

### RED- Team Project Assignments

Sess ion	Topic	Class activity	Assignment	Hand-in
1	Introduction to course, the design process, where do new products come from?	Exercise in ideation- dry run: how to weigh your head, Dorm	Intersection Drawing	
2	SCAMPER Project List	SCAMPER on sneaker dishwasher, Review intersection assignment	SCAMPER list for dishwasher	Dorm Drawing
3	FINAL PROJECT CHOICES ANNOUNCED. SELECT PROJECT AND TEAM END of 3rd SESSION			
3	Engineering Design Process	Present SCAMPER DW in class Choose Project, BREAK INTO TEAMS	Select project and write problem definition.	SCAMPER list for dishwasher
4	Prototyping	Team project Discuss Problem Definition SCAMPER project	SCAMPER project	Project Definition Draft
5	Reverse Engineering	Present SCAMPER for project Determine Critical Path	Morph/Pugh charts- critical path	Final Project Definition+ SCAMPER
6	Sheet Metal and Machining			
7	Gibbscam in ECL		Whistle	Morph/Pugh Critical Path
8	Injection Molding 3D printing	Critical Path Readout	3D cord organizer	

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9	Materials Selection and adhesives			
10	Good vs Bad Design Overview	Demo Soft Prototypes		
11	Form as a Material			
12	Costing		James Bond	
13	Mechanisms I	Critical Path Demos Demo your whistles and cord organizers	Calculate manufacturing cost of one or two parts in final project	Whistles run-by date Cord Organizer
14	Mechanisms II			
15	CREO 4 BAR in ECL (A4) or EPIC (A2)		4-bar mechanism	James Bond
16	Interim project reports			Calculate manufacturing cost of one or two parts in final project

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17	Arduino I—Digital IO	Last chance to modify design	In-class circuits	
18	Arduino II- Analog IO	Build Time	In-class circuits	
19	Creo Structures in ECL (A4) or EPIC (A2)			4-bar mechanism (last individual assignment)
20	Thermal properties			
21	CREO Thermal analysis in ECL			
22	Design for Quality Design for Manufacturing	Build Time		
23	Quality Control M&M QC Experiment	Build Time		
24	4 bar Assignment Feedback Project Presentation and Paper Guidelines Creo Gears and Belts, more 4Bar	Build Time		

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25	Intellectual Property- the short version Course evaluations	Last build time		
26	Project presentation with FINAL prototypes in class	Chance to incorporate project feedback into final report		Final project report submitted- paper and online
		NO FINAL		