

Republic of Yemen
Ministry of Higher Education & Scientific Research
21 September University for Medicals and Applied Sciences



Faculty of Clinical Pharmacy

Bachelor of Clinical Pharmacy & Pharm. D.

Course Specification of

General Chemistry

Course Code. (02.04.243)

2022



T4: This Template is Developed and Approved by CAQA-Yemen, 2023

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulelah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulelah Thabet	Dr. Ali Alyahawi

I. General Information:

1.	Course Title:	General Chemistry			
2.	Course Code:	02.04.243			
3.	Credit Hours:	Credit Hours	Theory Contact Hours		Practical Contact Hours
			Lecture	Tutorial/Seminar	Lab Clinical
		3	2		2 --
4.	Level/ Semester at which this Course is offered:	1 st Level / 1 st Semester			
5.	Pre –Requisite (if any):	None			
6.	Co –Requisite (if any):	None			
7.	Program (s) in which the Course is Offered:	Bachelor of Clinical Pharmacy & Pharm. D.			
8.	Language of Teaching the Course:	English			
9.	Location of Teaching the Course:	Faculty of Clinical Pharmacy			
10.	Prepared by:	Dr. Abdulelah Ahmed Thabet			
11.	Date and Number of Approval by Council:				

II. Course Description:

The course deals with the study of some basic principles of chemistry (descriptive and theoretical), including matter, classes, physical and chemical properties and measurement, atoms, atomic structure, classes of elements, naming inorganic compounds, electronic structure of atoms molecules, ions, types of formulas, and nomenclature of compounds. It includes periodic properties of the elements, stoichiometry, moles, atomic and molecular weights, chemical reactions, quantitative calculations. Also, it includes a chemical bonding, Lewis structure and molecular geometry.

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulelah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulelah Thabet	Dr. Ali Alyahawi

III. Course Intended Learning Outcomes (CILOs) : Upon successful completion of the course, students will be able to:		Referenced PILOs	
A. Knowledge and Understanding:		I, P or M/A	
a1	Define atom, compound, mixture, group, period, quantum numbers, metals, nonmetals, metalloids, atomic size, ionization energy, electron affinity, electronegativity, ionic bond, and covalent bond.		A1
a2	Understand the basic principles of chemistry, and chemical properties of matter, basic units in SI system, arrangement of elements in the periodic table, cations and anions, chemical reaction, quantitative calculations, types of chemical reactions, chemical bonding and the molecular geometries of the molecules.		A1
B. Intellectual Skills:			
b1	Write the electronic configuration of the elements, chemical formulas and naming ionic and covalent compounds, Lewis structure, and molecular geometries of the molecules.		B1
b2	Differentiate between the different classes of matter, types of elements, chemical reactions, chemical bonding, different properties of the elements and the molecular geometries of the molecules.		B1
C. Professional and Practical Skills:			
c1	Calculating the number moles and molecular weights of the compounds, percent composition of elements in the compounds, mass, yield percent, and limiting reacting of reactants or products by using balanced chemical equations.		C1
c2	Able to discuss the basic principles of chemistry, classes of matter, different types of elements and their properties, chemical bonding, Lewis structure and the molecular geometries of the molecules.		C1
D. Transferable Skills:			
d1	Work effectively individually or within a team using mathematics to solve chemical problems and performing practical experiments.		D1

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulalah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulalah Thabet	Dr. Ali Alyahawi

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
a1	Define atom, compound, mixture, group, period, quantum numbers, metals, nonmetals, metalloids, atomic size, ionization energy, electron affinity, electronegativity, ionic bond, and covalent bond.	- Lecture - Instructor – student Interactive - Office hour	- Exam - Assignment - Quiz
a2	Understand the basic principles of chemistry, and chemical properties of matter, basic units in SI system, arrangement of elements in the periodic table, cations and anions, chemical reaction, quantitative calculations, types of chemical reactions, chemical bonding and the molecular geometries of the molecules.	- Lecture - Instructor – student Interactive - Office hour	- Exam - Assignment - Quiz

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
b1	Write the electronic configuration of the elements, chemical formulas and naming ionic and covalent compounds, Lewis structure, and molecular geometries of the molecules.	- Lecture - Instructor – student Interactive - Exercises - Solving Problem Methods	- Problem-Solving Exercises. - Assignment - Quiz
b2	Differentiate between the different classes of matter, types of elements, chemical reactions, chemical bonding, different properties of the elements and the molecular geometries of the molecules.	- Lecture - Instructor – student Interactive - Exercises - Solving Problem Methods	- Problem-Solving Exercises. - Assignment - Quiz

