2023
TP-153

Course Specification
(Bachelor)

Course Title:	General Chemistry-1
Course Code:	CHM101
Program:	CHEMISTRY
Department:	CHEMISTRY
College:	Sciences
Institution:	Majmaah University
Version:	3
Last Revision Date:	27 September 2023

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: (3)					
Equivalent to ECTS Credit Point: 4.5					
2. Course type					
A.	☒ University	☐ College	☒ Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (First level)					
4. Course general Description:					
5. Pre-requirements for this course (if any)**:**					
NIL					
6. Pre-requirements for this course (if any)**:**					
NIL					
7. Course Main Objective(s):					
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					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	45	100%
2	E-learning		
3	Hybrid • Traditional classroom • E-learning		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	45
2.	**Laboratory/Studio**	
3.	**Field**	
4.	**Tutorial**	
5.	**Others (specify)**	
Total		45

Workload (based on the academic semester)

No	Activity	Workload (in hours)
1.	**Contact Hours**	45
2.	**Self-Study hours or Academic learning hours** (Assessment, quizzes, reports, discution , Library,research..)	45
Total workload		90 hours
Equivalent to ECTS Credit Points		4.5

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Recognize the fundamental concepts in chemistry, (mole, state of matter, atomic structure and the bases of units and measurements)	K1	Lectures Brain storming cooperative education	Standardized exam
1.2	Describes basic concepts and laws in chemistry (gas laws, thermodynamics' laws,	K3	Lectures Brain storming	Written Midterm

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	chemical bonds and solutions)		cooperative education	Final examinations
...				
2.0	Skills			
2.1	Demonstrate the ability to calculate the problems related to chemistry	S1	Lectures Brain storming Cooperative learning Dissection - E-learning	Electronic exam Written Midterm Final examinations
2.2				
3.0	**Values, autonomy, and responsibility**			
3.1	Shows the ability to deal with difficult situations and work under pressure.	V2	Interactive learning Cooperative learning Student reports	
3.2				
...				

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. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Midterm	6	30%
2.	E-exam	9	10%
3.	Final written Examination	13	40%
4.	Review and oral presentation	10	10%
5.	Group discussion and activities	Every week	10%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	1. General Chemistry: The Essential Concepts (2013), Raymond Chang and Kenneth Goldsby, Mc Graw Hil, ISBN 10: 0073402753, 13: 9780073402758 2. Chemistry (10th edition) (2010), Raymond Chang, Mc Graw Hil, ISBN 978-007-127220-9 3. General Chemistry: Atoms First (International Edition) (2009), McMurry, John E.; Fay, Robert C, PIE (PS), ISBN 10: 0321571630
Supportive References	J. Analytical Chemistry
Electronic Materials	http://www.chemistry.ohio-state.edu
Other Learning Materials	**NA**

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Class rooms are available with smart boards and internet
Technology equipment (projector, smart board, software)	Computers and internet are available for online study and video tutorials.
Other equipment (depending on the nature of the specialty)	The course is only theoretical part.

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching		questionnaire
Effectiveness of Students assessment		Electronic questionnaire
Quality of learning resources		questionnaire
The extent to which CLOs have been achieved		Internal revision reports
Other		

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

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	**CHEMISTRY COUNCIL**
REFERENCE NO.	**4**
DATE	**2/3/1445H**