EES 4401 Public Health Engineering [Sections 039B & 0903]
EES 5415 Environmental Health [Section 0924]

Syllabus for Fall Semester 2011 – Rev 0

1. Instructor –
   A. Professor J. J. Delfino
   B. Office location: Room 310 A.P. Black Hall
   C. Telephone: 352-392-9377
   D. E-mail address: delfino@ufl.edu
   E. General Instructor Info: Web site: www.ees.ufl.edu (go to Faculty/Delfino)
   F. Office hours: Open door policy or by appointment [phone; E-mail]

2. Meeting Locations and Times for Fall 2011 –
   A. Classroom: BLK 213, M-W-F, 3rd Period, 9:35 – 10:25 AM [Section 039B]
   B. Classroom: EDGE Studio NEB 102, M-W-F 4th Period, 10:40 AM – 11:30 AM
      [Sections 0903, 0924]

3. Catalog Description –
   EES 4401 - Application of engineering principles to protect public health. Areas covered
   include water supply, waste treatment, air pollution, radiological health, occupational health,
   food, vector control and solid wastes (P). Credits: 3
   EES 5415 – Effects of environment pollution upon health. Methods of evaluation,
   treatment and prevention of pollutants of health significance. Credits: 3

4. Pre-requisites and Co-requisites – None formally. Previous basic science courses such as
   general chemistry and biology (H.S., A.P., I.B., college) will be helpful.

5. Course Objectives – To learn:
   The major public and environmental health issues that will be encountered in the
   students' professional and personal lives;
   The origin and prevention of public and environmental health hazards; and
   The role of engineering in solving public health problems.

   Course topics typically include some or all of the following plus additional topics that
   might be added during the semester:

   The scope of public/environmental health
   Current Issues in Public and Environmental Health
   Environmental Laws; Regulations; Compliance
   Human Populations
   Degradation and Pollution of the Environment
   Radiation, Solid and Hazardous Waste; Endocrine Disruptors; Nanomaterials;
      Accidents and Spills
   Food; Food Security; Foodborne Illnesses
   Diseases; Emerging Diseases
   Pests and Pesticides
   Environmental Compartments: Water, Wastewater, and Air
   Risk and its Assessment
   Emergency Preparedness
6. Textbook and Reading Book –
   A There is no textbook required; if interested, the following is recommended: Living
   with the Earth 3rd Ed., (Concepts in Environmental Health Science), 2007 by Gary S. Moore.
   CRC Press (Taylor and Francis Group), ISBN 978-0-8493-7998-7 (cloth)
   B. Reading Book: a book related to the course material will be selected, read, and used as
   a basis for a book review (see Sections 20 & 21, below).

7. Course Materials –
   Materials include lecture notes [PowerPoint slides, blackboard written notes, and in-class
   comments and discussion] and documents [mostly PDF files] loaded by the instructor on the
   course Sakai web site. Students are highly encouraged to take notes based on comments and
   discussion in class in addition to reading the Power Point slides and documents on the Sakai site.

8. Expectations –
   A. Attendance: Students are required to attend each class and participate in discussions.
   Attendance is monitored by a sign-in sheet provided during each class session starting Monday,
   August 29, 2011. Unexcused absences will result in lost grading opportunities [see Section 12,
   below]. NOTE- if you are ill with a communicable disease, such as the flu or a bad cold, do
   not come to class! Seek medical attention, obtain documentation, and contact the instructor by e-
   mail or phone. If you can’t see a medical professional, someone else needs to document your
   absence due to illness. That person needs to contact the instructor by email to explain the
   situation to support your excused absence for that class. Students remain responsible for all
   assignments that are missed during a period of illness. Contact the Instructor for assistance.
   
   B. Overall academic initiative:
   Students can earn a good grade if good study habits are applied. At any time, if you have
   any questions about any course-related material or requirements, don’t hesitate to ask questions in
   class or contact the instructor by e-mail or phone.
   
   C. Specific academic initiatives: Students are expected to read all of the course materials,
   attend class, take notes, complete homework assignments, engage in discussion, study for
   examinations, and be generally engaged in the course material. These are the usual expectations
   of any university student who wants to do well in a course.
   
