



Course Specifications

Muharram 1437 H

Institution:	Majmaah University
Academic Department :	Preparatory Year Deanship
Programme :	Preparatory Year (Medical Track)
Course :	Introduction to Chemistry CHM 124
Course Coordinator :	Dr. Belal Kanaan
Programme Coordinator :	
Course Specification Approved Date :	01/02 / 1440 H



A. Course Identification and General Information

1 - Course title :	Introduction to Chemistry	Course Code:	CHM 124
2. Credit hours :	3 (2+1)		
3 - Program(s) in which the course is offered:	Preparatory Year (Medical Track)		
4 – Course Language :	English		
5 - Name of faculty member responsible for the course:	Dr. Belal Kanaan Mr. Mohannad Odeh		
6 - Level/year at which this course is offered :	Preparatory Year – Second level		
7 - Pre-requisites for this course (if any) :	(none)		
8 - Co-requisites for this course (if any) :	(none)		
9 - Location if not on main campus :	Preparatory Year Deanship Building (King Khalid road Majmaah city)		
10 - Mode of Instruction (mark all that apply)			
A - Traditional classroom	<input checked="" type="checkbox"/>	What percentage?	40 %
B - Blended (traditional and online)	<input checked="" type="checkbox"/>	What percentage?	10 %
D - e-learning	<input checked="" type="checkbox"/>	What percentage?	10 %
E - Correspondence	<input type="checkbox"/>	What percentage? %
F - Other	<input checked="" type="checkbox"/>	What percentage?	40 %
Comments :	Smart boards (power point) used every class		

B Objectives

<p>What is the main purpose for this course?</p> <p>The purpose from this course is to relate the fundamental concepts of general chemistry to the world around us, and in this way illustrate how chemistry explains many aspects of everyday life.</p> <p>This Course is designed for students who have an interest in nursing, nutrition, environmental science, food science, and a wide variety of other health-related professions. The content of this book is designed for an introductory chemistry course with no chemistry prerequisite, and is suitable for either a two-semester sequence or a one-semester course.</p> <p>Briefly describe any plans for developing and improving the course that are being implemented :</p> <p>* In this course we will follow two guiding principles</p> <ul style="list-style-type: none">• use relevant and interesting applications for all basic chemical concepts.• present the material in a student friendly fashion using bulleted lists, extensive illustrations, and step-by-step problem solving. <p>* Keep abreast of developments in scientific research through a review of the latest research in the field of chemistry and linking of information theory in practical side through research published in this area in the form of scientific research useful.</p>



C. Course Description

1. Topics to be Covered

List of Topics	No. of Weeks	Contact Hours
Matter and Measurement	2	6
Atoms and periodic table	2	6
Ionic Compounds	2	6
covalent compounds	2	6
Chemical reactions	2	6
Solution	2	6
Acids & Bases	2	6

2. Course components (total contact hours and credits per semester):

	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	30		15			45
Credit	30		15			45

3. Additional private study/learning hours expected for students per week.

Presentations, and duties (to solve the end of chapter questions or questions enrichment teacher), reports are discussed in the teacher's office during office hours. Estimated at 2-3 hours per week for each division.



4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge		
1.1	Identify the main concepts in the course: like: a- states, properties, and changes of matter. b- Types of matter. (pure, mixtures, solutions). c- chemical bonding (Ionic and covalent). d- redox processes. e- Acid-base substances.	- Direct teaching through lecture - Presentation skills and diction through activities and duties to be presented as discussions - Teamwork through a related research work between a group of students - The application of problem-solving skills and decision-making - Open discussions	Performance-based assessment 1- Presentation 2- Demonstration 3- Performance 4- Speech Pencil & Paper Test/quiz/Exam Test item types: 1-short-term questions *Multiple choice items 2-Open-ended answer items *Short answer *Essay and problem solving Observation • Random observation • Systematic observation
1.2	Write the chemical equations (for example: combustion reaction, redox reaction, acid-base neutralization reaction, ...etc.) distinguish its components, balance and Make chemical calculations based on balanced equation.	-Direct teaching through lecture - Teamwork through a related research work between a group of students. - The application of problem-solving skills and decision-making	• Performance-based assessment • Pencil & Paper • Assessment of teamwork
1.3	knowledge and Naming of ionic and covalent compounds, Identify the oxidation and reduction reactions and their applications, and acids and bases, its characteristics, and their application.	Teamwork through a related research work between a group of students - The application of problem-solving skills and decision-making - Open discussions	• Performance-based assessment • Pencil & Paper • Assessment of teamwork and reports





