TEXAS TECH UNIVERSITY

Department of Computer Science

Course Syllabus

Course Name: Introduction to Engineering Design	**Number:** ENGR 1340 (009)	**Semester: Fall** 2025
Instructor: Dr. Maaz Amjad	**Office: EC** 211B	**Email:** maaz.amjad@ttu.edu
Office Hours: MON 2:30 – 4:30 pm, WED 2:30 – 3:30 pm, or by appointment (M-F)	**Location: EC** 211B	**Link:** See Canvas **Credit:** 3 Credits
TA/Grader: Ananyaa Kaushik		**Email:** anakaush@ttu.edu
TA/Grader Office Hours: WED 11 am - 12 pm, FRI, 11 am - 1 pm		**TA/Grader Office:** EC 202A

If you write me an email for this class, please start the email subject with [ENGR-009].

Catalogue Description: A first-year project-based, hands-on engineering design process with emphasis on developing oral and written communication skills. Students work in teams to design, implement, and test prototypes or solutions to their engineering disciplines.

Textbook (optional**):** (*Recommended*) (PDF will be provided on Canvas)

1. Dym, Clive L (2015). *Engineering design: A project-based introduction*. John Wiley & Sons.
2. McCahan, S., Anderson, P., Kortschot, M., Weiss, P. E., & Woodhouse, K. A. (2015). *Designing engineers: an introductory text*. John Wiley & Sons.

Course Description: This course is to introduce the student to engineering design process and to enhance student confidence in problem solving.

Course Objectives:

1. Introduce the fundamentals of DevSecOps and provide the foundations of integration with software development and information technology operations
2. Provide foundational knowledge of application and web development through hands-on projects
3. Provide a basic understanding of tools for application and web development
4. Provide basic knowledge of Business Model Canvas and Lean LaunchPad methodologies
5. Provide understanding of the engineering design process and emphasize its iterative nature
6. Promote team building and presentation skills to enhance student confidence in problem solving
7. Cultivate an engineering mindset, develop skills in teamwork, communication, and create ethical awareness

Course Prerequisite: TSI readiness, admission to first-year engineering foundational curriculum.

Key Topics:

1. Introduction – Overview of the Course
2. Engineering Design Process:
    a. Problem Statement
    b. Functional requirements and constraints
    c. Project and team management
3. Conceptual Design
4. Engineering Design Tools
5. Preliminary Design
6. Detailed Design
    a. Safety review
7. Prototype Start
    a. Accessibility in Prototyping
    b. Analytics in Prototyping
8. Prototype Build and Test
9. Presentation of Demos'
10. Design Iterations
11. Final Product
12. Final Product Showcase, Technical Report, and Oral Presentation

Learning Outcomes: Students who have completed this course should have the ability to:

1. An ability to apply engineering design to produce solutions that meet specific needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
2. An ability to communicate (written and oral) effectively to deal with a range of audiences
3. An ability to function effectively in a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
4. Understand and be able to apply engineering design to produce solutions that meet specific needs. This includes consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
5. Apply an engineering approach to open-ended problems by identifying user needs, framing challenges, and developing practical solutions
6. Apply the Business Model Canvas and Lean LaunchPad methodologies to create project-based innovative solutions that have entrepreneurial potential
7. Be familiar with different DevSecOps tools and implement the design process from ideation to prototypes and digital solutions
8. Test and refine designs through iterative improvement based on user and peer feedback
9. Efficiently work on a team whose members together provide leadership and be able to create and help promote a collaborative and inclusive environment
10. Establish goals, plan tasks, and meet desired objectives
11. Communicate ideas through technical presentations, wireframes, reports, and pitches

Methods of Assessment of Learning Outcomes: The expected learning outcomes for the course will be assessed through quizzes, assignments, comprehensive exams, and projects.

Assessments	Details
Quizzes	Periodic quizzes will assess students' understanding of foundational concepts, including the engineering design process, DevSecOps tools, web development basics, accessibility principles, and entrepreneurial frameworks (Business Model Canvas & Lean LaunchPad). Quizzes will focus on both theoretical knowledge and practical application.
Assignments	Regular individual and group assignments will reinforce technical skills, such as Git and GitHub usage, HTML/CSS coding, website deployment, and early-stage prototyping, and how Business Model Canvas and Lean LaunchPad methodologies are used in product development. Assignments are designed to build up the students' practical abilities step-by-step and provide opportunities for iterative improvement based on feedback.
Projects	Project work will constitute a major portion of the assessment. Students will apply the engineering design process in teams to identify real-world problems, develop solutions, create prototypes, and deliver final products. Project evaluation will consider technical accuracy, creativity, usability, teamwork, documentation quality, and final presentations during design showcases.
Examinations	Written examinations may be used to assess deeper conceptual understanding of engineering design principles, ethical considerations in engineering, integration of technology tools, the ability to analyze and communicate complex information effectively, and the ability to synthesize technical tools with Business Model Canvas & Lean LaunchPad in the engineering design process. Exams will emphasize critical thinking rather than rote memorization.

