

## Introduction to Statics, Structures and Materials

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### Teaching Assistants:

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**Class Website:** log on to <https://canvas.colorado.edu>

**Homework Site:** Mastering Engineering, linked through Canvas!

**Graded Exams Uploaded to:** Gradescope, <https://gradescope.com>

**Class Email List:** This is automatically done through Canvas.

**Texts:** R.C. Hibbeler, *Statics and Mechanics of Materials* (5th ed.), Pearson, including Mastering Engineering site.

**Prerequisites:** APPM 1360 & PHYS 1110 or equivalent; CSCI 1300 or equivalent.

**Corequisites:** ASEN 2012; APPM 2350 or equivalent.

**Course Objectives:** Introduce the fundamental analytical tools for statics and structural analysis in the context of the equisitoools  
nt.

9. Deformation in bending, bending stress
10. Shear stress in beams
11. Beam deflection
12. Torsion

### **Grading Guidelines**

Homework	10%
Unit quizzes	5%
3 midterm exams	20% each
Comprehensive final exam	25%
	<hr/>
	100%

Please verify all your scores and grades on Canvas within 2 weeks after they are posted; requests to change a score need to be made within this period. All regrade requests should be submitted to Canvas folder as outlined in 'Important Notes' below.

We reserve the right to make minor changes to this distribution of weights based on variations in assignments.

### **Course Delivery**

The course will be in person unless campus instructional guidelines change.

### **Exam Policies**

Students will take 3 exams during the semester. The exams may consist of work out, or computational problems, and/or conceptual questions (T/F, multiple choice, short answer). The final exam is comprehensive.

Tentative exam dates are as follows

Exam 1 (2/16/2023)

Exam 2 (3/23/2023)

Exam 3 (4/27/2023)

### **Makeup exam policy**

If a student has a conflict due to an official, university-related, activity (e.g., student conference that requires travel), a request for a makeup must be made in writing 2 weeks before the exam. In your email to the instructor, please include:

- Reason for missing the exam, or assessment
- Name of conference, meeting, or event
- Location and date(s) of the meeting or event

**No makeup exams will be given due to illness.** However, the comprehensive final can replace the lowest midterm exam score. Please see the section pertaining to the final exam.

### **Final Exam**

Since many of the topics covered in the first half of the course (statics) are directly applicable to what is covered in the second half (solid mechanics), the final exam shall be comprehensive. As we near the end of the semester, more details on specific exam topics shall be given.

**No makeup exams are given in this class due to illness.** However, since the final exam is comprehensive, it can replace the lowest midterm exam grade. For example:

A student is not feeling well and does not take midterm exam #2 (grade of 0 shall be recorded), but this student earns an 80% on the final. The new grade for the second midterm is now 80%.

A student does poorly on midterm exam #2 and earns a grade of 40%. This same student earns an 80% on the final exam. The new grade for midterm exam #2 is now 80%.

The final exam will take place during the university-scheduled final exam time, which is Tuesday, May 9<sup>th</sup> 2023 from 4:30 – 7:00 pm.

**Lecture:** Lecture will be in person in AERO 114.

**Office Hours:** Students can ask questions about concepts, example problems, and homework assignments during office hours. The office hour schedule will be posted to Canvas within a week of the course starting. Students are strongly encouraged to attend office hours if they have questions about the material or the homework.

### **Evaluated Outcomes**

The Department of Aerospace Engineering Sciences has adopted a policy of assigning grades according to evaluated outcomes (Ox) in each course. Each assignment designed and graded to assess some combination of several or a few of the following outcomes:

- O1** Professional context and expectations (ethics, economics, etc.)
- O2** Historical perspective and vision
- O3** Multidisciplinary, system perspective
- O4** Written, oral, graphical communication ability
- O5** Knowledge of key scientific/engineering concepts
- O6** Ability to define and conduct experiments, use instrumentation
- O7** Ability to learn independently, find information
- O8** Ability to work in teams
- O9** Ability to design systems
- O10** Ability to formulate and solve problems
- O11** Ability to use and program computers

### **Important Notes**

1. You should email your professor to schedule personal meetings. For example, if you experience a medical/family emergency, or you are struggling in the course and need to discuss success strategies, or maybe to discuss your career goals. Emails will be responded to during business hours, i.e., Monday



## 7. Exams

**Makeup exams will not be granted due to illness.** The final exam will be used for replacing the lowest midterm exam score.

Regrade requests must be submitted to the professors in writing within 2 weeks of the grade posting to Canvas. Submit a single pdf document to the 'regrade request' folder on canvas with: the exam problem with your original work, your hand-written CORRECT solution to the quiz problem in question, and a page stating the problem number, grading issue, and what you believe the correct grade should be.

place to reduce the risk of spreading infectious disease. CU Boulder currently requires COVID-19 vaccination and boosters for all faculty, staff and students. Students, faculty and staff must upload proof of vaccination and boosters or file for an exemption based on medical, ethical or moral grounds through the MyCUHealth portal.

The CU Boulder campus is currently mask-optional. However, if public health conditions change and masks are again required in classrooms, students who fail to adhere to masking requirements will be asked to leave class, and students who do not leave class when asked or who refuse to comply with these requirements will be referred to Student Conduct and Conflict Resolution. For more information, see the policy on classroom behavior and the Student Code of Conduct. If you require accommodation because a disability prevents you from fulfilling these safety measures, please follow the steps in the “Accommodation for Disabilities” statement on this syllabus.

If you feel ill and think you might have COVID-19, if you have tested positive for COVID-19, or if you are unvaccinated or partially vaccinated and have been in close contact with someone who has COVID-19, you should stay home and follow the further guidance of the Public Health Office ([contacttracing@colorado.edu](mailto:contacttracing@colorado.edu)). If you are fully vaccinated and have been in close contact with someone who has COVID-19, you do not need to stay home; rather, you should self-monitor for symptoms and follow the further guidance of the Public Health Office ([contacttracing@colorado.edu](mailto:contacttracing@colorado.edu)). {Faculty: insert your procedure here for students to alert you about absence due to illness or quarantine. Because of FERPA student privacy laws, do not require students to state the nature of their illness when alerting you. Do not require "doctor's notes" for classes missed due to illness; campus health services no longer provide "doctor's notes" or appointment verifications.}

### **Accommodation for Disabilities**

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the [Disability Services website](#). Contact Disability Services at 303-492-8671 or [dsinfo@colorado.edu](mailto:dsinfo@colorado.edu) for further assistance. If you have a temporary medical condition, see [Temporary Medical Conditions](#) on the Disability Services website.

### **Preferred Student Names and Pronouns**

CU Boulder recognizes that students' legal information doesn't always align with how they identify. Students may update their preferred names and pronouns via the student portal; those preferred names and pronouns are listed on instructors' class rosters. In the absence of such updates, the name that appears on the class roster is the student's legal name.

### **Honor Code**

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the [Honor Code](#). Violations of the Honor Code may include, but are not limited to: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials,

