

Department of Engineering Science and Mechanics

AEM 251 - MECHANICS OF MATERIALS LABORATORY

The objective of the laboratory is to complement AEM 250, Mechanics of Materials. The scope will be (1) to demonstrate by experiment the basic assumptions and experimental accuracy of the stress and deflection analysis presented in the lecture course; (2) to demonstrate the behavior of materials under various static loading conditions: axial, torsional, and flexural loading; and (3) to introduce the student to various basic materials testing devices.

Food and drinks are not allowed in the laboratory. The writing of laboratory reports must be done individually. Evidence of reports copied from other students or from old reports will be turned in for academic misconduct hearings. Reports are due promptly at the next laboratory meeting. Computer generated graphs are required for most labs, but hand drawn graphs may be required for certain labs. The information contained in this syllabus takes precedence over the information in the lab manual.

ANYONE WHO DROPS AEM 250 MUST ALSO DROP AEM 251.

All lab reports must be submitted. A student who misses a laboratory session may meet with another section (that same week) if the student obtains prior permission from both instructors. If the experiment has been missed without prior arrangements, a grade of F will be assigned for the course, unless a suitable excuse is obtained for the missed laboratory. The excused laboratory will be made up during study week with other excused students from all the other sections. Weekly quizzes on each topic will be conducted when the lab report is due.

Grading. The laboratory grade will be determined approximately by:

Lab Reports: 30% Quizzes 30% Daily Work: 10% Final Exam: 30%

The final examination is comprehensive and may be a common departmental exam. If the exam is a common departmental exam, the final exam is typically at the time scheduled for Monday classes at 6 p.m. or later. Because this is a one-hour credit course, the final examination will last 1-1/2 hours. For conflicts, all students requiring a final examination at other than the scheduled time will be given an alternate final exam. See your instructor during the last experiment for details.

ASSIGNMENT SHEETS AND COURSE CONTENT ARE SUBJECT TO MODIFICATION WHEN CIRCUMSTANCES OR SOUND PEDAGOGY DICTATE AND AS THE COURSE PROGRESSES. IF CHANGES ARE MADE, YOU WILL BE GIVEN DUE NOTICE.