

# Advanced Inorganic Chemistry, Chem 4380 Spring 2016 CRN 23436

Lecture (Laney 105): TTh 8:00 – 9:15 am

**Instructor** Dr. Patrick Desrochers  
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[faculty.uca.edu/patrickd/chem4380/main4380.html](http://faculty.uca.edu/patrickd/chem4380/main4380.html)  
username = chem4380 password =

**Office hours** Drop in times: M 12-1p Tu 3-4p W 1-3p  
Other times available by appointment.

**Text** *Inorganic Chemistry (5<sup>th</sup> Ed.)*: ISBN 1-4292-1820-7 W.H. Freeman & Co. (c) 2010.  
P. Atkins, T. Overton, J. Rourke, M. Weller, F. Armstrong, M. Hagerman

Grading category	possible points	your percent in the category	your points in the category
literature studies	10	<b>Use your pct to determine your points in each category.</b>	
quizzes	20		
two-page essay	10		
exams	40		
final exam (Apr 28)	20		
TOTAL POSSIBLE	100	YOUR TOTAL =	

The lowest quiz and hour exam will be dropped. Final exams may not be dropped.

**Grades: A 89 - 100 points B 79-88 C 69-78 D 57-68 F < 57**

**Consult my Chem 4380 webpage for examples of grade calculations.**

UCA adheres to the requirements of the Americans with Disabilities Act. A student with a documented disability (e.g., physical, learning psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must at the beginning of the semester contact the instructor and UCA Office of Disability Services at 450-3135.

**Literature Studies** You will periodically be asked to peruse the current inorganic literature (current 2016 only) and cull an article that illustrates some topic related to current lecture discussions. Requests for these will be announced in class. Consult my website for examples. These brief summaries can be sent to me via e-mail.

**Homework** You learn a new skill best by doing. Specific homework problems representative of the material discussed in lecture and the text will be recommended on the Daily Boardlist. Work these problems on a regular basis as they are assigned each day. You must regularly work and *understand* these problems to do well on quizzes and exams.

**Weekly Quizzes** 10 min quizzes will be given every week in lecture to gauge your progress in understanding lecture material as well as the assigned practice homework. These will be announced one day before they are given.

**Two-page Essay** During the semester, you will be writing an essay of two pages in length. In it you will discuss the importance of the periodic table. To improve the quality of your writing, I have enlisted the help of the UCA writing center. Tutors there have agreed to serve as email partners for you to receive feedback and to ask you questions about your topic. Your email answers to their questions are intended to provide you seeds for your final essay. I expect you to discuss your essays with me during office time. For additional specifics see information on my website.

## **Policies**

### 1. Attendance

People who miss classes typically do poorly in this course. Do not be one of these people. Three unexcused absences will result in a WF grade in a senior-level course. Don't do this. It is the student's responsibility to obtain information covered during an absence.

### 2. Office Hours

This time is specifically set aside for you to ask me questions and receive help on course material. Use this time! If you cannot make the scheduled times, make another arrangement with me.

### 3. Makeups, late work

No makeup quizzes or exams will be offered. A missed quiz or exam will be dropped as your lowest score.

### 4. Academic misconduct (cheating/plagiarism)

"In the event an instructor determines that a student has engaged in academic misconduct, the instructor will notify the student of the allegation and the basis on which it is made and inform him/her of the action or sanction the instructor deems appropriate, consistent with the terms of section E of this policy." p 34 [UCA Student Handbook](#).

### 5. Title IX disclosure Attached at the end of this syllabus.

### 6. Laney-Manion Emergency Procedures Attached at the end of this syllabus.

## Study Sessions and Exam Schedule

Date	Chapter: Topic	HW to work is posted on Daily Outline	Assigned chapter reading
Jan 7 Th	Ch. 1: Atomic Structure		Sec. 1.3 – 1.9
12 T 14 Th			
19 T 21 Th	Ch. 2: Mol. Structure and Bonding		Sec. 2.1 – 2.12, Sec. 8.8
26 T 28 Th		<b>Essay outline due</b>	
Feb 2 T 4 Th	<b>FIRST EXAM (Ch. 1 and 2)</b> Ch. 6: Molecular Symmetry	<b>Last chance for drafts</b>	Sec. 6.1 – 6.10, Sec. 8.4
9 T 11 Th			
16 T 18 Th	Ch. 3: Solids	<b>2nd EXAM Ch 2 &amp; 6</b> W 3-415 pm Feb 24	<b>Essay Due</b>
23 T 25 Th	Ch. 4: Acids and Bases		Sec. 3.1 – 3.15, Sec. 8.1 – 8.2
Mar 1 T 3 Th	Ch. 5: Redox		Sec 4.1 – 4.10, 4.12
8 T 10 Th		<b>3rd EXAM Ch 3 &amp; 4</b> W 3-415 pm Mar 9	Sec. 5.1 – 5.13, p 249
15 T 17 Th	<b>ACS National Meeting, no class</b> Chapter 7: Coordination Compounds		Sec. 7.1 – 7.14
22, 24	<b>Spring Break</b>		
29 T 31 Th	Ch. 20: Electronic structure and spectra Magnetism		Sec. 20.1 – 21.6, Sec. 8.3 Sec. 8.6, p 249
Apr 5 T 7 Th	Ch. 21: Thermodynamics Kinetics		Sec. 21.1 – 21.2
12 T 14 Th	<b>FOURTH EXAM (Ch. 5, 7, 20, 21 as assigned)</b> Ch. 22 Organometallics and Catalysis		Ch22 Sec.1-3,5-9,14,18,22,24-25
19 T 21 Th			
Apr 28 Th	<b>COMPREHENSIVE FINAL 8:00 – 10:00 am</b>		

Answers to end-of-chapter exercises are in the back of the text. Work these as assigned on the boardlist to prepare for quizzes and exams. If you keep to this habit you will be able to see me with questions well in advance of quizzes and exams.