



Texas A&M University-Commerce
College of Science and Engineering
Department of Engineering & Technology
Course Outline

Course Code: ENGR 110-001	Course Title: Introduction to Engineering & Technology	Semester: Fall 2024	
Course Credits: 3	Lecture Hours: 3	Tutorial Hours: 0	Lab Hours: 0
Lectures Schedule: Tuesday 4:00 PM-6:30 PM Location: AGIT125	Tutorial Schedule:		Lab Schedule:
Course Instructor: Nizar Tayem, PhD Electrical Engineering, Dept. of Eng. and Technology <ul style="list-style-type: none"> • Office: Dept. of Engineering & Technology • Email: Nizar.tayem@tamuc.edu • Office Hours: Tuesday 3:00 – 4:00 pm Or by appointment • Preferred Form of Communication: email • Communication Response Time: one day to email 		Tutorial Instructor: Lab Instructor:	
Optional Textbook: <ul style="list-style-type: none"> • S. Moaveni, <i>Engineering Fundamentals: An Introduction to Engineering</i>, 5th ed., Cengage Learning, 2016. ISBN-13: 978-1305084766 			
References:			
Notes and other supplemental materials: <ul style="list-style-type: none"> • Lecture notes. 			
Prerequisites: MATH 142 or MATH 2312, or concurrent enrollment.	Co-requisites:		Course Type: <input checked="" type="checkbox"/> Required <input type="checkbox"/> Elective <input type="checkbox"/> Selected Elective
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. <http://coursecatalog.tamuc.edu/undergrad/courses/engr/>

Major Topics*:

Week	Chapter**	Topic
1	-	Introduction to Course and Safety quiz, E&T Dept. Graduation Requirements & Degree Plans.
2	1&2	Introduction to the Engineering Profession & Preparing for a Career
3	3	Introduction to Engineering Design
4	4&5	Engineering Communication & Ethics
5	6	Fundamental Dimensions and Units
6	7	Length and -Related Variables in Engineering
7	8	Time and -Related Variables in Engineering
8		Exam
9	9	Mass and -Related Variables in Engineering
10	10	Force and -Related Variables in Engineering.
11	11	Temperature and -Related Variables in Engineering
	12	Electric Current and -Related Variables in Engineering
13	17	Engineering Materials
14	18 & 20	Mathematics in Engineering Chapter Probability and Statistics in Engineering
15	-	Course review. Project's report and class presentation are due.
16	-	Fall Finals Week - Exam II (Ch. 10-12, 14/15, 17 & 18)

*Contents/schedules may be changed to accommodate official holidays or progress in class. Any updates will be disseminated in advance.

**Sequence of chapters follows that in the optional textbook.

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.

Software:

- Microsoft Office - MS Word, Excel, PowerPoint <https://products.office.com/en-US/>
- MATLAB <https://www.mathworks.com/>

Specific Course Outcomes:

- Describe the fundamental principles of engineering profession and the engineering design process.
- Gain knowledge of engineering disciplines, and professional ethical responsibilities.
- Acquire knowledge on the mathematical, chemical, and physical laws and related principles that students will practice during the coming years.
- Explain basic quantities such as length, time, mass, force, temperature, mole, and electric current and their related variables.
- Acquire knowledge on engineering computational tools to record, organize, analyze data.
- Describe the basic characteristics of materials such as metals, plastics, glass, wood, and concrete.
- Apply mathematics to model and investigate engineering projects and problems

- Justify appropriate engineering techniques and necessary tools for solving technical subjects.
- Verify and validate engineering designs or products via technical and software tools.
- Practice fundamental concepts of teamwork, and effective communication skills.
- Demonstrate effective oral and written communication skills

EVALUATION

Course Component	Weight	Comments
Assignments/Class Activities	25%	Team work
Project	20%	Due week 15 (team work)
Exam I	20%	During week 9 (individual work)
Exam II	25%	During fall finals week (individual work)
Class Participation/Attendance	10%	Individual work
Total	100%	

