CHM 3610: INORGANIC CHEMISTRY

Fall 2014 **Location: Leigh 207** **MWF 9:35AM – 10:25AM (Period 3)**

Instructor: Prof. Leslie Murray
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Office hours: Mon 8:30AM – 9:30AM (period 2)
Tues 4:00PM – 5:00PM (period 9)
Thurs 12:50PM – 1:40PM (period 6)

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Office Hours: Mon 10:30–11:30AM Wed 4:00–6:00pm
Thurs 4:00–6:00PM Fri 8:30–9:30am

Course Description and Objective: to provide a basic understanding of modern inorganic chemistry

Required Text

1. Miessler, G. L. and Tarr, D. A., *Inorganic Chemistry 5th Ed.*
2. The required text will be supplemented with handouts, specific topics covered by recommended/reserve texts, and references to the primary and secondary literature.

Recommended or Reserve Texts *(freely available through the UF library website portal)*

1. *Shriver & Atkins' Inorganic Chemistry 5th Edition*
2. Cotton, F. A., *Chemical Applications of Group Theory*
3. Cotton, F. A., Murillo, C. A. and Bochmann, M., *Advanced Inorganic Chemistry 6th Ed.*
4. Greenwood, N. N. and Earnshaw, A. *Chemistry of the Elements 2nd Ed.*
5. Wulfsberg, G., *Inorganic Chemistry*

Grades

Grades will be based on three exams during the semester (100 points for each exam), and the final exam (200 points). For information on UF's Grading Policy, see:
http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html and
http://www.isis.ufl.edu/minusgrades.html
Course grades will be assigned on a curve with the following point totals used for guidance:
A: 500-451; A/B: 450-401; B: 400-351; B/C: 350-301; C: 300-251; C/D: 250-201; D: 200-151; F: <150

Homework

Suggested problems will be assigned on a weekly basis and supplemental problems will be provided occasionally. These homework assignments will **not** be graded but provide excellent practice for the exams. Solutions to these suggested problems will be provided one week after they have been assigned.

Exams

Exams will be administered in class and cover all prior lectures and assigned reading. Use of phones, computers, and tablets during exams is strictly prohibited and will result in **zero** points awarded for that exam. Make-up exams will be administered only if absence from the scheduled date satisfies the criteria outlined in the "Attendance and Absence Policy" section (see below) and is documented. To receive a make-up exam, the student must notify the instructor and provide documentation *at least one week in advance* (**no exceptions**). Beyond these extenuating circumstances, **make-up exams will not be provided**. The final exam will cover the material from the entire semester, with a slightly greater focus on the material covered after the third exam.

Exam 1 (100 points)	Friday, September 19, in class
Exam 2 (100 points)	Wednesday, October 15, in class
Exam 3 (100 points)	Friday, November 14, in class
Final Exam (200 points)	Thursday, December 18, 10:00AM – 12:00PM

Attendance and Absence Policy
Attendance will not be included in student assessment but is **strongly** advised as the in-class discussion may diverge from the text. Acceptable reasons for absence from class include illness*, serious family emergencies, special curricular requirements (e.g., judging trips, field trips, professional conferences), military obligation, severe weather conditions, religious holidays, court-imposed legal obligations (e.g., jury duty or subpoena), and participation in official university activities such as music performances, athletic competition, or debate.
*The university's policy on appropriate documentation of absence due to illness can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx and http://shcc.ufl.edu/forms-records/excuse-notes/

Academic Honesty
Students are required to be honest in their coursework. Any act of academic dishonesty will be reported to the Dean of Students, and may result in failure of the assignment in question and/or the course. For University of Florida's honor code, see http://www.dso.ufl.edu/sccr/honorcodes/honorcode.php.

Accommodations for Students with Disabilities
Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation. Contact the Disability Resources Center (http://www.dso.ufl.edu/drc/) for information about available resources for students with disabilities.

Counseling and Mental Health Resources
Students facing difficulties completing the course or who are in need of counseling or urgent help should call/contact one of the on-campus resources such as:
Counseling and Wellness Center (352-392-1575; http://www.counseling.ufl.edu/cwc/)
Student Health Care Center (352-392-1161; http://shcc.ufl.edu)

Topics & associated reading:

The Elements, Atomic Structure, and Periodic Properties	Chapter 1
Ionic Bonding	Chapter 7: 7.1–7.2
Crystal Field Theory	Chapter 10: 10.2.1
Symmetry & Group Theory	Chapter 4: sections 4.1–4.3
Molecular Orbitals	Chapter 5: 5.1–5.4.3
Acids and Bases	Chapter 6: 6.4–6.4.1, 6.6–6.6.1
Electrochemistry and Redox Chemistry	*lecture notes*
Ligand Field Theory & Coordination Chemistry	
Introduction	Chapter 9: 9.1–9.3.5
Bonding	Chapter 10
Spectroscopy	Chapter 11
Reactions	Chapter 12: 12.1–12.4, 12.6–12.8
Band theory of solids	Chapter 7: 7.3
Organometallic Chemistry	Chapter 13: 13.1–13.3
	Chapter 14: 14.1.2–3, 14.2, 14.3.4
Bioinorganic Chemistry	TBA