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### CHEM 573.01: Chemical Kinetics

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# SYLLABUS-CHEMISTRY 573-CHEMICAL KINETICS

## AUTUMN SEMESTER-2000

Richard J. Field, CP 7, Office Hours: 10-12, Wednesday and Friday. Other times when I am in the office and available, which is most of the time.

Class Meets in CP 211, 1:05 - 2:25 PM on Tuesday-Thursday.

Textbook: *Physical Chemistry*, by George Woodbury, Brooks/Cole Press, 1996.

This course will cover experimental and theoretical aspects of chemical reactions and other transport processes, including molecular diffusion. Major components will be concerned with treating experimental data, interpreting such data in terms of reaction mechanisms, and relating these interpretations to thermodynamic information and the principal theories of chemical kinetics, including collision theory and transition-state theory. A major component of the course will be problem-solving.

- Grading:**
- (1) Three Examinations @ 100 points apiece. In class on: 9/28/00, 10/26/00 and 11/30/00.
  - (2) Final Examination. In class: 3:20-5:20 PM, Thursday, December 21.
  - (3) Problem Set on Chemical Kinetics: due December 4, 2000.

Much of the material covered will be from my notes, which are available in CP 6. Chapters 27-31 of Woodbury gives a less-detailed version of the crux of our discussions. It is recommended that at least the problems within the chapters be worked out in addition to the large, chemical-literature based problem set mentioned above. Try to do or at least think a bit about how to do the end-of-chapter problems in Woodbury as well. They serve as a good introduction to the problem set.