**COURSE:** CHM 343  
**Time:** MWF 9:20-10:27 am (Lecture) Rm 172, SEB;  
**Tuesday** 12:00-12:55pm (Recitation) Rm 172 SEB

**Title:** PHYSICAL CHEMISTRY II  
**Instructor:** M.M. Bryant (Szczesniak), Rm 250, SEB; phone: 370-2087; e-mail: bryant@oakland.edu  

**Objective:**
In this important part of chemistry you learn about energy levels (quantum mechanics) and about transitions between these levels (spectroscopy).

**Course Content:**
1. Quantum theory (Chap. 8, 9)  
2. Atomic Structure (Chap. 10)  
3. Molecular Structure (Chap. 11)  
4. Symmetry (Chap. 12)  
5. Molecular spectroscopy 1: rotational and vibrational spectra (Chap. 13)  
6. Molecular spectroscopy 2: electronic transitions (Chap. 14)

**Grading:**
Exams - 80%, homework + quizzes 20%, Extra credit: Special project 5%  
1. Three 1-hour exams and a 3-hour final (15% each + 35% final)  
   The final exam will be comprehensive (ACS Exam with ample time of 3 hours to complete it)  
2. Homework assignments, ca. 11, will be given roughly every week. A quiz involving one (important and/or typical) problem from the list will be given the following week. Homework assignments should be done individually. Quizzes will be given typically every Wednesday.  
3. The purpose of recitations is to supplement math skills, give additional information, to review material before exams, and to discuss no more than 1-2 homework problems which caused the most difficulty.  
4. Special project (applications of symmetry in spectroscopy) will be due last day of classes.

**Exam Schedule**
- Wed, Sept. 26  
- Wed., Oct. 17  
- Wed., Nov. 14  
- Monday, Dec. 10  
- Final Exam (8:00-11:00am)

**Office hours:**  
**Tuesdays:** 100pm - 200pm