# ME 481 Schedule

**Fall 2021**

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] | - 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) | - Assumption of Risk  
- Design Lab Access [All on-line Initially]  
- 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] | Safety Training & Release Forms (Lewis Moore) | - Literature Search  
- Brainstorming  
- Order-of-magnitude analysis  
- Project Proposal Guidelines (Lab Sections) |
| 5    | Engineering Communication (Writing primarily, but a bit on Oral as well) [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) |
- Concepts  
- Project Proposal Report Due (Lab Sections) |
- Modules  
- Safety Training (Moore) - 30 min (Mandatory) |
| 8    | Solid Works Finite Element Analysis (FEA) Lecture [ZT] and Workshop Assignments [ZT, TS, & MN] | Concepting [MN] | - Solid Modeling Workshop (Solid Works)  
- MCM  
- Proof of Concept |
- FEA Workshop (Solid Works)  
- Modeling & Analysis  
- Website/Wiki and Design Notebook Checks |
| 10   | Failure Analyses [MN] Material Selection [MN] | Patents and Intellectual Property (IP) Rafael Gacel-Sinclair, Patent Attorney (or from UH-OTT) | - Bench level/Prototype testing  
- Group Check  
- Preliminary Design Reviews (During Lab Sections) |
| 11   | Team Dynamics [MN] | Selling your Idea/Sales Pitch [TS] Peter Rowan, Director of PACE. Ann Park, UH OTT | - FEA Workshop Checkoffs  
- Preliminary Design Report (PDR) |
| 12   | Failure Mode & Effect Analysis (FMEA) [TS] | Review on FEA BCs & Analyses [MN] | - Detailed Analyses and Material Selections  
- Preliminary Design Report Due |
| 13   | Sales Pitch | Sales Pitch | - Sales pitch and Website/Wiki  
- Website/Wiki and Design Notebook Checks  
- Detailed Analyses and Final Materials Selections |
| 14   | SAE Industrial Lecture - "Optimizing FSAE Designs using the best practices in CAD, FEA, and CFD" (Tentative) | SAE Industrial Lecture - "Good Grades do Count, but That's Not All" (Tentative) | - Begin Final Report Draft  
- Panic — Then finish loose ends! |
- Design Freeze |
| 16   | Final Presentation/CDR (1)/Lab Sections | Final Presentation/CDR (2)/Lab Sections Last Day of Classes | - Comprehensive Design Review/Presentation (CDR) |
| 17   | - Design Notebooks - Final Website Check - Comprehensive/Critical Design Report Due | - Peer Evaluations Due | - Comprehensive Design Report (CDR) |