## MINOR IN CHEMISTRY

## Minor in Chemistry

Earning a minor in chemistry signifies that a student has completed a significant amount of coursework and demonstrated some proficiency in chemistry. Chemistry is foundational and complementary to several fields and majors. Many students who find themselves taking several chemistry courses as part of their major decide to take a few additional chemistry courses to satisfy the requirements for the minor.

## Advising

Students who are considering a minor in chemistry are encouraged to meet with an advisor to identify the best selection of courses to meet the minor requirements.

## Program Learning Outcomes

a. Demonstrate an understanding of key concepts and an ability to solve problems in chemistry.
b. Perform basic chemistry laboratory procedures, including the use of modern instrumentation, for the synthesis, separation, isolation, analysis and characterization of molecules.
c. Effectively communicate the results of scientific experiments in oral reports, technical graphics, and written reports.
d. Draw on classroom knowledge to contribute to solutions of problems encountered in a laboratory.

## Chemistry Minor - 20 units

All courses must be completed with grades of C - or better (CR/NC grading is not accepted).

A minimum of 6 upper-division units are required to complete the minor.
All coursework used to satisfy the requirements of the minor must be completed with a minimum grade point average of 2.0 .

Required Courses (8 units)

| Code | Title | Units |
| :--- | :--- | ---: |
| CHEM 115 | General Chemistry I | 4 |
| CHEM 215 | General Chemistry II | 4 |

## Chemistry Electives (12 units)

Chemistry courses taken on advisement. At least 10 of the units must be upper-division, with at least 6 of those units taken at SF State. Additional restrictions are listed below:

1. Only one course from each of the following pairs can be counted towards the minor.

| Code | Title | Units |
| :--- | :--- | ---: |
| CHEM 130 | General Organic Chemistry | 3 |
| or CHEM 233 | Organic Chemistry I |  |
| CHEM 349 | General Biochemistry | 3 |
| or CHEM 340 | Biochemistry I |  |

2. The following courses cannot be counted toward the minor.

| Code | Title | Units |
| :--- | :--- | ---: |
| CHEM 100 | Preparation for Chemistry | 3 |
| CHEM 101 | Survey of Chemistry | 3 |
| CHEM 102 | Survey of Chemistry Laboratory | 1 |

Note: Students majoring in Biochemistry are not eligible for the minor in chemistry.

