

Chemistry Major

CHEMISTRY MAJOR

Student Learning Outcomes

Upon completion of the Chemistry major, students will be able to perform the following:

1. Identify, describe, and explain the basic terminology, concepts, methodologies and theories used within chemistry (Content).
2. Analyze information and develop reasoned based solutions to problems using the processes and applications of scientific inquiry using ethical behaviors (Critical Thinking).
3. Communicate knowledge, ideas, and reasoning clearly and effectively in written and oral forms appropriate to the science of chemistry (Communication).

Program Outcomes

As a result of successful completion of the Chemistry Program, graduates will be able to perform the following:

1. Matriculate to graduate and professionals schools or accept employment within the field of chemistry.
2. Participate in an extracurricular research experience.
3. Pass the Senior Exit Examination on the first attempt.

Degree Type

Bachelor of Science

Major in Chemistry

Required courses for the major in Chemistry

The major in Chemistry consists of a minimum of thirty-three (33) credit hours in CHM and sixteen (16) hours of cognate courses in Physics and Calculus.

Item #	Title	Credits
CHM 141	General Chemistry I	4
CHM 142	General Chemistry II	4
CHM 247	Analytical Chemistry I	4
CHM 248	Analytical Chemistry II	4
CHM 343	Organic Chemistry I	4
CHM 344	Organic Chemistry II	4
CHM 420	Seminar in Chemistry	2
PHY 243	Physics I	4
PHY 244	Physics II	4
MAT 145	Calculus I	4
MAT 146	Calculus II	4

Physical Chemistry or Biochemistry Sequence

For the Chemistry major, students must select between a sequence in Physical Chemistry or Biochemistry:

- CHM 345 and 346

OR

- BIO 343 and BIO 434

Item #	Title	Credits
CHM 345	Physical Chemistry I	4
CHM 346	Physical Chemistry II	4
BIO 343	Biochemistry I	4
BMS 434	Biochemistry II Metabolic Pathways & Clinical Applications	3

Minor in Chemistry

Required courses for the minor in Chemistry

A minor in chemistry consists of a minimum of 20 credit hours. The following courses are required for a minor in chemistry:

Item #	Title	Credits
CHM 141	General Chemistry I	4
CHM 142	General Chemistry II	4
CHM 343	Organic Chemistry I	4
CHM 344	Organic Chemistry II	4
	Chemistry Elective	4
Total Credits		49-50

Major in Chemistry FRESHMAN YEAR Fall Semester

Item #	Title	Credits
CHM 141	General Chemistry I	4
MAT 131	Algebra	3
ENG 131	English Composition I	3
REL 131	Introduction to the Old Testament	3
STI 111	Orientation	1

FRESHMAN YEAR Spring Semester

Item #	Title	Credits
CHM 142	General Chemistry II	4
MAT 134	Pre-Calculus	3
ENG 132	English Composition II	3
REL 132	Introduction to the New Testament	3
CSC 121	Critical Thinking in Digital Age	2
STI 114	Orientation II	1

SOPHOMORE YEAR Fall Semester

Item #	Title	Credits
CHM 343	Organic Chemistry I	4
MAT 145	Calculus I	4
PHY 243	Physics I	4
HIS 131	Foundations of World Civilization	3
BUS 210	Financial Literacy	1

SOPHOMORE YEAR Spring Semester

Item #	Title	Credits
CHM 344	Organic Chemistry II	4
MAT 146	Calculus II	4
PHY 244	Physics II	4
HUM 130	African American Heritage	3
HPR 121	Lifetime Wellness	2

JUNIOR YEAR Fall Semester

Item #	Title	Credits
CHM 247	Analytical Chemistry I	4
MAT 233	Introduction to Statistics	3
	200/300-level Religion	3
ENG 235	Technical Writing	3
LOG 330	Logic	3

JUNIOR YEAR Spring Semester

Item #	Title	Credits
CHM 248	Analytical Chemistry II	4
SPE 232	Public Speaking	3
	200/300-level Religion	3
	Social Science Elective	3
EDU 310	Test Taking Strategies	1

SENIOR YEAR Fall Semester

Item #	Title	Credits
CHM 345	Physical Chemistry I	4
CSC 131	Introduction to Computing	3
CHM 439	Advanced Inorganic Chemistry	3
	General Elective (2 credits)	2

SENIOR YEAR Spring Semester

Item #	Title	Credits
CHM 346	Physical Chemistry II	4
CHM 420	Seminar in Chemistry	2
CHM 432	Organic Qualitative Analysis	3
	General Elective (3 credits)	3
	General Elective (3 credits)	3