



ENGR 110: Introduction to Engineering & Technology
Section 03E, Course Syllabus, Fall 2025
Rev 2, 8/18/2025

INSTRUCTOR INFORMATION

Instructor	Gerald L. Fudge, PhD
Office Location	AG/ET 217
Office Hours	Monday – Friday, except Wed. (10:00 am – 11:00 am) Wednesday (10:00 am – 11:30 am) Also, by appointment at other times
Phone	Engineering & Technology Office: 903-886-5474
University Email Address	Gerald.Fudge@etamu.edu
Preferred Form of Communication	Email
Communication Response Time	Typically, within 48 hours on weekdays for email

COURSE INFORMATION

Class Meeting Schedule	See schedule at end of syllabus
Class Meeting Dates	MWF (9:00 am – 9:50 am)
Classroom	AG/ET 125
Textbook(s) Required	None
Software Required	Microsoft Office - MS Word, PowerPoint

COURSE DESCRIPTION

This course provides a solid foundation in fundamental skills needed for freshmen and transfer students to academically succeed and professionally prepare them for challenges within the disciplines of Engineering and Technology Management. The project-based assignments will provide students with opportunities to apply mathematics to solve engineering problems, acquire team working skills, practice written and verbal communication skills, and enhance problem solving and design skills. Early understanding of these skills will assist students throughout their undergraduate experience.

Prerequisites: Prerequisites: MATH 142 or MATH 2312 (precalculus), or concurrent enrollment.

Student Learning Outcomes

Upon successful completion of this course, students will achieve the following learning outcomes:

- Know basic quantities, including time, length, mass, force, work & energy, power, temperature
 - Know the corresponding SI units
 - Know scientific notation quantity prefixes from nano (10^{-9}) to giga (10^9)
- Be able to apply mathematical, chemical, and physical laws to solve engineering problems
 - Unit conversions and scientific notation
 - Basic trigonometry
 - Complex numbers & polar conversion
 - Basic probability & statistics
- Apply key engineering principles and an appropriate engineering design process
- Summarize professional & ethical responsibilities and reasons for those responsibilities
- Describe basic characteristics of materials such as metals, plastics, glass, and concrete
 - Material properties including ductile, brittle, malleable
 - Recognize different types of material stress, including compressive, tensile, shear
- Demonstrate the fundamentals of teamwork, and be able to work in multi-disciplinary teams
- Demonstrate effective oral and written communication skills, including reports and presentations
- Demonstrate using generative AI tools properly

COURSE REQUIREMENTS

Minimal Technical Skills Needed

Students must be able to access the Internet, use the D2L learning management system, and use Microsoft Office tools (Word, Excel, PowerPoint). Students should know how to use a scientific calculator.

Instructional Methods

The instructional methods in this course include lectures, class discussion and participation, informal quizzes, homework assignments, team projects, and exams. The team projects and class participation will include the use of teamwork for students to learn from each other under leader supervision, similar to a real-world engineering environment.

Student Responsibilities or Tips for Success in the Course

- **Attendance & Participation:** On-time attendance is required. Students must show up awake and ready to participate with proper attire (see below). Attendance & Participation is a graded

The syllabus/schedule are subject to change

component because for optimum learning, students need to attend class and participate in all activities. The table below shows the potential grade penalty for unexcused absences. Coming late to class counts as half of an absence. Students should inform the instructor if they need to miss class. Student should bring a scientific calculator to class to support participation.

# of unexcused absences	< 5	5	6	8	9	>9
Grade penalty	0%	5%	10%	20%	30%	F

- **Homework Assignments:** Working through example problems is a critical component to learning. Late work may be penalized, including a grade of zero, unless student has an acceptable excuse proven by a doctor's note or other legal documentation.
- **Quizzes:** Quizzes will be used to assess problem solving skills and provide student feedback. In-class quizzes will be given to help reinforce the material. Unless otherwise specified, these must be turned in during the class; late submissions are not allowed.
- **Projects:** Students will be expected to work together in team projects, similar to real-world engineering, to design and build a system, and to document via in-class presentation, soft-copy presentation, and engineering report. Peer reviews will be collected for group projects to support group evaluation of team member performance.
- **Assignment Submission:** Students shall submit assignments either in class or in the assigned drop boxes on D2L. If problems are encountered using D2L, then email may be used as a backup with instructor permission.
- **Collaboration:** Students are strongly encouraged to collaborate, but must turn in their own work. Teamwork is an integral aspect of engineering.
- **Soft-Copy Report Formats:** Students should submit reports in PDF following the required report or other format as specified by the assignment.
- **Exams:** The exams will be closed book & closed notes. Student will need to bring a scientific calculator. The written exams will be supplemented with at least one oral exam. The use of a personal phone is prohibited during exams. A makeup exam may be offered but an official permit for absence that fulfills University procedures may be required by the instructor.
- **Shoes & Attire:** This course requires laboratory work with power tools, and thus closed toe shoes are required for safety. In addition, as described in safety training, suitable attire will be required to minimize the risk of injury. Hoodies should not be worn over the head during class, nor should blue tooth and similar devices be worn in the ears during class.
- **Use of Artificial Intelligence (AI) Tools:** Students should use tools such as spelling and grammar checkers, page and section breaks, and format templates. However, other than as directed by the instructor for specific assignments, AI tools, ChatBots, and other software that has the capacity to generate text, or suggest replacements for text beyond individual words is prohibited. Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism). This course will allow the use of generative AI tools on some of the assignments (see specific D2L assignment directions and associated classroom discussion).

