



MCCOY SCHOOL OF ENGINEERING
Course Syllabus: Fall 2026

EENG/ MENG 1101: Intro to Engineering

Contact Information

Instructor: Dr. Shahed Enamul Quadir

Office: Martin Hall 110

Course Schedule: *F: 1 pm – 1:50 pm*

Office hours: *M: 2:00–4:00 PM; T: 1:00–3:00 PM; Th: 3:30–4:30 PM*

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Course Description

An introduction to engineering as a career. The major fields of engineering and the typical responsibilities of an engineer are introduced through the use of guest speakers and field trips. Development of skills in teamwork, problem-solving, and basic computer applications as related to engineering.

Textbook & Instructional Materials

Introduction to Engineering by Paul H. Wright, 3rd Edition.
Wiley. ISBN: 978-0-471-05920-2.

Student Handbook

Refer to: [Student Handbook](#)

List Of Topics Covered

- History of Engineering
- Engineering Challenges for the Future
- Engineering Fields of Specialization
- Career Paths for Graduating Engineers
- Professional Registration
- Professional Organizations
- Engineering Ethics & Case Studies
- Tips for Academic Success
- Team Project Demonstration and Presentation
- Introduction to Arduino and basic engineering design concepts

**Additional material may be covered as time permits.*

Student Resources

For quick links to numerous offices and student services available on the MSU Campus, please refer to the [MCOSME Student Resources Website](#)

Desire 2 Learn (D2L)

D2L will be used for course communication and distribution of course-related information as appropriate throughout the semester.

Grading

- | | |
|---|-------------|
| • Homework Assignments: | 15% |
| • Team Project Presentation: | 5% |
| • Midterm Exam: 25% each | 50% |
| • Final Exam: | 25% |
| • Professionalism, Preparation & Participation: | 5% |
| • Total: | 100% |

Course Organization and Assessment

Lecture Format

This course consists of one 50-minute session each week. Class meetings will cover the most essential lecture topic. Due to time limitations, not all textbook material will be covered in lecture, so students are expected to read assigned sections on their own to reinforce and deepen their understanding. Active participation in class discussions and problem-solving activities is strongly encouraged.

Homework

Homework assignments will be given regularly throughout the semester to reinforce concepts covered in lecture. Each assignment will include several problems designed to build problem-solving skills and conceptual understanding. All assigned problems should be attempted, even if only selected problems are graded. Homework due dates will be announced in advance, and assignments are typically due about one week after they are assigned. Students are encouraged to keep their homework organized and well documented for future reference and exam preparation.

Exams

There will be two exams during the semester. The date and time for each exam will be announced at least one week in advance. The exams will not be cumulative; however, the final exam may include selected concepts from earlier material as appropriate. Exam format and coverage will be clearly communicated prior to each exam.

Extra Credit

Extra credit opportunities may be offered at the instructor's discretion and, if provided, will be announced in advance and made available to all students equally. Extra credit is intended to support learning and cannot replace missed major assignments or exams.

Late Work

Late work may be accepted within a reasonable time window with a modest penalty, unless prior arrangements are made or documented circumstances arise. Students are encouraged to communicate early if they anticipate difficulties meeting a deadline.

Midterm Progress Report

In order to help students keep track of their progress toward course objectives, the instructor will provide a Midterm Progress Report for at-risk students through their WebWorld account. Midterm grades will not be reported on the students' transcript; nor will they be calculated in the cumulative GPA. They simply give students an idea of where they stand at the midpoint of the semester. Students with a midterm grade below a C should talk to the professor and seek out tutoring.

General Study Guidelines

Students are expected to spend a few hours outside of class each week reviewing lecture notes, examples, and assigned material. It is strongly recommended to revisit in-class problems before starting homework assignments. Do not wait until the last day to prepare for exams or complete assignments. Students are encouraged to ask questions, attend office hours, and seek help whenever concepts are unclear. Studying with classmates is encouraged.

Generative AI tools may be used to help understand concepts, but students are responsible for verifying the correctness of any information. Generative AI should not be used to complete homework, laboratory work, quizzes, or exams unless specifically permitted by the instructor.

Student Attitude

After the class starts, the use of phones, conducting private discussions, working on anything that is not directly related to the course, and making derogatory remarks about your classmates or instructor will not be accepted and may result in your dismissal from the class.

Professionalism, Preparation & Participation

This portion of the course grade is based on regular attendance, preparation for class by completing assigned readings, active participation in class discussions and Arduino activities, respectful classroom behavior, teamwork, and professional conduct throughout the semester.

Exam Make-up

Make-up exams will be given only in case of an emergency (accompanied by a doctor's report) or a well-documented conflict due to a scheduled athletic event or a conference.

Course Learning Objectives and Assessment Alignment

Table 1: Course Learning Objectives Aligned with ABET Student Outcomes (1-7).

