## ME 481 Schedule

### Fall 2021

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

<table>
<thead>
<tr>
<th>Bold Items denote items that MUST be turned in for credit. [Faculty Lecturers: MN: Dr. Mehrdad Nejhad, TS: Dr. Trevor Sorensen]</th>
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<td><strong>Week</strong></td>
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| 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] (WBS, GANTT charts; reviews - SRR, PDR, CDR, TRR, risk) | Safety Training & Release Forms (Lewis Moore) | -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  
-Concepts  
-Project Proposal Report Due (Lab Sections) |
| 6 | Engineering Communication (Writing Communication) [MN] | Systems Engineering - [TS] | Literature Search  
-Concepts  
-Project Proposal Report Due (Lab Sections) |
-Modules  
-Safety Training (Moore) - 30 min (Mandatory) |
-MCM  
-Proof of Concept |
-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 |
-Preliminary Design Reviews (During Lab Sections) |
| 12 | Team Dynamics [MN] | Failure Mode & Effect Analysis (FMEA) [TS] | -Detailed Analyses and Material Selections  
-Preliminary Design Report Due |
| 13 | Selling your Idea/Sales Pitch [TS] Peter Rowan, Director of PACE. Ann Park, UH OTT | Sales Pitch [TS] | -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) |