Course Syllabus of General & organic chemistry

Faculty: Medicine and Health sciences
Department: Health Sciences
Program: Bachelor in Medical Laboratory

I. General information about the course instructor:

Name	Dr. Sama Alaghbari	Office Hours(3 Hours Weekly)					
Location & phone number	4361	Sat	Sun	Mon	Tue	Wed	Thu
Email	Samazaid5@hotmail.com	1		1		1	

II. General information about the course:

1.	Course Title:	General &organic chemistry				
2.	Course Code and Number:	BHS110				
3.	Credit Hours:	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	2	-	3
4.	Study Level and Semester:	1st year/semester 1				
5.	Pre-requisites:	None				
6.	Co-requisites :	None				
7.	Program in which the course is offered:	Bachelor in Medical Laboratory				
8.	Teaching Language:	English				
9.	Instruction location:	University of sciences and Technology , Sana'a, Yemen				

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عميد الكلية:
د. عبد الله المخلافي

رئيس القسم:
د. عبدالحبيب القباطي

المراجع :
د. مشهور الحمادي
د. حمود الحبابي

الموصف:
د. سما الأغبري

III. Course Description

This course provides a student with the basic principles and concepts of chemistry and prepare him/her for more advanced courses in chemistry and other related courses via topics within containing matter and energy, atomic theory, periodic table with organic structures compounds, name culture, synthesis, reaction mechanism of compounds. The students will complete practical course to acquire practical skills. The teaching strategies will include lectures, tutorials, practical sessions, interactive discussions problem solving. The students will be evaluated through practical exam, written exam and report..

IV. Course Aims: This course is aimed to:

1. Give the student the knowledge about nature of matter and its properties.
2. Provide the student with the most important concepts in chemistry.
3. Learn the student the periodic table and determination chemical elements.
4. Provide the student the name of common chemical compounds.
5. Enable the student to prepare and do some chemical experiments.
6. Enable the student to work as member team work skills.

V. Course Intended Learning Outcomes (CILOs) :

1. Know the nature of matter and its properties
2. Classify elements according to their electronic structure and understand how that affecting periodic properties.
3. Summarize the naming, synthesis of organic compound.
4. Discriminate types of chemical reactions
5. Using stoichiometry concept to solve the problems related to chemical calculations.
6. Handle chemicals in their various forms in a safe manner
7. Conduct experiments and analyze results.
8. Work effectively as a part of team in order to fulfill a certain project.

VI. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Introduction to the course	-The study of chemistry -Classification of mater- -Unit of measurements -Uncertainly in the measurement -Dimension analysis	1st , 2nd	4
2	Atom, molecule and ion	-Atomic theory of matter -Discovery atomic structures -The modern atomic structures -atomic weight- Periodic Table	3rd , 4th , 5th	6

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الموصف:
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		-Molecule and molecular compounds -Ions and ionic compounds -Naming inorganic compounds -Simple organic compounds		
3	Stoichiometry, Calculation with chemical formula and equations	-chemical equations -Some simple patterns of chemical reactivity -Formula weight -The mole -Empirical formula from analysis -quantitative information from balanced chemical equation -Limiting reagent	6th , 7th	4
4	Periodic properties of the elements	-Development of the periodic Table -Effective nuclear charges -size of atoms and ions -ionization energy -electron affinity -metals, nonmetals and metalloids	8th	2
5	Med Exam		9th	2
6	Introduction	Chemical bonds and .shapes of molecules -Polar and non polar molecules -Orbital hybridization and Isomerism, Types of reaction -Classification of organic compounds, Nucleophilicity and basicity.	10th , 11th	4
7	Alkanes and cycloalkanes	Nomenclature, Synthesis, Physical properties and Chemical Reaction.	12th	2
8	Alkene and alkyne	Nomenclature, Synthesis, Physical properties and Chemical Reaction.	13th	2
9	Alkyl halide and alcohols	Nomenclature, Synthesis, Physical properties and Chemical Reaction.	14th	2

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10	Aldyhyde, Ketone and Caboxylic Acid	Nomenclature, Synthesis, Physical properties and Chemical Reaction.	15th	2
11	Final exam		16th	2
Total number of weeks and hours			**16**	**32**

Second: Practical/Tutorial/Clinical Aspects :

No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1.	Lab. safety	2nd	2
2.	Laboratory Equipments and uses	3rd	2
3.	Identification of carbonate and bicarbonate	4th	2
4.	Identification of chloride and Iodide	5th	2
5.	Identification of sulphate and borate	6th	2
6.	Scheme for identification of unknown salts	7th	2
7.	Identification Of Alcohols	8th	2
8.	Identification Of Aldehydes and Ketons	9th	2
9.	Identification Of Carboxylic Acid (Liquid)	10th	2
10	Scheme Of Liquid	11th	2
11	Final Exam	12th	2
Total number of weeks and hours		**11**	**22**

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