Handout #1

BOSTON UNIVERSITY
Department of Mechanical Engineering
ME 305: Mechanics of Materials Sections A1
Fall 2019

Instructor and Class Information

Instructor:	Dr. Xin Zhang, Professor of Mechanical Engineering
Office:	PHO 921, 8 Saint Mary's Street
Email:	xinz@bu.edu
Phone:	(617) 358-2702
Office Hours:	Friday 3-5, other times available via appointment (email preferred)
Class Hours:	Monday/Wednesday 12:20-2:05PM
Classroom:	STH B19
Prerequisties:	EK301
Course Website:	Boston University Blackboard (http://learn.bu.edu)
Midterm #1:	October 15 (Tuesday), 12:20-2:05PM, STH B19
Midterm #2:	November 13 (Monday), 12:20-2:05PM, STH B19
Final Exam:	December 19 (Thursday), 12:30-2:30PM, STH B19

Textbook

Goodno/Gere, Mechanics of Materials, 9th ed. (Cengage L), ISBN 9781337093347

Teaching Fellows

Ke Wu (wk0305ok@bu.edu) for A1/X. Zhang; Sam Kann (skann@bu.edu) for A6/P. Barbone
(Ke Wu's office is at Photonics Center, Rm. 902)

Graders

Lei Yan (leiy@bu.edu)
(Lei Yan's office is at Photonics Center, Rm. 902)

Course Summary

This course will introduce students to the theory and application of the fundamentals of mechanics of materials. The course will help enhance students problem-solving skills. After completing the course, students will be prepared for advanced courses in structural engineering. Specific learning objectives of this course are: (1) Gain a general understanding of normal and shear stresses and the relationship between stress and strain. (2) Be able to analyze axially loaded members (statically determinant and indeterminant) and determine the resulting stresses and displacements. (3) Be able to analyze members with circular cross-sections loaded in torsion. (4) Determine bending and shear stress distribution of members loaded in pure bending and transverse loads. (5) Be able to determine slopes and deflections of beams. (6) Understand the concept of stress transformation and be able to determine principle stresses and maximum in-plane shear stresses from a given state of stress. (7) Gain a general understanding of buckling and stability of columns with varying support conditions.

Grading: The allocation of credit for the semester is as follows:

Quizzes (13-3=10 Quizzes)	15%
Course Project (One Project)	10%
Laboratory Reports (3 Labs)	15%
Midterm Exam 1 (on Chapter1,2,3,4)	15%
Midterm Exam 2 (on Chapter 5,9,11)	15%
Final Exam (on Chapter 1,2,3,4,5,9,11,7,8)	30%

Important Information

- Homework will be assigned each week. It will not be collected or graded. Solutions will be posted online.
- Quizzes will be given intermittently throughout the semester (usually every two class sessions). The purpose of the quizzes is to help you to keep current with the material. The quizzes will consist of problems very similar to homework problems as well as problems discussed in class. ***No make-up quizzes will be given; however, you will be able to drop your three lowest quiz scores.***
- The course project will be assigned in the mid of the semester and will be due before the final.
- Laboratory scheduling is to be determined by a sign-up sheet outside the laboratory.
- Failure to turn in any one of the laboratory exercises, the design project, or signed Handout#1, will result in ***automatic failure*** of the course.
- All discussion sections are open to any student enrolled in this course. The discussion sections will focus on solving problems assigned for homework and other, similar problems.
- If you must miss class, see a classmate to obtain the class notes. If, after reviewing the material that you have missed, you have questions, see the instructor during office hours and/or teaching fellows during discussion sections to get your questions answered.
- All complaints related to grading quizzes, labs, projects and exams must be reported to the instructor ***within one week*** after the grades are announced.

Academic Conduct

All students are required to review the BU Academic Conduct Code. The following rules will be observed for assignments in ME305 during Fall Semester 2019:

- Quizzes, Midterm and Final Exams: These assignments are to be completed by each student individually with no consultation with any other person other than the proctor. ***All quizzes and exams are closed note and closed book.*** During the quiz or exam, students are not permitted to consult any materials other than those provided by the instructor with the quiz or exam sheets. Electronic calculators are permitted.
- Homework, Lab Reports, and Course Project: Students are permitted to consult with each other regarding approaches to solving problems in these assignments. However, everything that is written down and turned in must be authored by the student getting

credit for the assignment, and any sources that were consulted while completing the assignment must be referenced. For example, if you consult with another person in preparing one section of a laboratory report, you should write "Consulted with *<person's name>* in preparing this section" in that section of the report. Similarly, if you consult with a textbook other than the course text or a webpage, acknowledge this in writing in the relevant section of the report or project.

Academic Misconduct

Academic misconduct is conduct in violation of the conduct code, and/or other unethical conduct. I will report to the COE Academic Conduct Committee any action that I believe constitutes misconduct. Some examples of misconduct are listed below.

More information on BU's Academic Conduct Code, with examples, may be found at http://www.bu.edu/academics/policies/academic-conduct-code.

The following list contains examples of academic misconduct, and is not intended to be complete. Note that, although the examples refer to written assignments and exams, the same rules apply to assignments and exams that are administered or presented orally or by some other non-written means. (Adapted from Academic Dishonesty among College Students, S. Maramark and M. B. Maline, US Dept. of Education report no. OR-93-3082, August 1993.)

- Copying from another student's exam or assignment
- Allowing another student to copy from your exam or assignment
- Allowing another student to see your exam or to see part or all of your assignment before you hand it in, unless authorized by the instructor
- Collaborating on assignments or take-home exams when instructions (or the syllabus) call for independent work
- Providing or receiving answers to an exam using a system of signals or other means of communication with another student
- Bringing unauthorized materials to an exam without placing them where they cannot be used during the exam
- Altering the answers to, or otherwise tampering with, exams or assignments after they have been handed in, without the consent of the instructor
- Taking an exam or completing part or all of an assignment for another student
- Having another person take an exam for you or complete part or all of one or more of your assignments
- Hiring a ghostwriter to write part or all of an assignment
- Submitting all or part of a purchased term paper as your own
- Using course materials, including lecture notes and excerpts from textbooks, in written assignments without proper citation

- Using paraphrased materials in a written assignment without proper citation of the source
- Downloading text, drawings, images, and other materials from the Internet and using these in written assignments without proper citation of the sources
- Copying material without proper citation
- Feigning illness to avoid taking an exam or handing in an assignment on time
- Submitting the same term paper from credit to more than one course without permission
- Reviewing a copy of the regularly scheduled exam prior to taking a make-up exam
- Reviewing a stolen copy of an exam prior to taking the exam
- Providing questions from a test given in one section of a course to students in another section before they have taken the test
- Receiving questions from a test given in one section of a course from another student in another section before you have taken the test
- Altering or forging an official document