

## Chemistry BS Student Learning Outcomes

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Objective 1: Demonstrate knowledge of fundamental concepts and applications of analytical chemistry, inorganic chemistry, organic chemistry, and physical chemistry.

Outcome 1.1: Students will demonstrate knowledge and understanding of Physical Chemistry.

Outcome 1.2: Students will demonstrate knowledge and understanding of Inorganic Chemistry.

Outcome 1.3: Students will demonstrate knowledge and understanding of Analytical Chemistry.

Outcome 1.4: Students will demonstrate knowledge and understanding of Organic Chemistry.

Objective 2: Demonstrate critical thinking skills through the proficient conduct of basic scientific methodology and investigation, problem solving, data collection, and analysis.

Outcome 2.1: Students will apply scientific principles and methods.

Outcome 2.2: Students will apply mathematical reasoning.

Outcome 2.3: Students will weigh evidence, facts, ideas, and to draw conclusions.

Objective 3: Demonstrate written and oral communication skills needed to communicate chemistry concepts and the significance of experimental results.

Outcome 3.1: Students will be able to formulate and support a thesis through accurate evidence and documentation.

Outcome 3.2: Students will be able to research, collect, and assess scholarly information regarding their major field of study.

Outcome 3.3: Students will be able to present written information clearly, logically, and critically.

Outcome 3.4: As a writer, students will be able to create an audience-appropriate document that exhibits clarity and organization and serves the intended purpose.

Objective 4: Demonstrate understanding and appreciation of ethical, cultural, and global issues as they relate to chemistry and its applications.

Outcome 4.1: Students will demonstrate proficiency in ethical issues as they relate to the practice of chemistry

Outcome 4.2: Students will demonstrate proficiency in cultural and global issues as they relate to the practice of chemistry.

Outcome 4.3: Students will demonstrate proficiency in human diversity issues as they relate to the practice of chemistry.

Objective 5: Demonstrate ability to use technology effectively including that associated with the field of chemistry and its applications.

Outcome 5.1: Students will use technology effectively.