BACHELOR OF SCIENCE | MAJOR IN CHEMISTRY

Graduation Requirements: 120 total credits

Overall 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 must be taken at CSU.

Major Requirements/Other Requirements

Six foundational courses (30 credits); in-depth chemistry courses (12 credits, 5 credits must have lab); advanced electives (17 credits); 400 lab hours (beyond CHEM121 or CHEM114); foundational science courses (e.g. math, physics, etc.); electives.

All University Core-Curriculum Credit Requirements

Intermediate (AUCC1A, 3 credits) and advanced composition (AUCC2, 3 credits); mathematics (AUCC1B, 3 credits); diversity, equity, inclusion (AUCC1C, 3 credits); arts and humanities (AUCC3B, 6 credits); social and behavioral sciences (AUCC3C, 3 credits); historical perspectives (AUCC3D, 3 credits).

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

CHEM 192; CO 150; 3 credits of math; 3 credits of diversity, equity, and inclusion (AUCC1C).

FIRST YEAR: 30 Total Credit Hours

Fall: 16 Term Credit Hours

Course Code	Course Name	Credit Hours
CHEM192	Introductory Seminar	2
CHEM120	Modern Chemistry	4
CHEM121	Modern Chemistry Lab	1
AUCC3B	Arts & Humanities	3
AUCC1C	Global Awareness	3
CO150	College Composition	3
MATH117, 118, 124, 125, 126, or 127 (if needed)	Reference Course Catalog	Reference Course Catalog

Spring: 14 Term Credit Hours

Course Code	Course Name	Credit Hours
CHEM241	Organic Chemistry	4
CHEM242	Organic Chemistry Lab	1
CHEM263	Inorganic Chemistry	4
CHEM264	Inorganic Chem Lab	1
MATH155, or 160	Calculus I	4

SECOND YEAR: 26-27 Total Credit Hours

Fall: 14 Term Credit Hours

Course Code	Course Name	Credit Hours
CHEM231	Analytical Chemistry	3
CHEM232	Analytical Chemistry Lab	2
PH121 or 141	Physics I	5
MATH271 or 161	Applied Math I or Calculus II	4

Spring: 12-13 Term Credit Hours

Course Code	Course Name	Credit Hours
CHEM321 or BC351	Chemical Biology	4
CHEM322	Chemical Biology Lab	1
PH122 or 142	Physics II	5
CS152 or 150B	Python	2-3

THIRD YEAR: 30 Total Credit Hours

Fall: 14 Term Credit Hours

Course Code	Course Name	Credit Hours
CHEM371	Physical Chemistry	4
CHEM372	Physical Chemistry Lab	1
CHEM301 or CO300 or JTC300	Advanced Writing	3
AUCC3B	Arts & Humanities	3
AUCC3C	Social Science	3

Spring: 16 Term Credit Hours

Course Code	Course Name	Credit Hours
In-depth Chemistry	300 or 400-level	4
AUCC3D	History	3
Electives	Any Level	6
Advanced Elective	300, 400, or 500-level	3

FOURTH YEAR: 34 Total Credit Hours

Fall: 16 Term Credit Hours

Course Code	Course Name	Credit Hours
In-depth Chemistry	300, 400, or 500-level	4
Advanced Elective	300, 400, or 500-level	5
Electives	Any Level	7

Spring: 18 Term Credit Hours

Course Code	Course Name	Credit Hours
CHEM493 or 499	Seminar or Thesis	2
In-depth Chemistry	300 or 400-level	4
Advanced Elective	300, 400, or 500-level	7
Electives	Any Level	5

TOTAL DEGREE CREDITS: 120-121

All University Core Curriculum Courses (AUCC)
For a complete list of courses, visit the university catalog. Honors students may have other requirements in these categories; talk to your Honors Advisor.

***Foundational Courses Requirement Options (Choose One)**

Foundational Courses: GENERAL/ANALYTICAL

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

Foundational Courses: ORGANIC

GROUP A	GROUP B	GROUP 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 course at the 300, 400, or 500-level.
(If the student is pursuing a pre-health profession, please refer to Health Professions Advising for more information on prerequisites or declare concentration in Health Sciences. Courses may satisfy the advanced electives requirements).

Name: Advising Code:

Progress to Degree
Credits Earned: /120
Credits In Progress:
Credits Needed:

GPA
GPA-CUM:
GPA-AUCC:

Standing:
☐ GS ☐ PRB-1 ☐ PRB-2

Registration
Date:
Time:

Pre-Health
☐ PharmD ☐ MD ☐ DMD ☐ DVM

Double Major:

Minor(s):

*****In-depth Chemistry Courses (12 credits minimum)**
At least 3 credits from lab* courses and at least 5 credits from AUCC4B. Any of these courses may also be used to satisfy the advanced electives, except when required for a concentration.

COURSE	CREDITS
CHEM 311 – Introduction to Nanoscale Science	3
CHEM 315 – Foundations of Polymer Chemistry	3
CHEM 312 – Nanoscale Laboratory	1
CHEM 320 – Chemistry of Addictions	3
CHEM 333 – Forensic Chemistry (AUCC4B)	3
CHEM 338 – Environmental Chemistry (AUCC4B)	3
CHEM 355 – Sustainable Chemistry	3
CHEM 431 – Instrumental Analysis* (AUCC4B)	4
CHEM 433 – Clinical Chemistry*	3
CHEM 434 – Forensic Chemistry Laboratory	1
CHEM 440 – Advanced Organic Chemistry Lab* (AUCC4B)	2
CHEM 421 – Chemistry of Cannabis and Hemp	3
CHEM 445 – Synthetic Organic Chemistry (AUCC4B)	3
CHEM 448 – Medicinal Chemistry	3
CHEM 451 - Catalysis	3
CHEM 456 – Foundations of Sustainable Chemistry Laboratory*	1
CHEM 461 – Advanced Inorganic Chemistry (AUCC4B)	3
CHEM 462 – Advanced Inorganic Chemistry Laboratory*	2
CHEM 465 – Chemistry of Sustainable E-Waste Management	3
CHEM 476 – Advanced Physical Chemistry (AUCC4B)	3
CHEM 477 – Advanced Physical Chemistry Laboratory*	1
CHEM 498 - Research	1-3 per term
any CHEM 500+ course	