Physics I		
PH 105 General Physics W/Calc I		
PH 125 Honors Gen Ph W/Calculus		
Select one of the following:	4	
PH 102 General Physics II		
PH 106 General Physics W/Calc II		
PH 126 Honors Gen Ph W/Calculus II		
Credit Hours Subtotal:		20

Total Hours 55

Grade Point Average

A 2.0 grade point average in the major is required for completion of the degree. Please see the Grades and Grade Points section of this catalog for an explanation on grade point average calculations.

Upper-level Residency

A minimum of 12 hours of 300- and 400-level courses in the major must be earned on this campus.

Required Minor

The major in chemistry (BS) degree requires a minor.

Prerequisites

Prerequisites for all CH courses at the 300- and 400-level must be passed with a minimum grade of C-.

Additional Major Requirements

Students are responsible for ensuring that they have met all University, College, major and minor requirements. However, each student must meet with an adviser in the major department for academic planning and to be approved for registration each semester. College advisers are also available for additional assistance with minor, College and University requirements.

The BS in chemistry degree prepares students for a wide range of career opportunities in chemistry and biochemistry, as well as related sciences (toxicology, forensics, environmental science) and for admission to health professional programs in fields such as medicine, dentistry, pharmacy, and veterinary science.

Types of Jobs Accepted

Recent graduates have gone on to enroll in health professional programs leading to careers as doctors, pharmacists, dentists, and veterinarians, or in graduate programs in chemistry or related fields. Chemistry graduates also take jobs directly after graduating in the chemical industry as technicians or quality control scientists, as high school teachers, or in related fields where they can use their chemistry background, such as pharmaceutical sales, patent law, or technical writing.

Jobs of Experienced Alumni

Academic careers, Physicians, Dentists, Pharmacists, Industrial researchers, Entrepreneurs.

Learn more about opportunities in this field at the Career Center