

ACADEMIC PLANNING SHEET

B.S. CHEMISTRY BIOCHEMISTRY EMPHASIS

COLORADO STATE UNIVERSITY – PUEBLO

2017-2018 CATALOG

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| | Fall Semester | | Spring Semester | |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| First Year | CHEM 121/L: General Chemistry I/Lab ENG 101: English Composition I General Education Course: Humanities General Education Course: Social Sciences | 5 3 3 3 | CHEM 122/L: General Chemistry II/Lab ENG 102: English Composition II General Education Course: Humanities General Education Course: Social Sciences | 5 3 3 3 |
| | TOTAL SEMESTER HOURS | 14 | TOTAL SEMESTER HOURS | 14 |
| Second Year | CHEM 301/L: Organic Chemistry I/Lab MATH 126: Calculus and Analytic Geometry I BIOL 181/L: College Biology I/Organismal Bio/Lab | 5 5 4 | CHEM 302/L: Organic Chemistry II/Lab MATH 224: Calculus and Analytic Geometry II BIOL 182/L: College Biology II/Cellular Bio/Lab Free Electives | 5 5 4 1 |
| | TOTAL SEMESTER HOURS | 14 | TOTAL SEMESTER HOURS | 15 |
| Third Year | CHEM 221/L: Inorganic Chemistry I/Lab CHEM 317/L: Quantitative Analysis/Lab BIOL 301/L: General Microbiology/Lab CHEM 411: Biochemistry I | 4 5 5 3 | PHYS 221/L: General Physics/Lab CHEM 412/L: Biochemistry II/Lab BIOL 350: Mendelian & Population Genetics General Education Course: Humanities | 5 5 2 3 |
| | TOTAL SEMESTER HOURS | 17 | TOTAL SEMESTER HOURS | 15 |
| Fourth Year | CHEM 321: Physical Chemistry I PHYS 222/L: General Physics II/Lab BIOL 351/L: Molecular Biology and Genetics General Education Course: History | 3 5 4 3 | CHEM 419/L: Instrumental Analysis/Lab CHEM 322: Physical Chemistry II BIOL 412/L: Cellular Biology/Lab CHEM 492: Research OR CHEM 495: Independent Study CHEM 493: Seminar | 5 3 4 3 1 |
| | TOTAL SEMESTER HOURS | 15 | TOTAL SEMESTER HOURS | 16 |

The Academic Planning Sheet is designed as a guide for students planning their course selections. The information on this page provides only a suggested schedule. Actual course selections should be made with the advice and consent of an academic adviser. While accurately portraying the information contained in the college catalog, this form is not considered a legal substitute for that document. Students should become familiar with the catalog in effect at the time in which they entered the institution.

General Education Requirements: 24 semester hours

- ENG 101: English Composition I (3)
- ENG 102: English Composition II (3)
- Mathematics Course (3)
 - MATH 126: Calculus and Analytic Geometry I (5)*
- Humanities Courses (9)
- History Course (3)
- Social Sciences Courses (6)
- Natural and Physical Sciences Courses (8) (2 courses with labs)
 - CHEM 121/L: General Chemistry/Lab I (5)*
 - CHEM 122/L: General Chemistry/Lab II (5)*

| | |
|-----------------------------------|------------------------------|
| Course Completed elsewhere | CSU-Pueblo equivalent |
| (Ex: English 101) | (Ex: English 101) |

Major Requirements:*Chemistry Major Core Courses: 41 semester hours*

- CHEM 121/L: General Chemistry/Lab I (5)*
- CHEM 122/L: General Chemistry/Lab II (5)*
- CHEM 221/L: Inorganic Chemistry/Lab (4)
- CHEM 301/L: Organic Chemistry/Lab I (5)
- CHEM 302/L: Organic Chemistry/Lab II (5)
- CHEM 317L: Quantitative Analysis/Lab (5)
- CHEM 321*: Physical Chemistry I (3)
- CHEM 322*: Physical Chemistry II (3)
- CHEM 419L: Instrumental Analysis/Lab (5)
- CHEM 493: Seminar (1)

*CHEM 322 is not a continuation of CHEM 321 and can be taken before CHEM 321.

Institutional Graduation Requirements:

- Total of 120 semester hours, minimum.
- Complete a minimum of 40 semester hours in upper-division courses.
- Overall cumulative grade point average of 2.00.
- A minimum of 60 semester hours must be earned from a four -year institution. Of these, a minimum of 30 semester hours of credit must be earned in residence.
- Of the last 30 semester credits earned immediately preceding graduation, no more than 15 may be completed at other colleges or universities.
- All other requirements as specified in the Catalog.

Additional Major Graduation Requirements:

- Students majoring in chemistry must receive a grade of “C” or better in all core chemistry courses.
- Proficiency in physics, math and computer science is essential for understanding and applying chemical principles; therefore, graduates must complete approved math and physics courses with an overall GPA of 2.000 or better.

Major Requirements cont.:*Biochemistry Emphasis: 11 semester hours*

- CHEM 411: Biochemistry I (3)
- CHEM 412: Biochemistry II/Lab II (5)
- Approved Chemistry Electives (3)
(CHEM 492 or 495 strongly suggested)

Other Required Courses: 43 semester hours

- BIOL 181/L: College Biology I/Organismal Bio/Lab (4)
- BIOL182/L: College Biology II/Cellular Bio/Lab (4)
- BIOL 301/L: General Microbiology/Lab (5)
- BIOL 350: Mendelian and Population Genetics (2)
- BIOL 351/L: Molecular Biology and Genetics/L (4)
- BIOL 412/L: Cellular Biology (4)
- MATH 126: Calculus and Analytic Geometry I (5)
- MATH 224: Calculus and Analytic Geometry (5)
- PHYS 221/L: General Physics I/Lab I (5)
- PHYS 222/L: General Physics II/Lab II (5)

Free Electives (1)

(Courses *italicized* meet General Education requirements)

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