

ME 451 Laboratory

Introduction & Procedures

1 Introduction

The laboratory component of the course is held in room 1532 EB at the time set by the section you are enrolled in. Each section will be further divided into Groups A, B, and C. The laboratory experience you will be performing each week depends on the Group you have been assigned to. Please see the separate “Lab Groups” and “Lab Schedule” pages for more details. Note that there are some weeks you will not have a laboratory meeting, but you may have written assignments due. Make sure you have properly understood this timetable - a missed laboratory or written assignment without PRIOR ARRANGEMENT (see Section 4 and 5 below) may result in a ZERO GRADE for the entire laboratory section, leading to a ZERO GRADE for the course.

During each laboratory experience, every student must take a PRE-LAB QUIZ and complete a brief SHORT FORM. This Short Form should be handed-in to your TA before you leave the laboratory. In addition to the short form, a LONG FORM lab write-up will be required for Lab 6. You will submit draft copies of the long form to Craig Gunn and your TA two weeks before your final draft is submitted to your TA. Details of these various components can be found on separate folders on the lab web site. In particular, see the *Writing Guide* and the *Motivational Theme*, which must be addressed in the reports.

2 Objectives

- To familiarize the student with the theoretical and practical aspects of making physical measurements.
- To familiarize the student with the physical behavior of vibrating systems and control systems.
- To aid in the physical interpretation of the mathematics that are used to describe the dynamics and control of a system.
- To allow the students to practice writing a formal lab report and an executive summary.

3 Pre-lab Quizzes and Short Form issues

You must come well prepared for your laboratory experience. A 10 min PRE-LAB QUIZ (see Section 4 below) will be administered prior to each lab session. Pre-lab quizzes are closed book, closed notes, and are based on the ME451 MANUAL content and other files associated to the current laboratory. Make sure you arrive on time as the quizzes will be picked up exactly 10 min after the beginning of the lab session. Short Forms and the associated Laboratory Manual must be downloaded, printed, and read, well before your scheduled laboratory time. NO PRINTING of Short Forms or Lab Manuals will be allowed in room 1532EB. Make sure to ALWAYS read every file in the

folder "Additional Documents" associated with the current Laboratory session unless it is specified as optional.

4 Grading

The laboratory component of the ME 451 course will contribute 25% to your overall course grade. The laboratory grade alone will be weighted as follows:

Short Forms	60%
Long Forms	20%
Pre-Lab Quizzes	20%

Failure to complete all of the laboratory assignments will result in a zero grade for the laboratory and thus a zero grade for the course.

5 Changing a Laboratory Time

The procedure itemized below has been established to accommodate students that need to change a scheduled laboratory time on a non-recurring basis. This will be allowed providing all the arrangements are finalized at least 24 hours before the originally scheduled laboratory time. A missed laboratory, or a request for a time change not finalized at least 24 hours prior, will only be excused in the case of a documented emergency or sickness. In such a case the student must contact the Faculty Laboratory Coordinator by e-mail (jchoi@egr.msu.edu).

1. Find a regularly scheduled time that you can make-up the laboratory you are planning to miss.
2. Contact the TA involved and ask his/her permission to join the laboratory group for that week. (Note, there can be no more than 4 students and no less than 2 taking a laboratory at any one time.)
3. Once this has been verified, contact your regular TA and tell him/her what your plans are. Both TAs must approve the change.

6 Avoid Plagiarism

Plagiarism essentially occurs when someone presents another person's work or ideas as his/her own. It can result a zero for the class, or worse. Please see the MSU page: <https://www.msu.edu/unit/ombud/academic-integrity/plagiarism-policy.html>