The Hashemite University
Faculty of Science
Chemistry Department

General Chemistry (1) (1701081138)

Course Information	
Course Name: General Chemsitry (1) **Semester:** **Department:** **Chemistry** **Faculty:** **Science**	**Course Code: 1701081138** **Section:** 1
Day(s) and Time(s): **Classroom:**	**Credit Hours:** 3 **Prerequisites**: -

Course Description

This course is intended to illustrate the basic principles of modern chemistry. It includes the following topics: The Study of Change, Mass Relationships in Chemical Reactions , Mass Relationships in Chemical Reactions ,gases and gas laws, Quantum Theory and the Electronic Structure of Atoms, Periodic Relationships Among the Elements, Chemical Bonding I: Basic Concepts and Molecular Geometry and Hybridization of Atomic Orbitals.

Delivery Methods

The course will be delivered through a combination of active learning strategies. These will include:

- PowerPoint lectures and active classroom-based discussion
- Collaborative learning through small groups acting in an interdisciplinary context.
- E-learning resources: e-reading assignments and practice quizzes through Moodle and Microsoft Teams.

Instructor	
Name	
Academic Title:	
Office Location:	
Telephone Number:	
Email Address:	
Microsoft Teams Account:	

References and Learning Resources

Required Textbook: General Chemistry: Raymond Chang, 12th Eddition

Suggested Additional Resources: Chemistry, Zumdahl , ninth edition.

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Tentative List of Topics Covered			
Weeks	**Topics**	**Chapter**	**sections**
Week 1	Chemistry: The Study of Change	1	2-9
Week 2-3	Mass Relationships in Chemical Reactions	3	All Sections
Week 4	Reactions in Aqueous Solutions	4	All Sections
Week 5-6	Gases	5	2-7
Week 7-8	Quantum Theory and the Electronic Structure of Atoms	7	All Sections
Week 9-10	Periodic Relationships Among the Elements	8	All Sections
Week 11	Chemical Bonding I: Basic Concepts	9	1-9
Week 12-14	Chemical Bonding II: Molecular Geometry and Hybridization of Atomic Orbitals.	10	All Sections

Mapping of the course learning outcomes (CLOs) to the Program Student Outcomes (PSOs)		Assessment method
CLO1	Apply a working knowledge of chemical concepts such as atoms and molecules, stoichiometry, solution chemistry, thermochemistry, electronic structure of the atom and periodicity, and chemical bonding. **PSOs: a, b**	Exams
CLO2	Calculate extensive and intensive properties through basic algebra. **PSOs: a,b**	Exams
CLO3	Apply mathematical methods to the solution of common chemistry problems, including the use of scientific notation, significant figures and the quantitative use of balance chemical equations. **PSOs: a,b,e**	Exams

Relationship of CLOs to PSOs					
a	b	c	d	e	f
x	x			x	

Evaluation Methods		
Assessment Type	**%Weight**	**Expected Due Date**
First Exam	30%	
Second Exam	30%	
Final Exam	40%	

General notes	
Attendance	Students are expected to attend every class and arrive on time in compliance with Hashemite University regulations. Any student misses more than 15% of the classes cannot pass the course.
Academic Honesty:	Academic dishonesty is an unacceptable mode of conduct, and will not be tolerated in any form at The Hashemite University. All persons involved in academic dishonesty and plagiarism in any form will be disciplined in accordance with University rules and regulations.
Make-up Exam	Absence from First or Seconds exams must be followed by an acceptable excuse withen three days; where a high-level Make-up exam will be held. Otherwise, the grade of ZERO will be given.
Special Accommodations	Any student seeking academic accommodations, please contact me at the beginning of the semester.

Chemistry Program Student Outcomes	
(a)	**Technical problem-solving**: Students will be able to identify, formulate, and solve complex technical problems using their knowledge of chemistry, mathematics, and other sciences.
(b)	**Systems thinking**: Students will be able to formulate or design systems, processes, procedures, or programs to meet desired needs. They will also be able to analyze and improve existing systems.
(c)	**Experimental design and data analysis**: Students will be able to develop and conduct experiments, collect and analyze data, and draw conclusions from their results.
(d)	**Communication:** Students will be able to communicate effectively with a range of audiences, both orally and in writing.
(e)	**Ethics and professional responsibility**: Students will be able to understand and apply ethical principles to their work. They will also be able to identify and mitigate the risks of their work.
(f)	**Teamwork:** Students will be able to function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty.