

## CHEM 369

Chemical Structure

Professor Michelle Foster

Fall 2004

M W F 10:30 – 11:30 - lecture

M 9:30 – 10:30 – discussion

S / 2 / 064

**<http://www.chem.umb.edu/chemistry/ch369/>**

**Text:** Physical Chemistry by P.W. Atkins and J. de Paula, 7<sup>th</sup> edition

Some other books that may be helpful (and are available in the bookstore) include:

Applied Mathematics for Physical Chemistry by James R. Barrante

Mathematics for Physical Chemistry by Robert G. Mortimer

**Professor Foster:** Office – S / 1 / 87

Phone – 617-287-6096

Email – [michelle.foster@umb.edu](mailto:michelle.foster@umb.edu)

Office Hours – Wednesday – 9:30 – 10:30 am

Friday – 11:30 – 12:30 pm

### **Outline:**

Quantum Theory

Atomic Structure

Molecular Structure

Spectroscopy

**Grades:** Grades follow the typical scale, 90-100 = A, 80-89 = B, etc. The scales might be lowered, but they will not be raised. Your final score will be calculated in the following manner:

Exams 80 %

Homework 10 %

Participation 10 %

**Examinations:** There will be three one-hour exams and a final. The best 3 out of 4 exams will count for 80% of your grade (30 % each your one strongest exam and 25% for the remaining two.)

The tentative schedule for exams is as follows:

Exam 1	Monday	Oct 4	Chapters 11 & 12
Exam 2	Monday	Nov 8	Chapters 12 & 13
Exam 3	Monday	Dec 13	Chapters 14 & 16
Final	TBA	TBA	Chapters 11-14 & 16-17

**Discussion Sections:** Monday 9:30 am. All exams will take place on Mondays with the understanding that the extra hour of discussion will be employed to complete your test.

**Participation:** For those Mondays with no exam scheduled we will be going over homework problems on the board. I will be calling randomly on students to go to the board to solve select homework problems. This will be the basis for your participation grade (10 % of your total grade). If you are not ready or not present when your name is called, you lose your opportunity until all other students have had their chance.

**Homework:** 10% of your final grade will be determined from your weekly homework assignments. These assignments are due at the beginning of discussion each Monday, and they will be returned on the next Wednesday. Solutions will be posted on the class website on Monday afternoon and late homework will be severely penalized, 20% point reduction per day late. For example, homework turned in Monday evening will have a maximum score of 8/10, if it is turned in on Tuesday the max will be 6/10, if it is turned on Wednesday the max will be 4/10. No homework will be accepted after the Thursday evening following the due date.

**Quizzes:** Pop quizzes may occur at any time. Typically they are open book and open notes. They count as extra credit towards your final grade.

### **October 1927, Fifth Solvay Congress; Brussels**



Back row (From left to right): Auguste Piccard, E. Henriot, Paul Ehrenfest, E. Herzen, Th. de Donder, Erwin Schrodinger, E. Verschaffelt, Wolfgang Pauli, Werner Heisenberg, Ralph H. Fowler, Marcel L. Brillouin ; Second row: Peter Debye, Martin Knudsen, William L. Bragg, Hendrik A. Karmers, Paul A. M. Dirac, Arthur H. Compton, Louis V. de Broglie, Max Born, Neils Bohr ; Front row: Irving Langmuir, Max Planck, Mme. Marie Curie, H. A. Lorentz, Albert Einstein, Paul Langevin, Charles E. Guye, Charles T. R. Wilson, Owen W. Richardson.