- Exams will be closed book & notes. Relevant mathematical formulas will be provided. The use of personal phones is strictly prohibited. Each Student will need to bring a scientific calculator for exam. Makeup exam may be offered only if an official permit for absence is provided.
- Assignments and projects will be worked out in groups (teams) and the corresponding results from each team will be submitted in single file for evaluation. Teams will be formed during the first week of the semester, and they will remain constant for the entire semester.
- **Assignments:** Solutions should be submitted at the beginning of the class. Students in each team will be free to communicate together, but independently of their colleagues in other teams. Each team will need to submit one solutions report per assignment. Solutions of an assignment will be due one week from the day it assigned. Unless prior arrangements are made with the instructor, no late submission of assignment solutions is permitted.
- **Project:** Each team will need to identify appropriate topic for practical engineering project (e.g., research, prototype, product or design) within the disciplines of Engineering & Technology Dept, subject to an endorsement by the instructor. Students in each team can freely work together but be independent of other teams. Each team will have to submit a report that describes and analyzes the project and the main findings and present the work in class (during week 15). The report should not exceed 10 pages double space 12 font size with 1-inch margins, and the presentation should not exceed 25 slides. Students will have to apply the acquired knowledge and skills from this course into reports and presentations.

- **Class Attendance:**

# of lect. absences (3 lectures/week)	0 - 9	10	11	12	13
Points Deduction	0	- 3	- 5	- 8	- 10

GRADING SCALES

Grade	A	B	C	D	F
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Percent Range	90%-100%	80%-89%	70%-79%	60%-69%	0.0%-59%
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TECHNOLOGY REQUIREMENTS

- To fully participate in online courses, you will need to use a current Flash enabled internet browser. For PC and Mac users the suggested browser is Mozilla Firefox.
- You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:
 - 512 MB of RAM, 1 GB or more preferred
 - Broadband connection required courses are heavily video intensive
 - Video display capable of high-color 16-bit display 1024 x 768 or higher resolution
- You must have a:
 - Sound card, which is usually integrated into your desktop or laptop computer
 - Speakers or headphones.
 - *For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.
- Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning management system. The most current version of Java can be downloaded at: JAVA web site <http://www.java.com/en/download/manual.jsp>
- Current anti-virus software must be installed and kept up to date.
- Run a browser check through the Pearson learning Studio Technical Requirements website. [Browser Check http://help.ecollege.com/LS_Tech_Req_WebHelp/en-us/#LS_Technical_Requirements.htm#Browser](http://help.ecollege.com/LS_Tech_Req_WebHelp/en-us/#LS_Technical_Requirements.htm#Browser)
Running the browser check will ensure your internet browser is supported.
Pop-ups are allowed. JavaScript is enabled. Cookies are enabled.
- You will need some additional free software (plug-ins) for enhanced web browsing. Ensure that you download the free versions of the following software:
 - Adobe Reader <https://get.adobe.com/reader/>
 - Adobe Flash Player (version 17 or later) <https://get.adobe.com/flashplayer/>
 - Adobe Shockwave Player <https://get.adobe.com/shockwave/>
 - Apple Quick Time <http://www.apple.com/quicktime/download/>
- At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office. Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.
- For additional information about system requirements, please see: [System Requirements for LearningStudio https://secure.ecollege.com/tamuc/index.learn?action=technical](https://secure.ecollege.com/tamuc/index.learn?action=technical)

ACCESS AND NAVIGATION

Pearson Learning Studio (eCollege) Access and Log in Information

This course will be facilitated using Pearson learning Studio, the learning management system used by Texas A&M University-Commerce. To get started with the course, go to myLeo and from the top menu ribbon select eCollege. Then on the upper left side of the screen click on the My Courses tab. <http://www.tamuc.edu/myleo.aspx>

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: It is strongly recommended you perform a "Browser Test" prior to the start of your course. To launch a browser test login to Pearson learning Studio, click on the My Courses tab, and then select the Browser Test link under Support Services.

Pearson Learning Studio Student Technical Support

Texas A&M University-Commerce provides students technical support for the use of Pearson learning Studio.

Technical assistance is available 24/7 (24 hours, 7 days a week).

If you experience learning Studio (eCollege) technical problems, contact the learning Studio helpdesk at 1-866-656-5511 (toll free) or visit [Pearson 24/7 Customer Support Site](#) <http://247support.custhelp.com/>

The student help desk may be reached in the following ways:

- **Chat Support:** Click on *'Live Support'* on the tool bar within your course to chat with a Pearson learning Studio Representative.
- **Phone:** 1-866-656-5511 (Toll Free) to speak with Pearson learning Studio Technical Support Representative.

Accessing Help from within Your Course: Click on the *'Tech Support'* icon on the upper left side of the screen inside the course. Then you will be able to get assistance via online chat or by phone.

