

MECH 2322 Mechanics of Materials
Course Syllabus
Spring 2019
Section 002 (CRN 16282)

Time and Location: TR 7:30 am – 8:50 am, PSCI 208

Instructor: Dr. Omar Cedillos
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Teaching assistants: Monica Piñon
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Office Hours: By appointment
Office location: By appointment

Textbook: Mechanics of Materials, 10th Edition by R.C. Hibbeler, Pearson Publishing

Required Material: Mastering Engineering Access Code

Blackboard: The instructor will use Blackboard for uploading lectures, updating the syllabus (if necessary), and communicating with students via “Announcements” and email.

Prerequisites: MECH 121 or CE 23 Statics with a C or better

Course Objectives

At the end of this class the typical students should be well prepared in the following areas:

- Identify and solve basic axial, shear, torsion and beam bending stress analysis and deflection problems.
- Solve simple combined loading stress analysis and deflection problems.
- Have a good understanding of stress and strain components, stress transformation in 2D and 3D.
- Solve statically indeterminate problems
- Column buckling
- Ability to resolve internal tractions (stresses) with properly chosen FBDs

Course Content

- Chapter 1: Stress
Hibbeler 1.2, 1.3, 1.4, 1.5, 1.6
- Chapter 2: Strain
Hibbeler 2.1, 2.2

- Chapter 3: Materials
Hibbeler 3.1, 3.2, 3.4, 3.6, 3.7
- Chapter 4: Axial
Hibbeler 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7
- Chapter 5: Torsion
Hibbeler 5.1, 5.2, 5.3, 5.4, 5.5
- Chapter 6: Bending
Hibbeler 6.1, 6.2, 6.3, 6.4, 6.5
- Chapter 7: Transverse shear in bending
Hibbeler 7.1, 7.2, 7.3
- Chapter 8: Combined loading
Hibbeler 8.1, 8.2

Exams: There are three midterm exams and one final exam. Makeup exams are not given.

Exam dates: Midterms: September 24, October 24 and November 21. Final Exam: Thursday, December 12 (7:00 am – 9:45 am)

Grading

Your final grade for this course will be based on the following activities

Assignments	Percentage
Exams (3x)	60%
Homework	10%
Quizzes	10%
Final exam	20%
Total	100%

Grade Scale	
100-90%	A
89-80%	B
79-70%	C
69-60%	D
<60%	F

The instructor reserves the right to revise this grading plan

Important Dates: November 1, Drop/Withdrawal Deadline.

Homework and quizzes – Pearson Mastering Engineering

Homework assignments and quizzes are posted to the MasteringEngineering ([MasteringEngineering.com](https://www.masteringengineering.com)). Access to Mastering can be purchased at the Bookstore as a textbook bundle **or** individual access code. The international version of the textbook bundle **DOES NOT** work. Used books **DO NOT** come with Mastering. Mastering can be purchased **online**

directly from [MasteringEngineering.com](https://www.masteringengineering.com). Make sure to select the correct version of the book during registration. Pearson offers refunds for up to 14 days.

COURSE ID: MECEDILLOS2601586

Quizzes: Are posted each Friday. The student will be able to solve the quiz from 12:00 am – 11:59 pm, and will have 30 min time limit to solve the quiz from the moment the problem is opened. The quiz allows three attempts.

NO extensions are given in homework or quizzes

To receive full credit on the exam the exam problem solution must conform to the following structure:

1. **Knowns/Unknowns:** List the given parameters. List the parameters you must find.
2. **Free Body Diagram:** Draw a neat FBD that includes arrows with arrowheads, dimensions, and all the parameters needed to solve the problem. (When appropriate).
3. **Assumptions:** List any assumptions made, and the equations you will need.
4. **Steps:** Give necessary details so that people can easily follow your calculations. Answers without the steps will not be accepted.
5. **Answer:** Include units and box your final answers.
6. **Neatness:** Disorganized, incomplete, and/or copied work will be penalized.

Academic Dishonesty

During exams and quizzes, you are not allowed to use any form of Wi-Fi enabled electronic device, including cell phones or other electronic communication devices or methods (wristwatches, earbuds, etc.). No wristwatch or other electronic device may be worn. Calculators may be subject to inspection. You may be asked to temporarily remove glasses to allow for their inspection.

You may not bring backpacks, hats, or bulky coats into the exam room. Lockers are not available at the exam site so plan and leave your belongings in a secure location. You may NOT sit them in a corner of the exam room.

You must show your work for all problems. You must use the paper provided by the instructor. If no work is shown you may not receive credit. After the exam, the instructor may require you to explain how you solved a problem on the exam. If you refuse to or cannot explain your work you may be subject to discipline.

