UNIVERSITY OF CALIFORNIA, DAVIS  
Department of Chemical Engineering and Materials Science

EMS 262: Advanced Structural Properties of Materials  
COURSE OUTLINE - Fall 2014

Instructor:  Professor Yayoi Takamura  
2009 Kemper Hall  
x4-7124  
email: ytakamura @ ucdavis.edu  
Office hours: Tuesdays 1:30-2:30pm, or by appointment  
Course webpage: SmartSite


Additional readings will be posted on the course SmartSite

Other References:  A copy of these textbooks will be available on reserve at the library


Grading:  
Homework (due in class) 30%
Midterm Exam (Nov. 5th, in class) 30%
Final Exam (Fri. Dec. 19th, 6:00pm) 40%

Course Policies:  
1. Homework will be due in class on the specified due date. No late homework will be accepted.
2. Exams will be closed book, closed notes, but you will be allowed one 8 ½ “ x 11” cheat sheet for the midterm exam and two 8 ½ “ x 11” cheat sheets for the final exam.
3. Unless you are instructed otherwise, you may discuss homework problems with other students in the class, but submitted work must be your own. The UC Davis Code of Academic Conduct will be strictly enforced. (see http://sja.ucdavis.edu/sja/cac.htm)
4. It is expected that students will abide by the UC Davis Principles of Community (see http://www.ucdavis.edu/principles.html).
EMS 262: Advanced Structural Properties of Materials
Tentative Topic List - Fall 2014

Bonding (loosely following Rohrer Chapters 6-9)
Basic Structural Concepts (Rohrer Chapter 2)
Symmetry in Crystal Structures (Rohrer Chapter 3)
Crystal Structures (Rohrer Chapter 4)
Defects
X-ray Diffraction (Pecharsky and Zavalich Chapter 5)
Neutron Diffraction
Electron Diffraction
Etc…