

# B.A. Chemistry

Students pursuing a Bachelor of Arts in Chemistry should complete ENGL 1101 or ENGL 1101P, and COMM 1101 during the freshman year, and ENGL 1102 should be passed by, or during, the sophomore year. (General Education Objective 1 is satisfied by taking ENGL 1101 or ENGL 1101P, AND ENGL 1102. General Education Objective 2 is satisfied by COMM 1101.) Objective 3 should be fulfilled by MATH 1160 or MATH 1170 as early as possible. The other General Education Requirements should be taken as credit load allows. Students pursuing this degree must complete 8 of the 9 General Education Objectives (a minimum of 36 credits - see the General Education Requirements (<http://coursecat.isu.edu/undergraduate/academicinformation/generaleducation/>) described in the Academic Information section of this catalog).

## General Education

The listing below includes program requirements that also fulfill General Education requirements.

Code	Title	Credits
Objective 1-	ENGL 1101, ENGL 1102 <sup>1</sup>	6
Objective 2-	COMM 1101	3
Objective 3 -	MATH 1160 or MATH 1170	3
Objective 4		6
Objective 5		7
Objective 6		6
<b>Students must fulfill Objective 7 or Objective 8</b>		<b>3</b>
Objective 7		
Objective 8		
Objective 9		3
Total Credits		37

<sup>1</sup> "P" courses are equivalent to the original course.

## Major Requirements

Code	Title	Credits
BIOL 1101 & 1101L	Biology I and Biology I Lab	4
CHEM 1111 & 1111L	General Chemistry I and General Chemistry I Lab	5
CHEM 1112 & 1112L	General Chemistry II and General Chemistry II Lab	4
MATH 1170 or MATH 1160	Calculus I Survey of Calculus	3-4
PHYS 1111 & PHYS 1113 & PHYS 1112 & PHYS 1114	General Physics I and General Physics I Laboratory and General Physics II and General Physics II Laboratory	8
OR		
PHYS 2211 & PHYS 2213 & PHYS 2212 & PHYS 2214	Engineering Physics I and Engineering Physics I Laboratory and Engineering Physics II and Engineering Physics II Laboratory	10
CHEM 2211	Inorganic Chemistry I	3
CHEM 2213	Inorganic Chemistry I Laboratory	1

CHEM 2232 & CHEM 2234	Quantitative Analysis and Quantitative Analysis Laboratory	4
CHEM 3301 & CHEM 3303	Organic Chemistry I and Organic Chemistry Laboratory I	4
CHEM 3302 & CHEM 3304	Organic Chemistry II and Organic Chemistry Laboratory II	4
CHEM 3341 & CHEM 3342	Topics in Physical Chemistry I and Topics in Physical Chemistry II	6
OR		
CHEM 3351 & CHEM 3352	Physical Chemistry I and Physical Chemistry II	6
CHEM 3391	Seminar	1
BIOL 4432 or CHEM 4445	Biochemistry Biochemistry I	3
Total Credits		66-67

## Electives

Students must take 8 additional upper-division (3000-4000 level) credits in chemistry, approved by the department and not to include CHEM 4491. No more than 2 credits of CHEM 3311 and 2 credits in CHEM 4481-CHEM 4482 may be used to satisfy these electives. If the CHEM 4445 and CHEM 4447 sequence is taken, 3 credits may be used to satisfy elective credits. No more than 40 credits in chemistry will count toward graduation in this program.

## Degree Totals

Code	Title	Credits
Program Admission Requirements		0
General Education		37
Major Requirements (w/o General Education)		56-57
Upper Division Free Electives		8
Free Electives		19
Total Credits		120-121

ISU Degree Requirements (<http://coursecat.isu.edu/undergraduate/degree requirements/>)

ISU General Education (<http://coursecat.isu.edu/undergraduate/academicinformation/generaleducation/>)

Major Academic Plan (MAP) (<https://www.isu.edu/advising/maps/>)