COURSE OBJECTIVES	1	2	3	4	5	6	7
Students will be able to define the major differences between an engineer and a scientist.				X			
Students will learn about the major engineering accomplishments throughout history.			X	X			X
Students will be able to name some of the major engineering challenges of the future.			X	X			X
Students will be able to name the different engineering fields and specialty areas.			X	X			X
Students will be able to name the career options for graduating engineers.			X	X			X
Students will learn about engineering ethics through case studies based on real-life scenarios.				X			
Students will be able to deliver short engineering project presentations in teams..			X		X		X

Table 2: Summary of ABET Student Outcomes.

1	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2	an ability to apply engineering design to produce solutions that meets specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3	an ability to communicate effectively with a range of audiences.
4	an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgements, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5	an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7	an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Conflict Resolution

- In the event of an issue with the course or the instructor, the student should first contact the instructor. The faculty and the student will discuss the issue. Hopefully, a resolution is reached.
- The student should notify the faculty via email again if the issue still did not get resolved after the first communication.
- If not resolved, the student could then contact the Chair of the McCoy School of Engineering, Dr. Desai, face to face or via email, (raj.desai@msutexas.edu), and discuss the issue. Dr. Desai will discuss the issue at hand with the faculty member. Dr. Desai will discuss the result of this discussion with the student. Hopefully, a resolution is reached on the issue after this step.
- The student should notify the Chair via email if the issue still did not get resolved.
- The Chair will contact the Dean and try to resolve the conflict. In case the conflict deals with the student grade, he will forward the case to the Grade Appeals Committee, if necessary.

Academic Misconduct Policy & Procedures

Academic Dishonesty: Cheating, collusion, and plagiarism (the act of using source material of other persons, either published or unpublished, without following the accepted techniques of crediting, or the submission for credit of work not the individual's to whom credit is given). Additional guidelines on procedures in these matters may be found in the Office of Student Conduct.

[Office of Student Conduct](#)

Moffett Library

Moffett Library provides resources and services to support student's studies and assignments, including books, peer-reviewed journals, databases, and multimedia materials accessible both on campus and remotely. The library offers media equipment checkout, reservable study rooms, and research assistance from librarians to help students effectively find, evaluate, and use information. Get started on this [Moffett Library webpage](#) to explore these resources and learn how to best utilize the library.

Recording Classes

****Recording classes is generally prohibited without the professor's explicit permission.*** Such recordings, when permitted, are for personal use only and may not be uploaded to the internet or otherwise shared, transmitted, or published without the professor's prior consent. Some faculty may not permit recordings of their classes. When it is feasible and appropriate, students may record classes to accommodate disabilities under the Americans With Disabilities Act, with prior approval of Disability Support Services. Such recordings may not be uploaded to the internet or otherwise shared, transmitted, or published.

Refund and Repayment Policy

A student who withdraws or is administratively withdrawn from Midwestern State University (MSU) may be eligible to receive a refund for all or a portion of the tuition, fees and room/board charges that were paid to MSU for the semester. HOWEVER, if the student received financial aid (federal/state/institutional grants, loans and/or scholarships), all or a portion of the refund may be returned to the financial aid programs. As described below, two formulas (federal and state) exists in determining the amount of the refund. (Examples of each refund calculation will be made available upon request).

Emergency Aid Resources for Basic Needs

Unexpected life circumstances can affect anyone. If you are experiencing challenges meeting basic needs—such as housing, utilities, food, transportation, healthcare, technology, textbooks or other life necessities, resources may be available to help. Visit the [Student Emergency Support and Resources webpage](#) to learn more, and explore emergency support opportunities through MSU and how to access them. For additional information, please contact the Office of Student Affairs: Clark Student Center #108, (940) 397-7500, student.affairs@mstuexas.edu.

Services for Students with Disabilities

In accordance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University endeavors to make reasonable accommodations to ensure equal opportunity for qualified persons with disabilities to participate in all educational, social, and recreational programs and activities. After notification of acceptance, students requiring accommodations should make application for such assistance through Disability Support Services, located in the Student Wellness Center, (940) 397-4140. Current documentation of a disability will be required in order to provide appropriate services, and each request will be individually reviewed. For more details, please go to Disability Support Services.

College Policies

Campus Carry Rules/Policies

Refer to: [Campus Carry Rules and Policies](#)

Smoking/Tobacco Policy

College policy strictly prohibits the use of tobacco products in any building owned or operated by WATC. Adult students may smoke only in the outside designated-smoking areas at each location.

Alcohol and Drug Policy

To comply with the Drug Free Schools and Communities Act of 1989 and subsequent amendments, students and employees of Midwestern State are

informed that strictly enforced policies are in place which prohibits the unlawful possession, use or distribution of any illicit drugs, including alcohol, on university property or as part of any university-sponsored activity. Students and employees are also subject to all applicable legal sanctions under local, state and federal law for any offenses involving illicit drugs on University property or at University-sponsored activities.

