

General Chemistry for Medical Students

(Chemistry PCHEM 124)

2 Credits Hours

1437-1438

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 & QUIZZES	20%
FINAL EXAM	40%
TOTAL	100%

Letter Grade

The letter grades derived from the course mark and will be 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:

Chapter 1: Matter and Measurement	1.1 Chemistry introduction	6 Hrs.
	1.2 States of Matter	
	1.3 Classification of matter	
	1.4 Measurements	
	1.5 Significant figures	
	1.6 Scientific notation	
	1.7 Problem solving using Factor-labeled method	
	1.8 Focus on health and medicine: problem solving	
	1.9 Temperature	
	1.10 Density and specific gravity	

Chapter 2: Atoms and periodic table:	2.1 Elements	6 Hrs.
	2.2 Structure of the atom	
	2.3 Isotopes	
	2.4 The periodic table	
	2.5 Electronic structure	
	2.6 Electronic configuration	
	2.7 Electronic configuration & periodic table	
Chapter 3 Ionic Compounds	3.1 introduction to bonding	6 Hrs.
	3.2 Ions	
	3.3 Ionic compounds	
	3.4 Naming Ionic compounds	
	3.5 Physical properties of ionic compounds	
	3.6 Polyatomic ions	
Chapter 4: covalent compounds	4.1 Introduction to covalent bonding	6 Hrs.
	4.2 Lewis Structure	
	4.3 Exception to octet rule	
	4.4 Resonance	
	4.5 Naming of covalent structure	
	4.6 Molecular shape	
	4.7 Electronegativity and bond polarity	
	4.8 Polarity of molecules	
	4.9 Focus on health and medicine: problem solving	
Chapter 5: Chemical reactions	5.1 introduction to chemical reaction	6 Hrs.
	5.2 Balancing chemical reaction	
	5.3 The mole and Avogadro's number	
	5.4 Mass to mole conversion	
	5.5 Mole calculations in chemical equations	
	5.6 Mass calculation in chemical equation	
	5.7 Percent yield	
	5.8 Oxidation and reduction	
	5.9 Focus on health and medicine: problem solving	
Chapter 6: Solution	8.1 introduction	6 Hrs.
	8.2 Solubility	
	8.3 Solubility-effects of temperature and pressure	
	8.4 Concentration units- Percent units	
	8.5 Concentration units- Molarity units	
	8.6 Dilution	
	8.7 Colligative Properties	
	8.8 Osmosis and dialysis	

Chapter 7: Acids & Bases	9.1 Introduction to acids and bases	6 Hrs.
	9.2 Bronsted Lawry acid and base	
	9.3 Acid and base Strength	
	9.4 Equilibrium and acid Dissociation constant	
	9.5 Dissociation of water	
	9.6 The PH-scale	
	9.7 Common acid and base reaction	
	9.8 The Acidity and basicity of salt solution	
	9.9 Titration	
	9.10 Focus on health and medicine: problem solving	

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.