



**DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY**  
**CHEMISTRY BACHELOR OF SCIENCE**  
**CLASS OF 2024**



Chemistry B.S.

NAME:

TERM 1	TERM 2	TERM 3	TERM 4	TERM 5	TERM 6	TERM 7	TERM 8
GE B1 & B3 CHEM 120A 5 units	CHEM 120B 5 units	CHEM 301A 3 units	CHEM 301B 3 units	CHEM 371A 3 units	CHEM 371B 3 units	CHEM 495 1 unit	CHEM 495 2 units
CHEM 190 1 unit		CHEM 306A 2 units	CHEM 306B 2 units	CHEM 325 3 units	CHEM 355 3 units	CHEM Elective 3 units	CHEM Elective 3 units
GE A1 or A2 3 units	GE A1 or A2 3 units	CHEM 315 3 units	CHEM 316 2 units	GE D1 3 units	GE C2 3 units	CHEM Elective 3 units	GE D3 3 units
GE A3 CNSM 101 3 units	PHYS 225, 225L 4 units	PHYS 226, 226L 4 units	PHYS 227 1 unit	UD writing 3 units	GE B2 3 units	GE D2 3 units	GE C1 or C2 3 units
GE B4 MATH 150A 4 units	MATH 150B 4 units	MATH 250A 4 units	MATH 250B 4 units	GE C1 3 units	UD GE B5 3 units	UD GE C3 3 units	UD GE D4/Z 3 units
						Electives 3 units	
16 units	16 units	16 units	12 units	15 units	15 units	16 units	14 units

27	GE lower division
9	GE upper division
3	CNSM required
3	Upper division writing
50	Chemistry BS required
25	Chemistry BS related
3	Elective
<b>120</b>	<b>TOTAL UNITS</b>

**INSTRUCTIONS FOR COMPLETING THE CHEMISTRY BACHELOR OF SCIENCE**

1. Meet with your assigned faculty advisor each semester to plan and review your academic progress.
2. Visit your College of Natural Sciences and Mathematics Student Success Team in MH 488 to review GE and graduation requirements.
3. GE category E is waived for this major.
4. Complete GE courses in areas A1, A2, A3 and B4 with a C or better.
5. Complete a total of 12 units in GE Area B.
6. One course from GE Area Z can also fulfill a requirement in another category (e.g., D4). Check your Titan Degree Audit for courses that appear in both categories.
7. Apply for Graduation through your Student Center at the start of Term 7.

## CHEMISTRY BACHELOR OF SCIENCE

The Bachelor of Science in Chemistry is offered for students who are planning careers that require a specialized training in fundamental chemistry, for a professional chemist. The B.S. Chemistry program is particularly suited for those who plan to pursue advanced degrees in any area of chemistry.

The following courses are required to complete the B.S. in Chemistry.

### CHEMISTRY REQUIRED COURSES

- Complete the **fourteen** courses listed below:

Course	Course Title
CHEM 120A	General Chemistry
CHEM 120B	General Chemistry
CHEM 190	Orientation to Chemistry & Biochemistry
CHEM 301A	Organic Chemistry
CHEM 301B	Organic Chemistry
CHEM 306A	Organic Chemistry Lab
CHEM 306B	Organic Chemistry Lab
CHEM 315	Theory of Quantitative Chemistry
CHEM 316	Quantitative Chemistry Laboratory
CHEM 325	Inorganic Chemistry
CHEM 355	Physical Chemistry Laboratory
CHEM 371A	Physical Chemistry
CHEM 371B	Physical Chemistry
CHEM 495	Senior Thesis

- Complete the **nine** courses listed below:

Course	Course Title
MATH 150A	Calculus I
MATH 150B	Calculus II
MATH 250A	Calculus III
MATH 250B	Introduction to Linear Algebra and Differential Equations
PHYS 225	Fundamental Physics: Mechanics
PHYS 225L	Fundamental Physics: Laboratory
PHYS 226	Fundamental Physics: Electricity and Magnetism
PHYS 226L	Fundamental Physics: Laboratory
PHYS 227	Fundamental Physics: Waves, Optics and Modern Physics

- Complete **nine** units of upper division electives; choose from the courses listed below. Some of the courses below may have additional prerequisites that cannot be used as an elective. See Catalog or Department website for more information.

Course	Course Number
CHEM	410, 411A-G, 421, 422, 423A, 423B, 425, 429, 430, 431, 436, 438, 439, 445, 467, 472A, 472B, 473, 480T
BIOL	302, 303, 309, 327, 456
CRJU	300, 340, 420, 462
EDSC	304, 310, 320, 330, 340
EGCE	301, 441, 481, 482, 583
EGME	304, 331, 462, 475
GEOG	311, 422, 486
GEOLOG	303A, 406, 456
MATH	306, 310, 320, 335, 338, 435, 438, 439
PHYS	310, 315, 340, 380, 411, 416, 476

- Complete **one** course listed below to satisfy the University Upper Division writing requirement:

Course	Course Title
ENGL 301	Advanced College Writing
ENGL 360	Technical Writing
ENGL 363	Scientific Writing

### GENERAL EDUCATION REQUIREMENTS

- Area A.** Complete one course in each subarea for a total of 9 units of lower division.

Subarea	Title
A1	Oral Communication
A2	Written Communication
A3	Critical Thinking (CNSM 101)

- Area B.** Complete one course in each subarea; the course in B3 must be associated with the course taken to satisfy B1 or B2. Area B courses must include 9 lower division and 3 upper division units (\*).

Subarea	Title
B1	Physical Science
B2	Life Science
B3	Laboratory Activity
B4	Mathematics/Quantitative Reasoning
B5 (*)	Implications/Explorations in Math and Natural Sciences

- Area C.** Complete 3 units from C.1; 3 units from C.2; 3 units from C.3; and 3 units from either C.1 or C.2 for a total of 9 lower division and 3 upper division units (\*).

Subarea	Title
C1	Introduction to Arts
C2	Introduction to Humanities
C3 (*)	Explorations in the Arts/Humanities

- Area D.** Complete 9 lower division and 3 upper division units (\*).

Area	Title
D1	Introduction to Social Sciences
D2	American History, Institutions & Values
D3	American Government
D4 (*)	Explorations in Social Sciences

- Area E.** Waived for this major.

- Area Z.** Cultural Diversity Requirement (3 units). One GE Course in B, C, D, or E must double-count as a Z course (check TDA or CSUF website for courses that appear in both categories).

Area	Title
Z	Cultural Diversity