COURSE SYLLABUS

Course number and name	106 CHEM-4 GENERAL CHEMISTRY
Credits hours	4 Credit hours
Contact hours	5 Contact hours; 3 for lecture and 2 for practical
Instructor name	Dr Syed Kashif Ali
Textbook	**Chemistry Seventh Edition by Steven S. Zumdahl ans Susan A. Zumdahl**.
Other supplemental materials	POWER POINT OF THE TOPICS
Specific course information	
Catalog description	This course aims to give students knowledge in the following fields:Chemical Foundations, Atoms, Molecules, and Ions, Stoichiometry, Types of Chemical Reactions and Solution Stoichiometry, Gases, Thermochemistry ,Chemical Equilibrium, Acids and Bases, Properties of Solutions, Organic and Biological Molecules
Prerequisite	NA
Required / Elective	Required
Specific goals for the course	
Course Learning Outcomes (CLO)	By the end of this course, the student should be able to: **CLO#1** Explain the concepts related to- significant figures, accuracy, precision, matter, mixtures (types), pure compounds. Demonstrate the knowledge of the basic laws: law of conservation of mass, law of multiple/definite proportion, Dalton's atomic theory, gas laws, law of thermochemistry Demonstrate the knowledge of nucleus, isotopes, periodicity of elements, stoichiometry, electrolytes, acid/bases, organic molecules (basic structures) **CLO#2** Analyze the essentials facts, principles and theories related to atoms, molecules and ions, stoichiometry, types of chemical reactions and solution, gases. Thermochemistry, chemical equilibrium properties of solutions, organic and biological molecules **CLO#3** Evaluate the knowledge of the basic laws: law of conservation of mass, law of multiple/definite proportion, Dalton's atomic theory, gas laws, law of thermochemistry ,Demonstrate the knowledge of nucleus, isotopes **CLO#4** Demonstrate an ability in critical thinking for the naming o compound, knowing the oxidation state **CLO#5** know and follow up proper procedures and regulations for safe handling, use, and disposal of chemicals
List of topics to be covered	• Chemical Foundations • Atoms, Molecules, and Ions • Stoichiometry • Types of Chemical Reactions and Solution Stoichiometry • Gases • Thermochemistry • Chemical Equilibrium • Acids and Bases • Properties of Solutions

	• Organic and Biological Molecules