Syllabus
Chem 461, Inorganic Chemistry, Fall 2012

Instructor
Sophia E. Hayes, hayes@wustl.edu, McMillen 407, 935-4624

Teaching Assistant
Jia Luo, jluo24@wustl.edu, McMillen 307, 309

Office Hours
Sophia Hayes: Fridays 8:45 – 10:00am, 407 McMillen
Jia Luo: Mondays 4:30-5:30pm, Thursdays 5 - 6pm, Louderman 561

Textbook

Other Course Materials (on reserve in Chemistry Library)
Inorganic Chemistry, Huheey, Keiter, and Keiter
Chemical Applications of Group Theory, Cotton
Symmetry and Spectroscopy: An Introduction to Vibrational and Electronic Spectroscopy, Harris and Bertolucci

Grading Scheme

<table>
<thead>
<tr>
<th>Category</th>
<th>Percent of Grade</th>
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</thead>
<tbody>
<tr>
<td>Problem Sets</td>
<td>25%</td>
</tr>
<tr>
<td>Exams:</td>
<td>Total: 75%</td>
</tr>
<tr>
<td>Midterm 1</td>
<td>(30%, 30%, 15%)</td>
</tr>
<tr>
<td>Midterm 2</td>
<td></td>
</tr>
<tr>
<td>Final Exam</td>
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Exams will cover lecture material, assigned readings, and topics covered in homework. There will be a total of 3 exams offered for this course (two midterms and a final). The two highest scores will be more heavily-weighted at 30% a piece, and the lowest score of the 3 exams will count for 15%.

Exam Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm 1</td>
<td>Tues. 10/2/12</td>
<td>10:00-11:30 a.m.</td>
</tr>
<tr>
<td>Midterm 2</td>
<td>Thurs. 11/8/12</td>
<td>10:00-11:30 a.m.</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Tues. 12/18/12</td>
<td>6:00-8:00 p.m.</td>
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</tbody>
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Tentative Course Outline

Introduction to Inorganic Chemistry – “The Story of Chemical Bonding”
  Symmetry and Group Theory, Molecular Vibrations (Chap. 4)
  With a short review of Chap. 3—section 3.1 and 3.2 on Lewis and VSEPR structures
  Electronic Structure of Atoms (Chap. 2)
  --plus a short foray into Chap. 11 (11-2)
Molecular Orbital Theory (Chap. 5)
Acid-Base Chemistry (Chap. 6)
Coordination Chemistry I: Stereochemistry (Chap. 9)
Coordination Chemistry II: Bonding (Chap. 10)
Coordination Chemistry III: Electronic Spectra (Chap. 11)
Coordination Chemistry IV: Reactions and Mechanisms (Chap. 12)
Solid-State Chemistry (Chap. 7)—if time permits

Pass/fail option
P/F is allowed. A passing grade is C- or higher.

Problem Set Policies
Problem sets should be turned in at the beginning of class (during weeks when assigned). They should be answered in your own handwriting. Late work must be received personally by the instructor or TA to receive any credit but will receive a 20% point deduction/day. (Please email TA and instructor to arrange for late submission.) Problem sets will not be regraded.

Academic Integrity
Cheating is not tolerated. Cheaters will be caught and should expect severe penalties.

The WU College of Arts & Sciences Policies on Academic Integrity apply to all students enrolled in this class, regardless of affiliation. Students should familiarize themselves with these policies. All apparent violations of these policies will be referred to the Office of the College of Arts & Sciences for review by its Academic Integrity Committee (AIC).

If the AIC establishes that a lapse of integrity has occurred, the minimal response will be to change the score of the work in question to zero. However, the standard penalty for a proven lapse is a failing course grade. All sanctions will be applied at the sole discretion of the instructor.

Disclaimer
The instructor will make every attempt to follow the above but reserves the right to change any administrative aspect of the class at any time.
Examination Policies

(1) General
Examinations are closed-book and closed-notes. The final is formally cumulative, but will emphasize material not previously covered in earlier exams. Midterms are 90 min, and the final is 120 min.

(2) Missed examinations
Midterms: A student may not miss any midterm during the semester. An absence may be due to (1) an emergency or (2) an anticipated but unavoidable conflict. An emergency must physically prevent a student from attending an exam (i.e., hospitalization). A conflict is everything else (i.e., religious holiday, exam in another class, funeral/illness of a relative, medical school interview). A conflict is either excused or unexcused. Generally (but not automatically) a conflict will be excused if the student contacts the instructor prior to the exam. If the conflict arises within 24 hours of the exam, the student is expected to have a conversation with the instructor, in person or on the telephone (not fax, e-mail, voicemail, etc.). Once the exam has started, an absence will usually be regarded as unexcused. Proof of an emergency must be presented after the fact, otherwise the absence will be treated like a conflict (excused or unexcused). Here is what will happen in each case:
(a) Emergency and Excused absence due to a conflict. The semester grade of a student who has been excused from one exam will be calculated based on the other two exams. Foreseen conflicts are not emergencies.
(b) Unexcused absence due to a conflict. A score of zero will be given for the test. The zero score will also be excluded from the class mean, which is used to calculate grades.

Final: No make-ups or alternate examination times will be given.

(3) Regrading
Exams may be scanned after they are graded and before they are returned to the student. You should assume that any alterations of an exam paper submitted for regrading will automatically trigger administrative actions that may lead to failure of the course (see Academic Integrity below).

The following (semi)standard Chemistry Department procedure applies:
"There will be no debate on the amount of partial credit given for an exam answer. If there is an obvious mistake in the grading of a question or the addition of exam scores, a written explanation of the mistake, along with the exam, should be submitted to the professor within one week of the day the exam is returned to the students. No markings or other alterations should be made on the exam itself. To ensure fair and equal treatment of all students, all changes in exam scores will be made only through this formal regrade process. The professor will not discuss exam-score changes in face-to-face meetings with students. If a mistake was made in the student's favor, please do not call this to the instructor's attention -- it only punishes the honest."

No work appearing on the reverse side (back page) of an exam paper is eligible for regrading. (Work that continues onto the back page of an exam will be graded, if appropriate markings are made to that effect, but not re-graded.)

The instructor may (1) regrade other portions of the examination and (2) ignore truly frivolous regrade requests.