

Department of Mechanical Engineering
Fall 2006

ME 582 Mechanics of Composite Materials
W 6:00 pm - 8:30 pm

INSTRUCTOR

Dr. Jan Gou

Office hours: M & W, 9:00-10:00 am; W, 2:30-4:00 pm; or by appointment

TEXTBOOK

Mechanics of Composite Materials, by Autar K. Kaw, 2th Edition, ISBN: 0-8493-1343-0, CRC Press, 2006.

COURSE GOALS

After completing this course, students should be able to fundamentally understand the role of constituents in overall response of lamina (micromechanics) and how a set of laminae with different configurations affect the overall properties and response of laminates (macromechanics). Students will be able to apply these concepts to analyze and design composite structures for engineering applications.

TOPICS COVERED

Overview of Composite Materials
Micromechanical Analysis of a Lamina
Macromechanical Analysis of a Lamina
Macromechanical Analysis of Laminates
Failure, Analysis and Design of Laminates
Bending of Composite Beams
Experimental Characterization of Composite Materials

GRADING POLICY

Class Attendance 10%
Homework 30%
Term Exam 30%
Final Exam 30%
Total 100%

COURSE GRADE: A (90-100); B (80-89); C (70-79); D (60-69); F (<60)

CLASSROOM POLICY

1. Homework assignments will be announced in class and they are due at the beginning of the class period on the due day. Late homework will receive the grade of zero.
2. There will be three term exams plus a comprehensive final exam. All exams will be closed book. Sketches and all solutions must be shown clearly and neatly in your exam papers. All

examinations missed due to illness or emergency require a written, verified excuse or a grade of zero will be assigned.

3. Class attendance is necessary for satisfactory performance. It is student's responsibility to find out about all the assignments and announcements made in class. The student is held responsible for all missed work and classroom information. Class roll will be taken at the beginning of the term to ensure that students are attending the correct class and section. Class rolls will not be taken each time, but may be taken at any time to identify absentees.
4. Cheating and plagiarism are serious academic matters and they will be handled by the following policy and by the University policy. A grade of zero is assigned for the entire assignment. For example, zero is assigned for the entire test and not for individual parts of the test. Automatic failure of the course can result from a zero grade on an individual assignment.
5. Since all classes do not progress at the same rate, the instructor may wish to modify the syllabus requirements or their timing as circumstances dictate. For example, the instructor may wish to change the number and frequency of exams, or the number and sequence of assignments. If such a modification is warranted, students will be given adequate notification in writing.