	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
2.0	Cognitive Skills		
2.1	The ability to analyze information to give the right solution and derive important information from the textbook and learn important terminology in English	-Student participation in resolving the issues inside and outside the course	- Quizzes - Homework - Periodic and final tests
2.2	Ability to use modern technology like searching in the Internet and computers to extract information	-Discuss with students some topics in the field of chemistry, explaining some of the scientific experiments on the theoretical foundation given to students	-Reports and duties
2.3	The ability to think, analysis and interpretation and give conclusion and the acquisition of knowledge through the analysis of information	To raise the attention of students by introducing some of the problems and contradictions and try to solve them	-The use of oral evaluation - Periodic and final tests
3.0	Interpersonal Skills & Responsibility		
3.1	Skill of introduce a lecture and face the people without distraction.	Distribution of roles of students in groups such as appointment group's advisor	Use ladders appreciation to each student's contribution and participation of others
3.2	Brainstorm by group work without strict or mind close opinion	collective tests for each group and collective duties (group work and evaluations)	Write periodic reports about the work of groups and signing - Oral tests
3.3	The communication skills acceptance,	Training the students to accept the thinking each other	The work of a special file and evaluation of each group at the end of semester
3.4	Acquisition student skill to take responsibility for himself and his group and teamwork, and to improve Self-confidence in solving problems	Distribution of roles of students in groups such as appointment group's advisor	Use ladders appreciation to each student's contribution and participation of others
4.0	Communication, Information Technology, Numerical		





	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
4.1	Learn about safe and beneficial use of scientific tools	using the apparatus in chemistry lab	The work of manual laboratory tests and writing the reports
4.2	Quick access to information ensure the accuracy of it and	Use of modern technology such as learning from the Internet directly through the extraction of information of subject of the lesson and displayed directly and adopted as rapporteur course	Ask the students to read a certain number of researches and discuss it with them, then assessment
4.3	Development of student skills of statistically analyzing of data and make comparisons	Open discussion and only play the role of regulator, without giving information	Give the students statistical work on a particular topic (for example, about the number of occupied scientific research in a particular subject of the science of chemistry, the study of the cause of interest in this area more than others) or refer to the statistical of previous work and discussion
5.0	Psychomotor		
5.1	<ul style="list-style-type: none"> - Training on the use of volumetric measurement tools and various laboratory services in chemistry laboratories correctly - Make the acid – base calibration in the laboratory - finding the empirical formula of a compound - Calculate the density of substance practically - Find a concentration of aqueous solutions 	<ul style="list-style-type: none"> - Lectures - Demonstration by lab instructor - The teamwork of groups inside laboratory 	<ul style="list-style-type: none"> - Short tests - Practical tests and evaluations of laboratory work

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





	Assessment task	Week Due	Proportion of Total Assessment
1	Quizzes, Participation, Duties, Attendance	During semester	10%
2	Lap. Work and lap. Tests	During semester	10%
3	First exam	7	20%
4	Second exam	13	20%
5	Final exam	18	40%
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D. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)

E. Learning Resources

- 1. List Required Textbooks :**
General, Organic & biological Chemistry, by Janice Smith. McGraw Hill higher education, costume edition.
- 2. List Essential References Materials:**
(Journals, Reports, etc.)
- 3. List Recommended Textbooks and Reference Material:**
(Journals, Reports, etc)
- 4. List Electronic Materials :**
 - Healthcare TV programs,
 - Healthcare websites.
- 5. Other learning material :**
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F. Facilities Required

1. Accommodation <ul style="list-style-type: none">• Classrooms• laboratories•
2. Computing resources <ul style="list-style-type: none">• Data show,• Smart Board
3. Other resources <ul style="list-style-type: none">•

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching: <ul style="list-style-type: none">••
2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor : <ul style="list-style-type: none">••
3 Processes for Improvement of Teaching : <ul style="list-style-type: none">••
4. Processes for Verifying Standards of Student Achievement <ul style="list-style-type: none">•
5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement : <ul style="list-style-type: none">•





Course Specification Approved
Department Official Meeting No (.....) Date ... / / H

Course's Coordinator

Department Head

Name : Dr. Belal Kanaan (Course
Coordinator)
Signature : B.Kanaan
Date : 01/ 02 / 1439 H

Name :
Signature :
Date : .../ ... / H

