

Degree Plan: Chemistry- Bachelor of Science[AR-BS-CHEM-1]

School of Arts and Sciences

Department of Chemistry, Physics, and Engineering
Catalog Year: 2017-2018

General Education Requirements - 44 -46 hours				
Communication - 9 hours	American History - 3 hours	Behavioral Science - 3 hours		
ENGL 1113;	HIST 1483 or 1493	FAMS 1123, PSY 1113,		
ENGL 1213;		SOCI 1113, HON 2133		
COMM 1113				
Mathematics - 5 hours	Political Science - 3 hours	Economics - 3 hours		
MATH 2215	PS 1113	AGRC 1334, ECON 2013,		
		GEOG 3023, CRM 3603		
Science* - 9 hours	Humanities - 6 hours	Health and Wellness* - 4 hours		
Biological Science (4 hours)	Diversity (3 hours)	HLTH 1012, 1053, 1063, any course from		
Physical Sci:CHEM 1361/1364	Aesthetics (3 hours)	the following: PE 11, 21, 22		
*One course must be a lab science; see	*One course must be taken from each category;	*Requirement waived for some students; see		
undergraduate catalog for list.	see undergraduate catalog for list.	undergraduate catalog for list.		

General Education Non-PE Electives (To total at least 44 hours, if needed)*.

General Education Electives must be selected from the list of approved Gen Ed courses, exclusive of those with the PE prefix. For a full list of General Education courses, see: http://www.cameron.edu/catalog/general_ed.html
University Requirements

UNIV 1001 or 1113 – 1-3 hours	Computer Litera	cy - CHEM 1361	Capstone Experience – PSCI 4442		
Major Requirements - 75-85 hours					
Required Core Courses -25 hours		Concentration or	Options - 40-50 hours		
*Students must maintain an overall 2.0 GPA for all Major		Majors must select from the following options:			
courses.		American Chem So	ociety Certified Chemistry Degree Option		
CHEM 1361/1364 General Chemistry Lab I		Chemistry Degree	Option (non-ACS Certified) (must select		
CHEM 1471/1474 General Chemistry Lab II		minor)			
CHEM 2541 Introduction to Chemical Literature		Health Profession	Chemistry Degree Option		
CHEM 3113 Fundamentals of Analytical Chemistry		(See next page for c	ourse list)		
CHEM 3232 Quantitative Analysis Lab					
CHEM 3314 Organic Chemistry I					
CHEM 3324 Organic Chemistry II					
CHEM 4541 Chemistry Canstone					

Additional Requirements - 10 hours

PHYS 1115 Physics I **OR** 2015 Physics I for Sci & Engineering Majors (preferred); PHYS 1215 Physics II **OR** PHYS 2025 Physics II for Sci & Engineering Majors (preferred)

Minor Requirements - 18 hours

For a full list of available minors, see: http://www.cameron.edu/catalog/minors.html

General Electives - to Complete 124 hours

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

Concentration or Option - 40-50 hours

American Chem Society Certified Chemistry Degree Option | Health Profession Chemistry Degree Option **Required Courses (37 hours)**

CHEM 4025 Instrumental Methods of Analysis

CHEM 4334 Advanced Inorganic Chemistry

CHEM 4351 Physical Chemistry I Lab

CHEM 4353 Physical Chemistry I

CHEM 4361 Physical Chemistry II Lab II

CHEM 4363 Physical Chemistry II

CHEM 4403 Biochemistry I

CHEM 4413 Biochemistry II

CHEM 4491-3 Special Problems in Chemistry**

MATH 2235 Calculus & Analytic Geometry II

MATH 2244 Calculus & Analytic Geometry III

MATH 3253 Differential Equations

MATH 4433 Matrix Algebra (preferred) OR

MATH 2613 Foundations of Mathematics

**Only three hours of CHEM 4491-3 may be counted toward completion of the required fifty hours for chemistry degree. Must take a minimum of two credit hours of Special Problems in Research.

Electives (0-2 hours)

CHEM 2441 Working Safely with Chemicals

CHEM 3334 Chemistry of Water & Wastewater

CHEM 3343 Organic Analysis

CHEM 4332 Adv Inorganic Chemistry Lab

CHEM 4401 Biochemistry I Lab

CHEM 4411 Biochemistry II Lab

CHEM 4481-3 Adv Topics in Chemistry

Chemistry Degree Option (non-ACS Certified) (must select minor)

Required Courses (8 hours)

Choose one concentration:

1. Physical Chemistry:

CHEM 4351 Physical Chemistry I Lab

CHEM 4353 Physical Chemistry I

CHEM 4361 Physical Chemistry II Lab

CHEM 4363 Physical Chemistry II

2. Biochemistry

CHEM 4401 Biochemistry I Lab

CHEM 4403 Biochemistry I

CHEM 4411 Biochemistry II Lab

CHEM 4413 Biochemistry II

Required Upper Division Analytical Elective (3-5 hours)

CHEM 3334 Chemistry of Water & Wastewater OR

CHEM 3343 Organic Analysis OR

CHEM 4025 Instrumental Methods of Analysis

Electives (2-4 hours)

CHEM 2441 Working Safely with Chemicals

CHEM 3334 Chemistry of Water & Wastewater

CHEM 3343 Organic Analysis

CHEM 4025 Instrumental Methods of Analysis

CHEM 4332 Adv Inorganic Chemistry Lab

CHEM 4334 Advanced Inorganic Chemistry

CHEM 4481-3 Adv Topics in Chemistry

CHEM 4491-3 Special Problems in Chemistry **

**Only three hours of CHEM 4491-3 may be counted toward completion of the required forty hours for chemistry degree.

MINOR (18 hours)

Required Courses (23 hours)

CHEM 4401 Biochemistry I Lab

CHEM 4403 Biochemistry I

CHEM 4411 Biochemistry II Lab

CHEM 4413 Biochemistry II

BIOL 1364 Principles of Biology I

BIOL 1474 Principles of Biology II

BIOL 2124 Microbiology

CIS 1013 Intro to Computer Information Systems

Guided Electives (17 hours)

1. Must select at least one lower division course from following:

AGRC 1124 Intro to Animal Science OR

BIOL 2034 Human Anatomy OR

BIOL 2134 Human Physiology OR

BIOL 2154 Zoology

2. Substitutions can be made for other professional health programs.

ANIM 3653 Applied Nutrition

BIOL 3014 Principles of Genetics

BIOL 3093 Immunology

BIOL 3174 Molecular Cell Biology

BIOL 4004 Physiology

CHEM 3334 Chemistry of Water & Wastewater

CHEM 3343 Organic Analysis

CHEM 4025 Instrumental Methods of Analysis

CHEM 4332 Adv Inorganic Chemistry Lab

CHEM 4334 Advanced Inorganic Chemistry

CHEM 4351 Physical Chemistry Lab I

CHEM 4353 Physical Chemistry I

CHEM 4361 Physical Chemistry Lab II

CHEM 4363 Physical Chemistry II

CHEM 4481-3 Adv Topics in Chemistry

CHEM 4491-3 Special Problems in Chemistry **

STAT 2013 Intro Probability & Statistics I

**Only three hours of CHEM 4491-3 may be counted toward completion of the elective hours for this option.