



Course Specifications

Course Title:	General Chemistry-1
Course Code:	CHEM 226
Program:	Chemistry
Department:	Chemistry
College:	Science
Institution:	Majmaah University

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A. Course Identification

1. Credit hours: 03 hours
2. Course type
a. University <input type="checkbox"/> College <input type="checkbox"/> Department <input checked="" type="checkbox"/> Others <input type="checkbox"/>
b. Required <input type="checkbox"/> Elective <input type="checkbox"/>
3. Level/year at which this course is offered: First level
4. Pre-requisites for this course (if any):
Nil
5. Co-requisites for this course (if any):
Nil

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	03 hours per week	100%
2	Blended		
3	E-learning		
4	Distance learning		
5	Other		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	Lecture	42
2	Laboratory/Studio	---
3	Tutorial	---
4	Others (specify)	---
	Total	42

B. Course Objectives and Learning Outcomes

1. Course Description	
2. Course Main Objective	
The course covered the general concepts of chemistry and its application which includes matter and its properties, the periodic table, chemical bonding, the mole concept and mass relationships in chemical reactions, physical properties of solutions, gases and their properties, thermochemistry, chemical kinetics and chemical equilibrium	
3. Course Learning Outcomes	
	CLOs
1	Knowledge and Understanding
	Aligned PLOs



CLOs		Aligned PLOs
1.1	Recognize the fundamental concepts in chemistry, (mole, state of matter, atomic structure and the bases of units and measurements)	1.1
1.2	Describe the basic concepts and laws in chemistry (gas laws, thermodynamics' laws, chemical bonds and solutions)	1.2
1.3		
1...		
2	Skills :	
2.1	Demonstrate the ability to calculate the problems related to chemistry	2.1
2.2		
2.3		
2...		
3	Values:	
3.1		
3.2	Show the ability to deal with difficult situations and work under pressure.	3.2
3.3		
3...		

C. Course Content

No	List of Topics	Contact Hours
1	Matter and Measurements	6
2	Atoms, Molecules and Ions	3
3	Mass Relationships in Chemical Reactions	6
4	Reactions in Aqueous Solutions	6
5	Gases	6
6	Thermochemistry	3
7	Chemical Bonding	3
8	Physical properties of solutions	3
9	Chemical Kinetics	3
10	Chemical Equilibrium	3
11	Acids and Bases	3
Total		

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	Knowledge and Understanding		
1.1	Identification of different state of matter, atomic structure and the bases of units and measurements	Lectures Solving problems Video tutorial Discussion	Midterm exams Periodical short quizzes Discussion and team work



Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.2	Knowledge of the main properties of Gases, solutions.	Lectures Solving problems Video tutorial Discussion	Midterm exams Periodical short quizzes Discussion and team work
1.3	Identification of ionic and covalent bonds	Lectures Solving problems Video tutorial Discussion	Midterm exams Periodical short quizzes Discussion and team work
1.4	Identification the bases of chemical kinetic and chemical kinetic	Lectures Solving problems Video tutorial Discussion	Midterm exams Periodical short quizzes Discussion and team work
2.0	Skills		
2.1	Solving problems in chemistry	Lectures Discussion	Class Participation Presentation Essay Question
2.2	Solving practice exercises	Lectures Discussion	Class Participation Presentation Essay Question
3.0	Values		
3.1	Communicate with teacher, ask questions, solve problems, and use computers.	Exercises Problem solving Essay questions	Write reports and power point presentation Exercises related to specific topics
3.2	Operate questions during the lecture, work in groups, and communicate with each other.	Exercises Problem solving Essay questions	Write reports and power point presentation Exercises related to specific topics

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	First Midterm	6th	15 %
2	E-exam	12th	10%
3	Second Midterm	13th	15%
4	Review and oral presentation	14th	10 %
5	Group discussion and activities	Every week	10%
6	Final written Examination	15th	40 %

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

4 hours each week for student consultation and academic advice

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	1- General Chemistry: The Essential Concepts (2013), Raymond Chang and Kenneth Goldsby, McGrawHil, ISBN 10: 0073402753, 13: 9780073402758 2-Chemistry (10th edition) (2010), Raymond Chang, McGrawHil, ISBN 978-007-127220-9 3-General Chemistry: Atoms First (International Edition) (2009), McMurry, John E.; Fay, Robert C, PIE (PS), ISBN 10: 0321571630
Essential References Materials	J. Organic Chemistry J. Analytical Chemistry
Electronic Materials	<ul style="list-style-type: none"> http://www.chemistry.ohio-state.edu
Other Learning Materials	Tutorial CD, Bb, power point

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Class rooms are available with smart boards and internet
Technology Resources (AV, data show, Smart Board, software, etc.)	Computers and internet are available for online study and video tutorials.
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	The course is only theoretical part.

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Strategies for Obtaining Student Feedback on Effectiveness of Teaching	students	questionnaire
Student evaluation about the course electronically organized by the University	students	Electronic questionnaire
Student satisfaction about the examination	students	questionnaire

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Evaluation of internal revision	Staff members	Internal revision reports

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	Chemistry department council
Reference No.	
Date	

