# ME 481 Schedule

**Fall 2023**

Schedule is subject to change as circumstances during the course of the semester demand.

**Bold items denote items that MUST be turned in for credit.**

[Faculty Lecturers: MN: Dr. Mehrdad Nejhad, TS: Dr. Trevor Sorensen]

<table>
<thead>
<tr>
<th>Week</th>
<th>Monday</th>
<th>Wednesday</th>
<th>Weekly Tasks/Milestones</th>
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</table>
| 1    | Welcome & Introduction (TS & MN)  
(Sec 1: No Lab, Sec 2: Finalizing Teams) | Design Process Overview  
(MN)  
(During Lab Sections) | -Finalize projects  
-Initial team and sections selections  
-Design Notebooks Guidelines |
| 2    | Design Process Overview  
(MN) | Project Management [TS]  
(WBS; GANTT charts; reviews - SRR, PDR, CDR, TRR; risk) management; | -Assumption of Risk  
-Design Lab Access [Forms available on-line on RIP]  
-Freeze teams and Schedule Weekly Meeting Times  
-Background information and Literature Search |
| 3    | NO CLASS - Labor Day | Project Management – cont [TS]  
(WBS; GANTT charts; reviews - SRR, PDR, CDR, TRR; risk) | -Objective Statements/Functional Requirements  
-Request for Proposal (RFP), sample posted  
-Report Outline  
-Design Process Examples (Lab Sections) |
| 4    | Project Management – cont [TS]  
(WBS; GANTT charts; reviews - SRR, PDR, CDR, TRR; risk)  
Requirements Definition & Management [TS] | Safety Training & Release Forms (Lewis Moore)  
[MN] | -Literature Search  
-Brainstorming  
-Order-of-magnitude analysis  
-Project Proposal Guidelines (Lab Sections) |
| 5    | Engineering Communication (Oral  
Communication) [MN] | Literature Survey, library resources, finding  
reports and patents, search strategies,  
engineering database - [TS] | -Strategies  
-Group Check  
-Report Outline, and Draft  
-Project Proposal Report Reviews (Lab Sections) |
| 6    | Engineering Communication (Writing  
Communication) [MN] | Systems Engineering - [TS] | -Literature Search  
-Concepts  
-Project Proposal Report Due (Lab Sections) |
| 7    | Systems Engineering - cont. [TS] | Ethics - The basics and ASME code [MN]  
Ethics - Evaluation Theories [MN] | -Concept Selection  
-Modules  
-Safety Training (Moore) - 30 min (Mandatory) |
| 8    | Concepting [MN] | Solid Works Solid Modeling Lecture [ZT] and  
Workshop Assignments [ZT, TS, & MN] | -Solid Modeling Workshop (Solid Works)  
-MCM  
-Proof of Concept |
| 9    | Modeling [MN] | Solid Works Finite Element Analysis (FEA)  
Lecture [ZT] and Workshop Assignments [ZT, TS, & MN] | -FEA Workshop (Solid Works)  
-Modeling & Analysis  
-Website/Wiki and Design Notebook Checks |
| 10   | Finite Element Analysis (FEA) & FEA  
Boundary Conditions [MN] | Failure Analyses [MN] | -Bench level/Prototype testing  
-Group Check  
-Solid Modeling Workshop Checkoffs |
Attorney (or from UH-OTT) [MN] | -FEA Workshop Checkoffs  
Preliminary Design Reviews (During Lab Sections) |
| 12   | Failure Mode & Effect Analysis  
(FMEA) [TS] | FSATE Lecture on CAD, FEA, CFD:  
2:30 – 4:30 PM on Zoom [MN] | -Detailed Analyses and Material Selections  
Preliminary Design Report Due |
| 13   | Engineering Economics [TS] | Selling your idea/Sales Pitch [TS]  
Vincent Kimura, Office of Innovation and  
Commercialization | -Detailed Analyses and Final Materials Selections  
-Revise/iterate Sales pitch and Website/Wiki |
| 14   | Ethics - Case Studies [TS] | In-Class Sales Pitch [TS] & [MN] | -Website/Wiki and Design Notebook Checks  
-Begin Final Report Draft  
-Panic --- Then finish loose ends! |
| 15   | Team Dynamics [MN] | Good Grades do Count, but That's Not All”  
[MN] | -Design Freeze |
| 16   | Final Presentation/CDR (1)/Lab  
Sections | Final Presentation/CDR (2)/Lab Sections  
Last Day of Classes for ME 481 | -Critical Design Review/Presentation (CDR) |
| 17   | -Final Website Check | - Critical/Comprehensive Design Report  
- Design Notebooks  
-Peer Evaluations Due by 8 AM 12/14/2023 | -Critical/Comprehensive Design Report (CDR) |