

CHEMISTRY 111: General Chemistry

SPRING 2008 SYLLABUS

Instructors:	Phone:	Office:	e-mail:
Dr. Holly D. Bendorf (lecture)	321-4365, 998-8647	209 Heim Bldg.	bendorf@lycoming.edu
Dr. Jeremy Ramsey (lab coord.)	321-4103	232 Heim Bldg.	ramsey@lycoming.edu
Dr. David Franz (lab)			
Mr. Alex Hunter (study group facilitator)			

Course Schedule:

Lecture:	MWF 11:30 - 12:20 in Heim G-09
Recitation:	Th 7:45 - 8:35 or 1:00 - 1:50 in Heim G-09
Lab:	T 8:45 - 11:35
	Th 8:45 - 11:35, 2:00 - 4:50, or 6:00 - 8:50 in Heim 241

HDB's Office Hours: MWTh 2:00 – 2:50 pm and by appointment.

Course Description: A continuation of CHEM 110, with emphasis placed on the foundations of analytical, inorganic, and physical chemistry. Topics include kinetics, general and ionic equilibria, acid-base theory, electrochemistry, thermodynamics and nuclear chemistry. The laboratory treats aspects of quantitative and qualitative inorganic analysis.

Prerequisite: Successful completion of CHEM 110.

Text and Materials:

- "Chemistry: A Molecular Approach" by Nivaldo Tro.
- Laboratory Notebook
- Non-Programmable Calculator (cannot be shared during exams and quizzes)
- Safety glasses or goggles

Grading Criteria:	Quizzes (8)	120 points
	Exams (3)	300 points
	Final	130 points
	Laboratory	150 points
	<u>Attendance and Participation</u>	<u>25 points</u>
	Total	725 points

Final letter grades will be assigned as follows: >90% A, 80-90% B, 70-80% C, 60-70% D, <60% F. The ranges given include "+" and "-" grades. Be aware that you must pass both the lecture and laboratory to receive a passing grade for the course.

Quizzes: Quizzes are an incentive to stay current with the course. They provide you with a means of evaluating your progress and allow you to identify any potential "trouble spots" before the exam. Quiz questions will come from the homework, assigned reading and class notes. The lowest quiz grade will be dropped.

Quiz dates: **January 18 and 25** **February 1, 15 and 22** **March 7 and 28** **April 4 and 17**

All are Fridays, except for April 17 (Thursday). Mark them on your calendar!

Exams: There will be three mid-semester exams and a final exam. The exam dates are given below.

Friday, February 8

Friday, March 14

Friday, April 11

The final exam will be administered at **8:30 am on Tuesday, April 22.**

The mid-semester exams will consist of multiple choice, short answer and calculation-based questions. The final is the American Chemical Society exam for general chemistry. It is a multiple-choice exam and covers Chemistry 110 and 111. The grade on the final can be substituted (based on %) for a lower mid-semester exam grade.

Moodle: Announcements, assignments, answer keys for quizzes and exams, and the colloquium schedule will be posted on the course Moodle site. To access the site: go to moodle.lycoming.edu, log in and select CHEM 111 from the Spring 2008 list of courses. If you are prompted for a password (enrollment key), enter "chem111" (all lower case, no spaces).

Assignments from the Text: The chapters we will cover are listed below. More detailed assignments will be distributed along with the chapter outlines. Homework will not be collected, but the weekly quizzes will be based on the homework assignments.

<u>Chapter</u>	<u>Topic</u>
11	Liquids, Solids and Intermolecular Forces
12	Physical Properties of Solutions
13	Chemical Kinetics
14	Chemical Equilibrium
15	Acids and Bases
16	Aqueous Ionic Equilibrium
17	Thermodynamics
18	Electrochemistry
19	Radioactivity and Nuclear Chemistry (time permitting)

Attendance and Participation: A portion of the grade in this course is based on attendance and participation. Students who do not exceed three absences (as defined in the attendance policy below) and supply thoughtful answers when called upon in class will receive full credit. Each absence beyond the first three results in a 3-point deduction per absence. If a student is not prepared to participate when called upon, a 2-point deduction will be assessed.

Attendance Policy: Please note that I do not distinguish between excused and unexcused absences.

Lecture: Regular attendance at lecture is expected. Attendance at class means arriving on time, remaining in class for the entire 50 minutes, and participating in class. Missing part of a class (late arrival, early departure, etc.), sleeping or reading during class, or engaging in disruptive activities is equivalent to an absence and will be counted as such.

Quizzes: Missed quizzes cannot be made-up (remember, the lowest quiz grade is dropped).

Exams: Exceptions may be granted for exams only if we have discussed it **prior** to the absence and there are significant extenuating circumstances -- usually a case of medical or family **emergency** that must be documented (such as notification from the Dean). Missing an exam without prior approval from me will result in a grade of zero.

Recitation: Although attendance at recitation is not mandatory, it is strongly recommended. Attendance will be taken at each meeting.

Lab: Regular attendance in the scheduled lab period is mandatory. Any questions regarding lab attendance or scheduling should be directed to the lab coordinator, Dr. Ramsey.

Policy on Calculators and other Electronic Devices: You will need a calculator for most class meetings, including recitations. Graphing (programmable) calculators may not be used on quizzes or exams and calculators can not be shared during quizzes or exams. Cell phones, PDA's, and all web-enabled devices are banned from class.

Extra Credit: Extra credit points can be earned by attending departmental colloquia (3 points per colloquium). If you are unable to attend colloquium, you may also earn extra credit by writing a brief research paper on a mutually agreed upon topic (up to 15 points depending on length of paper, number of sources, quality of paper). Extra credit papers must be submitted via turnitin.com and will not be accepted after the last day of class. Extra credit is capped at 15 points and a maximum increase of ½ of a letter grade (for example, from a B+ to an A-).

Academic Honesty: Be aware that in accordance with the College's policy on academic honesty, any work you submit must be your own. Any instances of plagiarism (including copying answers from a classmate) will be penalized to the fullest extent possible and reported to the Dean of the College.

Study Suggestions: We will cover a lot of material this semester and much of it is fairly challenging. Lectures and in-class exercises are prepared with the assumption that you have studied the assigned material and have completed the homework. I suggest you skim the reading assignment before class. After class, be sure to read and take notes on the assignment; your notes on the reading will be a useful resource when it comes time to study for an exam or quiz. As you read the text, take time to stop and work the "Example" and "For Practice" problems that appear throughout each chapter. If you get stuck, you can review the text and the detailed solutions for the "Example" problems. Finally, a list of end-of-chapter questions and problems will be provided in class along with the outline for each chapter. Be sure to complete as many of these homework problems as you can.

Perhaps the best advice I can give you on how to succeed in this course is: Don't procrastinate! We cover a lot of material and cramming for a night or two before an exam simply will not work. Just like learning a foreign language or becoming proficient at a sport, you need to practice a little each day. Review your notes, read the text, quiz yourself, and most importantly: work lots of problems.

And remember, my job is to help you learn chemistry--if you have questions, if you are not sure how to approach a certain type of problem, or if a concept is still a little fuzzy, please ask me about it right away!