CE 370 – INTRODUCTION TO ENVIRONMENTAL ENGINEERING
Fall 2011

Lecture: 10:10 – 11:00 AM MWF, 102 Leonard

Instructor: Dr. Stephanie Velegol
206-E Sackett Building; sbv1@psu.edu
(814) 865-9062
Office hours: Mondays 12:30 AM – 2:30 PM
Please note that if you would like to see me during another time, feel free to e-mail me and we can set up a time. I will also be on campus Wednesday 11:30 – 2:30 PM and Friday 11:30 – 1 PM.


Course Objectives: 1) Develop students’ environmental literacy, and an appreciation for the environmental impacts of their future careers; 2) Prepare students for the Environmental Engineering section of the FE/EIT exam by introducing them to the basic principles of science and engineering pertinent to the natural and engineered environment; and 3) Discuss the various classes of environmental pollution and introduce a variety of traditional and alternative methods available to prevent and remediate their presence.

Topics Covered in Class: We will learn the basics of environmental engineering by looking at the challenges and solutions to a number of real environmental problems. Here is a partial list:
- Acid Mine Drainage (especially as it relates to I99)
- PCB contamination in the Hudson River
- Marcellus Shale drilling and water quality issues
- Water and wastewater treatment
- Groundwater remediation
- Eutrophication in the Chesapeake Water Shed
- LEED designed buildings
- Clean energy and Global climate change
- Marcellus Shale and Water treatment

Lecture materials: All the lectures will be posted on Angel and will be watched on-line. Each lecture has lecture notes on Angel. I would strongly advise that you print out these lecture notes before watching the video lecture. Please contact Mike Sechrist at msechrist@engr.psu.edu if you experience any problems.

Grading:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>20%</td>
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<tr>
<td>Exam 2</td>
<td>20%</td>
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<tr>
<td>Final Exam</td>
<td>20% (During Finals Week)</td>
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<tr>
<td>Weekly On-line Quizzes</td>
<td>15% (15 quizzes due Fridays at noon, lowest 2 dropped)</td>
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<tr>
<td>Homework</td>
<td>15% (7 per semester due Wednesdays)</td>
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<td>In-class problems</td>
<td>10% (14 classes, lowest 2 dropped)</td>
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The standard grading system will be used to assign final letter grades in the course (A = 93 – 100%; A- = 90 – 92%; B+ = 87 – 89%; B = 83 – 86%; B- = 80 – 82%; C+ = 76 – 79%; C = 70 – 75%; D = 60 – 69%; F = 0 – 59%).

In-Class time: You will only come to class once per week on the day that you choose at the beginning of the semester. These classes will be used to review problems, give practice quizzes and exams to assess your learning and to discuss current events through articles or videos. We will also use a few of these recitations for field trips. I expect you to come to each of these recitations on the day you are assigned. You will work in a group or individually on assignments given during class time. These assignments will be assessed and will be included in your Final Grade.
Homework: Homework assignments will be due on Monday at 2:30 PM. Due dates will be announced during lectures and posted on Angel. There will be 7 homework assignments. There are 3 options for turning in homework:

1. You may bring the homework to the Monday class on the day it is due (or give it to a friend to hand in).
2. You may scan your homework assignment and hand it in electronically via homework drop boxes on Angel by 5 PM on the Monday it is due. Please convert the scan to a .pdf and make sure the scan size is less than 5 MB. Please check your assignment after it is submitted to make sure all the pages are there...
3. You can drop the homework off in my office (206-E Sackett) before 2:30 PM on the Monday it is due.

If the homework assignment is handed in 12 hours after the time it is due 25% will be docked. If the homework is handed in 12 – 24 hours late, 50% will be docked. Homework will not be accepted after 1 day. Homework problems should be written neatly with a box placed around the final answer. You must show your work to receive credit. Neatness counts – illegible or messy solutions will be penalized at the discretion of the grader. Solution sets will be placed on Angel after all assignments have been received.

Quizzes: There will be weekly quizzes posted every Monday morning on Angel. The quiz will be due on the following Sunday at midnight. The 2 lowest quiz grades will be dropped. The quizzes will serve many purposes. The questions will be:

- Usually qualitative in nature – to test your conceptual understanding
- On material covered on the on-line lectures
- On posted articles
- Similar to questions that will be found on the exams

Extra credit: A group of you (2-4 students from your recitation section) may receive extra credit for developing up to 10 power point slides on a topic that you learned outside of class that relates to the class material. Each assignment will add up to 1 point to your final grade in the class (For example, if your final grade in the class is an 89% and you receive a 100% on your extra credit presentations you final grade will be a 90% in the class.) You should hand in all extra credit assignments in the drop box on Angel. All students in the group will receive the same grade. You could find a topic any number of places including: a seminar at Penn State, a newspaper article, a journal article, a documentary or a tour.

The first draft of the extra credit presentation is due in the extra credit drop box on Angel before midnight on October 24th. I will give you a grade on this first draft by October 31st. Your group will be asked to present the final presentation during the week of November 14th during your small class time.

Requirements for extra credit: This presentation should be interesting and concise. The first slide should be a description of the problem (i.e. water shortage in Arizona, contaminated water in Africa, etc.). The following slides should then each describe one solution to the problem. Each slide should include one image (photo or diagram) and 3 bullet points with at least 20 point font.

Exams: Evening exam will be given twice during the semester. The dates and locations will be determined at a later date. Exams will be based on material from the textbook, assigned reading, lecture notes, and homework. You may bring 1 “cheat sheet” to the exam. This sheet should be 8 ½ x 11 and you can use both sides. Makeup exams will only be arranged for students with valid excuses provided at least one class period before the scheduled exam. If you have a valid conflict, please let me know as soon as possible. The final will be cumulative but will focus mostly on the last section of the course.

Evening Exam #1:
Evening Exam #2:
Final Exam: TBD

Academic Honesty: Students are encouraged to work together on homework assignments; however, original solutions are required. If cheating or copying is suspected, all students involved will receive a zero for that assignment. Cheating or plagiarism on any graded activity (homework, quiz, exam, report, etc.) will be penalized with a minimum of a zero points for the assignment, and up to a failing grade in the class. I will also place academic integrity violation reports in the offenders’ permanent files. If you are not familiar with what constitutes an academic integrity violation, I encourage you to read Penn State’s policies on the following web site: http://www.engr.psu.edu/CurrentStudents/acadinteg.asp.