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Physics 1, ASEN2001, and ASEN2012, APPRM2350 are prerequisites for this course. APPM2360 is a pre or co-requisite. Much of the material covered in this class has been introduced in your freshman physics class. It also depends heavily on a solid understanding of statics. Students are expected to have a working knowledge of vector operations and vector calculus. Assignments regularly require the use of MATLAB; students are expected to be proficient in the use of MATLAB for problem solving.

Material and concepts are introduced, and student mastery is evaluated using several mechanisms throughout the course:

In some laboratory exercises, we will stress data analysis skills. This includes extensive usage of computer programming and statistics taught in ASEN2012. In these examples, we expect students to follow directions from the instructor and provide a lab write-up that demonstrates that students understood the key concepts of the lab. Presentation of results will be stressed and students are expected to properly describe what was measured, what was modeled, and whether discrepancies between observations and models are significant. Although the computer programs written for this class will not be graded, students are required to turn them in. Students will also be required to follow programming instructions made by the instructor. Our purpose in making these programming requirements is to teach students new and efficient methods for conducting engineering analyses.

7. Lab Reports -

Posting & Submission

- Homework will be posted on Canvas/Gradescope including the due date & time.
- Homework is due in Gradescope on Mondays by 11:00 pm (Mountain Time). Late homework will not be accepted, but the lowest two homework grades will be dropped (see below).
- Solutions will be posted on Canvas after the due date.

Collaboration vs Copying/Plagiarism

- Collaboration is permitted on homework. You may discuss the means and methods for formulating and solving problems and even compare answers, but you are not free to copy someone's assignment. Copying material from any resource (including solutions manuals) and submitting it as one's own is considered plagiarism and is an Honor Code violation. Remember, the more you think about the problems yourself, the more you actually learn, and the more successful you will be on exams and in subsequent courses.
- Directly COPYING from a solution manual or other source is considered PLAGIARISM.
- While we strongly discourage students from relying on a solutions manual for pedagogical reasons, we will NOT consider the USE of a solutions manual as plagiarism. What is critical is that students SOLVE the homework on their own, regardless of the tutoring or resources they used, and not turn in a copy of someone else's work. Thus, copying another student's homework or the answer key and turning it in is plagiarism and a violation of the honor code.

Content

- Homework solutions must demonstrate an understanding of the principles involved, by including diagrams, using correct notation and terminology, explaining the approach, showing the key steps to obtaining the solution, and outlining the answer with proper units. These problem-solving steps are critical for developing problem formulation skills.

Format

- Homework should be neatly handwritten with a new page for each problem. Typed homework is acceptable if you prefer it, but is definitely not required or encouraged. If you write a MATLAB script or function to solve the problems, the code must be included in your submission.
- Always submit work with a professional appearance. Neatness, clarity, and completeness count. Very messy work will be not be graded and a score of zero recorded.
- Vector notation must be used when appropriate. Numerical values must include units and a meaningful number of significant digits. Final answers must be indicated with an arrow, underline, or box.

Grading

- For grading purposes, homework is considered part of the group grade and only contributes to the total grade when the individual work is C or better.
- Homework is graded partially based on completion of all assigned problems (50%) and partially based on the quality/accuracy of a subset of the assigned problems (50%). To receive credit for completion, problems must be presented using the full appropriate problem solving approach. The problems graded for accuracy will be evaluated in more detail looking for correct methods, accurate complete results, and clear explanations (where appropriate).
- In computing the overall homework grade, we will drop the two lowest homework scores. This is meant to provide some flexibility in dealing with a higher workload in another class or unexpected situation that prevents you from completing one or two of the assignments on time.

| Type | Description | Percentage |
|---|---|---|
| Individual Grade | Unit Exams (4) | 60% |
| | Final Exam | 40% |
| | Individual Total | 100% |
| Group Grade | Labs | 70% |
| | Homework | 30% |
| | Group Total | 100% |
| Final Grade | If individual grade >= C* | Final = 0.6*Individual + 0.4*Group |

All students who are new to campus must complete the COVID-19 Student Health and Expectations Course. Before coming to campus each day, all students are required to complete the Buff Pass.

Students who have tested positive for COVID-19, have symptoms of COVID-19, or have had close contact with someone who has tested positive for or had symptoms of COVID-19 must stay home. In this class, if you are sick or quarantined and unable to participate in specific lecture or lab activities, please notify the instructors and if possible, your lab partners, of your absence. In accordance with FERPA privacy laws, you are not required to state the nature of your illness/reason for being absent.

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 for further assistance. If you have a temporary medical condition, see Temporary Medical Conditions on the Disability Services website.

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.

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one