

Program SLOs Chemistry

A.S. Degree – Chemistry

A.S. Degree – General Science

Chemistry Program Student Learning Outcomes from the 2015 PrOF (Program Review) Update

1	Program Student Learning Outcome (P-SLO)	Scientific Method	<p>Understand the Scientific Method which includes the ability to:</p> <ul style="list-style-type: none"> • Demonstrate critical thinking skills. • Be able to establish testable hypotheses. • Interpret, manipulate and quantify generated data. • Draw sound conclusions from collected data and observations.
2	Program Student Learning Outcome (P-SLO)	Written and Oral communication	<p>Be able to write clearly about chemistry, demonstrating knowledge of basic chemical terminology and understanding of fundamental concepts in chemistry.</p> <ul style="list-style-type: none"> • Demonstrate logical development to problem solving. • Present data clearly. • Demonstrate validity of data and analysis of experimental error. • Cite relevant, valid, and proper literature information.
3	Program Student Learning Outcome (P-SLO)	Demonstrate Content Knowledge	<p>Demonstrate content knowledge</p> <ul style="list-style-type: none"> • Develop test taking skills. • Develop note-taking skills. • Develop time-management skills. • Become competent in using available resources. • Develop the skills necessary to organize and catalog large quantities of information.
4	Program Student Learning Outcome (P-SLO)	Use Appropriate Laboratory Techniques	<p>Students will be able to use appropriate laboratory techniques safely and proficiently. Skills to be mastered will depend on the goal of the student as indicated below:</p> <ul style="list-style-type: none"> • Science majors lab techniques include: following written directions, measurement, pipetting, graphing, titration, synthesis, observation of physical changes, observation of chemical changes, filtration, neutralization, solution preparation, quantitative analysis, qualitative analysis, calorimetry, chromatography, spectroscopy, analytical instrumentation, and computer based data acquisition and analysis. Additional laboratory techniques relevant to science majors can be found in the SLO's for physics, biology, or geology labs (depending on student's field of emphasis.) • Allied Health Track lab techniques include: following written directions, measurement, pipetting, graphing, dilution, solution preparation, synthesis, observation of physical changes, observation of chemical changes, filtration, neutralization, qualitative analysis, calorimetry, Additional laboratory techniques relevant to allied health majors can be found in the SLOs for biology labs required for this career option.