   D. Copies of previous examinations. Exams from 2010 are provided on the course
   website in Sakai (http://lss.at.ufl.edu) [click on this course number and then the Resources and
   Previous Exams tabs]. These should be reviewed to see how course material was tested in the
   past. Course material changes each year so use the previous examinations as a guide as to how
   questions are asked rather than emphasizing specific questions.

9. Cell phone, laptop computer, and email policy – cell phones and laptop computers are to be
   turned off during the class periods and are not to be stored on the desktop. This is a courtesy to
   everyone in the course so that extraneous interruptions can be limited. The instructor’s course-
   related email to students will use the student’s UF Gatorlink email address that appears on the
   Registrar’s course roster.

10. Homework –
   Homework with appropriate deadlines will be assigned during class and included in
   lecture notes. Homework will be a basis for classroom discussions. It will be collected and
   checked. Doing a good job on homework can earn up to 20% of the total course grade.
11. Course Grading

<table>
<thead>
<tr>
<th>Course grade</th>
<th>Percent of Course grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam No. 2 [Wed. Dec 7, 2011]</td>
<td>25%</td>
</tr>
<tr>
<td>Homework</td>
<td>20%</td>
</tr>
<tr>
<td>Assignment [Book Review]</td>
<td>15%</td>
</tr>
<tr>
<td>Class Attendance [see Section 12 # below]</td>
<td>10 %</td>
</tr>
<tr>
<td>Class Discussion</td>
<td>5%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

12. Grading Scale –

Final letter grades will be based on the students total course performance. Letter grade assignments below are representative of past grading results. A high degree of scholarly initiative and student involvement is expected and such performance will be reflected in the final course grades. Final letter grades for EES 4401 and 5415 will be assigned separately.

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Success Range (%)</th>
<th>Scholarship Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>A; A-</td>
<td>100 – 94; 93.9 – 90.0</td>
<td>Superb; Excellent</td>
</tr>
<tr>
<td>B+; B</td>
<td>89.9 – 86; 85.9 – 80.0</td>
<td>Very Good; Good</td>
</tr>
<tr>
<td>B-; C+</td>
<td>79.9 – 76; 75.9 – 70.0</td>
<td>Average+; Average</td>
</tr>
<tr>
<td>C; D</td>
<td>69.9 – 66; 65.9 – 60.0</td>
<td>Below Average; Poor</td>
</tr>
<tr>
<td>E</td>
<td>≤ 59.0</td>
<td>Unacceptable</td>
</tr>
</tbody>
</table>

#Class participation and absences: active participation in class discussion (5%) and regular attendance (10%) at all class sessions will allow students the opportunity to earn up to 15% of the course grade [see Section 11, above]. However, unexcused absences will diminish this opportunity and result in lost opportunities to earn full credit. Also, obvious lack of participation in class discussion during the semester will reduce the credit that a student can earn for class participation, even if the student has no unexcused absences. The following policy will be followed:

<table>
<thead>
<tr>
<th>Cumulative Unexcused Absences</th>
<th>Class Attendance</th>
<th>Maximum Earnable Grade %</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤2</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>≥7</td>
<td></td>
<td>0 and an E for Final Course Grade</td>
</tr>
</tbody>
</table>

Note: If a student is absent and someone signs the roster indicating that such student was present and the instructor discovers this on the signed roster, this will be treated as an honor code violation, resulting in an E grade for the course for both students plus referral to the Dean’s Office.

13. Exam Make-Up Policy –

Make-up examinations are allowed only for documented [in writing] and approved (in advance) medical or legitimate academic/athletic reasons. A student may request a make-up exam if he/she cannot attend the scheduled exam for a documented reason. The student (or
his/her medical surrogate or advisor) must contact the instructor before the examination, if at all possible, to indicate that he/she will be unable to take the exam and to make arrangements for taking a make-up examination at a later date. An unexcused absence from an examination without an approved make-up schedule results in a zero (0) grade for that examination.