Assignment Submission: All assignments must be submitted via TTU Canvas. No assignments should be submitted via email. Any assignment submitted via email will not be graded and will receive zero grade. In case you have any issues submitting assignments via TTU Canvas, please contact tech support and resolve the problem.

Grading Policy: The final grade for this course will be based on the items described below:

Group Work: 50% of Final Grade

- Projects will be long programming or written assignments to be done outside of class. They may also consist of giving presentations to the instructor or the class.
  1. **Project 1 (25 %):**
     a. *Preliminary design Weight*: 15%
        - Evaluation Focus: Quality of initial problem framing, user needs identification, definition of functional requirements, constraint analysis, and initial project planning.

     b. *Prototype Development and Presentation Weight*: 10%
        - Functionality, user-centered design approach, technical feasibility, and clarity of presentation during the mid-project demonstration.

  2. **Project 2 (25 %): Culminate in one integrated final project**
     a. *Final Design Project Weight*: 15%
        - Completeness, robustness, usability, and overall quality of the final engineered solution, evaluated against defined goals and constraints.

     b. *Final Design Showcase Weight*: 10%
        - Effectiveness of the final demonstration and oral presentation, including narrative coherence, design justification, user impact, and visual/technical communication.

<u>Individual Work</u>: 50% of Final Grade

3. Quizzes: **5%**
   - Quizzes are short tests given through Canvas or during class lecture (in-class) over the subject matter covered in the course.
4. Assignments: **15%**
   - Assignments will be programming or written assignments to be done outside of class.
   i. Safety, Hands-on skills: 5%
      - Demonstrated adherence to safety protocols during laboratory and prototyping activities, proficient and responsible use of technical tools and equipment.
   ii. 3 Individual homework: 5%
      - Timely submission of individual assignments and milestone deliverables showcasing understanding of key technical concepts (e.g., version control, web development, prototyping).
   iii. Business Model Canvas and Lean Launchpad: 5%
      - Students will be asked to describe their prototypes as a business model and how their prototypes solve customer problems and focus on maximizing customer value.
5. Exams: **30%**
   - Two comprehensive exams (midterm and final), each worth 15%.

Extra Credits: Students will have opportunities to earn extra credits by participating in TTU Innovation Hub events: Red Raider Startup (Fall & Spring), Red Raider Idea Competition (Fall), Discoveries to Impact (Spring), and Lunch and Learn (held a few times each semester). To receive extra credit, students must submit a reflection explaining how the event deepened their understanding of course topics and how the experience at the Innovation Hub will inform Project 1 or the Final Project. Students will also be asked to complete surveys administered by the TTU Innovation Hub at both the beginning and the end of the semester.

Criteria for Grading: All assignments will be graded within two weeks of the due date unless unforeseen circumstances prevent timely grading. Table 1 shows the grading scale and breakdown of grade components.

Table 1: Scores are not rounded

letter grade	lower bound	upper bound
A	90%	100%
B	80%	89%
C	70%	79%
D	60%	69%
F	0%	59%

For example, if you receive an 89.9 score, it will be considered 89%, and you will still receive a B grade.

Additional Information

6. The final exam will replace your lowest exam grade if the final exam score is higher than your lowest exam score. However, the final exam will not replace the grade on an exam you did not take.
7. Deadlines will not be extended due to system failures or disk crashes. Please back up your files securely in the cloud (OneDrive is free for TTU students) to prevent the loss of work.

8. Late work will only be accepted within 72 hours of the due date/time with the following deductions unless prior arrangements have been made with the professor or otherwise stated in class:
   a. 10% deduction for the first 24 hours
   b. 25% deduction for the second 24 hours
   c. 40% deduction for the third 24 hours
9. Some assignments will not be accepted late and will be marked as such on Canvas.
10. Quizzes will never be accepted late, regardless of any reason.
11. Students may not make up or submit any item once it has been graded and returned to any student.
12. All questions concerning graded material must be submitted **in writing** along with the graded material by the last day of classes as marked in the Academic Calendar.

