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ATTACHMENT 5.

Kingdom of Saudi Arabia
The National Commission for Academic Accreditation &
Assessment

T6. Course Specifications
(CS)

MEDICAL CHEMISTRY
PCHM121



Course Specifications

Institution	University Of Hail	Date	2 nd term 2015-2016
College/Department	Preparatory Year (Basic Science Department)		

A. Course Identification and General Information

1. Course title and code:	Medical Chemistry PCHM-121		
2. Credit hours:	3hrs		
3. Program(s) in which the course is offered. (If general elective available in many programs indicate this rather than list programs)	Preparatory year/ Medical track		
4. Name of faculty member responsible for the course :	Dr/Khalid Awad		
5. Level/year at which this course is offered:	Level one 1st semester / 2nd semester		
6. Pre-requisites for this course (if any):	None		
7. Co-requisites for this course (if any):	Laboratory session		
8. Location if not on main campus:	Deanship of preparatory year-Basic Science department- Baqaa road- Hail		
9. Mode of Instruction (mark all that apply)			
a. Traditional classroom	<input type="checkbox"/>	What percentage?	<input type="checkbox"/>
b. Blended (traditional and online)	<input checked="" type="checkbox"/>	What percentage?	<input type="checkbox" value="80"/>
c. e-learning	<input type="checkbox"/>	What percentage?	<input type="checkbox"/>
d. Correspondence	<input type="checkbox"/>	What percentage?	<input type="checkbox"/>
f. Other (lab)	<input checked="" type="checkbox"/>	What percentage?	<input type="checkbox" value="20"/>
Comments:			

B Objectives

<p>1. What is the main purpose for this course?</p> <ul style="list-style-type: none"> This course provides a thorough foundation of chemical principles. This course is appropriate both as an introductory course for chemistry and other science majors as well as an introductory and terminal course for non-science majors who desire a basic foundation in chemical principles. The primary learning outcomes are: learning the fundamental nature of chemicals and chemical systems, and becoming familiar with the language and symbols of chemistry.
<p>2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field)</p> <ul style="list-style-type: none"> Expanding the course further to cover more of the essential needs for medical chemistry. More focusing in the medical applications and biochemistry Designing a website enriched with interactive learning materials.

C. Course Description (Note: General description in the form used in Bulletin or handbook)

<p>Course Description: A- Theoretical B- Practical</p>
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A- Theoretical

1. Topics to be Covered		
List of Topics	No. of Weeks	Contact Hours
Matter, Energy and Measurements I: States of matter, Measurements Matter, Energy and Measurements II: Units of conversions, density and specific gravity	1	2
Atoms I: Classification of matter, inside an atom and periodic table Atoms II: Electronegativity, ionization energy oxidation reduction reactions. Balancing equations	1	2
Chemical Bonds I: octet rule, Ionic bond, covalent bond Chemical Bonds II: hydrogen bond and coordinate bond, naming ionic compounds	1	2
Gases I: gas pressure, gas laws Gases II: Avogadro's law, ideal gas law, Daltons law	1	2

Solutions and Colloids I: Types of solutions, Concentration units Solutions and Colloids II: Solubility and Colloids	1	2
Acid and bases Definitions, acid and bases strength, self ionization of water, pH and pOH	1	2
Organic Chemistry I: organic compounds: definition, sources, formulas, groups, bonding and forces Alkanes : structural formula, constitutional isomers, nomenclature of alkanes, reactions	1	2
Alkenes and Alkynes I: nomenclature cis/trans isomerism , nomenclature, Alkenes and Alkynes II:chemical reactions	1	2
Benzene and Its Derivatives I : structure, nomenclature of compounds1 Benzene and Its Derivatives II : reactions	1	2
Alcohols I: structure, nomenclature & physical properties of alcohols and ethers Alcohols II: synthesis and reactions of alcohols and ethers	1	2
Amines I: structure, classification, nomenclature & physical properties Amines II: basicity & characteristic reactions	1	2
Aldehydes and ketones I: structure, nomenclature & physical properties of aldehydes and ketones Aldehydes and ketones II: synthesis and chemical reactions of aldehydes and ketones	1	2
Carboxylic acids I: structure, nomenclature & physical properties of Carboxylic acids Carboxylic acids II: Synthesis and Reactions of Carboxylic acids	1	2
Revision	1	2

B-Practical

1. Topics to be Covered		
List of Topics	No. of Weeks	Contact Hours
Orientation lab: laboratory skills and safety rules	1	2
Measurement, accuracy, precision and error.	1	2
Types of chemical reactions	1	2
Identification of unknown solutions	2	4
Identification of some acidic radicals.	1	2
Identification of some basic radicals.	1	2
Volumetric analysis and acid-base titration.	1	2
Solubility of organic compounds in water	1	2
Classification of organic compounds.	1	2
Carboxylic acid	1	2
Revision	2	4