

## General Chemistry for Medical Students

(Chemistry PCHEM 124)

2 Credits Hours

1439-1440 H

Text book

General, Organic & biological Chemistry, by Janice Smith. McGraw Hill higher education, costume edition.

Course Coordinator: Dr. Belal Kanaan

### Evaluation System:

Evolution of the students at chemistry Pchem 124 includes:

- Two one Hour midterm exams.
- Final exam at the end of the semester.

Grades are distributed as the following:

ACTIVITIES	POINTS
FIRST EXAM	20%
SECOND EXAM	20%
HOMEWORK & QUEZES	20%
FINAL EXAM	40%
TOTAL	100%

### Letter Grade

The letter grades derived from the course mark and will based on the performance of the in the above exams and assignments as the following:

A+	A	B+	B	C+	C	D+	D	F
95-100	90-94	85-89	80-84	75-79	70-74	65-69	60-64	60 >

### Course content:

<b>Chapter 1: Matter and Measurement</b>	<b>1.1 Chemistry introduction</b>	<b>6 Hrs.</b>
	<b>1.2 States of Matter</b>	
	<b>1.3 Classification of matter</b>	
	<b>1.4 Measurements</b>	
	<b>1.5 Significant figures</b>	
	<b>1.6 Scientific notation</b>	
	<b>1.7 Problem solving using Factor-labeled method</b>	
	<b>1.8 Focus on health and medicine: problem solving</b>	
	<b>1.9 Temperature</b>	
	<b>1.10 Density and specific gravity</b>	
<b>Chapter 2: Atoms and periodic table:</b>	<b>2.1 Elements</b>	<b>6 Hrs.</b>
	<b>2.2 Structure of the atom</b>	
	<b>2.3 Isotopes</b>	
	<b>2.4 The periodic table</b>	
	<b>2.5 Electronic structure</b>	
	<b>2.6 Electronic configuration</b>	
	<b>2.7 Electronic configuration &amp; periodic table</b>	
FIRST EXAM (chapters 1-2)		20%

<b>Chapter 3 Ionic Compounds</b>	<b>3.1 introduction to bonding</b>	<b>6 Hrs.</b>
	<b>3.2 Ions</b>	
	<b>3.3 Ionic compounds</b>	
	<b>3.4 Naming Ionic compounds</b>	
	<b>3.5 Physical properties of ionic compounds</b>	
	<b>3.6 Polyatomic ions</b>	
<b>Chapter 4: covalent compounds</b>	<b>4.1 Introduction to covalent bonding</b>	<b>6 Hrs.</b>
	<b>4.2 Lewis Structure</b>	
	<b>4.3 Exception to octet rule</b>	
	<b>4.4 Resonance</b>	
	<b>4.5 Naming of covalent structure</b>	
	<b>4.6 Molecular shape</b>	
	<b>4.7 Electronegativity and bond polarity</b>	
	<b>4.8 Polarity of molecules</b>	
	<b>4.9 Focus on health and medicine: problem solving</b>	
	SECOND EXAM (Chapters 3-4)	20%
<b>Chapter 5: Chemical reactions</b>	<b>5.1 introduction to chemical reaction</b>	<b>6 Hrs.</b>
	<b>5.2 Balancing chemical reaction</b>	
	<b>5.3 The mole and Avogadro's number</b>	
	<b>5.4 Mass to mole conversion</b>	
	<b>5.5 Mole calculations in chemical equations</b>	
	<b>5.6 Mass calculation in chemical equation</b>	
	<b>5.7 Percent yield</b>	
	<b>5.8 Oxidation and reduction</b>	
	<b>5.9 Focus on health and medicine: problem solving</b>	
<b>Chapter 6: Solution</b>	<b>8.1 introduction</b>	<b>6 Hrs.</b>
	<b>8.2 Solubility</b>	
	<b>8.3 Solubility-effects of temperature and pressure</b>	
	<b>8.4 Concentration units- Percent units</b>	
	<b>8.5 Concentration units- Molarity units</b>	
	<b>8.6 Dilution</b>	
	<b>8.7 Colligative Properties</b>	
	<b>8.8 Osmosis and dialysis</b>	
	FINAL EXAM (Chapters 1-6)	40%

#### **Academic integrity:**

All students are expected to follow the rules of Majma'ah University. Unexpected absences exceeding 15% of total number of class meetings will result in " F" grade. During the exams all incidents of cheating or breaching the discipline of the exam will be taken very seriously, regulations stated penalties for such actions by an "F" for that class and "dropped" for the rest of classes in that year.