Campus Carry

Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes has prohibited. The new Constitutional Carry law does not change this process. Concealed carry still requires a License to Carry permit, and openly carrying handguns is not allowed on college campuses. For more information, visit [Campus Carry](#).

Active Shooter

The safety and security of our campus is the responsibility of everyone in our community. Each of us has an obligation to be prepared to appropriately respond to threats to our campus, such as an active aggressor. Please review the information provided by MSU Police Department regarding the options and strategies we can all use to stay safe during difficult situations. For more information, visit [MSUReady – Active Shooter](#). Students are encouraged to watch the video entitled “Run. Hide. Fight.” which may be electronically accessed via the University police department’s webpage: ["Run. Hide. Fight."](#)

Course Schedule:

Week	Activities / Assignments / Exams	Due Date
Week 1 (Aug. 24 – Aug. 28)	Course introduction and syllabus review; Introduction to Engineering using instructor introductory slides (Scientists, Engineers, Technologists, STEM, Science vs. Technology); selected Chapter 1 topics: History of Engineering and Major Engineering Accomplishments	No major assignment; Obtain the textbook before the next class; Read Chapter 2 before next class
Week 2 (Aug. 31 – Sept. 4)	Chapter 2: Definition of Engineering, Engineering Fields, Engineering Teams, Functions of Engineers, and Career Paths	Homework 1 Assigned; Read Chapter 3 before next class
Week 3 (Sept. 8 – Sept. 11)	Chapter 3: The Engineer as a Professional, Professional Registration (FE/PE),	Homework 1 Due (Tentative – See

Week	Activities / Assignments / Exams	Due Date
(Labor Day Sept. 7)	Professional Organizations, and Introduction to Engineering Ethics; Brief Arduino platform introduction	D2L); Read Chapter 4 before next class
Week 4 (Sept. 14 – Sept. 18)	Chapter 4: The Successful Engineering Student, Learning Strategies, Creativity, and Problem Solving; Arduino LED demonstration and discussion	Homework 2 Assigned; Read Chapter 5 before next class
Week 5 (Sept. 21 – Sept. 25)	Chapter 5: Engineering Design Process, Brainstorming, Design Teams, and Engineering Problem Solving; Arduino project introduction and team formation	Homework 2 Due (Tentative – See D2L); Review Chapters 1–5 for Midterm 1
Week 6 (Sept. 28 – Oct. 2)	Review of Chapters 1–5; Midterm Exam 1 (Tentative)	Midterm Exam 1 (Tentative – See D2L); Read Chapter 6 before next class
Week 7 (Oct. 5 – Oct. 9)	Chapter 6: Engineering Communication (technical writing, presentations, teamwork, and information literacy); Arduino programming activity and project development	Homework 3 Assigned; Complete Chapter 6 before next class
Week 8 (Oct. 12 – Oct. 16)	Continue Chapter 6: Engineering Presentations and Communication Skills; Arduino project progress and instructor guidance	Homework 3 Due (Tentative – See D2L); Read Chapter 7 before next class
Week 9 (Oct. 19 – Oct. 23)	Chapter 7: Engineering Calculations (selected topics: engineering documentation, units, significant figures, and basic calculations); Arduino project development	Project Progress Update; Review Chapters 6–7
Week 10 (Oct. 26 – Oct. 30)	Engineering Design Activity and Team Discussion; Arduino project development; Instructor feedback	Review Chapters 6–7 before Midterm 2

Week	Activities / Assignments / Exams	Due Date
Week 11 (Nov. 2 – Nov. 6)	Engineering Ethics Case Study (e.g., Space Shuttle Challenger or another engineering case study); Arduino project development	Draft Presentation Slides (Tentative – See D2L)
Week 12 (Nov. 9 – Nov. 13)	Review of Chapters 6–7 and selected engineering ethics topics; Midterm Exam 2 (Tentative)	Midterm Exam 2 (Tentative – See D2L)
Week 13 (Nov. 16 – Nov. 20)	Engineering Design Review, Project Testing, Presentation Practice, and Instructor Feedback	No major assignment
Week 14 (Nov. 23 – Nov. 27) (Thanksgiving Holidays: Nov. 25–29; Campus open Nov. 25)	Continue project development and presentation preparation	No major assignment
Week 15 (Nov. 30 – Dec. 4)	Student Arduino project demonstrations, presentations, course reflection, and wrap-up	Final Project and Presentation Due (Tentative – See D2L)
Final Exam	Comprehensive Final Examination	According to the University Final Exam Schedule

Reading Preparation

Students are encouraged to complete the suggested textbook reading before each class. These readings are intended to prepare students for lectures, class discussions, hands-on project activities (where applicable), and engineering design activities.

Note: Homework assignments, examinations, project milestones, chapter coverage, and suggested reading assignments are tentative. Students should refer to D2L for the most current schedule, announcements, assignment details, and due dates.

Disclaimer Statement

Information contained in this syllabus, other than grading, attendance, and late assignment policies, may be subject to change with advance notice, as deemed appropriate by the instructor.