

ME349

Engineering Design Projects

Spring, 2009 Syllabus

Date	Discussion Topic(s)	Assignments	Deliverables
1/21	Course introduction, Thinking preferences exercise, Discussion of class projects	Read: Introduction To Course Design Projects Team Building Keeping a Design Notebook Design Process Outline Project Planning	
1/26	Set Design Team, Project planning, Design notebook	Background research Define customer base	
1/28	Standards and Patents	In class presentation Read: Design Proposal	Choose project
2/2	Introduction to QFD Process (customer driven design)	Develop Problem Statement, Define customer needs and design specifications Read: QFD Method Customer Requirements, Engineering Specifications and Target Values Product Design Specification Requirements Example	Task Report Report project choice
2/4	Function Development	Read: Function and Concept Overview Function Development	Design Proposal Due
2/9	Scheduled Design Review	Read: Concept Generation Creative Problem Solving	Task Report
2/11	Function/Concept Generation TRIZ Method		
2/16	Brainstorming techniques	Read: Concept Evaluation	Task Report

2/18	Concept evaluation		Notebook evaluation
2/23	Combining concepts to generate designs	Read: FMEA Preliminary Design Report	Task Report
2/25	Failure Modes and Effects Analysis		
3/2	Work Period	Read: Material Selection	Task Report
3/4	Material Selection		
3/9	Work Period	Read: Design for Manufacturability Design for Assembly	Task Report Preliminary Design Due
3/11	Design for Manufacturability Design for Assembly	DFMA 9.3	
****	<i>Spring Break</i>	*****	*****
3/23	Work Period	Read: Product Liability	Task Report
3/25	Product Liability		
3/30	Work Period		Task Report
4/1	Ergonomics		Notebook evaluation,
4/6	Work Period		Task Report
4/8	Work Period		
4/13	Work Period		Task Report
4/15	Work Period		
4/20	Work Period		Task Report
4/22	Work Period		
4/27	Work Period		
4/29	Final Design Due		Report, drawings, etc.
5/4	Free Date		
5/6	Presentations		Presentation, prototypes, notebooks
5/8*	Field Trip to Capital Brewery *tentative date		