ENGR/BUSI 4970 Capstone Project: Design Proposal
Fall 2003

W 6:30-9:30 **Dunstan 303**

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Prerequisites: ENGR/BUSI 3520 and BUSI 3530
Corequisite: BUSI 4540

I. Course Content/Objectives

Content:
First of a two course capstone sequence in which undergraduate course work principles are brought to bear upon a design problem in a cooperating industry or institution. Design teams are cross-disciplinary consisting of business and engineering students from various majors. Students will be introduced to project management. The project for these courses will be a real world problem identified from an industry or institution. The student teams will work very closely with the industry partner, the instructors of the course and the Technology Management Professors. The output of this course will be a design proposal that should consider technical specifications, reliability, maintainability, manufacturability, marketing, costing, financing and an overall business plan approved by the sponsoring industry.

Objectives:

Demonstrate an appreciation for, understanding of, and ability to apply the principles of business practice in decision-making.

Demonstrate an appreciation for, understanding of, and ability to apply the principles of engineering practice in decision-making.

Demonstrate an ability to work in cross-functional, culturally diverse teams.

Demonstrate an appreciation for, understanding of, and ability to apply criteria that affect technical, schedule, cost, and risk decision-making in competitive environments.

Demonstrate an understanding of and participate in the processes required to create and present a business plan for the commercialization of a product or service.

Text Book: Ulrich and Eppinger, Product Design and Development
http://www.ulrich-eppinger.net/

Tentative Course Outline

Date	Topic	Reading	Due
08/20	Introduction	Ch1	-
08/27	Development Processes and Org	Ch2	TQ2.2
09/03	Product Planning	Ch3	EX3.1
09/10	Grieve		
09/17	Identifying Customer Needs	Ch4	TQ4.1
09/24	Product Specifications	Ch5	EX5.5
10/01	Concept Generation	Ch6	EX6.4
10/08	Midterm Exam		
10/15	Concept Selection	Ch7	EX7.1
10/22	Concept Testing	Ch8	EX8.2
10/29	Product Architecture	Ch9	EX9.1
11/05	Industrial Design	Ch10	EX10.2
11/12	Design for Manufacturing	Ch11	EX11.1
11/19	Prototyping	Ch12	TQ12.1
11/26	Thanksgiving		
12/03	Product Development Economics	Ch14	EX15.2
12/10	Managing Projects	Ch16	EX16.2
12/17	Presentations	5:00PM	

II. Grading and Evaluation Procedures:
Course Requirements: The course is based on mastering competency material and participating in discussions.
Grading (100 points):

Homework	25
Class Presentations	10
MidTerm Exam	25
Final Presentation	10
Final Report	30
Total	100

III. Statement related to policies on unannounced quizzes, class attendance, and participation:
Students are expected to be present in the classroom and can be excused only with University approved excuses – see Tiger Cub.

IV. Special Accommodation for Students with Disabilities:
Students with special accommodations should make an appointment to discuss the accommodation memo during my office hours as soon as possible. If scheduled office hours conflict with classes, please arrange an alternate appointment time. If you do not have an accommodation memo, but need special accommodations, please contact the Program for Students with Disabilities, 1244 Haley Center, 334-844-5943 (Voice T/O).

V. Academic Honesty:
All portions of the Auburn University Honesty Code (TITLE XII) found in the TIGER CUB will apply in this class.