Instructor: Joel Tellinghuisen, SC 5521  
Office Hours: 12-1 MWF & 5-6 T  
Assistant: Tadd Kippeny, SC 7810  
Texts:  
* Physical Chemistry, by Ira N. Levine (McGraw-Hill, 2001)  
* Class Pak from Campus Copy

The course will start with a series of exercises and lectures on statistical data analysis, with emphasis on the method of least squares. This material is covered piecemeal in the book by SGN (Chapters II and XXII), and is also summarized in the notes in the Class Pak. The exercises are designed to acquaint you with the data analysis and presentation program KaleidaGraph, which is available on both PCs and Macs in several of the microcomputer labs on campus. The experiments to be done will be mostly from the realm of optical spectroscopy, and will include studies of the emission spectrum of atomic hydrogen and deuterium, the infrared rotation-vibration spectrum of HCl (Experiment 37 in SGN), and the absorption/fluorescence spectrum of I$_2$ (SGN Expt. 40). Most of the theory behind these experiments can be found in Chapters 18-21 in Levine (especially 21), and was covered in Chemistry 230 last semester. However, the essentials will be reviewed in lectures in advance of work in the lab.

The course will be roughly 60% "lecture" and 40% "lab." More specifically, there will be

(a) two exams — one just before spring break, the other in the scheduled final exam slot or at some other mutually agreeable time at the end of the term,  
(b) 6-8 quizzes/problem assignments, and  
(c) laboratory data analyses and writeups.

The approximate credit breakdown for these assignments will be as follows:

Exams 200  
Problems/quizzes 100  
Labs/data analysis 200

Collaboration with the members of your lab team is of course permitted on the recording and analysis of experimental data. All other graded work is to be done individually, on the Honor System, unless otherwise specified.