

نموذج توصيف مقرر
Course Description Form

Name of College\Faculty :

اسم الكلية:

Name of Department:

اسم القسم العلمي:

Course Name	General chemistry I	اسم المقرر
Course No.	CHEM 101	رقم المقرر
No. of Credits	3	عدد الوحدات
Theoretical Hours	3	عدد الساعات النظرية
Practical Hours	0	عدد الساعات المحلّية
Course topics		مواضيع المقرر
Text book: (Name, Author , Year , Publisher)		عنوان الكتاب : (الاسم ، المؤلف ، سنة الطبع ، دار النشر)
Chemistry by Chang & Goldsby, 2016, McGraw-Hill, Boston, USA		
References: (Name , Author , Year . Publisher)		عنوان المرجع : (الاسم ، المؤلف ، سنة الطبع ، دار النشر)
None		

Prerequisites					متطلبات المقرر	
Grading	Exams	50	%		الاختبارات	آلية رصد المقرر
	Quizzes	10	%		امتحانات قصيرة	
	H.W.	0	%		واجبات	
	Project (field study)	0	%		مشاريع (دراسة ميدانية)	
	Final	40	%		الاختبار النهائي	
	100%					

Chapters included:

Chapter number	Chapter name
1	Chemistry the Study of Change
2	Atoms, Molecules and ions
3	Mass Relationships in Chemical Reactions
4	Reactions in Aqueous Solutions
6	Thermochemistry
7	Quantum Theory and the Electronic Structure of Atoms
8	Periodic Relationships Among the Elements
9	Basic Concepts of Chemical Bonding
10	Chemical Bonding II: Molecular Geometry and Hybridization of Atomic Orbitals
24	Organic Chemistry

Course objectives					
No.	Course Objectives (Learning Outcomes)	Example(s) of relevant (Topics and activities)	Recommended Level to satisfy the objectives		
			High	Medium	Low
1	To introduce some important basic concepts in chemistry.	Number of moles, SI unite			yes
2	To outline the structure of atoms and molecules.	3D structure (tetrahedral), lewis structure			yes
3	To apply the numerical methods used by chemists to extract quantitative information from chemical reactions.	Percentage composition, Calculate number of mole		yes	
4	To classify the elements using one of the most important organization devices of chemistry, the periodic table.	Periodic properties , ionization energy, atomic size		yes	
5	To introduce solution terminologies of acid-base, redox and metathesis reaction and stoichiometry.	Calculate Oxidation number, redox reactions			yes



6	To discuss how the electrons of atoms in a molecule lead to a chemical bonding and the properties of these bonds.	Lewis structure , valance electrons			yes
7	To show how to derive the three-dimensional structure of simple molecules	Tetrahedral vs octahedral vs trigonal planar from Lewis structure			yes
8	Basic Concepts of Chemical Bonding	Ionic bond, polar covalent vs nonpolar covalent			yes
9	To introduce the concept of acids and bases.	Arrhenius acid - base, Bronsted Acid-base			
Fields	Physical chemistry, Analytical chemistry, Organic Chemistry				
Skills	Math, presentation, general chemistry knowledge				
Coordinator :	Physical chemistry Coordinator				
Signature and stamp :					
Date:	10\ 11 \2025				