

# All levels SLOs statistics during CCC Fall 2012 for Chemistry

SLO Text	SLO Level	Course Number	Fully Achieved	Partially Achieved	Failed to Achieve
Demonstrate the applications of scientific methodology to experiments and observations.	C	CHEM-C105	50.00 %	7.14 %	42.86 %
Describe chemical and physical properties of substances in terms of molecular interactions, structure, and energy of the molecules.	C	CHEM-C105	50.00 %	7.14 %	42.86 %
Evaluate the validity and limitations of specific theories and scientific claims in interpreting experimental results.	C	CHEM-C105	50.00 %	7.14 %	42.86 %
Demonstrate the use of a variety of instructional and technological resources available on campus and in the community.	C	CHEM-C105	42.86 %	7.14 %	50.00 %
The student will be able to analyze the fundamental features of inorganic chemistry as it applies to organic and biochemistry including measurement and mathematical interconversion of physical properties such as mass, volume, density, temperature, solution, concentrations.	C	CHEM-C110	66.67 %	12.00 %	21.33 %
The student will be able to correctly use scientific systems of measurement, scientific symbols, and chemistry vocabulary and to differentiate typical acid and base formulas and compare/contrast the behavior associated with acids and bases including the behavior of buffers.	C	CHEM-C110	70.67 %	1.33 %	28.00 %
The student will be able to manipulate laboratory equipment so that he or she will be able to perform basic chemical experiments and determinations.	C	CHEM-C110	70.67 %	4.00 %	25.33 %
Students will be able to distinguish various roles of four major classes of biomolecules in living cells, and to distinguish and construct key structural features and common reactions of these classes of biomolecules.	C	CHEM-C110	66.67 %	12.00 %	21.33 %
Distinguish between chemical and physical changes and describe the basic properties and classifications of matter.	C	CHEM-C180	100.00 %	0.00 %	0.00 %
Distinguish between chemical and physical changes and describe the basic properties and classifications of matter.	C	CHEM-C180L	100.00 %	0.00 %	0.00 %
Use the Ideal Gas Law and associated laws to describe and explain gas behavior qualitatively and quantitatively.	C	CHEM-C180	98.41 %	0.00 %	1.59 %
Use the Ideal Gas Law and associated laws to describe and explain gas behavior qualitatively and quantitatively.	C	CHEM-C180L	98.41 %	0.00 %	1.59 %
Predict the physical, chemical, and electronic properties of elements using the periodic table.	C	CHEM-C180	46.03 %	44.44 %	9.52 %
Write, balance, and perform calculations based on chemical reactions of various types and know and use the mole concept to quantify the amounts and composition of chemicals and solutions.	C	CHEM-C180	100.00 %	0.00 %	0.00 %
Write, balance, and perform calculations based on chemical reactions of various types and know and use the mole concept to quantify the amounts and composition of chemicals and solutions.	C	CHEM-C180L	100.00 %	0.00 %	0.00 %
Describe the composition of the atoms, subatomic particles, and the positions of electrons.	C	CHEM-C180	100.00 %	0.00 %	0.00 %
Describe the composition of the atoms, subatomic particles, and the positions of electrons.	C	CHEM-C180L	100.00 %	0.00 %	0.00 %
Predict the physical, chemical and electronic properties of elements using the periodic table.	C	CHEM-C180L	85.71 %	11.11 %	3.17 %
Define reaction rate; describe the factors and mechanism that affect it; and determine the rate, rate constant, and rate law of a reaction.	C	CHEM-C185	0.00 %	15.15 %	84.85 %

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Define equilibrium, describe the factors and mechanism that affect it and the various types of equilibrium reactions, and determine the equilibrium constant and equilibrium concentrations of reagents.	C	CHEM-C185	0.00 %	18.18 %	81.82 %
Explain the phenomenon governing the laws of thermodynamics, spontaneity, free energy, and entropy.	C	CHEM-C185	3.03 %	42.42 %	54.55 %
Define acids and bases using the applications of aqueous equilibria and use the oxidation reduction reactions to explain electrochemistry.	C	CHEM-C185	51.52 %	0.00 %	48.48 %
Define acids and bases using the applications of aqueous equilibria and use the oxidation reduction reactions to explain electrochemistry.	C	CHEM-C185L	50.00 %	0.00 %	50.00 %
Define reaction rate, describe the factors and mechanism that affect it, determine the rate, rate constant, and rate law of a reaction.	C	CHEM-C185L	17.65 %	26.47 %	55.88 %
Define equilibrium, describe the factors and mechanism that affect it and the various types of equilibrium reactions, determine the equilibrium constant, and equilibrium concentrations of reagents.	C	CHEM-C185L	32.35 %	11.76 %	55.88 %
Describe the nuclear stability and nuclear decay through the laws of nuclear chemistry.	C	CHEM-C185	51.52 %	0.00 %	48.48 %
Describe the nuclear stability and nuclear decay through the laws of nuclear chemistry.	C	CHEM-C185L	50.00 %	0.00 %	50.00 %
Use the periodic table to explain reactions of the representative elements.	C	CHEM-C185	51.52 %	0.00 %	48.48 %
Use the periodic table to explain reactions of the representative elements.	C	CHEM-C185L	50.00 %	0.00 %	50.00 %
Demonstrate ability to apply critical thinking and analysis.	I	CHEM-C110	90.67 %	2.67 %	6.67 %
Demonstrate ability to apply critical thinking and analysis.	I	CHEM-C180	98.41 %	0.00 %	1.59 %
Demonstrate ability to apply critical thinking and analysis.	I	CHEM-C180L	98.41 %	0.00 %	1.59 %
Use scientific and quantitative reasoning.	I	CHEM-C110	81.33 %	5.33 %	13.33 %
Use scientific and quantitative reasoning.	I	CHEM-C180	98.41 %	0.00 %	1.59 %
Use scientific and quantitative reasoning.	I	CHEM-C180L	98.41 %	0.00 %	1.59 %
Explain the phenomenon governing the laws of thermodynamics, spontaneity, free energy, and entropy Define acids and bases using the applications of aqueous equilibria and use the oxidation reduction reactions to explain electrochemistry.	C	CHEM-C185L	35.29 %	11.76 %	52.94 %