

**Ch 370 –Inorganic Chemistry**  
**Spring 2014 – The Cooper Union**

**PROFESSOR:** Dr. Robert Q. Topper  
Office: 417 NAB  
Phone: (212) 353-4378; email: [topper@cooper.edu](mailto:topper@cooper.edu)  
<http://engfac.cooper.edu/topper>

**OFFICE HOURS:** TBA (see the Moodle page)

**REQUIRED TEXT:** *Inorganic Chemistry* (4<sup>th</sup> edition) by G.L. Miessler and D.A. Tarr

**CATALOG COURSE DESCRIPTION:** The vast and fascinating chemistry of inorganic compounds and materials will be covered. Atomic structure and the periodic table; molecular symmetry and spectroscopy selection rules; coordination chemistry; ligand-field theory and other electrostatic bonding models; superacids; reaction mechanisms; organometallic chemistry; chemistry of the heavy elements; nuclear chemistry. Chemistry and physics of ionic and molecular solids; atomic and molecular clusters; chemisorption and physisorption of surface-bound species; cage compounds and catalysts; bioinorganic chemistry. A useful course for chemical engineers to extend their knowledge of inorganic chemistry beyond the content of Ch 110. Strongly recommended for students interested in graduate work in chemistry. 3 credits. **Prerequisites:** Ch 110, Ch 160, Ch 231 and Ch 261.

**ATTENDANCE POLICY:** Attendance is expected at all classes, especially at scheduled exams; on days when homework is due; and when we will be carrying out group work. Attendance will be noted at all classes but will not otherwise be part of the grade. Recording or filming lectures is prohibited.

All of the material in the lectures, assigned readings, homework assignments and group work are fair game for all of the examinations. Material will be introduced in lecture and in assigned readings which is not in the textbook. Your active participation in the classroom discussions and the group work is very important in order for you to gain a good understanding of the material.

**ORGANIZATION AND REQUIREMENTS:** There will be homework assignments, two mid-term examinations, a final exam, projects, and in-class group work. The homework and reading assignments will be given on the Moodle page for this course; please sign up right away.

Homework will be collected regularly, and your written homework will be collected and graded. I will be glad to help you with questions at any time before or after the assignment is due. Please come see me during office hours or by appointment. I will also try to respond promptly to emails (but sending me an email the night before the homework is due may not work well).

Gradewise, it is better to turn in an incomplete assignment than to turn in nothing at all. Late homework and projects will not be accepted without prior arrangement, except for documented, unforeseeable emergencies. Exams must be taken on the scheduled dates

unless an absence is excused beforehand or caused due to a documented, unforeseeable emergency. Documentation may not come from any family member, even if that family member is a physician. Absence from class due to departure for a family vacation or spring break will not be sufficient reason for the absence to be considered excused.

**GRADES:** The course grades will be based on the following considerations: Two exams (20% each, for a total of 40%), a final exam (15%), homework (15%), projects (20%) and in-class group work (10%).

Based on these categories a point total (maximum 100 points) will be earned by the end of the semester. The point total you earn will be used to assign the final grade according to the scale below:

A=88-100, B=76-87, C=64-75, D=52-63, F = below 52.

In the interest of fairness, all grading opportunities will be available to all students alike. No extra assignments or projects other than those listed above will be accepted in order to improve your grade.

**STATEMENT ON ACADEMIC HONESTY:** You may not present someone else's work as if it were your own. If you work together on a project or a homework assignment, put the names of the students you worked with on your submitted work and properly acknowledge their contribution. Students who plagiarize other's work will be dealt with severely. The student who provided the original homework or material, or who helped the student to cheat either purposely or otherwise, will receive the same penalty. In addition to a failing grade, both students will be reported to their academic advisors, the deans, and the Chemistry and Chem. Eng. department chairs.

Please just do your own work, and give credit where credit is due if you receive help. If you do your own work, you'll learn more and do better on the exams.

Students who cheat during an examination or help another to cheat will receive an F in the course. The matter will be reported as above and may result in expulsion (seniors too).

**STUDENTS WHO NEED ACCOMMODATIONS:** Students with disabilities who need special accommodations for this class (such as extra time for examinations) are required to meet with me and / or the Dean as soon as possible so that arrangements can be made. In order to receive accommodations, students must notify both me and the Dean. Students will not be afforded any special accommodations for academic work completed prior to disclosure of the disability.