

## Course Syllabus

**Course:** Chemistry 0638.001.

**Course Title:** Chemical Kinetics.

**Time:** Thursday 6:10p - 9:00p.

**Place:** BE 121.

**Instructor:** Strongin, Daniel R.

**Instructor Office:** BE 246.

**Instructor Email:** dstrongi@temple.edu.

**Instructor Phone:** 1-7119.

**Office Hours:** W 1-2p.

**Prerequisites:** Good Undergraduate Background in Calculus and Physical Chemistry.

**Textbook:** Recommended Text -Keith J. Laidler, Chemical Kinetics 3rd edition, HarperCollins Publishers, N.Y. 1987. This book is recommended and will serve as an excellent reference book for the future. The lectures will only draw from this book for parts of the course.

**Course Goals:** CHE 638, Chemical Kinetics, is designed to introduce fundamental concepts and processes that are related to the kinetics of homogeneous and heterogeneous processes. The goal of the course is to give you the appropriate tools and background to aid you in your own research, and in reading the chemical literature.

**Topics Covered:** Some of the topics covered in the course are: 1) Fundamental kinetic concepts: a) orders of reactions b) elementary and composite reactions c) integrated reaction rate laws i) exact solutions ii) approximation methods 2) Analysis of the kinetics of selected types of chemical reactions: a) geochemical reactions b) catalytic reactions c) enzyme-based reactions d) oscillating reactions 3) Techniques for determining the kinetics of chemical systems 4) Transition state theory.

**Course Grading:** 2 exams, quizzes, presentation, and homework.

**Exam Dates:** October and December Examinations: There will be two exams during the semester. Quizzes also be given and you will be given advance warning in this circumstance. Also everybody will be required to present at least one oral presentation during the semester based on a relevant paper in the literature. Details of the presentation will be given later in the semester.

**Attendance Policy:** Mandatory.

Any student who has a need for accommodation based on the impact of a disability should contact me privately to discuss the specific situation as soon as possible. Contact Disability Resources and Services at (215) 204-1280, 100 Ritter Annex, to coordinate reasonable accommodations for students with documented disabilities.

Freedom to teach and freedom to learn are inseparable facets of academic freedom. The University has adopted a policy on Student and Faculty Academic Rights and Responsibilities (Policy # 03.70.02) which can be accessed at <http://policies.temple.edu>.

Students will be charged for a course unless a withdrawal form is processed by a registration office of the University by the Drop/Add deadline date. The Drop/Add deadline date is published in the Class Schedule each semester and is at the end of the second week of the semester or the third day of each summer session. For this semester, the crucial dates are as follows:

- The last day to drop (tuition refund available) is Monday, September 11.
- The last day to withdraw (no refund) is Monday, October 30.
- The last day of classes is Wednesday, December 6.

During the first two weeks of the fall or spring semester or summer sessions, students may withdraw from a course with no record of the class appearing on the transcript. In weeks three through nine of the fall or spring semester, or during weeks three and four of summer sessions, the student may withdraw with the advisor's permission. The course will be recorded on the transcript with the instructor's notation of "W," indicating that the student withdrew. After week nine of the fall or spring semester, or week four of summer sessions, students may not withdraw from courses. No student may withdraw from more than five courses during the duration of his/her studies to earn a bachelor's degree. A student may not withdraw from the same course more than once. *Students who miss the final exam and do not make alternative arrangements before the grades are turned in will be graded F.*