COURSE SPECIFIC POLICIES

Attendance Policy

Regular and punctual attendance is mandatory for this course. As a student, you are required to attend all scheduled lecture sessions. These sessions are pivotal to your learning and provide crucial instruction on the course material. Furthermore, all announcements, assignments, and lecture materials covered in each session will be your responsibility, regardless of whether or not you were present in the lecture sessions.

1. **Responsibility for Class Material**: If you miss a lecture, you are still responsible for all course content covered, including any announcements made, assignments given, and material discussed during the lecture. It is recommended that you collaborate with fellow students to receive any missing lecture materials or learn of any announcements covered during the lecture. Contact the instructor by email or approach the instructor during office hours to discuss any possible make-up opportunities assuming you are in accordance with the rest of this policy.
2. **Notification of Absence**: If you must be absent from class for any reason, you are required to notify the instructor in writing either prior to the absence or within a 48-hour window following the missed lecture. This notification should include the reason for your absence and a plan for making up any missed coursework. If you need to be absent for more than one week, please check these guidelines.
3. **Make-Up Work**: In cases of notified absences, arrangements for make-up work will be made on a case-by-case basis. This may include, but is not limited to, make-up assignments or an alternative exam schedule. Please note that it is at the discretion of the instructor to provide make-up work opportunities.
4. **Unexcused Absences**: Unexcused absences, i.e., those without prior notification or a valid reason, will not be taken lightly. **Please not that only two absences with prior notification will be accepted. Starting from third absence, a penalty of a minimum of 10% will be applied to any assignments, labs, or exams missed due to an unexcused absence**. In certain cases, the student may not be allowed to make up for the missed coursework at all. Please note that it is at the discretion of the instructor to provide make-up work opportunities.

This attendance policy aims to foster a disciplined academic environment and ensure that each student can make the most of this learning opportunity. Your presence and active participation in every lecture are integral to your understanding of the course content, and any absence, excused or otherwise, will potentially have a significant impact on your academic performance.

Extra Credit and Grading Curves

This policy outlines the guidelines for the allocation of extra credit opportunities and the application of grading curves in this course. It is designed to foster consistent attendance active class participation and preserve the standards of our academic community as described in the Attendance and Expanded Academic Integrity policies.

1. **Eligibility for Extra Credit and Grading Curves**
   a. *Course Attendance*
      Regular attendance is essential for academic success. **Students must attend at least 70% of the course lectures to qualify for extra credit assignments and to benefit from any grading curves implemented in this course**. Attendance will be strictly monitored for each class session using

in-class attendance sheet or/and using other platforms (e.g., TopHat). This requirement is waived for Distance Learning students taking courses specifically marked as for Distance Learning.

b. *Academic Integrity*
Students who are involved in an academic integrity investigation may not be eligible for extra credit or grading curves. If a student is found to be in violation of the academic integrity policy, their eligibility for extra credit or grading curve advantages will be revoked for the duration of the academic term.

c. *Class Participation*
Students who are actively involved in class discussions and actively participate in discussing the assigned reading materials and take part in class questions answer sessions may be eligible for extra credit or grading curves.

2. **Extra Credit**
   d. Extra credit assignments are intended to provide students with an opportunity to improve their grades by demonstrating a deeper understanding of the course material. However, these opportunities are contingent upon meeting the attendance and academic integrity requirements stated above.
3. **Grading Curves**
   e. When deemed appropriate, grading curves will be employed to more accurately reflect the student's comprehension of the course material. However, the advantage of grading curves will only be accessible to those students who meet the previously mentioned attendance and academic integrity requirements.

TEXAS TECH UNIVERSITY POLICIES / STATEMENTS

Academic Integrity and Plagiarism Statements:
Academic integrity is taking responsibility for one's own class and/or course work, being individually accountable, and demonstrating intellectual honesty and ethical behavior. Academic integrity is a personal choice to abide by the standards of intellectual honesty and responsibility. Because education is a shared effort to achieve learning through the exchange of ideas, students, faculty, and staff have the collective responsibility to build mutual trust and respect. Ethical behavior and independent thought are essential for the highest level of academic achievement, which then must be measured. Academic achievement includes scholarship, teaching, and learning, all of which are shared endeavors. Grades are a device used to quantify the successful accumulation of knowledge through learning. Adhering to the standards of academic integrity ensures grades are earned honestly. Academic integrity is the foundation upon which students, faculty, and staff build their educational and professional careers. [Texas Tech University ("University") Quality Enhancement Plan, Academic Integrity Task Force, 2010].

