## College of Natural Sciences and Mathematics

## DEPARTMENT OF CHEMISTRY \& BIOCHEMISTRY CHEMISTRY BACHELOR OF ARTS CLASS OF 2024

NAME:
TERM 1
TERM 2

| GE B1 \& B3 <br> CHEM 120A <br> 5 units | CHEM 120B 5 units | CHEM 301A 3 units | CHEM 301B 3 units | CHEM 361A 3 units | CHEM 361B 3 units | CHEM 421 <br> 3 units | CHEM Elective 3 units |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { GE B4 } \\ & \text { MATH 150A } \\ & 4 \text { units } \end{aligned}$ | MATH 150B 4 units | CHEM 306A 2 units | CHEM 306B 2 units | $\begin{aligned} & \text { CHEM } 325 \\ & 3 \text { units } \end{aligned}$ | GE B2 3 units | CHEM 495 1 unit | CHEM 495 <br> 2 units |
| $\begin{aligned} & \text { GE A1 or A2 } \\ & 3 \text { units } \end{aligned}$ | $\begin{aligned} & \text { GE A1 or A2 } \\ & 3 \text { units } \end{aligned}$ | CHEM 315 3 units | CHEM 316 <br> 2 units | $\begin{aligned} & \text { GE C1 or C2 } \\ & 3 \text { units } \end{aligned}$ | GE D2 <br> 3 units | GE D2 <br> 3 units | GE E/Z <br> 3 units |
| GE A3 CNSM 101 3 units | GE C1 <br> 3 units | $\left\|\begin{array}{c} \text { PHYS 211, 211L } \\ 4 \text { units } \end{array}\right\|$ | $\left\|\begin{array}{c} \text { PHYS 212, 212L } \\ 4 \text { units } \end{array}\right\|$ | UD writing 3 units | Elective 3 units | Elective 3 units | Elective 3 units |
| CHEM 190 <br> 1 unit |  | GE C2 <br> 3 units | GE D1 <br> 3 units | UD GE B5 <br> 3 units | UD GE C3 <br> 3 units | Elective 3 units | Elective 3 units |
|  |  |  |  |  |  | $\begin{aligned} & \text { UD GE D4/Z } \\ & 3 \text { units } \end{aligned}$ |  |
| 16 units | 15 units | 15 units | 14 units | 15 units | 15 units | 16 units | 14 units |


| 30 | GE lower division |
| :---: | :--- |
| 9 | GE upper division |
| 3 | CNSM required |
| 3 | Upper division writing |
| 44 | Chemistry BA required |
| 16 | Chemistry BA related |
| 15 | Elective |
| $\mathbf{1 2 0}$ | TOTAL UNITS |

## INSTRUCTIONS FOR COMPLETING THE CHEMISTRY BACHELOR OF ARTS

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. Complete GE courses in areas $\mathrm{A} 1, \mathrm{~A} 2, \mathrm{~A} 3$ and B 4 with a C or better.
4. Complete a total of 12 units in GE Area $B$.
5. 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.
6. Apply for Graduation through your Student Center at the start of Term 7.

## CHEMISTRY BACHELOR OF ARTS

The Bachelor of Arts in Chemistry is offered for students who are planning careers that require a sound background in fundamental chemistry, but not specialized training needed by a professional chemist. The B.A. program is particularly suited for those who plan to go into areas such as secondary education, technical sales, food processing, chemical patent law, forensic science, environmental law, and business administration (MBA). The B.A. degree can also be used to pursue graduate school.

The following courses are required to complete the B.A. 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 361A | Introduction to Physical Chemistry |
| CHEM 361B | Introduction to Physical Chemistry |
| CHEM 421 | Biological Chemistry |
| CHEM 495 | Senior Research |

- Complete three units of upper division CHEM electives; choose from:

| Course | Course Title |
| :--- | :--- |
| CHEM410 | Computational Chemistry |
| CHEM411A-G | Instrumental Analysis (1 unit each) |
| CHEM422 | Biochemistry Laboratory |
| CHEM425 | Advanced Inorganic Chemistry |
| CHEM429 | Medicinal Chemistry |
| CHEM430 | Bioorganic Chemistry |
| CHEM431 | Advanced Organic Chemistry |
| CHEM436 | Atmospheric Chemistry |
| CHEM438 | Environmental Biochemistry |
| CHEM445 | Nutritional Biochemistry |
| CHEM472B | Advances in Biotechnology Laboratory |
| CHEM467 | Medicinal Chemistry Laboratory |
| CHEM480T | Topics in Chemistry |

- Complete the six courses listed below:

| Course | Course Title |
| :--- | :--- |
| MATH 150A | Calculus I |
| MATH 150B | Calculus II |
| PHYS 211 | Elementary Physics |
| PHYS 211L | Elementary Physics: Laboratory |
| PHYS 212 | Elementary Physics |
| PHYS 212L | Elementary Physics: Laboratory |

- 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 <br> 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. Complete 3 units.

| Area | Title |
| :--- | :--- |
| E | Lifelong Learning and Self Development |

- 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 |

