**Biochemistry and Chemistry**

**Mission**

Please paste your program’s/major’s mission statement into the space below.

The mission of the Department of Chemistry and Biochemistry is to provide our students with a solid foundation in the chemical and biochemical sciences and the skills required for scientific analysis and critical thinking. Upon completing the chemistry or biochemistry major the students will be prepared to attend graduate schools (Ph.D. programs) or professional schools (medical, dental, optometry and others). They will be also ready to study and work at various engineering and academic institutions.

**Program/Major Goals**

1. Students will obtain a firm foundation in chemical and biochemical principles.

a. Students will know basic chemical terms

b. Students will be able to predict the outcome of chemical reactions

c. Students will be able to recognize the relationship between structure and function of molecules

1. Students will be able to interpret and evaluate scientific data and findings from laboratory experiments and scientific literature

a. Students will be able to accurately measure physical and chemical properties of systems

b. Students will be able to associate data with scientific principles and scientific findings

c. Students will be able to understand central points of scientific articles

1. Students will be able to communicate scientific concepts and research findings orally and in writing.

a. Students will be able to compose written reports summarizing and explaining experimental results

b. Students will be able to write an overview of a specific scientific topic

c. Students will be able to deliver oral presentations of research

1. Students will be able to utilize quantitative skills to address scientific problems

a. Students will be able to identify the appropriate equation to solve a chemical problem

b. Students will be able to manipulate fundamental equations to solve for unknown quantities

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | | | | | | | |
| **Gen. Chem. 1045-**  **1046C** | **Honors G.**  **Chem 1045-**  **146H** | **Gen. Chem. Lab** | **Orgo Chem 1213-**  **1214** | **Orgo Lab** | **Biochem and Biochem Lab** | **Phys. Chem 1415-**  **1416** | **Anal Chem 1125** | **Chem Sem 1937** |
| 1a.Students will know basic chemical terms | x | x | x | x | x | x | x | x | x |
| 1b. Students will know how to write chemical formulas, states, and structures of compounds and ions. | x | x | x | x | x | x | x | x |  |
| 1c.Students will be able to predict the outcome of chemical reactions and write associated equations | x | x | x | x | x | X |  | x |  |
| 1d.Students will be able to | x | x | x | x | x | x | x |  |  |