CHEM 6172
Physical Methods in Chemistry

MWF 9:05 am, Room G021 (MoSE)

Instructor: ___________________________; Office Hours: by appointment

Textbook:
1) D.M. Bishop; Group Theory and Chemistry; Dover, 1993

Reference Book:
A. F. Cotton; Chemical Applications of Group Theory, 3rd Ed. Wiley, 1990

Grade:
All tests will be close-book and close-notes ones.
1) There will be one QUIZ each Friday except the first and last week of the class, and the weeks having Hour Exam. Total number of Quizzes will be ten, and the best eight ones will count for 10% of the final grade.
2) There will be three HOUR EXAMs hold in class during the semester. The tentative dates for Hour Exams are September 26th Wednesday, October 31st, Wednesday, and November 30th, Friday. Each exam will count for 20% of the final grade.
3) The final exam will be on December 14th at 9 am and will contribute 30% of the final grade.

Topics to be discussed:

1. Applications of Group Theory in Chemistry
   (Bishop’s book)
2. Measurement of Magnetic Properties
   (Chapt. 11, Drago’ book)
3. Nuclear Magnetic Resonance Spectroscopy
   (Chapt. 2)
4. Electron Paramagnetic Resonance Spectroscopy
   (Chapt. 3)
5. Powder X-ray and Neutron Diffraction
   (Chapt. 8)
6. Photoelectron Spectroscopy
   (Chapt. 6)
7. Mössbauer Spectroscopy
   (Chapt. 7)
8. Mass Spectrometry
   (Chapt. 9)