

RED- Team Project Assignments

Session	Date	Topic	Class activity	Assignment	Hand-in
1	M Sep 2	Introduction to course, the design process, where do new products come from?			
2	W Sep 9	SCAMPER part I	Volleyball SCAMPER	Paper Stapler Drawing	
3	M Sep 14	SCAMPER part II, Seven ways to deal with the Future, Voting	Table Wobble SCAMPER	SCAMPER Wobble Table, Products and Seven Ways to Future	Paper Stapler Drawing SCAMPER Wobble Table
4	W Sep 16	Intro To Scenario Planning Part I			
5	M Sep 21	Intro To Scenario Planning Part II Review Seven future products			Products and Seven Ways to Future
6	W Sep 23	Wobble Table challenge Prototyping Methods	Existing Wobble Table Solutions	Wobble Table Proto	
7	M Sep 28	Extrapolation	Quick wobble design check-in		WT Design Check in
8	W Sep 30	Extrapolation II	WT Goals	Extrapolation	WT Product goals

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9	M Oct 5	Additive Manufacture	Product Briefs	Factoids	WT Product Brief
10	W Oct 7	Fastening and Joining	Morph and Pugh		WT Morph and Pugh WT CU Identification
11	T Oct 13	Adhesives			
12	W Oct 14		Extrapolation Curve presentations		Extrapolations
13	M Oct 19	Resumes	Future facts research		Factoids
14	W Oct 21	Choosing Driving Forces	Icemaker challenge	Icemaker	WT CU Test
15	M Oct 26	Molding	Scenarios	Scenarios	
16	W Oct 28	Choosing team projects	Icemaker Readout		ICEMAKER
17	M Nov 2	Thermal Expansion			WT Report WT Demo

Sess ion	Date	Topic	Class activity	Assignment	Hand-in
18	W Nov 4	Forging			Scenarios
19	M Nov 9	Materials Selection			Thermal Expansion Day
20	W Nov 11	FORM as a material		CD case materials Morph chart and critical unc.	
21	M Nov 16	Artificial Intelligence and impact on mechanical engineering	Individual Team Reviews		
22	W Nov 18	Checklists	Critical Path Prototypes, or		CP Prototypes
23	M Nov 23	Planning for retirement MIGHT BE CANCELLED	Critical Path Prototypes		
Thanksgiving Break					
24	M Nov 30	Intro to Mechanisms			CD case

Sess ion	Date	Topic	Class activity	Assignment	Hand-in
25	W Dec 2	Analytical Mechanism design			
26	M Dec 7	CREO and Solidworks mechanism demos			
27	W Dec 9	CD Case Materials choice discussion	Build Time	Pastry Case Mechanism	
28	Dec 11	⇒	Final Presentations and Product demos		Final Project report submitted- paper and online

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, market fit, optimize form and function, fast prototyping skills, transition to manufacture and design documentation
6. Secondary outcomes- teamwork (normally more important, but Covid), EPIC skills, life skills
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