Texas Tech University policies concerning Academic Honesty, Special Accommodations for Students with Disabilities, and Student Absences for Observance of Religious Holy Days can be found at the following link: TTU Required Policies. Additional Texas Tech University policies can be found at the following link: TTU Recommended Policies

AI Use Policy:
The use of generative AI tools (such as ChatGPT, Claude, Grammarly, Copilot, or similar tools) is allowed only to support your learning and understanding of concepts. However, *any code or any type of content that is generated, debugged, or obtained through any types of AI tools cannot be submitted as your own work, even with proper citation*. Submission of AI-generated content (i.e., information, text, or images) as your own work is a violation of academic integrity and may result in referral to the Office of Student Conduct. Please contact your instructor if you have questions regarding this course policy.

Ethical Conduct
Students are expected to comply with the Texas Tech Code of Student Conduct in all aspects of this class. The Code of Student Conduct may be found in the Student Handbook and/or Office of Student Conduct (https://www.depts.ttu.edu/dos/Studenthandbook2022forward/Student-Handbook-2023-2024.pdf).

In order to assure that all students have the opportunity to gain from time spent in class, unless otherwise approved by the instructor, students are prohibited from engaging in any other form of distraction, such as working on other classes, taking cell phone calls, text messaging, and working on laptop computers. Inappropriate behavior in the classroom shall result, minimally, in a request to leave class. Violations of conduct, including academic dishonesty, foul language, and classroom citizenship, are eligible to be reported to the Student Conduct Office.

ADA Statement

Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructor's office hours. Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructor's office hours. Please note: instructors are not allowed to provide classroom accommodations to a student until appropriate verification from Student Disability Services has been provided. For additional information, please contact Student Disability Services in Weeks Hall or call 806-742-2405.

Religious Holy Days

"Religious holy day" means a holy day observed by a religion whose places of worship are exempt from property taxation under Texas Tax Code §11.20. A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence. A student who is excused under section 2 may not be penalized for the absence; however, the instructor may respond appropriately if the student fails to complete the assignment satisfactorily. Please check the university policy on excused absences for religious holidays.

Absence due to Officially Approved Trips

Students planning an approved absence must notify the instructor of their departure and return dates prior to the trip to obtain advance permission; please check these guidelines.

Accommodation for Pregnant Students

To support the academic success of pregnant and parenting students and students with pregnancy-related conditions, the University offers reasonable modifications based on the student's particular needs. Any student who is pregnant or parenting a child up to age 18 or has conditions related to pregnancy may contact Alex Faris, the Texas Tech University designated Pregnancy and Parenting Liaison, to discuss support available through the University. The Liaison can be reached by emailing alfaris@ttu.edu. Should a student communicate with the instructor that they are pregnant or have a pregnancy-related condition or may need additional resources related to pregnancy or parenting, the instructor will communicate that student's information to the Title IX Coordinator, who will work with the student and others, as needed, to ensure equal access to the University's education program or activity.

For more information regarding supportive measures, please contact pregnancy and parenting liaison Alex Faris (alfaris@ttu.edu |806.834.3420) or visit below website to submit a request to Alex Faris for assistance. https://www.depts.ttu.edu/titleix/PregnacnyandParenting/index.php

Late Arrival, Late Return, and Early Departure Policy

The Computer Science department strictly follows the official academic calendars and requires students who are enrolled in face-to-face sections to be on campus by the first class day of each semester and leave campus no earlier than the last day with scheduled course activities. The only exception we make is for incoming new international students who often need more time to obtain the necessary paperwork, including a study visa, and in such cases, we accommodate late arrival for up to the 12th class day of their first semester. No exceptions will be made for late return or early departure requests from current students in general. If it is because of an unforeseen and uncontrollable situation, a student needs early departure or late return; then the student must obtain in-advance

approval from the academic advisors and instructors of all enrolled courses for an excused absence of four (4) or fewer weekdays and an additional in-advance approved Extended Absence Verification* from the Office of the Dean of Students for an extended absence of five (5) or more weekdays. If a student has unexcused absences, then the student must take full responsibility for any missed classes, missed academic work, or any financial issues caused.

