

CIVE 360: MECHANICS OF SOLIDS

SPRING 2018

Instructor: Professor P.R. Heyliger (prh@engr.colostate.edu), A223 Engineering, 491-6685. By far, e-mail is better than phone. **Important: To contact me via e-mail, please use this direct address. Do NOT go through Canvas.**

Instructor Office Hours: I will usually announce these at the start of each class period as they can sometimes vary, but for the most part they will be 12:30-2:30 MW. They will start the second week of class. I also do not mind e-mail questions, including over the weekend, but I have one requirement if they involve homework: make sure you have really tried the problem and send me a photo of your work so I can see where you are going wrong.

Graduate Teaching Assistant: Mr. Anirudh Kode (anirudhkode@gmail.com). He will most likely have office hours on Tuesday and Thursday, I will announce these when they are established. **Update: 12:30-2 Tuesday and Thursday in A207B Engineering.**

Course Text: Mechanics of Materials, Timothy A. Philpot, 4e. This is a good, solid text but we will most likely be pulling our homework assignments from other sources. **Update: Book only, no electronic resources will be required.**

Anticipated Topics:

In approximate order: stress (Chapter 1), strain (Chapter 2), constitutive law (Chapter 3), one-dimensional bars (Chapter 5), torsion (Chapter 6), beams (Chapters 7-10), stress transformations (Chapter 12), and buckling (Chapter 16). We will not be using the text as an item of study, but rather as a supplement and additional tool for learning the material. Hence your class notes are crucial, and your attendance in class is extremely important.

Probable Grading Algorithm:

Homework: 15 % This is an extremely important task (see below).

3 exams: 58 % (Dates: 2/9, 3/7 (the Weds before spring break), 4/13). I would like to give you 15 extra minutes, and begin the exams at 7:45 if the class agrees. We will talk more about this before the exam dates. These exams are closed book and closed notes, and you must use an FE calculator. I send exam reviews a week before the scheduled exam date.

Final exam: 27 %. This exam will be comprehensive. It is scheduled to take place Thursday, May 10, 4:10-6:10 PM. You can use a single sheet of 8.5 x 11 (inch) paper with anything you want written or copied on both sides. FE calculator required.

At a minimum, final grades will be assigned using the plus-minus system that begins with overall averages in the 90's being A or A-, the 80's being B+/B/B-, and so on. However, I will do my best to let you know approximately where you stand in terms of test grade after each exam. A nearly perfect homework score is a necessary but not sufficient condition for a decent grade. Thankfully, this near-perfection is going to be very doable (see below). Do not rely on the Canvas average, they sometimes have issues incorporating my grading scheme. Rely on what you hear from me.

Miscellaneous comments:

1. Come to class. It is important.
2. It would be nearly impossible to overstate the importance of completing homework assignments and doing them (for the most part) on your own. There will be a relatively large amount of homework in this class, and we will all be working on these - me included. This usually means 3 problems every class period, averaging around 45-60 minutes (that is a very rough estimate) of total effort. You can use any resource you wish (short of copying) to complete the assignments but make sure you do it and understand it. In other words, working with others is OK but pull your weight and don't poach. Homework is due at the beginning of class and will be due two class periods from when it is assigned. Hence assignments made on MWF will be due at noon on FMW. All homework must be submitted electronically via Canvas. I nearly always e-mail solutions the day they are turned in. I will usually wait to answer homework questions until the following class period so you have a chance to first look at my solution. The use of solution manuals on homework (for any purpose) or copying of any sort on homework or exams is considered to be academic dishonesty and will not be tolerated under any circumstances (students will be given an F in the class). The same is true for any other instance of academic dishonesty.
3. For homework, I grade almost completely on effort and not on the correct answer. However, if you are diligent there is no good reason why you should not get the correct answers almost all the time. This is also good practice for exams, where the correct answer counts for a lot. Homework solutions with the following traits will almost always be given a perfect score:
 - One side of engineering paper, stapled if necessary, always in pencil. **Update: Since our submissions are electronic, I will allow any style of paper/drawing, including electronic or typing, as long as it is neat. Just don't use torn spiral paper or anything remotely close. And ... no staples needed.**
 - Name, class, and assignment number up top.
 - Problem statement written out, a neat, clean effort at the solution, draw a box around your answer to help the grader, and give an explanation if you do not get the right answer.
 - It is always a good idea to sketch out your solution on scratch paper and then rewrite your final version.
4. Please consult a colleague or the TA to obtain missed handouts and lecture notes. I will also try to post the lecture notes on Canvas.
5. It will often prove difficult to answer every detail of every question posed during class. However, I will try to allow for as many questions as time allows at the beginning of every class. You may want to keep these as general as possible so that the entire class can benefit. More detailed questions are often best saved for right after class or during office hours.

6. Unless you have a conflict, please try to ask questions outside of class during my office hours. If you have a semester-long conflict, please see me to arrange an alternate time.
7. I am not a fan of talking in class, reading the newspaper, or otherwise being unengaged. At this point in your career, this is almost beyond discussion. I will do my best to keep you focused on our material. I have a long-established tradition of reading student body language to help you.
8. **Talk about solid mechanics with anyone who is interested.** In a sense, you can almost view this class as a foreign language. The more you discuss terms and concepts with colleagues or the instructor, the more comfortable you are with the material.