

University of Massachusetts Amherst -- Spring, 2007
Chemistry 241

MWF 1:25-2:15

GSMN 51

Course Information and Syllabus

Administration

Course Description: Intermediate Descriptive Inorganic Chemistry
CHEM241 Sect.1 3 units LEC (Grading: L, or P/F)

Required Text: *Inorganic Chemistry* by Shriver, Atkins, et. al; 4th Ed., Freeman Publishing, 2006. 800+ pages. (Textbook Annex)

Course website: www-unix.oit.umass.edu/~mjknapp/Chem241/

Publisher Website: <http://bcs.whfreeman.com/ichem4e/default.asp>

Instructor:

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Class Schedule/Location: MWF 1:25-2:15 GSMN51

Office Hours: Mon 10 – 11; Tue 10 – 11

Attendance Policy: Attendance at all lectures is expected.

Add/Drop: Use SPIRE. After the Add/Drop period ends, see Ms. Marie Whalen in GSMN 149C.

Academic Honesty: See the *Code of Student Conduct* and *Academic Regulations*, available from the Dean of Students Office (http://www.umass.edu/dean_students/). The bottom line is that dishonesty is NOT tolerated.

Copyright: Most of the materials created for this course are the intellectual property of the instructor. This includes, but is not limited to, the syllabus, lectures, handouts and class notes. Except to the extent not protected by copyright law, any use, distribution or sale of such materials requires the written permission of the instructor.

Learning Resources

The Chemistry Resource Center (CRC) is located in GSMN151 for informal help from Chemistry TAs.

Course Website:

www-unix.oit.umass.edu/~mjknapp/Chem241/. The site contains a copy of this syllabus, homework assignments and solutions, and other important class information. Check this class web site **often** as new and updated materials are added frequently. It is accessible through the Chemistry Department home page

Homework

Assignments will be made weekly. Solutions will be posted on the course web site. Although textbook homework will not be collected, it is of great utility in learning concepts and principles.

Examinations:

Exam #1: Mon. Mar. 5

Exam #2: Mon. Apr. 9

Exam #3: Mon. May 7

Final Examination: TBA

The date (and time, location, etc.) of the Final will be announced as soon as it is made available.

Grading: There will be three 50 minute examinations (500 points each) and one cumulative final examination (500 points). Hour exams will be held during class time on the dates shown on the lecture/exam schedule (see above). The maximum point total for the entire course is 2000 points. If the final exam grade is higher than any one of the hour exams, the lowest hour exam grade will be dropped and the final exam grade doubled.

Make-Up Policy: No make-up exams will be given without notification of absence **prior to** exam time, and **written** documentation of mandated absence from an exam due to **legal, medical, military** or other extraordinary **University-related** reason. Make-up exams for the final are governed by University policy.

Schedule

The lecture schedule details the sequence of topics. Although the actual rate of coverage may vary slightly from that projected, the **exams will be given on the dates shown in bold**. The material tested on any exam will be that covered since the beginning of the semester or previous exam. The final exam is cumulative, covering the entire semester.

Week #	Dates	Chapters	Topics
1*	Jan 29, 31, Feb 2	1	Periodic Table
2	Feb 5, 7, 9	2, 4	MOs , Lewis Acid/Base (HSAB)
3	12, 14, 16	7, 8	Coord. Chem.: Isomers, Symmetry
4	<i>19h</i> , 21, 23	19	Coord. Chem.: Crystal Field Theory
5	26, 28, Mar 2	5, 18	Transition Metals: descriptive
	Mar 5 (M)	First Exam	
6	7, 9	3	Solid State, Semiconductors
7	12, 14, 16		Solid State: Oxides and Silicates
	<i>18 – 25</i>	<i>Spring Break</i>	
8*	26, 28, 30	5	Redox, metals in natural waters
9	Apr 2, 4, 6	5, 9, 15	H ₂ , O ₂ , and Fuel Cells
	9 (M)	Second Exam	
10	11, 13		Atmospheric Chemistry
11	<i>16h</i> , 18, 20	10, 11	Groups 1, 2: s-block metals
12	23, 25, 27	12, 13	Groups 13, 14: 3c/2e bonds, silicon
13	Apr 30, May 2, 4	14	Group 15: nitrogen
	May 7 (M)	Third Exam	
14	9, 11	15, 16	Groups 16, 17: sulfur and halogens
15	14		Review

Class does not meet on the date in italics.

The final exam schedule will be available during the semester.