CHEM 281 Syllabus

Course Code	Course Name	Credits	Prerequisite	(S)	Classification	
CHEM 281	General Chemistry Laboratory	3	NON		Department Requirement	
Course Description	Chem 281 course students will learn about the safety rules, handling lab equipment and writing lab report which skills are need in chemistry labs. Students will practice by doing of some practical experiments such as: the qualitative analysis of acidic and basic radicals, Mass and Volume Measurements, Preparation of 1.0 M solution of Sodium Hydroxide and its standardization, Volumetric Analysis: Acid-Base Titration, quantitative determination of a chemical formula and synthesis of Aspirin.					
Class	Laboratory is held 1 time/week each for 180 minutes.					
Scheduling						
Textbook(s)	Practical Experiments in Chemistry, Kim Gogarty, Col Harrison, Grahame Dobinson, 1 st ed., Blake Education 2007.					
	Chemical principles in the Laboratory with quantitative analysis, Slowiski. Wolsey Masterton 6 th ed., 1997 Brooks/Cole.					
Relationship	1 2	3	4	5	6	
to SUS	x	х			х	
(10:	By the end of this course student will be able to:					
	CLO1. Understand the chemistry experiment concept and procedures. SO1 CLO2. Evaluate radicals to their correct acidic or basic groups.SO3 CLO3. Apply the correct law for chemical calculations.SO1					
	CLO4. Give the right structure or name for chemical compounds.SO1					
	CLO5. Perform the right and safe procedure to do any chemical experiment.SO6					
	CLO6. Express the expe	eriment result in	the lab report.	.SO3		
Contents						
	List of Topics				No. of Weeks	
	Introduction, Safety, ar	nd Lab Equipmen	nt		1	

Qualitative Analysis of Acidic Radicals	1
group (1): Carbonate, Bicarbonate, Nitrite, Sulphite,	
Thiosulphate, Sulphide	
group (2): Chloride, Bromide, Iodide, Nitrate	1
group (3): Phosphate, Borate, Sulphate	
Qualitative Analysis of Basic Radicals	1
group (1): Silver, Mercurous, Lead	
group (2): Mercuric, Bismuth, Copper, Cadmium	
group (3): Aluminum, Chromium, Iron (II), Iron (III)	1
group (4): Zinc, Manganese, Nickel, Cobalt	
group (5): Calcium, Barium, Strontium	
group (6): Ammonium, Magnesium, Potassium, Sodium	
Scheme for the identification of base radicals (cation)	1
Scheme for the identification of unknown salts	
Mass and Volume Measurements: Preparation of 1.0M solution	1
of Sodium Hydroxide and its standardization	
Volumetric Analysis: Acid-Base Titration	1
Quantitative determination of a chemical formula (MgCl ₂)	1
Synthesis of Aspirin or gas constant.	1