14. Students with disabilities –
Students requesting classroom accommodation must first register with the Dean of Students office. The Dean of Students office will provide the documentation to the student who will then provide the information to the Instructor when requesting accommodation.

15. Academic Honesty –
All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with that commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all other courses. Cheating on examinations or obvious plagiarism in assignments (e.g. Book Review) will result in an E for the course and referral to the Dean’s Office.

16. Software Use –
All faculty, staff, and students of the University of Florida are expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, UF disciplinary action from the Dean’s Office could also occur.

17. UF Counseling Services –
Resources are available on-campus for students having personal problems or lacking clear career and academic goals. These resources include:
A. University Counseling Center, 301 Peabody Hall [392-1575] for personal and career counseling
B. SHCC Health and Mental Health Care Center [392-1161; 1171], medical care and personal counseling
C. Center for Sexual Assault/Abuse Recovery and Education (CARE), Student Health Care Center [392-1161], sexual assault counseling
D. Career Resource Center, Reitz Union [392-1601], career development assistance and counseling

18. Course Evaluation - At the end of the course, students are asked to anonymously participate in the electronic course evaluation process administered by the UF administration. Please assist the instructor and the University by honestly completing the evaluations.
<table>
<thead>
<tr>
<th>Day</th>
<th>2011 Date</th>
<th>Lecture No.</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>Aug 22</td>
<td>1</td>
<td>Introduction</td>
</tr>
<tr>
<td>W</td>
<td>Aug 24</td>
<td>2</td>
<td>Public and Environmental Health – Current Issues</td>
</tr>
<tr>
<td>F</td>
<td>Aug 26</td>
<td>3</td>
<td>Environmental Laws and Compliance</td>
</tr>
<tr>
<td>M</td>
<td>Aug 29</td>
<td>4</td>
<td>Environmental Laws and Compliance</td>
</tr>
<tr>
<td>W</td>
<td>Aug 31</td>
<td>5</td>
<td>Population</td>
</tr>
<tr>
<td>F</td>
<td>Sept 2</td>
<td>6</td>
<td>Population</td>
</tr>
<tr>
<td>M</td>
<td>Sept 5</td>
<td></td>
<td><strong>Book Review Title Due</strong></td>
</tr>
<tr>
<td>W</td>
<td>Sept 7</td>
<td>7</td>
<td>No Class - Labor Day Holiday</td>
</tr>
<tr>
<td>F</td>
<td>Sept 9</td>
<td>8</td>
<td>Population, Birth Control &amp; STDs – Ms. S. Evans, GatorWell</td>
</tr>
<tr>
<td>M</td>
<td>Sept 12</td>
<td>9</td>
<td>Global Change - Climate</td>
</tr>
<tr>
<td>W</td>
<td>Sept 14</td>
<td>10</td>
<td>Geography and Food Production</td>
</tr>
<tr>
<td>F</td>
<td>Sept 16</td>
<td>11</td>
<td>Food Safety</td>
</tr>
<tr>
<td>M</td>
<td>Sept 19</td>
<td>12</td>
<td>Alachua County Health Dept – Mr. P. Myers, Asst. Director</td>
</tr>
<tr>
<td>W</td>
<td>Sept 21</td>
<td>13</td>
<td>Food Pyramid and Nutrition</td>
</tr>
<tr>
<td>F</td>
<td>Sept 23</td>
