

ABE 290 SOPHOMORE SEMINAR

FALL 2016

Purpose of the Course:

To provide students with a science and engineering based framework for understanding global challenges in engineering, agriculture, biotechnology, natural resources and society.

Instructors:

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Office Hours: Email for an appointment only

By appointment only

Course Learning Objectives:

Successful completion of the course will enable students to:

1. Prepare for professional internships and careers and understand graduation requirements
2. Demonstrate interview skills, resume writing skills and critical thinking
3. Knowledge of global challenges facing Agricultural and Biological Engineers and understanding the complex issues raised by science, technology and society
4. Knowledge of contemporary issues in Agricultural and Biological Engineering including Biotechnology, Water and the environment and Global Climate change
5. Knowledge of career paths for graduates and needs in education process
6. Understand professional and ethical and responsibilities
7. Recognition of the need to engage in life-long learning
8. Understand sustainability issues

Course Goals:

1. Career Opportunities in ABE
2. Graduation Requirements
3. Placement/Resumes
4. Case Studies on Ethical Choices
5. Professional Opportunities

Course Texts: (*all text materials will be available via the course Blackboard site*)

1. Brown, L.R. (2009) *Plan B 4.0: Mobilizing to Save Civilization*. New York, NY: Earth Policy Institute. ISBN 978-0-393-07103-0 (cloth) 978-0-393-33719-8 (pbk).
2. National Academy of Engineering (2008): *Grand Challenges for Engineering*. <http://www.engineeringchallenges.org/File.aspx?id=11574&v=ba24e2ed> and video (2013): <http://www.nae.edu/Projects/GCShortVideoCompetition.aspx>
3. National Academy of Engineering (2014): *Making a World of Difference: Engineering Ideas into Reality*. <http://www.nae.edu/Publications/Reports/119620.aspx>.

Course Grading:

Class Participation and Attendance *	30 points
Critical Thinking Writing Assignments** Faculty, Alumni or Professional Interview	40 points (4 points per assignment)
	<u>30 points</u>
Total	100 points for full credit

* Full attendance is required for full credit. Optional assignments (Refer to Course Schedule) may be substituted for absences due to illness or preapproved excused absences.

** A maximum total of 40 points (10 @ 4 points) is possible for required Homework Assignments *and* optional assignments (up to 2 additional). Two Optional Homework assignments may be submitted for extra HMK credit but may not be substituted for required assignments. Each assignment limited to 300 words.

ABE 290 COURSE SCHEDULE
FALL 2016: Lilly G 126
Every Tuesday and Several Thursdays 2:30-3:20

WEEK	DATE	TOPIC	Reading / HMK
1	T 8/23	Introduction to ABE 290 and the ABE Department	Reading Ref. 1, 3-23 HMK 1. Required
2	T 8/30	Timothy B. Luzader - Resumes – Fact or Fiction	HMK 2. Required
	Th 9/01	Susan B Bush – Interviewing Skills	Optional Assignment
3	T 9/06	Nate Engelberth – Internships: Planning for next summer...Now ! SURF	Optional Assignment
4	T 9/13	Industrial Round Table	Attend Roundtable, No class HMK 3. Required
5	T 9/20	Michelle Creech - Student Soybean and Corn Product Innovation Competitions	Reading Ref. 3, 3-15; 18-25
6	T 9/27	Marianne Stowell Bracke – Finding the Best Resources You Never Knew We Had	HMK 4. Required
	Th 9/29	John Lumkes - Opportunities for global impact in Agricultural & Biological Engineering	Reading Ref. 1, 31-51
7	T 10/04	Sara McMillan - Opportunities and Challenges in Environmental and Natural Resources	Reading Ref. 2: 1-21
	Th 10/06	Water, Technology and Society Discussion	HMK 5. Required
		October Break – No Class on Tuesday	Reading Ref. 1, 55-75
8	T 10/18	College of Agriculture Academic Programs Associate Dean Marcos Fernandez	Optional Assignment.
	Th 10/20	Anne Dare – International Experiences and Opportunities	Optional Assignment
9	T 10/25	Energy and Global Climate Change Discussion	HMK 6. Required
10	Th 10/27	Nathan Mosier – Sustainable Bioenergy	Optional Assignment
	T 11/01	Michael Ladisch - Biotechnology and Society Discussion	HMK 7. Required
11	T 11/08	Michael R. Ladisch - Ethics in Engineering and Science	
	Th 11/10	Ethics Case Studies Discussion (continued)	HMK 8. Required
12	T 11/15	Nathalie Duval-Couetil – Entrepreneurship	Optional Assignment.
13	Th 11/17	Vincent Bralts - Accreditation Board of Engineering and Technology (ABET)	HMK 9. Required
		Thanksgiving Holiday – No class on Thursday	
14	T 11/29	Graduate School / Life Long Learning	HMK 10. Required
15	Th 12/08	Course Evaluation due	Online / Required

In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances. Information about changes in this course in the event of campus emergency can be obtained from Blackboard Learn at <https://mycourses.purdue.edu/>.

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Statement on Academic Honesty:

Honesty requires that ideas, data, figures, tables, equations or derivation of equations, process concepts, wording of explanations, or other forms of intellectual property of others must be fully acknowledged. The use of such property in reports and papers is acknowledged by citing the source (ALL of the authors; title, journal or other publication in which the information appeared; volume and number; editor(s), if appropriate; publishing house, city, state, if the information is from a book; beginning and ending page numbers of the publication; and year). Property which is conveyed through a letter or other form of personal communication is to be indicated as such. Again, give the authors, title (if appropriate), "Personal Communication," and date.

The offering of materials assembled, collected, or created by others or reported by others in the form of projects, books or parts of books, periodicals, speeches, or the writings of other students as one's own is plagiarism. Dishonesty of any kind with respect to examinations or alterations of records is cheating.

Plagiarism and/or cheating is sufficient for an F. See student handbook for University rules.

(This statement was adapted from Professor Richard Feinberg, "Academic Honesty and Dishonesty," CSR Dept., Jan. 1993.)

LILLY Emergency Evacuation Plan

In case of a tornado warning please evacuate to the basement of Lilly Hall. If possible it is best to be in the 100 corridor. There are areas in Lilly Hall in which you can NOT hear the sirens so, if you are asked to move into the basement please do so immediately.

In case the fire alarm goes off please leave the building. Because of the size of Lilly Hall it is hard to designate a meeting place. But, if possible please evacuate to the back parking lot. Do not re-enter the building until you have been informed that it is safe to do so.

In the case of a security incident, again please evacuate the building. If you hear about it via the local radio or TV stations please call the department main office (494.4408) and there will be a recording informing you of the status. Again, do not re-enter the building until you have been informed that it is safe to do so.