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
c1	Calculating the number moles and molecular weights of the compounds, percent composition of elements in the compounds, mass, yield percent, and	Lectures, laboratory work, directed reading, independent study	Practical works, practical reports and presentations based on their

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulalah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulalah Thabet	Dr. Ali Alyahawi

	limiting reacting of reactants or products by using balanced chemical equations.	and group assignments.	experimental work.
c2	Able to discuss the basic principles of chemistry, classes of matter, different types of elements and their properties, chemical bonding, Lewis structure and the molecular geometries of the molecules.	Lectures, laboratory work, directed reading, independent study and group assignments.	Practical works, practical reports and presentations based on their experimental work.
(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:			
	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
d1	Work effectively individually or within a team using mathematics to solve chemical problems and performing practical experiments.	Lectures, small group discussions, practical classes and micro assignments	reports, presentations and communication with the lecturer and his colleagues.

IV. Course Contents:

A. Theoretical Aspect:

Order	Units/Topics List	Learning Outcomes	Sub Topics List	Number of Weeks	Contact Hours
1	Introduction and basic concepts	a1, a2, b1	Introduction and basic concepts: - Matter: atom, element, compound, mixture. - Physical and chemical properties physical and chemical changes, - Intensive and extensive properties, Energy changes. - Units, SI system and Measurements and significant figures: The basic units in SI system.	2	4

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulelah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulelah Thabet	Dr. Ali Alyahawi



2	Atomic Structure	a1, a2, b1, b2	Atomic Structure: - Atoms and their component - Atomic and mass number, Isotopes, Mole, Avogadro's number and the mole and molecular weight. - Periodic table: Historical, modern periodic table - Groups and Periods - Elements of metals, nonmetals, and metalloids and their properties. - Cations and anions - Writing formula from ions Naming Chemical Compounds: ionic, covalent (molecules), and oxoacid compound (Compound containing mono and polyatomic ions)	3	6
3	Electronic Structure and the Periodic Table	a1, a2, b1, d1	- Introduction to electronic structure - Organization of electrons in atoms - Electronic Structure and the Periodic Table - Orbitals and quantum numbers for electrons: Principal quantum number, the azimuthal quantum number, the magnetic quantum number, and the spin quantum number - The Energies of orbitals - Electron Configuration - Writing electron configuration Find the position (group & period) of element in Periodic table	1	2
4	Mid-term Exam	a1, a2, b1, b2	-	1	2
5	Periodic Properties of the Elements	a1, a2, b1, b2	- Atomic Size, Ionization Energy, Electron Affinity, Electronegativity, Metallic Characters. Explaining the Behavior of Elements Through Atomic Properties and Periodic Table: The Halogens as Oxidizing Agents, Acidic, Basic and Amphoteric Properties	2	4
6	Chemical Formulas and	a1, a2, b1, b2	- Chemical formulas: Empirical, molecular, and structure formulas. - Number mole and mole ratio	2	4

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulelah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulelah Thabet	Dr. Ali Alyahawi



	Chemical Equations		- Percent composition - Determine the Empirical formula from a percent composition. - Empirical formula and molecular formula - Balance the chemical equation - Chemical Equations Calculations based on Chemical Equations - Yield percent and limiting reacting • Classifying Chemical Reactions ▪ Oxidation-Reduction Reactions, ▪ Combination Reactions ▪ Decomposition Reactions ▪ Displacement Reactions ▪ Metathesis Reactions		
7	Chemical Bonding, Lewis structure and Molecular Geometry	a1, a2, b1, b2,d1	- Lewis Dot Formulas of Atoms - Formation of Ionic bonding metallic and covalent Bonding - Lewis formulas for molecules and polyatomic Ions - The Octet Rule - Resonance - Limitations of the Octet Rule for Lewis Formulas - Polar and Nonpolar Covalent Bonds - Dipole Moments - Formula charge - Molecular Structure and Covalent Bonding Theories - Valence Shell Electron Pair Repulsion (VSEPR) Theory	3	6
8	Introduction to Organic Chemistry	a1, a2, b1, b2	Definition, Nomenclature, Classification, Properties, and Important of Organic compounds.	1	2
9	Final Exam	a1, a2, b1, b2		1	2
Number of Weeks /and Units Per Semester				16	32

