Biological Engineering 4290
Senior Engineering Design and Professionalism
Credit Hours: 2 (2 hours lecture)
Fall Semester 2013

Instructor: Daniel Hayes, Ph.D., Room 167 E.B. Doran Building, e-mail: danielhayes@lsu.edu.
Office hours: By appointment.

Course Description: Capstone project selection and design (for building and testing in BE 4292); completion of project feasibility study and outline of design project; ordering necessary parts; design philosophy, teamwork, and communication; economics; product liability and reliability; use of standards and codes; goal setting and time management.

Prerequisite: Senior standing in the College of Engineering and credit for or registration in BE 4303.

Objectives: to develop a team design project for completion in BE 4292. To become familiar with the process and philosophy of design and engineering professionalism.

Accreditation: The Accreditation Board of Engineering and Technology (ABET) has established criteria through which engineering programs, including this one, are accredited. When you complete the Biological Engineering curriculum at LSU, you should be proficient in WKH REMHFWLYHV OLVWHG EHORZ 7KLV FRXUVH

an ability to design and conduct experiments, as well as to analyze and interpret data
(c) an ability to design a system, component, or process to meet desired needs
(d) an ability to function on multidisciplinary teams
(e) an ability to identify, formulate, and solve engineering problems
(f) an understanding of professional and ethical responsibility

- Fundamentals of Engineering Supplied Reference Handbook, National Council of Examiners for Engineering and Surveying
- Strategies for Engineering Communication, by Susan Stevenson and Steve Whitmore

Grading Breakdown:

Homework	5%
(includes design homeworks, progress reports, and notebooks)	
Exam on engineering methods	10%
Final project report	15%
Final presentation	45%
Individual grade	25%
(assigned by instructor in consultation with faculty advisor(s))	

Late homework assignments will receive 10% off for each day late, (i.e., 10% if one day late, 20% if two days late, etc.). Assignments are due to Angie in the front office by 4:00 p.m.

Course grades will be determined on the following scale: A (90±100%), B (80±89%), C (70±79%), D (60±69%), F (<59%). Remember, if you are on the border between letter grades, coming regularly to class, participating in class, and following class rules (see below), will get you the higher letter grade.

Final comments:

Once again, I will do everything I can to make each of you succeed in this course! This is it, folks!!! Senior design is extremely important and can have a huge impact on what kind of job you take, what sort of graduate/professional work you do, etc. I am honored to be your instructor in your first *and* your last year of this curriculum! Remember class rules!

- Turn off your cell phone before class starts!
- Cheating and plagiarism will not be tolerated under any circumstances!
- Be respectful of yourself and others (don't [illegible])

Approxim ate schedule

Date	Topic	Readings
Week 1-		