*Extended Absence Verification Request to be verified by Office of the Dean of Students: https://cm.maxient.com/reportingform.php?TexasTechUniv&layout_id=6

Food Insecurity

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students for support. The important thing is that all of the programs are now housed under the umbrella of The Raider Relief – Advocacy and Resource Center. It was developed to support student needs and connect them with essential resources necessary for academic success as a Texas Tech student. Furthermore, please notify the professor if you are comfortable in doing so. Raider Red's Food Pantry (located in Doak 117) supplies personal care items and a selection of nonperishable food to students. The Raider Relief Advocacy and Resource Center (RR- ARC) is a centralized hub of resources and support for students facing hardships with their basic needs. Through a comprehensive network of campus and community partnerships, we strive to alleviate the burden of financial, physical, and emotional hardships and promote the well-being and academic success of all students. Please check these outreach initiatives, Raider Relief Fund, Raider Red's Food Pantry, and Red to Black Peer Financial Coaching, and fill out our form to get connected: https://www.depts.ttu.edu/raiderrelief/.

Discrimination, Harassment, And Sexual Violence

Beginning January 1, 2020, Texas Education Code, Section 51.252 (formerly known as Senate Bill 212) requires all employees of Texas universities, including faculty, to report to the Title IX Office any information regarding incidents of sexual harassment, sexual assault, dating violence, or stalking that is disclosed to them. Texas law requires that all employees who witness or receive information about incidents of this type (including, but not limited to, written forms, applications, one-on-one conversations, class assignments, class discussions, or third-party reports) must report it to the Title IX Coordinator. Before talking with me, or with any faculty or staff member about a Title IX-related incident, please remember that I will be required to report this information.

Texas Tech University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from gender and/or sex discrimination of any kind. Sexual assault, discrimination, harassment, and other Title IX violations are not tolerated by the University. Report any incidents to the Office for Student Rights & Resolution (806)-742-SAFE (7233) or file a report online at titleix.ttu.edu/students. Faculty and staff members at TTU are committed to connecting you to resources on campus. Some of these available resources are TTU Student Counseling Center, 806- 742-3674, https://www.depts.ttu.edu/scc/(Provides confidential support on campus.) TTU 24-hour Crisis Helpline, 806-742-5555, (Assists students who are experiencing a mental health or interpersonal violence crisis. If you call the helpline, you will speak with a mental health counselor.) Voice of Hope Lubbock Rape Crisis Center, 806-763-7273, voiceofhopelubbock.org (24-hour hotline that provides support for survivors of sexual violence.) The Risk, Intervention, Safety and Education (RISE) Office, 806-742-2110, https://www.depts.ttu.edu/rise/ (Provides a range of resources and support options focused on prevention education and student wellness.) Texas Tech Police Department, 806-742- 3931, http://www.depts.ttu.edu/ttpd/ (To report criminal activity that occurs on or near Texas Tech campus.). If you would like to have more information about reporting options and resources, I encourage you to visit the TTU website for more information or to contact the professional staff: https://www.depts.ttu.edu/titleix/students/Report_an_Incident.php.

Civility in the Classroom
Texas Tech University is a community of faculty, students, and staff that enjoys an expectation of cooperation, professionalism, and civility during the conduct of all forms of university business, including the conduct of student-student and student-faculty interactions in and out of the classroom. Further, the classroom is a setting in which an exchange of ideas and creative thinking should be encouraged and where intellectual growth and development are fostered. Students who disrupt this classroom mission with rude, sarcastic, threatening, abusive, or obscene language and/or behavior will be subject to appropriate sanctions according to university policy. Likewise, faculty members are expected to maintain the highest standards of professionalism in all interactions with all constituents of the University (www.depts.ttu.edu/ethics/matadorchallenge/ethicalprinciples.php). If you exhibit distractive or inappropriate behavior (without explicit consent of the instructor), you may be asked to leave the class session and be subject to attendance-related penalties.

COVID-19 Statement
The University will continue to monitor CDC, State, and TTU System guidelines concerning COVID-19. Any changes affecting class policies or temporary changes to delivery modality will be in accordance with those guidelines and announced as soon as possible. Students will not be required to purchase specialized technology to support a temporary course modality change, though students are expected to have access to a computer to access course content and course-specific messaging as needed. If you test positive for COVID-19, report your positive test through TTU's reporting system:
https://www.depts.ttu.edu/communications/emergency/coronavirus/ . Once you report a positive test, the portal will automatically generate a letter that you can distribute to your professors and instructors.

Safety and Wellness:
The Texas Tech University (TTU) and Edward E. Whitacre Jr. College of Engineering are committed to the safety and wellness of our students by providing various services and resources.

