

726

Course Title: ChE 446, Catalysis
Term, Year: Spring 1998 —
Time, Location: 12:30 - 1:45 pm, TTh, 401 Engineering Sciences Building
Instructor: Edwin L. Kugler
Office Hours: Open Door Policy or by appointment
Office Phone: 293-2111 ext. 414
Home Phone: 599-5357

Course Description: This course will present a coherent set of concepts of chemical structure, reactivity, kinetics and transport phenomena applied to catalytic chemistry. It will closely follow the outline of the text covering catalysis in solution, catalysis by enzymes, catalysis by polymers, catalysis in molecular-scale cavities, and catalysis on surfaces. The course is intended for chemical engineering graduate students. Prerequisites are undergraduate kinetics/reactor design and physical chemistry. Students will be required to write a term paper on one of the topics listed in the course outline.

Text: "Catalytic Chemistry," Bruce C. Gates, John Wiley & Sons, Inc. 1992

Grading:	Midterm	30%	Take-home, due 12:30 pm Wednesday, March 18
	Term Paper	30%	Due 3:00 pm, Friday, April 24
	Final	40%	3:00 - 5:00 pm, Monday, May 4

Course Outline:

1. Introduction to Catalysis Concepts
2. Catalysis in Solutions
3. Catalysis by Enzymes
4. Catalysis by Polymers
5. Catalysis in Molecular-Scale Cavities
6. Catalysis on Surfaces