

BE 3290
Professionalism for Biological Engineers
Spring 2013

A required course in biological engineering

Instructor: W. David Constant, PhD, PE, BCEE, Head, BAE Department and
Humpheys T. Turner Professor of CEE

Class Hours: Friday 10:30-12:30.

Location: 2162 PFTH

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hscons@lsu.edu

Credit Hours: 2

Course Description: (2 credits) Prereq: Grade of C or better in CE 2450. This required course explores ethical standards, technical communication, goal setting, professionalism and professional organizations, safety and risk, team dynamics, and proposal preparation.

Objectives: To provide focus in professionalism and ethics for biological engineers. NCEES code of conduct; practical applications of these codes and engineering ethics in general will be reviewed and discussed. Professional aspects of biological engineering including resume and proposal writing, professional presentations and publications, as well as real-life ethical and professional challenges will be explored. It is a pre-requisite for Senior Design, and includes development of a proposal for a Senior Design project. It is "communication intensive". Proposal development includes keeping an Individual Journal (Computational Notebook type) on the course and the proposal work as it progresses.

Texts: NCEES supplied reference handbook Fundamentals of Engineering Supplied Reference Handbook, NCEES® 2011 by www.ncees.org, ISBN 978-1-932613-59-9

References: Professionalism Skills for Workplace Success, 3rd Ed., Anderson and Bolt, 2013. Ethics in Engineering, 4th Ed., Martin and Schinzinger, 2005.
Frequent look at online cases: nspe.org, onlineethics.org, ethics.state.la.us

Proposal Guidelines: Each student will be involved in developing a proposal for an engineering project, which are normally designed, built and tested in the Senior Design second and third courses. A specific format and content will be followed and proposals will be presented in later class periods this semester. You must keep individual journals of this work as it progresses toward the final proposal. More details on the journals will follow.

Student Participation: Students will share in discussions, preparation and presentation of professionally related work throughout the course.

Criteria for determining grade:

Midterm	30%
Proposal/Presentation/ Journal/Class Activity (10%)	40%
Final Exam	30%

Final course grade will be determined from the following scale:

- A: 90-100%
- B: 80-89%
- C: 70-79%
- D: 60-69%
- F: 0-59%

Late policy: One letter grade reduction each late day after an assignment is due.

LSU codes shall be adhered to.

BE 32900 Spring 2013 Course Outline

Class, Date	Topic (specifics may be altered at discretion of instructor)
1) 1/18	Introduction, syllabus review, ethical standards
2) 1/25	Professionalism, Resumes and cover letters, tech communication
3) 2/1	Resume analysis, Interviews, Suggested Proposal Topics.
4) 2/8	Ethical Problems, Codes and Intent, Proposal RFP Review
5) 2/15	Risk and Safety/Whistleblowing/ Project Proposals
6) 2/22	Sustainability and Intellectual Property/ Team Assignments
7) 3/1	Teamwork and Honesty, Research Integrity (see Martin and Schinzinger 6.1 and Ch. 7 and Anderson and Bolt, Ch. 11)
8) 3/8	MIDTERM EXAM
9) 3/15	Advice from Professionals/Exam Review Prelim Proposals Due
10) 3/22	Proposal Prep – Prelim Proposal Review (Spring Break: 3/29-4/7) Submit Journals for my review
11) 4/12	Ready for Work – ABET Perspective – e-comm, memos, linkedin (A & B, Ch. 9 and 10)
12) 4/19	Student Presentations – Proposals Due
13) 4/26	Student Presentations – Journals Due
14) 5/3	Conclusions – Notebooks Due
Week of 5/6	FINAL EXAM, Tues. May 7, 10AM-Noon. TURN IN JOURNAL