

# Department Level Requirements - Chemistry

## Requirements - BA or BS students

Students should consult with a chemistry advisor to schedule science and mathematics requirements in the appropriate order. Note that for a number of chemistry courses there is a prerequisite of a grade of C or better in a previous course. Please see the Associate Chair for Undergraduate Studies for assignment of an advisor.

Students also must complete all applicable College of Arts and Sciences and University graduation requirements (<https://catalog.missouri.edu/collegeofartsandscience/#undergraduatetext>), including University general education (<https://catalog.missouri.edu/academicdegree/requirements/generaleducationrequirements/>). Note that students pursuing a BS degree with a major in Chemistry may opt to satisfy the foreign language requirement through alternative course work consisting of no fewer than 12 credits numbered 2000 or above.

### Major Core Requirements

CHEM 1400	College Chemistry I	3
CHEM 1401	College Chemistry I Laboratory	1
CHEM 1410	College Chemistry II	3
CHEM 1411	College Chemistry II Laboratory	1
CHEM 2100	Organic Chemistry I	3
CHEM 2110	Organic Chemistry II	3
CHEM 2130	Organic Laboratory I	2
CHEM 2140	Organic Laboratory II	2
CHEM 2400	Fundamentals of Inorganic Chemistry with Lab	3
CHEM 3200	Quantitative Methods of Analysis with Lab	4
CHEM 3700W	Undergraduate Seminar in Chemistry - Writing Intensive	3
MATH 1500	Analytic Geometry and Calculus I	5
MATH 1700	Calculus II	5
<b>Total Credits</b>		<b>38</b>

## Degree Tracks

Beyond the major core requirements, each student must select a degree track. There is one track for students pursuing a BA degree and three for those pursuing a BS. The BA degree is designed to meet the needs of students who wish to gain a strong chemistry background but who may have goals other than employment as a chemist or graduate work in chemistry. The American Chemical Society certification track is recommended for BS students who desire professional employment as chemists or who plan to pursue graduate education in chemistry. A medicinal chemistry track is available to BS students who plan careers in the health professions or in pharmaceutical, clinical, or medicinal chemistry. The third BS track, leading to simultaneous completion of a BS in Chemistry and a BS in Education, is appropriate for those students who wish to teach chemistry in secondary schools. More information about this third degree track is available from the Chemistry Associate Chair for Undergraduate Studies.

Note: "Track" designations do not appear on transcripts or diplomas.

## Double Majors

No specific programs (other than the dual degree program with the College of Education noted above) are offered, although it is possible to combine a chemistry major (BS or BA) with a variety of other majors, including biological sciences, mathematics, and physics.

## Departmental Honors

A BS with Honors in Chemistry is available to honors-eligible BS students who complete CHEM 4990H and CHEM 4991H as well as all of the requirements for the ACS Certification Track or the Medicinal Chemistry Track. (These courses replace CHEM 4950). Please contact Prof. Steven Keller (KellerS@missouri.edu) for more specific details about the Honors in Chemistry program.