

Chemistry Curriculum Guides

The following are curriculum guides for a four-year Chemistry degree program and is subject to change without notice. Students should consult a Chemistry program advisor to ensure that they have the most accurate and up-to-date information available about a particular four-year degree option.

- Chemistry
 - General Major
 - ACS Certified Major
 - ACS Certified Major in Environmental Chemistry

General Major

An example: Four year plan for **Chemistry Major**

120 credits necessary to graduate.

Plan is a representation and categories of classes can be switched. Check with your advisor.

Course	Title	Credits
Freshman		
Fall		
CHEM 211	Principles of Chemistry I	4
CHEM 213	Principles of Chemistry I Laboratory	1
MATH 202	Calculus and Analytic Geometry I	4
First Year Seminar		3
General Ed		3
		Credits 15
Spring		
CHEM 207	Laboratory Safety	1
CHEM 212	Principles of Chemistry II	4
CHEM 214	Principles of Chemistry II Laboratory	1
MATH 203	Calculus and Analytic Geometry II	4
General Ed		3
General Ed		3
		Credits 16
Sophomore		
Fall		
CHEM 302	Organic Chemistry I	3
CHEM 304	Organic Chemistry Laboratory I	1
PHYSICS 201	Principles of Physics I	5
General Ed		3
Elective		3
		Credits 15
Spring		
CHEM 303	Organic Chemistry II	3
CHEM 305	Organic Chemistry Laboratory II	1
CHEM 311	Analytical Chemistry	4
PHYSICS 202	Principles of Physics II	5
General Ed		3
		Credits 16
Junior		
Fall		
CHEM 320	Thermodynamics and Kinetics	3
CHEM 322	Thermodynamics and Kinetics Laboratory	1
General Ed		3
General Ed		3

Elective		3
Elective		3
Credits		16
Spring		
CHEM 321	Structure of Matter	3
CHEM 323	Structure of Matter Laboratory	1
General Ed		3
General Ed		3
Elective		3
Credits		13
Senior		
Fall		
CHEM 413	Instrumental Analysis	4
General Ed		3
Elective		3
Elective		3
Elective		3
Credits		16
Spring		
Chemistry Upper Level Elective Lecture		3
Chemistry Upper Level Elective Lab		1
Elective		3
Elective		3
Elective		3
Credits		13
Total Credits		120

ACS Certified Major

An example: Four year plan for **Chemistry - ACS Certified Major - Professional Major**

120 credits necessary to graduate.

Plan is a representation and categories of classes can be switched. Some upper level courses are only taught once every other year. Check with your advisor for course periodicity.

Course	Title	Credits
Freshman		
Fall		
CHEM 211	Principles of Chemistry I	4
CHEM 213	Principles of Chemistry I Laboratory	1
MATH 202	Calculus and Analytic Geometry I	4
First Year Seminar		3
General Ed		3
Credits		15
Spring		
CHEM 207	Laboratory Safety	1
CHEM 212	Principles of Chemistry II	4
CHEM 214	Principles of Chemistry II Laboratory	1
MATH 203	Calculus and Analytic Geometry II	4
General Ed		3
General Ed		3
Credits		16
Sophomore		
Fall		
CHEM 302	Organic Chemistry I	3
CHEM 304	Organic Chemistry Laboratory I	1
MATH 209	Multivariate Calculus	4
PHYSICS 201	Principles of Physics I	5

General Ed		3
Credits		16
Spring		
CHEM 303	Organic Chemistry II	3
CHEM 305	Organic Chemistry Laboratory II	1
CHEM 311	Analytical Chemistry	4
PHYSICS 202	Principles of Physics II	5
General Ed		3
Credits		16
Junior		
Fall		
CHEM 320	Thermodynamics and Kinetics	3
CHEM 322	Thermodynamics and Kinetics Laboratory	1
CHEM 330	Biochemistry	3
CHEM 331	Biochemistry Laboratory	1
General Ed		3
General Ed		3
Credits		14
Spring		
CHEM 321	Structure of Matter	3
CHEM 323	Structure of Matter Laboratory	1
General Ed		3
General Ed		3
Elective		3
Elective		3
Credits		16
Senior		
Fall		
CHEM 413	Instrumental Analysis	4
CHEM 496	Project/Research Assistantship	1-6
General Ed		3
Elective		3
Elective		3
Credits		14-19
Spring		
CHEM 410	Inorganic Chemistry	3
CHEM 411	Inorganic Chemistry Laboratory	1
Elective		3
Elective		3
Elective		3
Credits		13
Total Credits		120-125

ACS Certified Major in Environmental Chemistry

An example: Four year plan for **Chemistry – ACS Certified Major in Environmental Chemistry - Professional Major**

120 credits necessary to graduate.

Plan is a representation and categories of classes can be switched. Some upper level courses are only taught every other year. Check with your advisor for course periodicity.

Course	Title	Credits
Freshman		
Fall		
BIOLOGY 201	Principles of Biology: Cellular and Molecular Processes	3

BIOLOGY 202	Principles of Biology Lab: Cellular and Molecular Processes	1
CHEM 211	Principles of Chemistry I	4
CHEM 213	Principles of Chemistry I Laboratory	1
GEOSCI 202	Physical Geology	4
MATH 202	Calculus and Analytic Geometry I	4
Credits		17
Spring		
BIOLOGY 323	Principles of Microbiology	3
BIOLOGY 324	Principles of Microbiology Laboratory	1
CHEM 207	Laboratory Safety	1
CHEM 212	Principles of Chemistry II	4
CHEM 214	Principles of Chemistry II Laboratory	1
ENV SCI 102	Introduction to Environmental Sciences	3
MATH 203	Calculus and Analytic Geometry II	4
Credits		17
Sophomore		
Fall		
CHEM 302	Organic Chemistry I	3
CHEM 304	Organic Chemistry Laboratory I	1
MATH 260	Introductory Statistics	4
PHYSICS 201	Principles of Physics I	5
General Ed		3
Credits		16
Spring		
CHEM 303	Organic Chemistry II	3
CHEM 305	Organic Chemistry Laboratory II	1
CHEM 311	Analytical Chemistry	4
PHYSICS 202	Principles of Physics II	5
General Ed		3
Credits		16
Junior		
Fall		
CHEM 320	Thermodynamics and Kinetics	3
CHEM 322	Thermodynamics and Kinetics Laboratory	1
CHEM 330	Biochemistry	3
CHEM 331	Biochemistry Laboratory	1
General Ed		3
Elective		3
Credits		14
Spring		
CHEM 321	Structure of Matter	3
CHEM 323	Structure of Matter Laboratory	1
ENV SCI 305	Environmental Systems	4
General Ed		3
General Ed		3
Elective		3
Credits		17
Senior		
Fall		
CHEM 413	Instrumental Analysis	4

CHEM 496	Project/Research Assistantship	1-6
General Ed		3
General Ed		3
General Ed		3
	Credits	14-19
Spring		
CHEM 410	Inorganic Chemistry	3
CHEM 411	Inorganic Chemistry Laboratory	1
General Ed		3
General Ed		3
	Credits	10
	Total Credits	121-126