<td>14</td>
<td>TBA</td>
</tr>
<tr>
<td>M</td>
<td>Sept 26</td>
<td>15</td>
<td>Research Security – UF Env Health &amp; Safety – Dr. W. Properzio</td>
</tr>
<tr>
<td>W</td>
<td>Sept 28</td>
<td>16</td>
<td>Environmental Disease – The Environment Fights Back</td>
</tr>
<tr>
<td>F</td>
<td>Sept 30</td>
<td>17</td>
<td>The Atmosphere and Air Pollution</td>
</tr>
<tr>
<td>M</td>
<td>Oct 3</td>
<td>18</td>
<td>Emerging Infectious Diseases – Dr. G. Gray, UF Env. Global Health</td>
</tr>
<tr>
<td>W</td>
<td>Oct 5</td>
<td>19</td>
<td>Air Pollution</td>
</tr>
<tr>
<td>F</td>
<td>Oct 7</td>
<td>20</td>
<td>Air Pollution</td>
</tr>
<tr>
<td>M</td>
<td>Oct 10</td>
<td>21</td>
<td>Course Part 1 Summary; Examination No. 1 Overview</td>
</tr>
<tr>
<td>W</td>
<td>Oct 12</td>
<td></td>
<td><strong>Examination No. 1</strong></td>
</tr>
<tr>
<td>F</td>
<td>Oct 14</td>
<td>22</td>
<td>Risk and Health</td>
</tr>
<tr>
<td>M</td>
<td>Oct 17</td>
<td>23</td>
<td>Risk Assessment &amp; Superfund Site – Dr. P. Cline, Consultant</td>
</tr>
<tr>
<td>W</td>
<td>Oct 19</td>
<td>24</td>
<td>Toxins and Health [EDCs, BPA, Phthalates, PCBs]</td>
</tr>
<tr>
<td>F</td>
<td>Oct 21</td>
<td>25</td>
<td>Materials and Human Disease</td>
</tr>
<tr>
<td>M</td>
<td>Oct 24</td>
<td>26</td>
<td>Nanomaterials &amp; Public Health – Dr. J. C. Bonzongo</td>
</tr>
<tr>
<td>W</td>
<td>Oct 26</td>
<td>27</td>
<td>Nanoparticle Toxicity; Water Resources</td>
</tr>
<tr>
<td>F</td>
<td>Oct 28</td>
<td>28</td>
<td>Water Resources</td>
</tr>
<tr>
<td>M</td>
<td>Oct 31</td>
<td>29</td>
<td>Water Resources</td>
</tr>
<tr>
<td>W</td>
<td>Nov 2</td>
<td>30</td>
<td>TBA</td>
</tr>
<tr>
<td>F</td>
<td>Nov 4</td>
<td></td>
<td><strong>Book Review Due</strong></td>
</tr>
<tr>
<td>M</td>
<td>Nov 7</td>
<td>31</td>
<td>No Class – UF Homecoming</td>
</tr>
<tr>
<td>W</td>
<td>Nov 9</td>
<td>32</td>
<td>Florida Water Story – Ground Water DVD Video</td>
</tr>
<tr>
<td>F</td>
<td>Nov 11</td>
<td></td>
<td>No Class – Veteran’s Day Celebration</td>
</tr>
<tr>
<td>M</td>
<td>Nov 14</td>
<td>33</td>
<td>Peace Corps and Public Health - Ms. A. Panikowski, UF Peace Corps</td>
</tr>
<tr>
<td>W</td>
<td>Nov 16</td>
<td>34</td>
<td>Drinking Water Treatment – Engineering</td>
</tr>
<tr>
<td>F</td>
<td>Nov 18</td>
<td>35</td>
<td>Wastewater Treatment - Engineering</td>
</tr>
<tr>
<td>M</td>
<td>Nov 21</td>
<td></td>
<td>UF Water Reclamation Plant Tour</td>
</tr>
<tr>
<td>W</td>
<td>Nov 23</td>
<td>36</td>
<td>Homo Toxicus - DVD Video</td>
</tr>
<tr>
<td>F</td>
<td>Nov 25</td>
<td></td>
<td><strong>No Class - Thanksgiving Holiday</strong></td>
</tr>
<tr>
<td>M</td>
<td>Nov 28</td>
<td>37</td>
<td>Book Review discussions</td>
</tr>
<tr>
<td>W</td>
<td>Nov 30</td>
<td>38</td>
<td>Book Review Discussions</td>
</tr>
<tr>
<td>F</td>
<td>Dec 2</td>
<td>39</td>
<td>Book Review Discussions</td>
</tr>
<tr>
<td>M</td>
<td>Dec 5</td>
<td>40</td>
<td>Course Part 2 Summary and Examination No. 2 Overview</td>
</tr>
<tr>
<td>W</td>
<td>Dec 7</td>
<td></td>
<td><strong>Examination No. 2</strong></td>
</tr>
</tbody>
</table>

