

500.101.02 What is Engineering? - Fall 2002 - MTW 2pm

Professor: Ben Schafer (schafer@jhu.edu)

Introduction

1	introduction	9-Sep	
	lab - mousetrap design (MD 5)	10-Sep wk 1 lab due	
	units, dimensionality, statistics	11-Sep	
2	dimensional analysis / eng. essay discussion	16-Sep	
	lab - college ranking (MD 226)	17-Sep	

Material Science & Mechanics of Materials

	mat'ls, properties	18-Sep	Weihls
3	material testing	23-Sep	Weihls
	lab - materials testing (MD 5)	24-Sep wk 2 lab due	
	mat'l data analysis	25-Sep	Schafer

Statics and Civil Structures

4	statics	30-Sep	Schafer
	lab - wp bridge designer (MD 226)	1-Oct wk 3 lab due	
	civil structures	2-Oct	Schafer

Mathematical Sciences

5	calculus of errors	7-Oct	Karweit
	lab - remote meure (outside)	8-Oct wk 4 lab due	
	Math Sci. Guest	9-Oct <i>eng. essay due</i>	Scheinerman
6	<i>holiday</i>	14-Oct	
	lab - drilling for oil (MD 226)	15-Oct wk 5 lab due	

Chemical Processes and Chemical Engineering

	chemical processes	16-Oct	Karweit
	Open House - SATURDAY	19-Oct	
7	diffusion	21-Oct	Karweit
	lab - chemical processes (MD 5)	22-Oct wk 6 lab due	
	Chem Eng. Guest	23-Oct	Wirtz

Design - The Dome Project

8	Engineering Design, Intro. to contest	28-Oct	
	lab - structural analysis with MASTAN	29-Oct wk 7 lab due	
	design contest - truss test - dome analysis (MD 226)	30-Oct spag. truss due	
	group design meetings with Dr. Schafer		
9	discussion/testing/construction	4-Nov	
	discussion/testing/construction	5-Nov	
	discussion/testing/construction	6-Nov	
10	cleanup	11-Nov <i>dome due</i>	
	Dome Testing - MON. NIGHT	11-Nov	
	lab - mousetrap build (TBA)	12-Nov	

Logic, Circuits and EE, CompE, and ME (robotics)

	binary systems	13-Nov	
11	logic	18-Nov	
	lab - binary systems / circuits (MD 226)	19-Nov	
	robotics	20-Nov	

Engineering Business and Proposals

12	eng. business and proposal writing	25-Nov	
	lab - robot circuit build (MD 5)	26-Nov wk 11 lab due	
	<i>cancelled, travel safe</i>	27-Nov	
13	presentations	2-Dec	
	lab - eng. major planning and course feedback (MD 226)	3-Dec week 12 labs	
	presentations	4-Dec <i>research essay</i>	
14	exam	9-Dec depending on dome performance	

Class held in MD 214 unless otherwise listed.