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CONE 331-01E Mechanics of Materials

COURSE SYLLABUS: Fall 2024

INSTRUCTOR INFORMATION

Instructor: Eddie Oh
Office Location: AG/ET 208

Office Hours: Monday 10 am ~ 1 pm / Wednesday 10 am ~ 12 pm

Office Phone: 903. 886. 5474
Office Fax: 903. 886. 5468

University Email Address: Eddie.0h@tamuc.edu

Preferred Form of Communication: email Communication Response Time: one day

COURSE INFORMATION

Textbook(s) Required: Mechanics of Materials, Hibbeler, 10th, Pearson, 9780134319650

Software Required: None

Optional Texts and/or Materials: None

Lecture/Lab: Tuesdays & Thursdays 4:00 – 5:15pm, AG/ET 118A

Course Description

Applications of conservation principles and stress/deformation relationships for continuous media to structural members; axially loaded members; thin-walled pressure vessels; torsional and flexural members; shear; moment; deflection of members; combined loadings; stability of columns; indeterminate members. *Prerequisite:* CONE 211 / ENGR 210

Student Learning Outcomes

- Calculate stress, strain, and deformation of materials subjected to axial, torsional, bending, and transverse loading.
- 2. Utilize the stress-strain diagrams for determining the mechanical properties of various materials.
- 3. Utilize stress transformation equations and Mohr's circle to determine the principal stresses and the max shear stress.
- 4. Analyze beams and columns, and determine shear, bending, deflection, and buckling load.
- 5. Describe standard lab testing procedures and interpret data.

COURSE REQUIREMENTS Prerequisite : CONE 211 / ENGR 210

In-Class, Face-to-Face, D2L

Student Responsibilities or Tips for Success in the Course

Weekly assignments & quizzes

GRADING

Final grades in this course will be based on the following scale:

А	В	С	D	F
100 - 90	89 - 80	79 – 70	69 - 60	59 – 0

Weights of the assessments in the calculation of the final letter grade.

Assignments	Quiz	Midterm Exam	Final Exam
20%	30%	20%	30%

Assessments

TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

https://community.brightspace.com/s/article/Brightspace-Platform-Requirements

LMS Browser Support:

https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

YouSeeU Virtual Classroom Requirements:

https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

https://community.brightspace.com/support/s/contactsupport

Interaction with Instructor Statement

Preferred Form of Communication: email

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.

 $\frac{\text{http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.a}}{\text{spx}}$

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: https://www.britannica.com/topic/netiquette

TAMUC Attendance

For more information about the attendance policy please visit the <u>Attendance</u> webpage and <u>Procedure 13.99.99.R0.01</u>.

http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf

Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

<u>Undergraduate Academic Dishonesty 13.99.99.R0.03</u> <u>Undergraduate Student Academic Dishonesty Form</u>

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf

Graduate Student Academic Dishonesty Form

http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonesty Formold.pdf

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf

Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors 'guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty 13.99.99.R0.10 Graduate Student Academic Dishonesty

Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce Velma K. Waters Library Rm 162 Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@tamuc.edu

Website: Office of Student Disability Resources and Services

http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/

The syllabus/schedule are subject to change.

Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the <u>Carrying Concealed Handguns On Campus</u> document and/or consult your event organizer.

Web url:

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

A&M-Commerce Supports Students' Mental Health

The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.tamuc.edu/counsel

Department or Accrediting Agency Required Content

COURSE OUTLINE / CALENDAR

Week#	Week of	Course Topic	
1	26-Aug	Course Introduction / Stress	
2	2-Sep	Stress & Strain	
3	9-Sep	Stress & Strain	
4	16-Sep	Mechanical Properties of Materials	
5	23-Sep	Axial Load	
6	30-Sep	Torsion / Exam I	
7	07-Oct	Bending	
8	14-Oct	Bending	
9	21-Oct	Transverse Shear	
10	28-Oct	Combined Loading / Stress Transformation	
11	4-Nov	Strain Transformation / Design of Beams & Shafts	
12	11-Nov	Deflection of Beams & Shafts	
13	18-Nov	Deflection of Beams & Shafts	
14	25-Nov	Thanksgiving Break	
15	2-Dec	Buckling of Columns	
16	9-Dec	Final Exam	