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulelah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulelah Thabet	Dr. Ali Alyahawi

b - Practical Aspect				
Order	Tasks/ Experiments	CILOs (symbols)	Number of Weeks	Contact Hours
1	Identification of acid radical in simple salts	a1, a2, b1, b2,c1, c2, d1	1	2
2	Dilute hydrochloric acid group - Carbonate radical - Bicarbonate radical	,c1, c2, d1	2	4
3	Dilute hydrochloric acid group - Sulphide radical - Sulphite radical	,c1, c2, d1	1	2
4	Dilute hydrochloric acid group - Tiosulphate radical - Nitrite radical	b1, b2,c1, c2, d1	2	4
5	Mid-semester exam	a1, a2, b1, b2,c1, c2, d1	1	2
6	Concentration sulphuric acid group - Chloride radical - Bromide radical	b2,c1, c2, d1	2	4
7	Concentration sulphuric acid group - Iodide radical -Nitrate radical	b1, b2,c1, c2, d1	2	4
8	Miscellaneous group - Sulphate radical	a1, a2, b1, b2,c1, c2, d1	1	2
9	Miscellaneous group - Borate radical -phosphate radical	a1, a2, b1, b2,c1, c2, d1	1	2
10	Final exam	a1, a2, b1, b2,c1, c2	1	2
Number of Weeks / Units per Semester			14	28

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	Assignment 1	6 th	5	a1, a2, b1, b2,c1,d1
2	Assignment 2:	12 th	5	a1, a2, b1, b2,c2,d1
Total				5

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulelah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulelah Thabet	Dr. Ali Alyahawi

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Assignments	6th, 12th	5	5%	All CILOs
2	Practical Reports	2 nd -13 th	5	5%	c1-c2,d1
3	Midterm Exam (Theory)	Week 7	15	20%	a1-a2, b1-b2
	Midterm Exam (Practical)	Week 7	10	10%	c1-c2,d1
4	Final Practical Exam	14 th	15	15%	c1-c3,d1,d2
5	Final Exam (Theory)	Week 16	50	50%	a1-a2, b1-b2
Total			100	100%	

IX. Learning Resources:

1- Required Textbook(s):

- 1- Kenneth W. Whitten , Raymond E. Davis ,and Larry Peck. Thomson, 2004, General Chemistry, 7th edition, Brooks Cole
- 2- James E. Brady, Frederick A. Senese and Neil D. Jespersen, Chemistry, 2009, 5th Edition, John Wiley

2- Essential References.

1. Satyajit D. Sarker and Lutfun Nahar . Chemistry for Pharmacy Students: General, Organic and Natural Product Chemistry. John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex , 2007
2. Nivaldo J. Tro., 2014, Introductory Chemistry, Ed. 5 th , Standalone Book
3. Steven S. Zumdahl, and Susan A. Zumdahl, 2013, Chemistry , 9 edition Cengage Learning

3- Electronic Materials and Web Sites etc.

X. Course Policies: (Based on the Uniform Students' By law (2007))

1	Class Attendance: Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	Tardiness: A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	Exam Attendance/Punctuality: No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulalah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulalah Thabet	Dr. Ali Alyahawi



	leave the hall before half of the exam time has passed.
4	Assignments & Projects: Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	Cheating: Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	Forgery and Impersonation: Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
7	Other policies: The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulelah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulelah Thabet	Dr. Ali Alyahawi

Faculty of Clinical Pharmacy

Bachelor of Clinical Pharmacy & Pharm. D.

Course Plan (Syllabus) of General Chemistry

Course Code. (02.04.243)

I. Information about Faculty Member Responsible for the Course:						
Name of Faculty Member:	Dr. Abdulelah Thabet			Office Hours		
Location & Telephone No.:						
E-mail:				SAT	SUN	MON TUE WED THU

2022

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulelah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulelah Thabet	Dr. Ali Alyahawi

II. Course Identification and General Information:

1.	Course Title:	General Chemistry			
2.	Course Code:	02.04.243			
3.	Credit Hours:	Credit Hours	Theory Contact Hours		Practical Contact Hours
			Lecture	Tutorial/Seminar	Lab Clinical
		3	2		2 --
4.	Level/ Semester at which this Course is offered:	1 st Level / 1 st Semester			
5.	Pre –Requisite (if any):	None			
6.	Co –Requisite (if any):	None			
7.	Program (s) in which the Course is Offered:	Bachelor of Clinical Pharmacy & Pharm. D.			
8.	Language of Teaching the Course:	English			
9.	Location of Teaching the Course:	Faculty of Clinical Pharmacy			
10.	Prepared by:	Dr. Abdulelah Ahmed Thabet			
11.	Date and Number of Approval by Council:				

III. Course Description:

The course deals with the study of some basic principles of chemistry (descriptive and theoretical), including matter, classes, physical and chemical properties and measurement, atoms, atomic structure, classes of elements, naming inorganic compounds, electronic structure of atoms molecules, ions, types of formulas, and nomenclature of compounds. It includes periodic properties of the elements, stoichiometry, moles, atomic and molecular weights, chemical reactions, quantitative calculations. Also, it includes a chemical bonding, Lewis structure and molecular geometry.

