

ACADEMIC ROADMAP

BS Degree in Chemistry

Fall 2026

Freshman Year (28 credits)

FIRST SEMESTER

Course Title	Catalog Number	Prerequisite(s)
College Writing I (3)	CWP 101	Successful completion of CWP 099 or SAT score over 400 or ACT composite score of 18 (or higher)
Fund of Chem I (3) ¹	CHE 111	MAT 114 or a higher-level math (C or better) or SAT math of 480 (or better) or ACT composite score of 18 (or higher); CHE113(Corequisite)
Fund of Chem I Lab (1) ¹	CHE 113	CHE111 (corequisite)
Calculus I (4) ^{1,3}	MAT 161	MAT 124 with a minimum grade of C or equivalent ²
GE23 Course (3)	See course catalog	

SECOND SEMESTER

Course Title	Catalog Number	Prerequisite(s)
College Writing II (3)	CWP 102	CWP 101 or its equivalent
Fund of Chem II (3) ¹	CHE 112	CHE 111; CHE114(corequisite)
Fund of Chem II Lab (1) ¹	CHE 114	CHE111; CHE113; CHE112(corequisite)
Calculus II (4)	MAT 162	MAT 161 (C or better)
GE23 Course (3)	See course catalog	

Notes and recommendations:

¹A grade of C or better is required.

²A high school pre-calculus course is considered equivalent

³Students may start MAT161 one or two semesters later; however, they should consult with an academic advisor to plan an appropriate alternative roadmap.

- Attend at least one faculty office hour; visit Academic Excellent Center (math, writing, and general tutoring); view your degree audit sheet in Degree Works

Sophomore Year (59 - 60 credits)

THIRD SEMESTER

Course Title	Catalog Number	Prerequisite(s)
Organic Chemistry I (3)	CHE 201	CHE 112
Organic Chemistry I Lab (1)	CHE 203	CHE 112; CHE 114; CHE 201 (or concurrent registration)
University Physics I (5) ¹	PHY 111	MAT 161 (or concurrent registration)
Analytical Chemistry (4) ¹	CHE 301	CHE 112; CHE 114

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Course Title	Catalog Number	Prerequisite(s)
GE23 Course (3)	See course catalog	

FOURTH SEMESTER

Course Title	Catalog Number	Prerequisite(s)
Organic Chemistry II (3) ¹	CHE 202	CHE 201
Organic Chemistry II Lab (1)	CHE 204	CHE 203; CHE 202 (or concurrent registration)
University Physics II (5) ¹	PHY 112	PHY 111 or equivalent
Calculus III (4) OR Introduction to Linear Algebra (3) OR Introductory Probability and Statistics (3) ²	MAT 263 MAT 202 MAT 311	MAT 162 (C or better) MAT 161 Three years of Regents high school math
GE23 Course (3)	See course catalog	

Notes and recommendations:

¹These courses are usually offered only in the semester indicated.

²MAT 311 satisfies GE23 requirements.

- Form a study group; consider enrolling in a second major, minor or certificate program in the sophomore year.

Junior Year (89 - 90 credits)

FIFTH SEMESTER

Course Title	Catalog Number	Prerequisite(s)
Intro to Inorganic Chem (3) ¹	CHE 360	CHE 202
Princ. Med. Chem. (3) ²	CHE 325	CHE 202
Introduction to Cell Biology and Genetics (4)	BIO 211	BIO 111 (C or better) OR CHE 112 (C or better)
GE23 Course (3)	See course catalog	
Elective (3) ³	See course catalog	

SIXTH SEMESTER

Course Title	Catalog Number	Prerequisite(s)
Principles of Phys. Chem. (3) ¹	CHE 331	CHE 202; MAT 162; PHY 112
Instrumental Analysis (3) ¹	CHE 403	CHE 301; CHE 331 (or concurrent registration)
Physical & Inorganic Chemistry lab (2) ¹	CHE 465	CHE 360; CHE 331 (or concurrent registration)
Electives (6) ³	See course catalog	

Notes and recommendations:

¹These courses are usually offered only in the semester indicated.

² These course are offered on a 2-year rotation in the semester indicated; therefore, students may take them during the alternate year.

³ These electives may be used to fulfill minor requirements (if pursuing a minor) or to help meet the 45 upper level credit requirement, depending on the course level.

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- Visit the Career & Professional Education Center to discuss appropriate career options; talk to your faculty advisor about graduate school options.

Senior Year (120 credits)

SEVENTH SEMESTER

Course Title	Catalog Number	Prerequisite(s)
Biochemistry I (3) ¹	CHE 470	CHE 202; BIO 211 recommended
Biochemical Techniques (2) ¹	CHE 471	CHE 204; CHE 301; CHE 470 (or concurrent registration)
Medicinal Plant Chemistry (2) ²	CHE 327	CHE 202; CHE 204
Instrumental Analysis Lab (2) ¹	CHE 404	CHE 403
Electives (6) ³	See course catalog	

EIGHTH SEMESTER

Course Title	Catalog Number	Prerequisite(s)
Analytical Toxicology (3) ² OR Biochemistry II (3) ²	CHE 406 CHE 472	CHE 202; CHE 301 CHE 202; CHE 470
Cannabis Analysis (2) ²	CHE 427	CHE 327; CHE 404
Electives (10 - 11) ^{3,4}	See course catalog	

Notes and recommendations:

¹These courses are usually offered only in the semester indicated.

²These courses are offered on a 2-year rotation in the semester indicated; therefore, students may take them during the alternate year.

³ These electives may be used to fulfill minor requirements (if pursuing a minor) or to help meet the 45 upper-level credit requirement, depending on the course level.

⁴ The number of courses may vary depending on course credit.

- Apply for graduation; apply to graduate school, if applicable; visit the Career Development Center to have your resume reviewed.