

GENERAL CHEMISTRY
CHEM 1010-01
FALL 2018

Instructor: Dr. Martin Margittai
SGM 253
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Lectures: 9-9:50 am, MWF, Boettcher 101
Recitation: 9-9:50 am, R, Olin 205
Office Hours: 2-3:00 pm, TR, SGM 253

Textbook: Connect Chemistry with LearnSmart and eBook - *Chemistry: The Molecular Nature of Matter and Change*, 8th Edition, Silberberg, McGraw-Hill.

Calculator: An inexpensive calculator that has the capabilities for square roots, logarithms, and (exponential) scientific notation operations is required.

Class Meetings: Important concepts from readings will be highlighted during lectures. Periodically throughout lecture, questions will be posted and you will be given time to work through and discuss them with your fellow classmates. Thursday recitations will be used for students to ask questions about lecture material and to work through problems.

Readings and LearnSmart Assignments: Assigned reading should be completed prior to class. The adaptive learning software, known as LearnSmart, is run through a system called Connect. It will be used to reinforce the concepts from the e-book as you read. There will be a LearnSmart assignment due before every Monday and Wednesday class (Friday for first week). The length and content of each assignment will vary between students depending on their understanding of the material. The more closely you read the material, the less time you are likely to spend on these assignments. LearnSmart assignments will not be graded based on right/wrong answers but on completion. Students are strongly encouraged to spend extra time using the features in the LearnSmart interface to study.

Our course link is: <https://connect.mheducation.com/class/m-margittai-fall-2018-mwf-900-am>

Online Homework: In addition to LearnSmart assignments, there will be weekly homework problem sets through Connect. These assignments are due Saturday nights by 11:59 pm. Late problem sets will be deducted 20% per day.

Exams: There are three (3) one-hour exams during the quarter, plus a two-hour cumulative final exam. Each exam is worth 100 points. If you miss a one-hour exam, then your final exam will be counted twice and replace the missed midterm exam. THERE WILL BE NO MAKEUP EXAMS. The only exception to the no-makeup policy will be for members of a university team or group, e.g. athletic team or music group scheduled to be away from campus at the time of the exam. You must inform your instructor of this prior to the exam and make arrangements at that time for a makeup exam.

If you take all three-hour exams and your grade on the final exam is higher than one of your hour exam grades, then your final exam will be counted twice and replace your lowest hour exam grade.

Grading:	<u>Component</u>	<u>Points</u>
	Hour Exams (100 points each)	300
	Final Exam	100
	Learn Smart Modules (5 points each)	100
	Online Homework (10 points each)	100

Canvas: The University of Denver uses the Canvas learning management system. You may log in to <https://du.instructure.com> with your DU ID number and PioneerWeb (WebCentral) password to access the course. Here is a helpful Canvas resource to get you started:

Canvas Student Guide: <http://guides.instructure.com/m/4212>

Academic Integrity: I have high expectations for each and every one of you as students at the University of Denver. While I encourage group study sessions outside of class, I expect you to work independently during homework assignments and in class examinations. Any deviations from this policy will not be tolerated. For more information, please see the University of Denver's official Honor Code at: <http://www.du.edu/studentlife/studentconduct/>

Science and Engineering Center: Need extra help? The Science and Engineering Center is a collaborative space staffed by undergraduate and graduate learning assistants (LAs) trained to assist students with some first and second year biology, chemistry, physics, computer science and engineering courses. We offer support for both lecture and laboratory courses for chemistry, physics, and engineering courses and lecture only for computer science and biology. Our goal is to help students grow as problem solvers by assisting with homework sets, lab reports, and preparing for exams. The Science and Engineering Center is **not** a one-on-one tutoring center, but is rather a support system where students can get guidance from LAs as well as their peers. This center is open to all DU students. All services are free. Located in the north-west corner of the first floor of the Anderson Academic Commons (west of the writing center). See <http://portfolio.du.edu/sec> for a complete schedule. Please also follow on Twitter for the most up-to-date announcements:

 [@SELCatDU](https://twitter.com/SELCatDU)

Lecture and Testing Accommodations - If you have a disability/medical issue protected under the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act and need to request accommodations, please make an appointment with the Disability Services Program (DSP); 303.871.2372/ 2278/ 7432; located on the 4th floor of Ruffatto Hall; 1999 E. Evans Ave. Information is also available on line at <http://www.du.edu/disability/dsp>. See the Handbook for Students with Disabilities.

Any student who feels they may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. Please contact the Disability Services Program.

If you qualify for academic accommodations because of a disability or medical issue please submit a Faculty Letter to me from Disability Services Program (DSP) in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities/medical issues.

DATE	TOPIC	READING
WEEK 1		
Sep 10	Course Introduction	1.1-1.5
12	The Components of Matter	2.1-2.6
13	Discussion	
14	Nature of Light	7.1-7.2
WEEK 2		
Sep 17	Wave Particle/Quantum Mechanical	7.3-7.4
19	Periodic Table	8.1-8.2
20	Discussion	
21	Atomic Properties	8.3-8.4
WEEK 3		
Sep 24	Lewis Symbols and Ionic Bonding	2.8, 9.1-9.2
26	Covalent Bonding and Bond Polarity	9.3, 9.5
27	Discussion	
28	EXAM 1	
WEEK 4		
Oct 1	Lewis Structures	10.1
3	VSEPR	10.2
4	Discussion	
5	Shape & Polarity	10.3
WEEK 5		
Oct 8	Valence Bond Theory	11.1
10	Types of Covalent Bonds	11.2
11	Discussion	
12	Molecular Orbital Theory	11.3
WEEK 6		
Oct 15	The Mole and Balancing Equations	3.1, 3.3
17	Calculating Quantities of Reactant and Product	3.4
18	Discussion	
29	EXAM 2	
WEEK 7		
Oct 22	Water as a solvent	4.1-4.2
24	Precipitation reactions and acid base reactions	4.3-4.4
25	Discussion	
26	Oxidation-reduction reactions	4.5-4.6

WEEK 8

Oct	29	Balancing Redox Reactions	21.1
	31	The ideal gas law	5.1-5.3
Nov	1	Discussion	
	2	Kinetic Theory of gases	5.4-5.5

WEEK 9

Nov	5	Forms of Energy	6.1-6.2
	7	Calorimetry	6.3-6.4
	8	Discussion	
	9	EXAM 3	

WEEK 10

Nov	12	Heats of Reaction	6.5
	14	Heats of Reaction	6.6
	15	Discussion	
	16	Heats of Reaction (continued)	9.4
Nov	17	FINAL EXAM (comprehensive), 8-9:50 am, Boettcher 101	