

# NORTHERN NEW MEXICO COLLEGE



<b>Course Number Course Name</b>	CHEM 1215L General Chemistry I Lab for STEM Majors
<b>Credit Value (Breakdown of theory and lab credits)</b>	1 Lab
<b>Catalog Course Description</b>	Co-requisite: CHEM 1215. (1, 0T+1L) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN CHEM 1214 with Lecture)
<b>Course Student Learning Outcomes/Objectives /Competencies</b>	<ol style="list-style-type: none"> <li>1. Demonstrate and apply concepts associated with laboratory safety, including the possible consequences of not adhering to appropriate safety guidelines.</li> <li>2. Demonstrate the computational skills needed to perform appropriate laboratory related calculations to include, but not be limited to determining the number of significant figures in numerical value with the correct units, solving problems using values represented in exponential notation, solving dimensional analysis problems, and manipulating mathematical formulas as needed to determine the value of a variable.</li> <li>3. Perform laboratory observations (both qualitative and quantitative) using sensory experience and appropriate measurement instrumentation (both analog and digital).</li> <li>4. Prepare solutions with an acceptable accuracy to a known concentration using appropriate glassware.</li> <li>5. Master basic laboratory techniques including, but not limited to weighing samples (liquid and solid), determining sample volumes, measuring the temperature of samples, heating and cooling a sample or reaction mixture, decantation, filtration, and titration.</li> <li>6. Demonstrate mastery in experimental techniques, such as pressure measurements, calorimetric measurements, and spectrophotometric measurements</li> <li>7. Draw conclusions based on data and analyses from laboratory experiments.</li> <li>8. Present experimental results in laboratory reports of appropriate length, style and depth, or through other modes as required.</li> <li>9. Relate laboratory experimental observations, operations, calculations, and findings to theoretical concepts presented in the complementary lecture course.</li> <li>10. Design experimental procedures to study chemical phenomena.</li> </ol>
<b>College-Wide Student Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Critical Thought</li> </ol>



<b>measured (General education courses only)</b>	
<b>Program Student Learning Outcomes measured</b>	<ol style="list-style-type: none"><li>1. The student should be able to identify and relate chemical phenomenon in everyday activities, technology and society. The importance in their community and in the future.</li><li>2. The student should be able to work in a laboratory setting following safety and standard chemical lab protocols. Synthesizing and Characterizing organic and inorganic compounds, planning and executing experiments.</li></ol>