

# CHEMISTRY 308

## SPRING 2012

**Section 02 (12 pm MWF):** ISC 1127

Instructor	Office	Phone	E-mail	Office Hrs.
Gary DeFotis	ISC 1060	221-2547	<a href="mailto:gxdefo@wm.edu">gxdefo@wm.edu</a>	M,Tu,W,Th: 2-3pm and by appointment

**Text:** J.E. McMurry and R.C. Fay, General Chemistry: Atoms First, Prentice Hall (2010) [Highly recommended is J.E. McMurry and R. Topich, Selected Solutions Manual, Prentice Hall (2010)]

**Objectives:** Continuing study of the principles of chemistry, including acid-base chemistry, thermodynamics, electrochemistry, molecular orbitals, descriptive inorganic chemistry, nuclear chemistry, chemical kinetics, and transition metal chemistry, including examples of biological relevance. The posted course schedule reflects this, and we hope to keep as close to the indicated dates as possible.

**Grading:** Problem sets (10%); Three hour exams (18% each); Comprehensive final (36%)

**Exam makeup policy:** Only students with approved excuses for illness or college related activity may make up exams. The instructor **MUST** be informed as soon as possible regarding any unavoidable absence, and before the exam. The time frame expires at the next scheduled lecture; longer excused absences do not take an exam but instead are handled by increasing the weight of other graded material.

**Problem Sets:** There will be about 10 problem sets throughout the semester. Each problem set will have 2-4 questions and/or problems for which complete and legible solutions are expected on the sheet(s) posted on blackboard and which you should copy from there. The problem sets will only be accepted at CLASS TIME on the due dates with no exceptions. You may use the textbook and class notes for solving the problems; however, you are bound by the honor code not to consult with any other person. The problem sets will be assessed on a 0-3 scale. Answers to the problem sets will be posted on blackboard, as will exam keys.

**Exercise Assignments:** The course schedule lists "exercises" from the text. These are not to be handed in, but the successful completion of these problems should be regarded as an **absolute minimum** required to learn the material adequately. They have been selected to reflect as closely as feasible important topics while keeping the number of problems to work moderate. Notice that these are from pages at the ends of chapters. In each chapter are many problems interspersed with the text. The recommended solutions manual covers all of these. It is recommended that you try to do these problems also, and study the solutions.

**Help Sessions:** The instructor will be available every Wednesday at 5:00pm in ISC 1127 to answer questions related to course material and problem assignments. Additional help sessions will be scheduled near examination times.

**Chemistry 308 Section 02      Course Schedule Spring 2012**

Date	Chapter	Topics	Pages	Review	Exercises
1/18-1/25	14	Acid-base equilibria	536-578	232-236	32, 36, 44, 46, 52, 56, 60, 62, 64, 66, 70, 72, 78, 82, 84, 86, 92, 94, 98, 102, 106
1/27-2/8	15	Common ions, buffers, titrations, solubility, complex ions	587-623		40, 42, 44, 52, 56, 60, 62, 64, 66, 68, 82, 84, 90, 92, 98, 100, 104
2/10-2/22	16	Thermodynamics	287-293 641-671	262-287	22, 32, 34, 38, 44, 50, 52, 54, 60, 62, 72, 76, 84, 86, 88, 90, 96
<b>*2/15 (Wed)</b>	<b>Examination 1</b>	(Chapters 14, 15)			
2/24-3/2	17	Electrochemistry	681-720	236-252	26, 30, 40, 42, 50, 56, 60, 62, 64, 66, 68, 70, 72, 78, 80, 90, 94, 100, 102
3/5-3/9	<b>Spring Break</b>				
<b>*3/14 (Wed)</b>	<b>Examination 2</b>	(Chapters 16, 17)			
3/12-3/23	5	Molecular Orbitals	135-180	98-115	38, 58, 60, 74, 76, 80, 92, 94, 98
3/26-4/4	4 18 19 21	Descriptive Inorganic Chemistry	118-127 731-758 765-801 861-867		<b>4:</b> 34, 82, 84, 86, 88 <b>18:</b> 38, 44, 50, 56, 60, 74, 82, 86 <b>19:</b> 24, 28, 30, 34, 40, 42, 44, 48, 50, 52, 56, 58, 60, 68, 70, 72, 74, 78, 82, 86, 98, 100
4/6-4/11	2 12	Nuclear Chemistry	50-58 446-449	43-50	<b>2:</b> 56, 58, 60, 132 <b>12:</b> 70, 74, 76 and supplemental to be provided
4/13-4/16	12	Enzyme Kinetics	477-479 hand out	429-474	supplemental to be provided
<b>*4/18 (Wed)</b>	<b>Examination 3</b>	<b>(Chapters 2,4,5,18,19)</b>			
4/20-4/27	20	Transition metals and complexes	809-852		22, 26, 32, 34, 64, 70, 78, 80, 84, 88, 100, 102, 104, 108, 112, 124
<b>FINAL EXAM:</b>					
Comprehensive	<b>Mon, May 8, 9:00 am</b>				

