ME 692A1 S21 v1.0 Prof Blonder

Exact dates and topics subject to change

Current version always on Blackboard

Session	DATE	Topic	Class Activity	Individual Assignment Due	Project Gate Due
1	M Jan 25	First class orientation	Team alignment Discuss Brief Civil Engineering CD Case Light Switch Quick Challenge		Product Goals Product Brief
2	W Jan 27	FEA Issues		Pastry Shelf Due	
3	M Feb 1	Design for Manufacture	SCAMPER review		SCAMPER general concept
4	W Feb 2	Pastry Shelf Solution Ethics	Morph and Pugh		Morph and Pugh
5	M Feb 8	FEA issues Fundamental Math and ME	Initial rough design review		Initial rough design review Identify Critical Uncertainty
6	W Feb 10	Thermal Design Principles			Gantt Chart
7	T Feb 16	Thermal FEA demo	Assign Coffee cup warmer		
8	W Feb 17	Consumer Testing		Ethics Essay Due	Soft Prototype

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9	M Feb 22	Good/Bad design	Demo CU		Test CU
10	W Feb 24	MVP and Checklists Presentation Guide			Functional Tree
11	T Mar 1	Practical Quality	Alpha Design Review		Alpha Design Review
12	W Mar 3	IP Patents			
13	M Mar 8	IP Copyright		Coffee cup warmer	
14	W Mar 10	Behavioral Science	Demo FP		Functional Prototype
15	M Mar 15	Diffusion Dashboard	Check List		Check List
16	W Mar 17	Stress cracking and design	Coffee cup warmer		
17	M Mar 22	Coffee cup warmer	Competitive Analysis		Competitive Analysis

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18	W Mar 24	Competitive Analysis			
19	M Mar 29	Scaling Laws	Discuss Survey		Customer Survey
20	W Nov 31	Product Packaging			
21	M Apr 5	Costing I+II -aPriori			Design for Manufacture
22	W Apr 7	Parametric Optimization	CF design review		Customer Feedback
23	M Apr 12	Negotiating Skills and Practice			
24	W Apr 14	Licensing	Costing Review		Costing

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Session	DATE	Topic	Class activity	Project Gate
25	W Apr 21	Sensors		
26	M Apr 26	OPEN		
27	W Apr 27	Project Presentation		Final working Prototype Final Report

General Rules

1. This is a practicum class- attendance is mandatory, including zoom.
2. Cheating is unacceptable and will be treated accordingly
3. We employ a range of homework and project styles- some will play to your strengths, others will be easy or challenging.
4. Note every assignment is graded.
5. Learning outcomes- how to imagine a new product, optimize form and function, prototype and document your design
6. Secondary outcomes- teamwork (normally more important, but Covid), EPIC skills, appreciation of product realization metrics
7. Most lectures will be recorded and posted within a day of class
8. If the class is held in person, all personal and community safety rules MUST be followed or you will be asked to leave.
9. No final, but large report and presentation
10. Syllabus is only a guide- we will adjust in real-time based on class progress, Covid, stuff, …
11. First lecture contains other guidelines