

CHEMISTRY 580-002
SYMMETRY IN CHEMISTRY
Fall 2006

Instructor	Dr. Dong Yang Office: CP-09; telephone: 257-4622; e-mail: dyang0@pop.uky.edu Office Hours: TR 1:30-3:00 P.M.
Text	Cotton, F. A., <i>Chemical Applications of Group Theory</i> 3rd Ed.; Wiley: New York, 1990.
Molecular Model (Optional)	1006 Research Inorganic Chemistry D-Set http://www.maruzenusa.com/hgs/
Class Hours	TR 11:00 A.M.-12:15 P.M., CP-103

Course Content (tentative list)

Chapter 1	Symmetry Elements, Operations, and Point Groups
Chapter 2	Representations of Groups
Chapter 3	Direct Products
Chapter 4	Symmetry-Adapted Linear Combinations and Projection Operators
Chapter 5	Symmetry and Chemical Bonding in Organic systems
Chapter 6	Symmetry and Bonding in Inorganic and Organometallic Compounds
Chapter 7	Transition Metal Compounds and Ligand Field Theory
Chapter 8	Vibrational Spectroscopy

Homework

Problem sets will be assigned for each chapter. Your solutions will be collected during the lecture one week from the day of distribution and will not be accepted late. You are expected to make a serious attempt at every assigned homework problem before consulting with your peers and to show the details of any calculations or explanations. Correct answers without details receive no credit. Answer keys will be placed on reserve in the Chemistry-Physics library after you receive your graded problems.

Examinations

Two 2-hour midterm examinations will be held in early October and November. The final examination is scheduled on Tuesday, December 12, 2006 at 10:30 A.M.

Grading

Homework	20%
Midterms (2 @25%)	50%
Final Exam	30%

Tentative plans for final grade assignments

Final Average	Course Grade
90 – 100 %	A
80 – 89	B
70 - 79	C
60 - 69	D
Below 60	E

Our accreditation association and policy of the Graduate School require different assignments and grading criteria for undergraduate and graduate students in 400G and 500-level courses. For that reason, undergraduate students enrolled in this class will receive additional 5% for the homework assignments and examinations.

Attendance

Students are expected to attend all classes.

Academic Dishonesty

The minimum penalty for a first offense is zero on the assignment or examination.