

CHEM course SLOs

Course ID	SLO Name	SLO
CHEM 10	Critical Thinking	Successful students will be able to analyze a chemistry problem and set up a reasonable approach to calculating the correct answer. This will involve dimensional analysis as well as significant figure calculations.
	Dimensional Analysis	Successful students will be able to set up a unit conversion using dimensional analysis and express the answer with correct significant figures.
	Metric System	Successful students will be able to perform unit conversions within the metric system.
CHEM 100	Lab Techniques	Successful students will be able to set up and execute general and intermediate chemical reactions in the lab using a chemical technique.
	Nomenclature	Successful students will be able to name general inorganic compounds.
	Scientific Method	Successful students will be able to apply the scientific method by stating a question, performing experiments and/or analyzing a data presentation.
CHEM 104	Basic Organic Chemical Principles	Successful students will be able to understand the basic principles of organic chemistry relating to simple structure and reactivity of hydrocarbons.
	Molecular Life Cycles	Successful students will be able to understand the basic energy cycles of life on the molecular level and be able to correlate structure and function.
	Understanding Of Periodic Table	Successful students will have a general understanding of the Periodic Table Of Elements and be cognizant of the simple periodicity of the chemical elements.
CHEM 105	Basic Organic Reactions	Successful students will be able to classify and evaluate basic organic chemical mechanisms and reactions.
	Organic Lab Reactions	Successful students will be able to plan simple organic synthetic reactions and demonstrate these techniques in the laboratory.
CHEM 110	Application of the Scientific Method	Successful students will be able to apply the scientific method by stating a question, performing experiments and/or analyzing a data presentation.
	Nomenclature	Successful students will be able to name general inorganic compounds.
CHEM 110L	Application of the Scientific Method	Successful students will be able to apply the scientific method by stating a question, performing experiments and/or analyzing a data presentation.
	Chemical Lab Technique	Successful students will be able to set up and execute general and intermediate chemical reactions in the lab using a chemical technique.
CHEM 115	Acid & Base Theory	Successful students will be able to explain the general differences that exist between weak acids and bases versus strong acids and bases.
	Application of the Scientific Method	Successful students will be able to apply the scientific method by stating a question, performing experiments

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	Application of the Scientific Method	and/or analyzing a data presentation.
	Chemical Equilibrium	Successful students will be able to set up an equilibrium problem and solve for equilibrium concentrations.
	Electrochemistry	Successful students will be able to calculate the potential of a voltaic cell using the Nernst equation.
	Kinetics	Successful students will use experimental data to determine the rate law for a chemical reaction.
	Weak Acid Equilibrium	Successful students will be able to calculate the pH of a weak acid solution using the appropriate K_a value.
CHEM 115L	Application of the Scientific Method	Successful students will be able to apply the scientific method by stating a question, performing experiments and/or analyzing a data presentation.
	Chemical Lab Technique	Successful students will be able to set up and execute general and intermediate chemical reactions in the lab using a chemical technique.
CHEM 205	Basic Biochemical Principles and Structures	Successful students will be able to understand the basic principles of biochemistry relating to simple molecular structure and reactivity.
	Basic Energy Cycles (Molecular Level)	Successful students will be able to understand the basic energy cycles of life on the molecular level.
CHEM 210	Analytical Lab Technique	Successful students will be able to set up and execute general and intermediate chemical measurements in the lab using an analytical technique.
	Application of the Scientific Method	Successful students will be able to apply the scientific method by stating a question, performing experiments and/or analyzing a data presentation.
CHEM 220	Application of the Scientific Method	Successful students will be able to apply the scientific method by stating a question, performing experiments and/or analyzing a data presentation.
	Organic Lab Technique	Successful students will be able to set up and execute general and intermediate organic chemical reactions in the lab using an organic chemical technique.
CHEM 221	Application of Organic Theory to the Lab (Synthesis)	Successful students will be able to successfully plan the synthesis, purification, and characterization of many common aliphatic and aromatic compounds from a theoretical perspective and then carry out the actual techniques in the laboratory.