Degree Requirements: Chemistry (340)–Bachelor of Science
School of Arts and Sciences
Department of Chemistry, Physics, and Engineering
Catalog Year: 2024-2025

General Education Requirements (44-46 hours)		
Communication (9 hours)	**American History (3 hours)**	**Behavioral Science (3 hours)**
ENGL 1113; ENGL 1213; COMM 1113	HIST 1483 or 1493	FAMS 1123, PSY 1113, SOCI 1113
Mathematics (3-5 hours)	**Political Science (3 hours)**	**Economics (3 hours)**
MATH 2215	PS 1113	AGRC 2013, ECON 2003, ECON 2013, GEOG 3023
Science* (8-9 hours)	**Humanities* (6 hours)**	**Health and Wellness* (4 hours)**
Biological Science (4 hours) Physical Science: CHEM 1361/1364 *One course must be a lab science.	Diversity (3 hours) Aesthetics (3 hours) *One course taken from each category.	SES 2003, 2013, 2023, MSL 1112, PE 1--1, 2--1, 2--2 *Requirement waived for some students.

General Education Non-PE Electives (To total at least 44 hours, if needed)*.
Gen ed electives must be selected from the list of approved general education courses, (MSL- and PE-prefixes excluded).

University Requirements		
UNIV 1001 (1 hour)	Computer Literacy (CHEM 1361)	Capstone Experience (CHEM 4541)

Major Requirements (56-66 hours)	
Required Core Courses (25 hours)	**Option (31–41 hours)**
CHEM 1361/1364 General Chemistry I/Lab (FA, SP) CHEM 1471/1474 General Chemistry II/Lab (FA, SP) CHEM 2541 Introduction to Chemical Literature (Odd FA) CHEM 3113 Fund of Analytical Chemistry (FA) CHEM 3232 Quantitative Analysis Lab (FA) CHEM 3314/L Organic Chemistry I /Lab (FA) CHEM 3324/L Organic Chemistry II/Lab (SP) CHEM 4541 Chemistry Capstone (SP) *Students must maintain an overall 2.0 GPA for all Major courses. A minimum of 50 total hours of CHEM-prefix courses are required for the degree. *FA=Fall; SP=Spring; SU=Summer*	Majors must select from the following options: **ACS Certified Chemistry Degree Major-Minor** **Chemistry Degree with Chosen Minor** **Health Profession Chemistry Degree Major-Minor** (See next page for course list)

Additional Requirements (10 hours)
PHYS 1115/L Physics I/Lab **OR** 2015/L Physics I for Sci & Engineering Majors/Lab (preferred) PHYS 1215/L Physics II/Lab **OR** PHYS 2025/L Physics II for Sci & Engineering Majors/Lab (preferred)

Minor Requirements (18 hours)
A full list of available minors is available on the CU website.

General Electives (To Complete 124 hours)

Graduation Requirements	
Department Requirements Minimum 124 Total Credit Hours Minimum 40 Upper Division Credit Hours Minimum 55 Liberal Arts & Science Credit Hours Minimum 30 Credit Hours in Residence at CU	Minimum 60 Credit Hours at a 4-Year Institution Minimum ½ of Major Upper Division Hours Completed at CU 15 of last 30 Credit Hours or ½ of Major Completed at CU Retention GPA 2.0; Cameron GPA 2.0 Complete Graduation Application Online

Degree Requirements: Chemistry (340)–Bachelor of Science (Cont'd)

