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 207	Laboratory Safety	1
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	**16**
Spring		
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	**15**
Sophomore		
Fall		
CHEM 302	Organic Chemistry I	3
CHEM 304	Organic Chemistry Laboratory I	1
PHYSICS 201	Principles of Physics I	4
General Ed		3
Elective		3
	Credits	**14**
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	4
General Ed		3
	Credits	**15**
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	**118**

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 207	Laboratory Safety	1
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	**16**
Spring		
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	**15**
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	4

General Ed		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	4
General Ed		3
	Credits	**15**
Junior		
Fall		
CHEM 320	Thermodynamics and Kinetics	3
CHEM 322	Thermodynamics and Kinetics Laboratory	1
BIOLOGY 201	Principles of Biology: Cellular and Molecular Processes	3
BIOLOGY 202	Principles of Biology Lab: Cellular and Molecular Processes	1
General Ed		3
General Ed		3
	Credits	**14**
Spring		
CHEM 321	Structure of Matter	3
CHEM 323	Structure of Matter Laboratory	1
CHEM 330	Biochemistry	3
CHEM 331	Biochemistry Laboratory	1
General Ed		3
General Ed		3
	Credits	**14**
Senior		
Fall		
CHEM 413	Instrumental Analysis	4
CHEM 496	Project/Research Assistantship	1-6
General Ed		3
General Ed		3
	Credits	**11-16**
Spring		
CHEM 410	Inorganic Chemistry	3
CHEM 411	Inorganic Chemistry Laboratory	1
Elective		3
Elective		3
Elective		3
	Credits	**13**
	Total Credits	**113-118**

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		
CHEM 207	Laboratory Safety	1

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
MATH 202	Calculus and Analytic Geometry I	4
First Year Seminar		3
	Credits	**17**
Spring		
BIOLOGY 323	Principles of Microbiology	3
BIOLOGY 324	Principles of Microbiology Laboratory	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	**16**
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	4
General Ed		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	4
GEOSCI 202	Physical Geology	4
	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
Elective		3
	Credits	**13**
	Total Credits	**122-127**