CHM – 101 Fall 2017 General Chemistry I

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Office hours: Please use Starfish to make an appointment

Sakai site: Lecture notes, skill summaries, problem assignments and tutorials are available electronically on the Sakai web site.

Tutors are available at the Academic Enhancement Center (AEC) in Roosevelt Hall. For a complete schedule -- including when tutors are available specifically for this class -- go to www.uri.edu/aec, call (401) 874-2367, or stop by the fourth floor in Roosevelt Hall.

Teaching assistants keep regular office hours in the help office, room 115

Syllabus

Text: General Chemistry, R. Chang 7th ed. McGraw Hill

Chapter	Title	Date
1	Introduction: Matter and Measurement	
2	Atoms, Molecules and Ions	
EXAM 1		9/22
3	Stoichiometry: Chemical Calculations	
4	Chemical Reactions in Aqueous Solution	
5	Gases	
EXAM 2		10/20
6	Thermochemistry	
7	Atomic Structure, Electron Configurations	
8	Atomic Properties, and the Periodic Table	
EXAM 3		11/17
9	Chemical Bonds	
10	Bonding Theory and Molecular Structure	
12	States of Matter and Intermolecular Forces	
13	Physical Properties of Solutions	
EXAM 4		12/8
FINAL EXAM	TBA (Common Exam)	

Grading: Your best 3 out of 4 exam grades (23% each), 8% for homework (Connect and LearnSmart), 23% final exam
Your final exam score will replace the score for any exam missed for any reason.

CHM 101 learning outcomes

Gen Ed Outcome	Gen Ed Rubric Element	Specific Course Outcome
Knowledge: STEM Disciplines	**Identifies** facts, vocabulary, definitions, terms, concepts, people	Students will be able to identify chemical principles relating to: matter; physical and chemical processes; chemical structures; chemical bonds
	Recognizes concepts or tools relevant for application to a task	Students will be able to recognize the theories and models chemists use to explain natural phenomena
	Asks questions or frame hypotheses relevant to the task	Students will be able to frame questions and answer them by distilling and correlating principles and theories they have learned
	Collects information relevant to address the task – e.g. data; literature sources	Students will be able to: use periodic trends to predict properties of substances; predict reaction products an balance chemical reactions; estimate physical properties based on intermolecular forces of attraction; determine energetics involved in chemical and physical processes.
	Analyzes: Applies concepts to address the task	Students will be able to: differentiate between factors that affect chemical processes; integrate various chemical principles to predict reaction outcomes; employ stoichiometry and dimensional analysis for quantitative relationships in chemical changes

Gen Ed Outcome	Gen Ed Rubric Element	Specific Course Outcome
Mathematical, Statistical or Computational (MSC) Strategies	**A.1. Conceptualize: Interpretation and Representation** Finds The Necessary Information	Students will be able to read a word problem, determine what elements are needed and convert the problem into the appropriate mathematical equations needed to generate the correct solution.
	A.2. Conceptualize: Interpretation and Representation Make A Plan For How To Solve The Problem	Students will be able to restate the problem and to clearly list the mathematical steps required to generate a correct solution.
	B.1. Computation: Calculation, Application, Analysis Performs The Calculation Or Analysis.	Students will be able to apply their algebraic skills and use a scientific calculator to correctly solve a multi-step problem. Students will be able to use dimensional analysis to follow the units in a computational problem.
	B.2. Computation: Calculation, Application, Analysis Checks The Answer For Accuracy	Students will review their work for mathematical errors and to apply a reality check to their answers before submitting work. Students will be able to defend their answers to computational problems based on chemica concepts as well as mathematical models.