

## **CHEM 3320 Chemical Kinetics**

### **Course Description:**

We will first take a phenomenological view of chemical kinetics, then we will cover various topics in chemical kinetics, including steady-state approximation, transition-state theory, estimation of rate constants, complex reactions, catalysis, and various modern experimental methods of determining reaction rates and mechanism.

### **Main Course Outline:**

1. Basic Kinetics Concepts
2. Complex Reactions
3. Techniques and Measurement of Kinetics
4. Reactions in Solution
5. Catalysis
6. Transition from Macroscopic to Microscopic Level
7. Transition State Theory
8. Unimolecular Reaction Dynamics
9. Reactions on Surfaces and in Solid
10. Kinetics of Multicomponent Systems