GRADING

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

A	B	C	D	F
100 - 90	89 - 80	79 - 70	69 - 60	59 – 0

Overall grades will be based on a weighted average as shown below.

Assessment Type	Percent
Attendance & Participation (see attendance policy)	10
Quizzes	15
Homework	25
Exams	25
Final project	25
Total	100

Required D2L Lab Safety Training Course

As a new campus wide initiative to ensure compliance with system requirements, to improve efficiency and streamline processes, the Department of Environmental Health and Safety has created a required Student Laboratory Safety Training that is required for this course. When students register for this class, they will automatically be enrolled in the D2L "Lab Safety Training" Course per the below policy:

- Students will have access the D2L "Lab Safety Training" course on the first-class day.
- Students, by default, has a Compliance Hold "OH" placed on their Banner Profile; this will be removed once student completes the training.
- Students will receive email notification prior to the start of term and then once per day for the first 5 days of the semester. The students will also receive notification through D2L's Pulse App via Intelligent Agents.
- Students that have not completed the training within the first 5 days of the start of term will begin getting an email notification on the 6th day indicating that their access to the courses associated to this training has been restricted. Restriction and Access to course(s) will be handled via the custom web-application. Student with restricted access may encounter additional penalties if they are not able to submit assignments on time; thus it is critical that students complete the D2L "Lab Safety Training" course within the first 5 days of the semester.
- Students will continue to get a daily email notification until the training is complete (Instructors will be copied so they are aware).
- On the 21st day of the term, students that have not completed the training will be notified via email that they have been dropped from this course.
- The D2L "Lab Safety Training" course is separate from the specific ENGR 110 safety training that takes place during the first week of class.

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 ETAMU campus open computer lab, etc.

The syllabus/schedule are subject to change

Course Calendar

The planned course schedule is shown below. In addition to the below, the D2L “Lab Safety Training” course must be completed as discussed earlier.

Wk.	Days			Weekly Topic Plan	Notes	HW Assignment Plan
	M	W	F			
1	8/25	8/27	8/29	W1: Course overview; lab safety; engineering profession	Safety Quiz	
2	9/1	9/3	9/5	W2: Introductions; teams; volume, unit conversion method	9-1: Holiday	1. Introductions
3	9/8	9/10	9/12	W3: Calculations; bridge design; SI units, SI prefixes	9-10: Census	2. Basic calculations
4	9/15	9/17	9/19	W4: Reports, resumes; more unit conversion		3. Bridge paper report
5	9/22	9/24	9/26	W5: Trig, force, friction on ramp, bridge software		4. Resumes
6	9/29	10/1	10/3	W6: Energy, work, power; MacArthur Maze & Tacoma Bridge		5. Friction project report
7	10/6	10/8	10/10	W7: Review -> Exam 1	Exam 1	
8	10/13	10/15	10/17	W8: Balsa wood bridge build in-class project		
9	10/20	10/22	10/24	W9: Complex numbers; ethics; current, voltage, resistance		6. Bridge project report
10	10/27	10/29	10/31	W10: Probability & statistics; material properties		7. Ethics, complex numbers
11	11/3	11/5	11/7	W11: Case studies: engineering disasters; mechanical advantage		8. Probability, materials
12	11/10	11/12	11/14	W12: Mouse trap project, team project time	Start project	
13	11/17	11/19	11/21	W13: Team project time; final exam review		9. Final review HW
14	11/24	11/26	11/28	W14: Team project time	Th/F Break	
15	12/1	12/3	12/5	W15: Presentations, competition, final exam review	Projects due!	10. Career assessment report
16				Final:	Final Exam	
Notes: <ol style="list-style-type: none"> 1. The weekly topic and HW assignment plans are notional, and may be revised by the instructor as needed 2. Unless otherwise specified by D2L, HW is due on Thursdays at 11:59 pm 3. Quizzes and quiz assignments are assigned by the instructor as needed in D2L 						

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

You can ask questions any time before, during, and after lectures or office hours face to face. You can also send an e-mail. Please expect an answer within few hours for e-mails.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

ü Late work will not be accepted and a grade of "0" will be assigned, unless prior arrangements are worked out with the instructor. Late penalties will be assessed to any prior-arranged approved late work, 20% off per day.

- A make-up exam/quiz is allowed only if the student informs the instructor before the exam due date and provides a doctor's note with an acceptable health excuse. Family emergencies are not accepted as a reason for make-up exams.

ü Attendance is mandatory. The instructor takes attendance for every class.

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](http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx).

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

The syllabus/schedule are subject to change

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: [Netiquette](http://www.albion.com/netiquette/corerules.html)
<http://www.albion.com/netiquette/corerules.html>

ETAMU Attendance

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).
<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 East Texas A&M University 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:

East Texas A&M University 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.

Undergraduate Academic Dishonesty 13.99.99.R0.03

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

Graduate Student Academic Dishonesty 13.99.99.R0.10

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

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

East Texas A&M University

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/)

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

Nondiscrimination Notice

East Texas A&M University 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 East Texas A&M University 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 East Texas A&M University 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 [Carrying Concealed Handguns On Campus](#) 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 East Texas A&M University campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

East Texas A&M University Supports Students' Mental Health

The Counseling Center at East Texas A&M University 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.