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulelah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulelah Thabet	Dr. Ali Alyahawi

IV. Course Intended Learning Outcomes (CILOs) :

Upon successful completion of the Course, student will be able to:

A. Knowledge and Understanding:		I, P or M/A	
a1	Define atom, compound, mixture, group, period, quantum numbers, metals, nonmetals, metalloids, atomic size, ionization energy, electron affinity, electronegativity, ionic bond, and covalent bond.		<u>A1</u>
a2	Understand the basic principles of chemistry, and chemical properties of matter, basic units in SI system, arrangement of elements in the periodic table, cations and anions, chemical reaction, quantitative calculations, types of chemical reactions, chemical bonding and the molecular geometries of the molecules.		A1
B. Intellectual Skills:			
b1	Write the electronic configuration of the elements, chemical formulas and naming ionic and covalent compounds, Lewis structure, and molecular geometries of the molecules.		B1
b2	Differentiate between the different classes of matter, types of elements, chemical reactions, chemical bonding, different properties of the elements and the molecular geometries of the molecules.		B1
C. Professional and Practical Skills:			
c1	Calculating the number moles and molecular weights of the compounds, percent composition of elements in the compounds, mass, yield percent, and limiting reacting of reactants or products by using balanced chemical equations.		C1
c2	Able to discuss the basic principles of chemistry, classes of matter, different types of elements and their properties, chemical bonding, Lewis structure and the molecular geometries of the molecules.		C1
D. Transferable Skills:			
d1	Work effectively individually or within a team using mathematics to solve chemical problems and performing practical experiments.		D1
I= Introduced, P=Practiced or M/A= Mastered/Advanced			

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulalah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulalah Thabet	Dr. Ali Alyahawi

V. Course Contents:

A. Theoretical Aspect:

Order	Units/Topics List	Learning Outcomes	Sub Topics List	Number of Weeks	Contact Hours
1	Introduction and basic concepts	a1, a2, b1	Introduction and basic concepts: - Matter: atom, element, compound, mixture. - Physical and chemical properties physical and chemical changes, - Intensive and extensive properties, Energy changes. - Units, SI system and Measurements and significant figures: The basic units in SI system.	2	4
2	Atomic Structure	a1, a2, b1, b2	Atomic Structure: - Atoms and their component - Atomic and mass number, Isotopes, Mole, Avogadro's number and the mole and molecular weight. - Periodic table: Historical, modern periodic table - Groups and Periods - Elements of metals, nonmetals, and metalloids and their properties. - Cations and anions - Writing formula from ions Naming Chemical Compounds: ionic, covalent (molecules), and oxoacid compound (Compound containing mono and polyatomic ions)	3	6
3	Electronic Structure and the Periodic Table	a1, a2, b1, d1	- Introduction to electronic structure - Organization of electrons in atoms - Electronic Structure and the Periodic Table - Orbitals and quantum numbers for electrons: Principal quantum number, the azimuthal quantum number, the magnetic quantum number, and the spin quantum number	1	2

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulelah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulelah Thabet	Dr. Ali Alyahawi

			- The Energies of orbitals - Electron Configuration - Writing electron configuration Find the position (group & period) of element in Periodic table		
4	Mid-term Exam	a1, a2, b1, b2	-	1	2
5	Periodic Properties of the Elements	a1, a2, b1, b2	- Atomic Size, Ionization Energy, Electron Affinity, Electronegativity, Metallic Characters. Explaining the Behavior of Elements Through Atomic Properties and Periodic Table: The Halogens as Oxidizing Agents, Acidic, Basic and Amphoteric Properties	2	4
6	Chemical Formulas and Chemical Equations	a1, a2, b1, b2	- Chemical formulas: Empirical, molecular, and structure formulas. - Number mole and mole ratio - Percent composition - Determine the Empirical formula from a percent composition. - Empirical formula and molecular formula - Balance the chemical equation - Chemical Equations Calculations based on Chemical Equations - Yield percent and limiting reacting • Classifying Chemical Reactions ▪ Oxidation-Reduction Reactions, ▪ Combination Reactions ▪ Decomposition Reactions ▪ Displacement Reactions ▪ Metathesis Reactions	2	4

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulelah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulelah Thabet	Dr. Ali Alyahawi

