

Bachelor of Arts With a Major in Chemistry

The B.A. degree is intended for students who desire a general training in chemistry that still provides adequate preparation for graduate work in chemistry or the medical field. The B.A. degree is also suited for those students wishing to add a major in another field. The B.A. degree requires a minimum of 26 credit hours in the department, in addition to eight hours of physics and six hours of calculus or statistics. This degree is not certified by the American Chemical Society. Degree requirements, including a suggested four-year plan, are summarized below.

COURSE REQUIREMENTS

Chemistry (minimum of 26 hours)¹

Core Courses:

CHEM 1303, 1304, 1113, 1114 General Chemistry

CHEM 3371, 3372, 3117, 3118 Organic Chemistry

CHEM 5383 Physical Chemistry I

Electives: At least seven hours from additional chemistry courses at the 3000+ level, with at least three hours at the 4000 or 5000 level.² It is recommended that one of these courses be CHEM 3351, but another course can be substituted with the permission of the Departmental Advisor.

CHEM 3351 Quantitative Analysis

CHEM 4313 Modern Physical Organic Chemistry

CHEM 5110 Biological Chemistry Laboratory

CHEM 5185 Laboratory Methods in Physical Chemistry

CHEM 5306 Introduction to Computational Chemistry

CHEM 5310 Biochemistry I

CHEM 5311 Biochemistry II

CHEM 5312 Physical Biochemistry

CHEM 5317 Introduction to Molecular Modeling and Computer Assisted Drug Design

CHEM 5321 Understanding Chemistry

CHEM 5322 Introduction to Nanotechnology

CHEM 5333 Polymer Chemistry

CHEM 5344 Physical Chemistry of Proteins

CHEM 5384 Physical Chemistry II (Note that MATH 3302 and CHEM 5383 are prerequisites for this course.)

CHEM 5393 Advanced Organic Chemistry

CHEM 5398 Medicinal Chemistry

CHEM 5486 Instrumental Analysis

Mathematics (minimum of 6 hours):

MATH 1337 Calculus I

One additional course in mathematics, such as MATH 1338, STAT 2301, or STAT 2331.

Physics (8 hours):

PHYS 1303, 1304 (or 1307, 1308), 1105, 1106 General Physics

You also need to satisfy University Curriculum (UC) requirements.

¹Undergraduate Research does *not* count towards the 26 hours of chemistry required.

²Dual-listed courses, such as CHEM 5310/BIOL 5310, count only for one major or minor; they cannot be double-counted.

Suggested four-year plan for a B.A. in Chemistry (University Curriculum courses are not included in this plan)

1st year, Fall	1st year, Spring
CHEM 1303 General Chemistry I lecture CHEM 1113 General Chemistry I laboratory MATH 1337 Calculus I	CHEM 1304 General Chemistry II lecture CHEM 1114 General Chemistry II laboratory MATH 1338 Calculus II or STAT 2331 Intro to Statistical Methods
2nd year, Fall	2nd year, Spring
CHEM 3371 Organic Chemistry I lecture CHEM 3117 Organic Chemistry I lab PHYS 1303 or 1307 General Physics I lecture PHYS 1105 Physics I laboratory	CHEM 3372 Organic Chemistry II lecture CHEM 3118 Organic Chemistry II lab PHYS 1304 or 1308 General Physics II lecture PHYS 1106 Physics II laboratory
3rd year, Fall	3rd year, Spring
CHEM 5383 Physical Chemistry I lecture	CHEM 33XX, 4313, or 53XX Advanced chemistry elective
4th year, Fall	4th year, Spring
CHEM 33XX, 4313, or 53XX Advanced chemistry elective	CHEM 51XX Advanced chemistry laboratory