IE 496 Lecture and IE 496 Internship, Spring 2008 Dr. Robert E. Barnes Schedule and Syllabus including Concepts, Assignments and Forms

Class	Date	Syllabus	Concept	Assignment	Forms/Handouts
1	January 14	Course introduction	Clarify role of multiple course/registration.	For next time define project	1. Project description and objectives.
			Present course syllabus and schedule; course description,	and write objectives, etc. using	2. Student appraisal by company.
			objectives and grading	form.	3. Project summary sheet.
			Hand out required forms.	Brief resume email	4. Team work form.
			Check work assignments.	immediately.	
2	January 28	Review work	Expected report information.		
		assignments and IE	Project report.		
		tools as potential	Give out faculty advisors for each student.		
		solutions	Classify projects by type.		
			Review major IE tools.		
3	February 4	Technical	Written and oral technical communications – Mr. Grunert.		
		Communications			
4	February 11	Research Company,	Learn important aspects of how to conduct a job search –	Write a resume for UB	
		Resume, and	Mr. Millar.	CareerFEST February 28,	
		Interviewing		Alumni Arena, 3 to 6:30 pm.	
5	February 18	Professionalism and	Introduction and orientation to 1^{st} career job – Ms. Hunter.	Interview supervisor asking	
		Life-long Learning	Learn how professionals keep current.	how he/she keeps his/her	
				knowledge base current – due	
				next class.	
6	February 25	Team work	Document multidisciplinary nature of assignment.	Readings will be assigned.	Team work form, due next class .
7	March 3	Ethics – Part 1	History of ethical thought, codes of ethics, professional	Chapters 2, 3 & 6, <i>Engineering</i>	Engineering Code of Ethics
			responsibilities.	Ethics.	
8	March 17	Ethics – Part 2	Ethical problem solving techniques.	Chapter 4, Engineering Ethics.	
				*Do in teams, due 4/14.	
9	March 24	Future of work	What will work look like in the future – Dr. Drury.		
10	March 31	Future of	From the Engineer of 2020 and Battelle's Technology		

		Engineering	Forecasts.		
<mark>11</mark>	April 7 – week	Project Review	Receive rough drafts and discuss issues that students want	Present rough draft of final	
	of with project		clarification on.	project	
	academic				
	advisor				
12	April 14	Ethics	Present ethics case.	Student groups	
13	April 21	Ethics	Present ethics case.	Student groups	
14	April 28	Ethics	Present ethics case.	Student groups	
Exam	May 5,	Project	Present projects.	Final Reports due and Oral	
Week	May 6			Reports made; Student	
				Appraisal due; Industry	
				success due via Internet.	

*For this assignment, the class will be divided into equal or near equal groups by the instructor.

Each group is to choose one major accident and write a report on it that includes the use of ethical problem solving techniques (line drawing, flowcharting) found in *Engineering Ethics*. Instructor approval of the accident you choose is needed before beginning. The instructor will adjudicate multiple selections of the same project by a first date and time e-mail.

Presentations will be approximately 10 slides explaining the accident and its causes including the two diagrams and conclusions.

All assignments are to be submitted in electronic format (e.g., Word, PowerPoint) AND paper.

For these accident reports in USA, Australia, Canada, and UK go to:

U.S. – <u>http://www.ntsb.gov/</u> (has an index to go to all modes of transportation); <u>http://www.faa.gov/data_statistics/accident_incident/</u> (looks like aviation); <u>http://www.ntsb.gov/events/major.htm</u> (one boat, mostly planes)

Australia, Canada and the U.K.— <u>http://www.atsb.gov.au/</u> Search for: Aviation Safety Accident & Incident Reports Database; <u>http://www.tsb.gc.ca/en/reports/air/2003/index.asp; http://www.aaib.dft.gov.uk/publications/formal_reports.cfm</u>