Make sure you register with Tech Alert to get emergency notifications by phone call, text, or email. You are encouraged to review the Emergency Action Plans (EAPs) and watch the videos of Know What To Do In Emergency Events and Surviving an Active Shooter Event Training to be prepared for those emergency situations. Additionally, due to the nature of laboratory or design courses, it is mandatory for you to follow the university safety policies and any additional safety protocols required by the course instructor(s).

For your well-being, various services are available at Student Counseling Center and Student Health Services. The Student Wellness Center provides convenient walk-in services M-F from 8 am to 5 pm. Furthermore, the Texas Tech Crisis HelpLine (806-742-5555) provides 24/7/365 assistance for students experiencing a crisis or distress.

Emergency/Crisis Phone Number

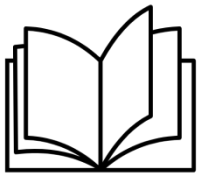
TTU Police (UPD) Emergency	911
TTU Police (UPD) Non-Emergency	806.742.3931
TTU Emergency Maintenance	806.742.4677
TTU EHS (M-F, 8 am – 5 pm)	806.742.3876
SafeRide	806.742.7433
TTU Crisis HelpLine	806.742.5555
Student Wellness Center (From Urgent Care to a Full-Service Pharmacy on site)	806.742.2848
Title IX Reporting	806.742.7233
The Dean of Students	806.742.2984

Course Resources/ Tools

Dr. Maaz Amjad

CANVAS

Learning Management System



Recommended Books

***Important Note*:** The topics (below table), the order in which they are presented, and the information presented in this complete syllabus are subject to change, expansion, contraction, or stasis during the semester at the instructor's discretion because of scheduling issues, developments in the discipline, or other contingencies. The copy of the syllabus on Canvas takes precedence in case of conflict between different versions of the syllabus. This schedule is also tentative and subject to change.

Week of	Monday	Wednesday	Friday
8/25/2025	Course Overview, Learning Outcomes, Assessment Structure	What is Engineering Design? (Frameworks, Impact)	Role of Engineers in Society + Ethics Introduction
9/1/2025	School Holiday	Identifying Needs: Problem Statements and Customer Discovery	Business Model Canvas and the Lean LaunchPad Methods/Workshop
9/8/2025	Team Formation & Agile Project Planning Tools + Introduction to Preliminary Design	How to Use AI and Prompting for the Design Process	Intro to Wireframing and User Experience & Ideation Techniques: Brainstorming with AI and Mind Mapping/Workshop
9/15/2025	Whiteboard Brainstorming (In-class Exercise)	Git Basics: Commits, Repositories, Branching	GitHub: Cloning, Pull Requests, Issue Tracking
9/22/2025	DevOps Introduction: CI/CD, Automation Concepts, Demo Walkthrough	HTML Basics: Syntax, Tags, Nesting, Page Structure	Semantic HTML: Headings, Lists, Tables, Media
9/29/2025	Hands-on: Building a Basic Portfolio Page	CSS Styling Essentials: Selectors, Colors, Fonts, Box Model	Flexbox and Grid Layout Systems
10/6/2025	Responsive Design Principles	Hands-on Lab: Styling the Portfolio Page	HTML Forms: Inputs, Labels, Validation
10/13/2025	Guest Lecture/Panel	Accessibility: ARIA Roles, Alt Text, Keyboard Navigation	Introduction to APIs: JSON, HTTP, Example Fetch Calls
10/20/2025	Hosting Websites: GitHub Pages, Netlify, Vercel	Web Analytics Overview: Google Analytics, Ethical Data/Midterm Exam Review	Midterm Exam

10/27/2025	Figma Introduction: Low-Fidelity Prototyping / Peer Reviews and Iteration Techniques	Risk Assessment and Safety in Prototypes	MVP Design Refinement Based on Feedback
11/3/2025	Task Allocation and Roadmap for Final Product	Guest Lecture/Panel	Final Product Build: Code Freeze, Debugging
11/10/2025	User Testing: Observation and Interview Techniques	Workshop: AI-assisted and Vibe coding	Overview and Introduction to Computer Science
11/17/2025	Overview and Introduction to CS Overview: Technical Report & Oral Presentation	Technical Report & Oral Presentation	Technical Report & Oral Presentation
11/24/2025	Refinement of Technical Report & Oral Presentation	School Holiday	School Holiday
12/01/2025	Refinement of Technical Report & Oral Presentation	Exam Review	X
College Presentation Showcase	December 2nd Tuesday: SUB Matador Room from 3:00 – 6:00 pm		
Final Exam:	Tuesday, December 9, 10:30 am to 1:00 pm		