Chemistry and Biochemistry

Objectives

Upon completing the BA in Chemistry degree, students will be able to:

1. Understand and apply basic mathematics to the solution of problems in chemistry and biochemistry.
2. Apply the essential principals of the major subdivisions of chemistry and biochemistry.
3. Analyze chemical samples by qualitative and quantitative methods and appreciate the limits of the analysis.
4. Synthesize, purify and characterize organic molecules.
5. Understand structure, bonding and reaction mechanisms of organic, inorganic, and biochemical substances.
6. Understand the fundamental concepts of kinetics, thermodynamics, and quantum chemistry.
7. Work in the chemical laboratory in a safe and environmentally friendly manner.
8. Abstract information from the chemical literature and communicate that information to their peers.
9. Communicate the results of their laboratory work in a professional report.
10. Apply the highest standards of integrity in doing science and reporting scientific results.
11. Prepare lesson plans and use them in a secondary chemistry classroom.
14. Understand procedures and processes for classroom planning and operation.

Mission

The following learning goals contribute to the readiness for future work of the students who graduate with a BA in Chemistry with Secondary Teacher Licensure.  
- Understanding chemical and biochemical concepts;
- Training to work in the laboratory setting;
- Solving biochemical and related problems;
- Using written, oral and multimedia methods of communication to clearly express ideas;
- Understanding the role of chemistry and biochemistry in society;
- Being environmentally responsible.