

Course Outcome Guide (COG)

Course:	CHEM 121 L/L: General Chemistry I	Credits:	5	Date updated:	11/19/15
Course Description:	<i>Prerequisite: "C" or higher in MATH 103, concurrent enrollment in MATH 103 or higher, or Instructor approval. Topics include atomic structure, stoichiometric relationships, chemical reactions, gas laws, thermochemistry, bonding, and molecular geometry. Course required for science, pre-med, allied health, agriculture, and engineering majors.</i>				
Concepts and Issues	Process Skills	Assessment Tasks	Intended Outcomes		
			Course	General Education or Program	Institutional
<ul style="list-style-type: none"> • Measurements and problem solving • Atomic structure • Bonding and compounds • Stoichiometry • Gas Laws • Thermochemistry • Spectroscopy • Properties of the elements • Lewis theory • Chemical bonding theories • Data collecting, recording, and analyzing 	<ul style="list-style-type: none"> • Demonstrate accurate measurement techniques and solve related problems • Identify the parts of atoms • Identify ionic and molecular compounds • Manipulate stoichiometry • Solve gas problems • Predict energy transfers • Classify effects of light • Analyze periodic properties • Create Lewis structures • Apply bonding theories to compounds • Demonstrate ability to follow directions. • Collect data and explain deviations from expectations. 	<ol style="list-style-type: none"> 1. Fill in lab reports 2. Homework assignments 3. Chapter quizzes 4. Unit Exams 5. Comprehensive final exam 	Students will be able to: <ol style="list-style-type: none"> 1. Develop a mastery of fundamental concepts and applications of chemistry. 2. Solve chemical problems and understand concepts. 	Students will: <ol style="list-style-type: none"> 2. Use reasoning skills to analyze and solve problems. 	Students will: <ol style="list-style-type: none"> 2. Use reasoning skills to analyze and solve problems.