No electronic version of the book, loose paper printouts of the book or extra sheets of paper of any kind are allowed unless explicitly mentioned in writing by the instructor. As a part of the zero-tolerance policy, if you have a cellphone or other electronic device capable of communication on your person; or if any proctor sees or hears any electronic device during the exam or if you share your work with someone else, you will be reported to the proper authorities and you may receive a zero on the exam and an F in the class. Other actions including suspension may also be pursued.

No one will be allowed to leave the room during an exam. This includes restroom breaks.

University approved recording devices may be located at various locations in the room and may be out of sight of the students. These recordings will be managed according to the UTEP approved regulations for such media.

If you are suspected of scholastic dishonesty you may or may not be directly confronted about your conduct by the instructor or proctor. You will however, be reported to the Office of Student Conduct and Conflict Resolution (OSCCR) and your exam may not be admissible. Your grade in the class may not be available until OSCCR makes a final ruling, this may adversely impact your ability to enroll in other classes.

If you arrive more than 15 minutes late to an exam, you will not be allowed to take the examination.

There will be no makeup exams administered. If you have a university approved excuse, your instructor will have a process for determining how to handle the missing grade outlined in the syllabus. However, no makeup exams will be given.

If you miss more than one exam, the instructor may choose to administratively drop you from the class. This may adversely impact a visa and financial aid.

No food or drink may be brought into the examination room.

Departmental policy allows for the use of assigned seats. All students must present their UTEP issued ID prior to and during every exam and may be required to sign in. Not having a UTEP issued ID when asked will result in forfeiture of the exam.

Scholastic dishonesty on homework, lab assignments and all other class assignments will be held to the same standards and requirements of academic honesty as quizzes and exams.

Class Attendance Policy

Attendance is mandatory. Anyone with 5 or more absences will be dropped from the class. A drop for not attending will count toward the State Allowed Six Drop Limit. If you are failing the class at the time of the drop you may also be given a WF designation. Be advised that a drop could adversely impact visa status, financial aid and other programs.

As per UTEP rules, you may be asked to show a UTEP ID at any time during class. Anyone who is present and not registered in the class will be subject to disciplinary action unless the instructor gives prior approval.

Excused Absence for Exams

The UTEP catalog allows Exam Absence to be excused ONLY for University-Recognized Activities and very specific other situations. Medical absence is NOT allowed in the UTEP catalog. For consistency with the catalog, students will NOT be excused from exams due to illness.

Harassment Policy

The department has a zero-tolerance policy for harassment. Engagement in any behavior considered harassment will be reported to the proper authorities. In addition to generally understood forms of harassment, the department also treats the following behavior as harassment:

- Repeated emails and/or calls regarding subjects that have already been addressed. Once a decision has been made or a question answered, a student who continues to ask the same question will be given a warning by the recipient of the email/call. If the student continues, the behavior will be reported. Questions that seek understanding of course material are not harassment; but repeated questions about a grade or an administrative decision are.
- Grades are NOT negotiable, ever. If you believe a grading mistake has been made, you must follow the process described in the UTEP catalog. Any request for a grade elevation that is NOT based on a mistake is considered harassment and will be reported immediately.
- Remaining in an office after the occupant requests you leave is considered harassment and potentially threatening. You will be reported immediately without warning and depending on the severity, may be reported to law enforcement.

Similar behavior towards department staff, and student advisors will also be treated as harassment, including persistent phone calls, emails, and badgering. Department staff and student advisors are there to help students, and should be treated with due respect.

Reasonable Accommodation Policy: If you have a disability and need classroom accommodations, please contact the Center for Accommodations and Support Services (CASS) at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass.

Course Calendar: May be updated throughout the semester. Always see the current version of the syllabus on Blackboard.

Department of Mechanical Engineering Safety Statement

The Department of Mechanical Engineering at the University of Texas at El Paso is committed to a model of excellence in education that includes providing a safe and healthy environment for its students, staff, faculty and the general public.

Our goal is to maximize education and research training that can only occur if you, the individual, minimize hazards and risks. This can be done by:

- Providing adequate control of the health and safety risks arising from any and all activities;
- Consulting with employees on matters affecting their health and safety
- Providing and maintaining safe laboratories and equipment;
- Ensuring safe handling and use of substance;

- Ensuring all employees are competent to do their task and have adequate training;
and
- Maintaining clean, safe and healthy working conditions

The principal investigator or individual in charge of each laboratory is ultimately responsible for safety in that respective lab. This includes training and ultimate release of the laboratory. Within the Department, we hold every employee (staff, faculty, student) responsible for implementing our safety practices and our departmental safety policy. We hold every employee (staff, faculty, student) responsible for providing leadership within our department to establish effective environmental safety and occupational health standards.