ChE 257
Polymer Composites Processing
Fall 2000

Instructor: Dr. Rakesh Gupta
Office: 421 ESB
Phone: 293-2111 ext. 2427
CRN: 85062
Class Time: 3:00-4:50 M W (class will not meet every week)
Room: 449 ESB

The objective of this course is to present the fundamental principles of thermosetting polymer matrix composites manufacturing and design.

Text: P.K. Mallick, *Fiber-Reinforced Composites*, 2nd edition, Marcel Dekker, New York, 1993.

Course Outline

Advantages of Polymer Composites
Chemistry of Matrix Polymers
Reinforcing Fibers and Coupling Agents
Prepregs and Sheet Molding Compounds
Mechanics of Composite Materials
Kinetics of Curing Reactions
Hand Lay-up and Spray-up
Bag Molding and Compression Molding
Injection Molding and Resin Transfer Molding
Pultrusion and Filament Winding

A background in fluid mechanics or transport phenomena is recommended.