7	Chemical Bonding, Lewis structure and Molecular Geometry	a1, a2, b1, b2, d1	- Lewis Dot Formulas of Atoms - Formation of Ionic bonding metallic and covalent Bonding - Lewis formulas for molecules and polyatomic Ions - The Octet Rule - Resonance - Limitations of the Octet Rule for Lewis Formulas - Polar and Nonpolar Covalent Bonds - Dipole Moments - Formula charge - Molecular Structure and Covalent Bonding Theories - Valence Shell Electron Pair Repulsion (VSEPR) Theory	3	6
8	Introduction to Organic Chemistry	a1, a2, b1, b2	Definition, Nomenclature, Classification, Properties, and Important of Organic compounds.	1	2
9	Final Exam	a1, a2, b1, b2		1	2
Number of Weeks /and Units Per Semester				16	32

b - Practical Aspect				
Order	Tasks/ Experiments	CILOs (symbols)	Number of Weeks	Contact Hours
1	Identification of acid radical in simple salts	a1, a2, b1, b2, c1, c2, d1	1	2
2	Dilute hydrochloric acid group - Carbonate radical - Bicarbonate radical	, c1, c2, d1	2	4
3	Dilute hydrochloric acid group - Sulphide radical - Sulphite radical	, c1, c2, d1	1	2
4	Dilute hydrochloric acid group - Tiosulphate radical - Nitrite radical	b1, b2, c1, c2, d1	2	4
5	Mid-semester exam	a1, a2, b1, b2, c1, c2, d1	1	2
6	Concentration sulphuric acid group - Chloride radical - Bromide radical	b2, c1, c2, d1	2	4
7	Concentration sulphuric acid group - Iodide radical	b1, b2, c1, c2, d1	2	4

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulalah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulalah Thabet	Dr. Ali Alyahawi



	-Nitrate radical			
8	Miscellaneous group - Sulphate radical	a1, a2, b1, b2,c1, c2, d1	1	2
9	Miscellaneous group - Borate radical -phosphate radical	a1, a2, b1, b2,c1, c2, d1	1	2
10	Final exam	a1, a2, b1, b2,c1, c2	1	2
Number of Weeks / Units per Semester			14	28

VI. Teaching Strategies of the Course:

- Lecture
- Instructor – student Interactive
- Exercises
- Presentation
- Office hours
- Seminar
- Assignment
- Self-Learning

VII. Assessment Methods of the Course:

خطأ! لم يتم العثور على مصدر المرجع.

- Assignments
- Quiz
- Exam
- Oral Presentation

VIII. Assignments:

No.	Assignments	Week Due	Mark
1	Assignment 1	6th	5
2	Assignment 2:	12th	5
Total			

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulelah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulelah Thabet	Dr. Ali Alyahawi

IX. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Assignments	6th, 12th	5	5%	All CILOs
2	Practical Reports	2 nd -13 th	5	5%	c1-c2,d1
3	Midterm Exam (Theory)	Week 7	15	20%	a1-a2, b1-b2
	Midterm Exam (Practical)	Week 7	10	10%	c1-c2,d1
4	Final Practical Exam	14 th	15	15%	c1-c3,d1,d2
5	Final Exam (Theory)	Week 16	50	50%	a1-a2, b1-b2
Total			100	100%	

X. Learning Resources:

1- Required Textbook(s):	
	1- Kenneth W. Whitten , Raymond E. Davis ,and Larry Peck. Thomson, 2004, General Chemistry, 7th edition, Brooks Cole 2- James E. Brady, Frederick A. Senese and Neil D. Jespersen, Chemistry, 2009, 5th Edition, John Wiley
2- Essential References.	
	1. Satyajit D. Sarker and Lutfun Nahar . Chemistry for Pharmacy Students: General, Organic and Natural Product Chemistry. John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex , 2007 2. Nivaldo J. Tro., 2014, Introductory Chemistry, Ed. 5 th , Standalone Book 3. Steven S. Zumdahl, and Susan A. Zumdahl, 2013, Chemistry , 9 edition Cengage Learning
3- Electronic Materials and Web Sites etc.	
	1 -

XI. Course Policies: (Based on the Uniform Students' Bylaw (2007))

Class Attendance:	
1	Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulelah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulelah Thabet	Dr. Ali Alyahawi



2	Tardiness: A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	Exam Attendance/Punctuality: No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	Assignments & Projects: Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	Cheating: Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	Forgery and Impersonation: Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
7	Other policies: The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality Affairs	Dean of College:
Dr. Abdulelah Thabet	Prof. Ali Alkaf	Dr. -----	Dr. Abdulelah Thabet	Dr. Ali Alyahawi