EVE 486
PUBLIC HEALTH
Fall Semester 2008 -- REVISED
M, W, F
11 – 11:50
Room EGC 208

Instructor: André Butler, Associate Professor
Environmental and Mechanical Engineering

Office: Suite 105D, School of Engineering
Phone: 301-2476 (w)
Email: butler_aj@mercer.edu

Availability: By appointment

Required

Course Website: http://faculty.mercer.edu/butler_aj/eve486.htm

Catalog Description:
Public health engineering principles for protection against biological and chemical hazards. Emphasis on major communicable diseases that plague mankind, organisms that cause them, routes of transmission, and engineering methods of control. Appropriate control methods for rural areas and developing countries.

Course Objectives:
Upon successful completion of this course, students will be able to
1. Discuss in detail the issues relevant to local and global environmental health.
2. Apply toxicological and epidemiologic data to air, water, and soil environments.
3. Analyze and critique environmental health research papers and case studies.

Outcomes will be measured and assessed by grades earned for homework, exams, research paper critiques and discussion. In addition, primary instructor evaluation and student feedback on the perceived quality of the course will be used to make future improvements.

Prerequisites: (and/or corequisites)
EGR 252, EVE 405, EVE 420, EVE 402 (corequisite).

Course Content:
1. Introductory concepts; Scope
2. Toxicology
3. Epidemiology
4. Indoor and outdoor air quality
5. Drinking water issues
6. Solid and liquid waste issues
7. Standards
8. Monitoring
9. Risk assessment
10. Disasters
11. Miscellaneous issues
Grading: The final grade will be determined as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>10%</td>
<td>Distributed weekly</td>
</tr>
<tr>
<td>Exam #1</td>
<td>20%</td>
<td>Monday, Sept. 22, 2008</td>
</tr>
<tr>
<td>Project #1</td>
<td>10%</td>
<td>Friday, Oct. 6, 2008</td>
</tr>
<tr>
<td>Exam #2</td>
<td>20%</td>
<td>Monday, Oct. 27, 2008</td>
</tr>
<tr>
<td>Project #2</td>
<td>10%</td>
<td>Monday, Nov. 10, 2008</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
<td>Thursday, Dec. 11, 2008, 9-12:00 Noon</td>
</tr>
</tbody>
</table>

Homework:
Homework is an important component of the class and will be distributed regularly. Collaboration is acceptable, but each student must submit an individual assignment. Late homework assignments will not be graded.

Class Participation:
Students are expected to attend class and actively participate during discussions.

Project:
Students will work in small teams to research a contemporary environmental public health problem. Each team will prepare a 10-minute Powerpoint presentation providing (1) a description of the problem, (2) analysis of data and results, and (3) major conclusions and recommendations. This is a flexible assignment; however, teams are required to incorporate at least three different sources (scientific journals or magazines – no websites) into the presentation.

Project #1 Teams:
1. Bundrick, Winslette, Cavendish
2. Brazas, Gonzalez, Hyde, Handziuk

Project #2 Teams:
1. Hyde, Winslette, Handziuk, Cavendish
2. Brazas, Bundrick, Gonzalez

Class Standards
1. Please turn off cell phones and pagers before entering the classroom.

2. The honor code provisions as outlined in the Bulletin and in the student handbook, The Lair, will be assumed for everyone. It should be clear from class discussion whether an assignment is collaborative or individual. When in doubt, please ask to avoid potentially embarrassing situations. Plagiarism is a violation of the honor code and is strictly prohibited.

3. Students requiring accommodations for a disability should inform the instructor at the close of the first class meeting or as soon as possible. If you are not registered with Disability Services, the instructor will refer you to the Disability Support Services office for consultation regarding documentation of your disability and eligibility for accommodations under the ADA/504. In order to receive accommodations, eligible students must provide each instructor with a “Faculty Accommodation Form” from Disability Services. Students must return the completed and signed form to the Disability Services Coordinator on the 3rd floor of the Connell Student Center. Students with a documented disability who do not wish to use academic accommodations are also strongly encouraged to register with Disability Services and complete a Faculty Accommodation Form each semester. For further information, please contact Carole Burrowbridge, Disability Services Coordinator, at 301-2778 or visit the website at http://www.mercer.edu/stu_support/swd.htm

4. This syllabus is subject to change.

Electronic Communication
As the need arises, I may choose to communicate to the class via email. I will do this using a database that incorporates your official Mercer email account. As a general rule, I will not accommodate your personal email accounts regarding emails to the class.