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.

Policy for Reporting Problems with Pearson learning Studio

Should students encounter Pearson learning Studio based problems while submitting assignments/discussions/comments/exams, the following procedure must be followed:

1. Students must report the problem to the help desk. You may reach the helpdesk at 1-866-656-5511.
2. Students must file their problem with the helpdesk and obtain a helpdeskticket number
3. Once a helpdesk ticket number is in your possession, students should email me to advise me of the problem and provide me with the helpdesk ticket number.
4. I will call the helpdesk to confirm your problem and follow up with you

PLEASE NOTE: Your personal computer and internet access problems are not legitimate excuses for filing a ticket with the Pearson learning Studio Help Desk. Only Pearson learning Studio based problems are legitimate reasons to contact the Help Desk.

You strongly are encouraged to check for your internet browser compatibility **BEFORE** the course begins and take the Pearson learning Studio tutorial offered for students who may require some extra assistance in navigating the Pearson Learning Studio platform.

myLeo Support

Your myLeo email address is required to send and receive all student correspondence. Please email helpdesk@tamuc.edu or call us at 903-468-6000 with any questions about setting up your myLeo email account. You may also access information at [myLeo](https://leo.tamuc.edu). <https://leo.tamuc.edu>

Learner Support


The [One Stop Shop](#) was created to serve you by providing as many resources as possible in one location. <http://www.tamuc.edu/admissions/onestopshop/>

The [Academic Success Center](#) provides academic resources to help you achieve academic success. <http://www.tamuc.edu/campusLife/campusServices/academicSuccessCenter/>

FREE Mobile APPS

The Courses apps for phones have been adapted to support the tasks students can easily complete on a smaller device. Due to the smaller screen size course content is not presented.

The Courses app is free of charge. The mobile Courses Apps are designed and adapted for different devices.

	App Title:	iPhone - Pearson learning Studio Courses for iPhone Android - learning Studio Courses - Phone
	Operating System:	iPhone - OS 6 and above Android - Jelly Bean, Kitkat, and Lollipop OS
	iPhone App URL:	https://itunes.apple.com/us/app/pearson-learningstudio-courses/id977280011?mt=8
	Android App URL:	https://play.google.com/store/apps/details?id=com.pearson.lsphone

Once downloaded, search for Texas A&M University-Commerce, and it should appear on the list. Then you will need to sign into the myLeo Mobile portal.

The Courses App for Android and iPhone contain the following feature set:

- View titles/code/Instructor of all Courses enrolled in online
- View and respond to all discussions in individual Courses
- View Instructor Announcements in individual Courses
- View Graded items, Grades and comments in individual Courses
- Grade to Date
- View Events (assignments) and Calendar in individual Courses
- View Activity Feed for all courses
- View course filters on activities
- View link to Privacy Policy
- Ability to Sign out
- Send Feedback

learning Studio Notifications

Students can be alerted to course activities via text on their mobile phones or up to two email addresses.

Based on their preferences, students can automatically receive a push notification with every new: course announcement, threaded discussion post, grade, and/or assignment without having to login to the course. Enrolled students will automatically receive email notifications for announcements and can opt out of this feature. To receive text notifications, students must opt in.

To begin setting up notifications, go into your course in learning Studio and click on the bell-shaped Notifications icon on the main menu ribbon.

By default, the student's university email address will appear. This cannot be changed in learning Studio. Additional email addresses may be added by clicking the Add button. After all the other selections are completed be sure to click the Save and Finish button.

UNIVERSITY SPECIFIC PROCEDURES

Detailed information can be found @ 2018-2019 Undergraduate Catalog <http://coursecatalog.tamuc.edu/undergrad/>

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/registrar/documents/studentGuidebook.pdf). <http://www.tamuc.edu/admissions/registrar/documents/studentGuidebook.pdf>. 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>

TAMUC Attendance For more information about the attendance policy please visit the [Attendance](http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx) webpage and [Procedure 13.99.99.R0.01](http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf) , <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: [Undergraduate Academic Dishonesty 13.99.99.R0.03](http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf)
<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

ADA Statement

Students with Disabilities 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

Gee Library- Room 132

Phone (903) 886-5150 or (903) 886-5835, Fax (903) 468-8148

Email: StudentDisabilityServices@tamuc.edu

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

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 based on race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination based on 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 [Carrying Concealed Handguns On Campus](http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf) 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

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