ME 310

Instrumentation and Theory of Experiments

Lecture Section A2, FALL 2018

LECTURE: M-W 10:10-11:55, PHO 210

LAB: ENG113 (110 cummington), 6 sections:
C1 (Mon 2:30-6:15pm), C2 (Tues 5:30 – 9:15), C3 (Weds 2:30-6:15pm), C4 (Thurs 5:30-9:15 pm), C5 (Fri 8:00 – 11:45am), C6 (Fri 2:30 – 6:15pm)

TEXT: Required: Figliola and Beasley, *Theory and Design for Mechanical Measurements,* 6th edition (or earlier), Wiley, 2015.

LAB NOTEBOOKS: Preferably square-ruled but anything will do, at least 1 needed

PROFESSOR: Glynn Holt, rgholt@bu
110 Cummington, Rm 417
Office hours M, 12-2, or by appointment

GSTs:

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GRADING:

5%	(Class and Lab performance)
20%	(Design Project)
15%	(Homework Sets)
25%	(Labs and Lab Reports)
35%	(In-class Exams)

There will be 2 hourly exams, roughly 6 homework sets, 4 labs plus 1 design project, NO FINAL.

CLASS: Class will be lively and informative, and PART OF YOUR ASSIGNED GRADED WORK. Come to class and be prepared to use the knowledge you already have as upperclass students, and to think on your feet.

HOMEWORK: Homework assignments are given out (roughly) every other week in class. They are due at the BEGINNING of class on the due date listed. LATE HOMEWORK WILL NOT BE ACCEPTED unless circumstances merit the exception.

EXAMS: The hourly exams will cover a specific section of the course material. They will be thorough and challenging. "Make-up" exams will rarely be given. In the case of prior knowledge of a conflict you must arrange to take the test before you are away. A "make-up" exam will be different from the exam given in the class, and will possibly be viva.

DESIGN PROJECT: You will design and implement a complete transduction system to measure the frequency-dependent displacement of a damped mass on a spring. This will occupy roughly the final 5 weeks of laboratory meetings. Note that it is a design as well as lab project, and as such there will be significant work done OUTSIDE and BEFORE lab.

DROP DATES: Pay attention to the University's schedule of drop dates. You cannot drop this course after the last "W" date because of an impending low grade – you will receive your current grade if you drop after the official W date. "Incomplete" grades are reserved for the most extreme of circumstances, and are a NEGOTIATED CONTRACT between the student and myself.

PREREQUISITES: EK 301, ME303, ME366 and EK307.

FEEDBACK: The intent is to maximize learning. If you have feedback on the class or feel free to provide feedback. The link below is set up to accept anonymous feedback. https://goo.gl/forms/QN2yvV44gm7ydkCl1

COLLABORATION (everything not explicitly allowed is Academic Misconduct*):
A. Homework: Do it individually. However, you are encouraged to consult with classmates on general concepts, but all answers must be in your own words/work. This policy extends to ALL components (text, figures, tables, etc) of the document.
B. Lab reports: Also to be done individually. Pre-labs should be done individually. For some experiments, there will only be one copy of your raw data/results, which you must copy later for inclusion in your own reports. Your lab report should be a stand-alone document, and therefore you may not 'reference' any section in one of your lab partners' reports. However, you must consult with your lab partners even after the lab period to discuss findings and results.
C. Design project: This is a group collaborative project, and I expect to see some division of labor here, and there will only be 1 report per group, so each group member will receive the same grade. Despite the division of labor, since this is a class, each member of the group must understand the other member's contributions.
D. Copying (scanning, etc…) text, figures, equations, tables, schematics from the lab manual writeups: VERBOTEN! This is plagiarism, in its laziest form! Transgressions will be prosecuted.

***ACADEMIC MISCONDUCT:** BU takes academic integrity very seriously. Academic misconduct is conduct by which a student misrepresents his or her academic accomplishments, or impedes other students' opportunities of being judged fairly for their academic work. Knowingly allowing others to represent your work as their own is as serious an offense as submitting another's work as your own. More information on BU's Academic Conduct Code, with examples, may be found at http://www.bu.edu/academics/policies/academic-conduct-code