

Physical Inorganic Chemistry – Winter 2014

CHEM 3031 3.0

Three lecture hours
Term: Winter 2014
Prerequisite: Chem 3030
Time: MWF 12:30 – 1:20pm
Location: LSB 105

Course Director

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Course Description. This course builds on materials presented in Chem 2030 and Chem 3030 and is divided into three major areas. The first part of the course deals with spectroscopies for structural determination of inorganic compounds. The second part of the course examines the theories for describing the bonding and properties of inorganic compounds. The third part of the course introduces 1D and solid state materials, with an emphasis on their electronic properties.

Course Objectives. At the end of this course students will have an appreciation for the theory and physical characterization techniques for inorganic compounds and solid state materials. Students will also be exposed to the application of these compounds in relation to real world and industrial processes.

Recommended texts and references (in Steacie Reserve):

Inorganic Spectroscopic Methods (Oxford chemistry primer) - A. Brisdon
Miessler and Tarr Inorganic Chemistry
Housecroft and Sharpe Inorganic Chemistry
Solid State Chemistry An Introduction – Smart and Moore
Basic Solid State Chemistry – A. R. West
Chemical Applications of Group Theory – A. Cotton
Understanding Inorganic Chemistry– J. Barrett
The Electronic Structure and Chemistry of Solids – P. A. Cox

Evaluation: In-class quizzes¹ – 10% total ¹Short pop quizzes (10 min) will not be announced
2 Midterms – 25% each
Final exam – 40%
Missed quizzes will not be rescheduled and will count as zero. Missed midterm exams will not be rescheduled. The weight of the missed midterm will be added to the final exam.
*Alternative marking scheme (when both midterms are written): 10% quizzes, 90% final exam

Tentative Schedule:

Midterm 1: Feb. 14
Midterm 2: Mar. 26
Drop date: Mar. 7
Reading week: Feb. 15 – Feb. 21
Statutory holidays: Feb. 17, Apr. 18
Final exam period: Apr. 8 – Apr. 24 (must stay for the whole period)

Important Information for All Students:

Students must make themselves aware of university policies on Academic Honesty/Integrity†, Access/Disability, Student Conduct, Religious Observance and other matters. A periodically updated Information Sheet summarizing this information can be downloaded* and printed, and the Registrar's Office also issues a list of Religious Observance Days‡.

† Senate Policy on Academic Honesty: <http://www.yorku.ca/secretariat/policies/document.php?document=69>

*www.yorku.ca/secretariat/senate/committees/ascp/documents/CourseInformationForStudentsAugust2012.pdf

‡ www.registrar.yorku.ca/enrol/dates/religious.html