20. Guidelines for Preparation of Book Review Paper
Deadlines:

**Book selection - Due Friday, Sept. 2, 2011**

On campus and EDGE: Provide the instructor with your choice of a book to read (see Section 21, below) and for which you will write a review:
- On-Campus students – Write the book name on the roster provided in class [Lecture 6].
- EDGE students – send by email

**Submission of Completed Review – Due Monday, October 31, 2011.**

- On-Campus students – Turn in printed copy at the beginning of class:
- EDGE – Send as PDF file attached to email

**Details for preparation of Book Review Paper**

1. Format and Dimensions
   - A. 11 or 12 pt font
   - B. One inch margins all around
   - C. Use 1 1/2 or double line spacing [don’t use single spacing].
   - D. Staple the pages; do not put in a binder, report cover, etc. No cover page needed – put your name on the top of the first page.

2. Length
   - A. On-Campus students – 3 pages
   - B. EDGE students – 5 pages

3. Content
   The review will focus on the content of the book, its objectives, design and coverage, your evaluation of the book, its arguments, etc. Cite other book reviews that you can locate in journals, etc. Compare your reaction to the book with other review writers.

4. Intellectual Honesty
   Some of the reading books have previously published reviews available [you are encouraged to read them and compare your perspective of the book with them]. It is fully expected that in concurrence with the UF Student Honor Code, that students will not copy, in whole or in part and then submit a previously published review as their own work.

   Where appropriate you can use phrases from those published book review(s) in your own review, using “quotation marks” to indicate verbatim material from those reviews. Also, indicate the source of the “quote” using any standard bibliographic format [e.g. author’s last name and publication year placed after the “quote” and then include the full bibliographic citation at the end of the text of your book review.]

   Certain reading books will be selected for classroom discussion, which will be led by their student reviewers. These discussions will occur during Lectures 37 – 39 with student discussion leaders being identified in advance by the instructor.
21. EES 4401 Public Health Engineering & EES 5415 Environmental Health – Fall 2011
Suggested Books for the Preparation of Book Reviews
[A book not on this list can be selected with the Instructor’s advance permission]

[Note: Some of the books are “older;” and many are paperbacks and could be hard to locate; try local public or UF libraries, used-book stores, or on-line sites like Amazon, etc. Used copies should be available; if you can’t find your first choice, select another book that you can find].

An Inconvenient Truth (A. Gore)  The Great Warming
Biomimicry  The Health of Nations: Infectious Disease …
Bird Flu  The Heat is On
Blue Covenant  The Ghost Map
Blue Death  The Hot Zone
Cadillac Desert  The Poison That Fell from the Sky
Chernobyl  Toxic Deception
Demon in the Freezer  Tuna: Love, Death & Mercury
Diagnosis Mercury  Viruses, Plagues and History
Dying for Growth  Water Follies
Everyday Products Make People Sick  Water and Population Dynamics: Case Studies
Exposed: The Toxic Chemistry  When the Rivers Run Dry
Fast Food Nation  When Smoke Ran Like Water
Fat Land  Unquenchable
Global Time Bomb H1N1
Global Warming (S. Schneider)
Global Warming (D. Archer)
History of Public Health
Hormone Connection
Hot, Flat and Crowded
In Defense of Food
Laboratory Earth
Laying Waste – The Poisoning of America by Toxic Chemicals
Living Downstream
Mirage
Omnivore’s Dilemma
Our Choice (A. Gore)
Our Stolen Future
Outgrowing the Earth
Pandora’s Poison
Poisoned Profits
Should We Risk it? Exploring Environmental, Health …
Silent Spring
Since Silent Spring
Superfund: The Political Economy of Risk
Taming Regulation Superfund and the Challenge of Regulatory Reform
Terrorism and Public Health – A Balanced Approach to Strengthening …
The Big Necessity – The Unmentionable World of Human Waste …
The Coming Plague
The Empty Cradle
The Environmental Pendulum: A Quest for the Truth …