Option (31-41 hours)	
ACS Certified Chemistry Degree Major-Minor (41 hours)	**Health Profession Chemistry Degree Major-Minor (40 hours)**
Required Courses (41 hours)	***Required Courses (23 hours)***
CHEM 4025/L Instrumental Methods of Analysis/Lab	CHEM 4401 Biochemistry I Lab
CHEM 4334 Advanced Inorganic Chemistry	CHEM 4403 Biochemistry I
CHEM 4351 Physical Chemistry I Lab	CHEM 4411 Biochemistry II Lab
CHEM 4353 Physical Chemistry I	CHEM 4413 Biochemistry I
CHEM 4361 Physical Chemistry II Lab	BIOL 1364/L Principles of Biology I/Lab
CHEM 4363 Physical Chemistry II	BIOL 1474/L Principles of Biology II/Lab
CHEM 4401 Biochemistry I Lab	BIOL 2124/L Microbiology/Lab
CHEM 4403 Biochemistry I	IT 1013 Intro to Computer Information Systems
CHEM 4413 Biochemistry II	***Guided Electives (17 hours)***
CHEM 4491-3 Special Problems in Chemistry** (3 hrs max)	Must select at least one lower division course from following:
MATH 2235 Calculus & Analytic Geometry II	AGRC 1124/L Intro to Animal Science/Lab **OR** BIOL 2034/L Human Anatomy /Lab **OR** BIOL 2134/L Human
MATH 2244 Calculus & Analytic Geometry III	Physiology/Lab **OR** BIOL 2154/L Zoology/Lab
MATH 3253 Differential Equations	Substitutions can be made for other professional health programs.
MATH 4433 Matrix Alg (preferred) **OR** MATH 2613 Fnd of Math	AGRC 1124/L Intro to Animal Science/Lab
**Must take a min of 2 cr hrs of Special Problems in Research.	ANIM 3653 Principles of Animal Nutrition
	BIOL 2034/L Human Anatomy/Lab
Chemistry Degree with Chosen Minor (31 hours)	BIOL 2134/L Human Physiology/Lab
Required Courses (8 hours)	BIOL 2154/L Zoology/Lab
CHEM 4351 Physical Chemistry I Lab	BIOL 3014/L Principles of Genetics/Lab
CHEM 4353 Physical Chemistry I	BIOL 3093 Immunology
CHEM 4401 Biochemistry I Lab	BIOL 3174/L Molecular Cell Biology/Lab
CHEM 4403 Biochemistry I	BIOL 4004/L Physiology/Lab
Required Upper Division Analytical Elective (3-5 hours)	CHEM 3334/L Chemistry of Water & Wastewater/Lab
CHEM 3334/L Chemistry of Water & Wastewater/Lab **OR** CHEM 3343/L Org Analysis/Lab **OR** CHEM 4025/L Inst Meth of Analysis/Lab	CHEM 3343/L Organic Analysis/Lab
	CHEM 4025/L Instrumental Methods of Analysis/Lab
Electives (2-4 hours)	CHEM 4332 Adv Inorganic Chemistry Lab
CHEM 2441 Working Safely with Chemicals	CHEM 4334 Advanced Inorganic Chemistry
CHEM 3334/L Chemistry of Water & Wastewater/Lab	CHEM 4351 Physical Chemistry Lab I
CHEM 3343/L Organic Analysis/Lab	CHEM 4353 Physical Chemistry I
CHEM 4025/L Instrumental Methods of Analysis/Lab	CHEM 4361 Physical Chemistry Lab II
CHEM 4332 Adv Inorganic Chemistry Lab	CHEM 4363 Physical Chemistry II
CHEM 4334 Advanced Inorganic Chemistry	CHEM 4481-3 Adv Topics in Chemistry
CHEM 4361 Physical Chemistry II Lab	CHEM 4491-3 Special Problems in Chemistry** (3 hrs. max)
CHEM 4363 Physical Chemistry II	STAT 2013 Intro Probability & Statistics I
CHEM 4411 Biochemistry II Lab	***Only 3 hours of CHEM 4491-3 may be counted toward elective hours for this option.*
CHEM 4413 Biochemistry II	
CHEM 4481-3 Adv Topics in Chemistry	
CHEM 4491-3 Special Problems in Chemistry** (3 hrs max)	
**Only 3 hours of CHEM 4491-3 may be counted toward elective hours for this option	
Minor Requirements (18 hours)	