

CHEMISTRY 111 GENERAL CHEMISTRY I

Fall, 2002 – MWF 9:10-10:10

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DESCRIPTION: In this course, you will study several of the fundamental principles that define chemistry by exploring the composition, structure, properties and reactivity of matter. You will focus most of your attention on inorganic compounds, but the underlying ideas in the models of bonding and reactivity that we will discuss are applicable to most compounds. At the completion of the class, you should have an introduction to the models that scientists use to explain the observed composition, structure and reactivity of matter, and should be able to apply these models to help you predict such properties.

GOALS: To be successful in this course, the goals that you should work towards are;

1. Acquiring knowledge about the composition, structure, properties and reactivity of a variety of chemical substances;
2. Understanding some of the models that scientists use to explain the observed the composition, structure, properties and reactivity of matter;
3. Demonstrating an ability to apply your knowledge of the composition, structure, properties and reactivity of matter appropriately.

TEXT: *Essentials of General Chemistry*, 10th ed., by Robinson, Odom, and Holtzclaw.

EVALUATION: In this course, you will be evaluated on your ability to demonstrate your knowledge and understanding of chemistry as well as your ability to apply your knowledge and understanding to analyze and solve qualitative and quantitative problems. There will be three examinations, one comprehensive final examination, and 11 quizzes during the semester. Each of the three exams as well as the final exam will count 200 points. Each quiz will be worth 20 points, and I will drop the lowest quiz score in calculating your final grade.

The total number of points you attained on the four exams and 10 quizzes determines your final grade.

<u>Grade</u>	<u>Total points</u>
A	900-1000
B	800-899
C	700-799
D	500-699
F	below 500

Plus and minus assignments will be made approximately within these ranges.

POLICIES: My expectation is that you will attend all classes unless directed otherwise. There will be regularly assigned readings, problem sets and in-class problems and I expect that you will complete these assignments in a timely manner. None of these assignments are graded; they are to help you learn and apply concepts and skills you are learning. These assignments are the minimum I believe is necessary for an average student to understand the subject material. If you are unable to attend a class, it is your responsibility to obtain all material discussed and assignments given.

You will be allowed to make up a missed exam or quiz with an excused absence. Normally, these reasons would include medical emergencies, a death in your family or required travel for a Rhodes' event (e.g., athletic team travel). If at all possible, please let me know ahead of time if you are not able to take an exam or quiz at its scheduled time so that we can arrange another time for you to take it. If the absence is not excused, you will receive zero points for the exam or quiz. Your exams and quizzes must be pledged to be your own.

SCHEDULE

<u>Day/date</u>	<u>Topic(s)</u>	<u>Chapter(s)</u>
W 8/28	Course overview, expectations	
F 8/30	Introductory concepts	1
W 9/4	Atomic Theory, compounds, nomenclature, equations	2
F 9/6	Atomic Theory, compounds, nomenclature, equations (Q 1)	2
M 9/9	Atomic Theory, compounds, nomenclature, equations	2
W 9/11	Atomic Theory, compounds, nomenclature, equations	2
F 9/13	Chemical reactions (Q 2)	8, 21, 22
M 9/16	Chemical reactions	8, 21, 22
W 9/18	Atomic structure, spectra, properties (Q 3)	5
F 9/20	Atomic structure, spectra, properties	5
M 9/23	Atomic structure, spectra, properties	5
W 9/25	Atomic structure, spectra, properties (Q 4)	5
F 9/27	Atomic structure, spectra, properties	5
M 9/30	EXAM I	
W 10/2	Chemical stoichiometry	3
F 10/4	Chemical stoichiometry	3
M 10/7	Chemical stoichiometry (Q 5)	3
W 10/9	Chemical stoichiometry	3
F 10/11	Chemical stoichiometry	3
M 10/14	No class	
W 10/16	No class	
F 10/18	No class	
W 10/23	Chemical stoichiometry (Q 6)	3
F 10/25	Chemical stoichiometry: gases	3, 10
M 10/28	Chemical stoichiometry: gases	3, 10
W 10/30	Thermochemistry (Q 7)	4
F 11/1	Thermochemistry	4
M 11/4	Thermochemistry (Q 8)	4
W 11/6	Thermochemistry	4
F 11/8	EXAM II	
M 11/11	Chemical bonding	6
W 11/13	Chemical bonding	6
F 11/15	Chemical bonding (Q 9)	6
M 11/18	Chemical bonding: Molecular Orbital Theory	7
W 11/20	Chemical bonding: Molecular Orbital Theory	7
F 11/22	Molecular structure (Q 10)	7
M 11/25	Molecular structure	7
M 12/2	Molecular structure (Q 11)	7
W 12/4	Molecular structure	7
F 12/6	EXAM III	
M 12/9	Review	
W 12/11	Review	

LABORATORY: The laboratory component of this course will begin the second week of classes (the week of September 3) at the regularly scheduled times. Laboratory manuals and notebooks will be available at the beginning of the first laboratory period.

Fall 2002 schedule

This schedule is meant to aid you in reaching me. While it is not a guarantee of where I will definitely be at any moment, it should be a very good guide. Generally, I am at Rhodes from about 7:30 am to 5:00 pm M-Th and from 7:30 am to 2:00 pm Friday. Periodically, I have a committee meeting during a time listed as when I might be in his office/lab. I am happy to set appointments as you wish.

	TIME	EVENT	LOCATION
Monday	8:00-9:00 am	office/lab	K411/K401
	9:10-10:10 am	CHM 111	K201
	10:15-11:30 am	office/lab	K411/K401
	11:30 am-1:00 pm	lunch	
	1:00-4:00 pm	CHM 406L	K401/402
	4:15-5:30 pm	CHM 385	K201
Tuesday	8:00-9:30 am	CHM 406	K410
	9:40-11:30 am	office/lab	K411/K401
	11:30 am-1:00 pm	lunch	
	1:00-5:00 pm	CHM 111L	K308
Wednesday	8:00-9:00 am	office/lab	K411/K401
	9:10-10:10 am	CHM 111	K201
	10:15-11:30 am	office/lab	K411/K401
	11:30 am-1:00 pm	lunch	
	1:00-4:00 pm	CHM 406L	K401/402
Thursday	8:00-9:30 am	CHM 406	K410
	9:40-10:45 am	office/lab	K411/K401
	10:45 am-12:15 pm	volunteer work	off campus
	12:15-1:00 pm	lunch	
	1:00-4:00 pm	office/lab	K411/K401
Friday	8:00-9:00 am	office/lab	K411/K401
	9:10-10:10 am	CHM 111	K201
	10:15-11:30 am	office/lab	K411/K401
	11:30 am-1:00 pm	lunch	
	1:00-2:00 pm	office/lab	K411/K401
	2:00pm	BME seminar/research	off campus