Name _____

Bachelor of Science | Major in Chemistry | 4yrPlan | CHEM-BS

Graduation Requirements:

120 total credits; GPA 2.00 or better; AUCC GPA 2.00 or better; C or better in major courses; 42 upper-division credits (30 at CSU); last 15 credits at CSU.

Major Requirements:

six foundational courses (30 credits); 12 credits in-depth chemistry courses (5 credits must have lab); 17 adv. electives; 400 lab hours (beyond CHEM121).

All University Core-Curriculum Credit Requirement:

6-composition; 3-math; 3-diversity/global awareness; 6-arts and humanities; 3-social science; 3-history

Student Success Markers (to be completed within the first 30 credits):

CHEM 192; CO 150; 3 credits of math; 3 credits of diversity/global awareness (AUCC3E);

FIRST YEAR — Total Year Credits: 33

Term Credit Hours 16

Fall

Course Code	Course No.	Credit Hours
CHEM192	Intro Seminar	2
CHEM120	Modern Chemistry	4
CHEM121	Modern Chemistry Lab	1
AUCC3B	Arts & Humanities	3
AUCC3E	Diversity & Global Awarene	3
MATH	Pre-Calculus Seq	0
CO 150	Composition	3

Term Credit Hours 17

Spring

Course Code	Course No.	Credit Hours
MATH155 or 159 or 160	Calculus I	4
CHEM241	Organic Chemistry	4
CHEM242	Organic Chemistry Lab	1
AUCC3B	Arts & Humanities	3
CHEM263	Inorganic Chemistry	4
CHEM264	Inorganic Chemistry Lab	1

SECOND YEAR — Total Year Credits: 28

Term Credit Hours 14

Fall

Course Code	Course No.	Credit Hours
PH141	Calc-based Pysics 1	5
CHEM231	Analytical Chem	3
CHEM232	Analytical Chem Lab	2
MATH271 or 161	Applied Math or Calc 2	4

Term Credit Hours 14

Spring

Course Code	Course No.	Credit Hours
PH142	Calc-based Physics 2	5
CHEM321 or BC351	Chemical Biology	4
CHEM322	Chemical Biology Lab	1
MATH272 or 261	Applied Math or Calc 3	4

THIRD YEAR — Total Year Credits: 31

Term Credit Hours 15

Fall

Course Code	Course No.	Credit Hours
CHEM301 or CO300 or JTC300	Adv. Writing	3
CHEM371	Physical Chemistry	4
CHEM372	Physical Chemistry Lab	1
In-depth Chemistry	300 or 400 level	4
ELECTIVE	100-level	3

Term Credit Hours 16

Spring

Course Code	Course No.	Credit Hours
In-depth Chemistry	300 or 400 level	4
AUCC3D	History	3
AUCC3C	Social Science	3
ELECTIVE	100-level	3
Advanced Elective	300- or 400- or 500-level	3

FOURTH YEAR — Total Year Credits: 29

Term Credit Hours 16

Fall

Course Code	Course No.	Credit Hours
Advanced Elective	300- or 400- or 500-level	4
Advanced Elective	300- or 400- or 500-level	3
Advanced Elective	300- or 400- or 500-level	3
ELECTIVE	100-level	6

Term Credit Hours 13

Spring

Course Code	Course No.	Credit Hours
CHEM493 or 499	Seminar or Thesis	2
In-depth Chemistry	300 or 400 level	4
Advanced Elective	300- or 400- or 500-level	4
ELECTIVE	100-level	3

TOTAL DEGREE CREDITS: 121

All University Core Curriculum Courses (AUCC)

For a complete list of courses, visit the university catalog at *https://catalog.colostate.edu.* Honors students may have other requirements in these categories.

Foundational and Science Courses Requirement Options

Foundational Courses: General

A	B
CHEM 120/121	CHEM 111/112
CHEM 231/232	CHEM 113/114
	CHEM 231/232

Foundational Courses: Organic

A	B	C
CHEM 241/242	CHEM 245/246	CHEM 341
	CHEM 343/344	CHEM 343/344

Advanced Electives

CHEM 384-Supervised College Teaching
CHEM 487-Internship
CHEM 495-Independent Study
CHEM 498-Research
any other course from the in-depth chemistry courses list
any science course at the 300-, 400-, or 500-level
(If the student is pursuing a pre-health profession, please refer them to *https://hp.colostate.edu* for more information on prerequisites. These courses may satisfy the advanced electives requirements)

Revised: 10/2021 C.O.

In-depth Chemistry Courses (12 credits minimum)

At least 3 credits from lab courses and at least 5 credits from AUCC4B.*

CHEM 311-Introduction to Nanoscale Science	3
CHEM 315-Foundations of Polymer Chemistry	3
CHEM 320-Chemistry of Addictions	3
CHEM 333-Forensic Chemistry	3
CHEM 338-Environmental Chemistry	3
CHEM 421-Chemistry of Cannabis and Hemp	3
CHEM 431-Instrumental Analysis* (AUCC4B)	4
CHEM 433-Clinical Chemistry* (AUCC4B)	3
CHEM 440-Advanced Organic Chemistry Lab* (AUCC4B)	2
CHEM 445-Synthetic Organic Chemistry (AUCC4B)	3
CHEM 448-Medicinal Chemistry	3
CHEM 451-Catalysis	3
CHEM 461-Advanced Inorganic Chemistry (AUCC4B)	3
CHEM 462-Advanced Inorganic Chemistry Lab*	2
CHEM 476-Physical Chemistry II (AUCC4B)	3
CHEM 477-Physical Chemistry II Lab*	1
CHEM 498-Research*	1-3 per term