

## Chemistry and Biochemistry Department Student Learning Goals

### Students will:

1. Demonstrate problem solving skills.
2. Demonstrate basic laboratory skills, including those involved in synthesis, characterization, and quantitative analysis.
3. Demonstrate effective communication skills, including conventions for written, graphic, and oral communication of scientific results.
4. Understand the structures of atoms, functional groups, molecules, and bulk materials and how they relate to reactivity, physical properties, and biological function.
5. Understand the fundamentals of chemical instrumentation including operation, functional principles, capabilities, and limitations.
6. Understand the theory and principles behind observed chemical phenomena and the methods used to study them.
7. Understand the process of scientific research, including how to arrive at appropriate questions, propose hypotheses, design and execute experiments, analyze data, and interpret results.
8. Learn to locate and interpret scientific literature.
9. Learn and practice safe laboratory procedures.
10. Understand the role chemistry plays in everyday life.