Spring 2015

PUBH 6532 - Environmental Health

Evans Afriyie-Gyawu

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GEORGIA SOUTHERN UNIVERSITY
JIANN-PING HSU COLLEGE OF PUBLIC HEALTH

PUBH 6532 – ENVIRONMENTAL HEALTH
SPRING 2015

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E-MAIL ADDRESS: evansafriyiegyawu@georgiasouthern.edu

OFFICE HOURS: WEDNESDAY 11:00 AM - 4:00 PM
ALSO BY APPOINTMENT

CLASS MEETING: TUESDAYS & THURSDAYS 9:30 – 10:45 PM
INFORMATION TECHNOLOGY BLDG, R. 2205

Course schedules can be found at: http://students.georgiasouthern.edu/registrar/

Catalog Description: Survey of specific environmental conditions and factors that contribute to the development of health problems in communities. Health effects, policy issues, intervention strategies and control programs for community environmental health protection are discussed.


ISBN-10: 0763778907
MPH Environmental Health Core Competencies:

1. Describe the discipline of environmental health and its relation to the other core areas of public health.

2. Relate the direct and indirect effects of significant environmental and occupational agents pertaining to human and ecological effects both regional and global.

3. Describe physiologic and psychosocial factors that can affect susceptibility and health outcomes as a result of exposure to environmental hazards including genetic predispositions.

4. Describe the impact of federal and state regulatory statutes and guidelines along with the authorities that control environmental health issues.

5. Specify approaches for assessing, preventing and controlling environmental hazards that pose risks to human health and safety.

6. Articulate the general mechanisms of toxicity along with the response to exposure and the methods of assessing, managing and communicating risk.

7. Define environmental justice and identify environmental justice issues within both rural and urban communities.

8. Demonstrate the capacity to respond to environmental justice concerns.

9. Articulate how biological, chemical and physical agents affect human health.

10. Identify the ethical, social and legal issues implied by biological systems within public health.

11. Demonstrate effective written and oral skills to communicate risk to practitioners, clients, policy-makers, interest groups and the media.

12. Evaluate the strengths and limitations of environmental health source material in order to compile relevant and appropriate information when needed.
Course Learning Objectives:

The number in parenthesis corresponds to the competency number from the list above. 
*As a result of this course the student will be able to:*

1. Define key terms in environmental health and relate environmental health sciences to other core areas of public health (1).

2. Compare types of associations found between environmental hazards and health outcomes and relate current regional and global cases (2, 3).

3. Compare mechanisms and health effects of human exposure and contrast prevention methods for chemical, physical, and microbial agents that impact the environment (2, 3, 5, 6, and 9).

4. Contrast key environmental health regulatory agencies at the international, national, state and local levels and assess principles that guide environmental policy development (4).

5. Evaluate environmental policies designed to protect vulnerable groups (4, 7, 8).

6. Interpret the impact of humans on environmental change and its relation to emerging infectious diseases (5, 9).


8. Compare the health impact categories of occupational hazards and distinguish methods for prevention of occupationally related disease (5, 10).

9. Dissect a local or global environmental health issue, communicate the health outcomes and criticize the strength and limitations of the regulatory actions undertaken (11, 12).
## Overview of the Content to be Covered during the Spring 2015 Semester:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Readings</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction: The Environment at Risk</td>
<td>Chapters 1</td>
<td>Review Definitions/Abbreviations</td>
</tr>
<tr>
<td>1/13 &amp; 1/15</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2</td>
<td>Environmental Epidemiology</td>
<td>Chapter 2</td>
<td>Quiz 1 (Chapters 1 &amp; 2)</td>
</tr>
<tr>
<td>1/20 &amp; 1/22</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3</td>
<td>Environmental Toxicology</td>
<td>Chapter 3</td>
<td></td>
</tr>
<tr>
<td>1/27 &amp; 1/29</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td>Environmental Policy/Regulation</td>
<td>Chapter 4</td>
<td>Quiz 2 (Chapters 3 &amp; 4)</td>
</tr>
<tr>
<td>2/3 &amp; 2/5</td>
<td></td>
<td></td>
<td>Discussion 1: Env. Justice/Equity</td>
</tr>
<tr>
<td>5</td>
<td>Zoonotic and Vector-Borne Diseases</td>
<td>Chapter 5</td>
<td>TERM PROJECT PLAN DUE</td>
</tr>
<tr>
<td>2/10 &amp; 2/12</td>
<td></td>
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<tr>
<td>6</td>
<td>Toxic Metals &amp; Elements</td>
<td>Chapter 6</td>
<td>Quiz 3 (Chapters 5 &amp; 6)</td>
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<tr>
<td>2/17 &amp; 2/19</td>
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</tr>
<tr>
<td>7</td>
<td>Pesticides and Other Organic Chemicals</td>
<td>Chapter 7</td>
<td>MID-TERM EXAM (“Take Home”)</td>
</tr>
<tr>
<td>2/24 &amp; 2/26</td>
<td></td>
<td></td>
<td>Discussion 2: DDT</td>
</tr>
<tr>
<td>8</td>
<td>Ionizing and Nonionizing Radiation</td>
<td>Chapter 8</td>
<td>MID-TERM EXAM DUE</td>
</tr>
<tr>
<td>3/3 &amp; 3/5</td>
<td></td>
<td></td>
<td>Quiz 4 (Chapters 7 &amp; 8)</td>
</tr>
<tr>
<td>9</td>
<td>Water Quality</td>
<td>Chapter 9</td>
<td></td>
</tr>
<tr>
<td>3/10 &amp; 3/12</td>
<td></td>
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<tr>
<td>10: 3/16 – 20</td>
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<td></td>
<td>Spring Break - Enjoy!!!</td>
</tr>
<tr>
<td>11</td>
<td>Air Quality (Food Safety presentation??)</td>
<td>Chapter 10</td>
<td>Discussion 3: EH Concerns 1</td>
</tr>
<tr>
<td>3/24 &amp; 3/26</td>
<td></td>
<td></td>
<td>Quiz 5 (Chapters 9 &amp; 10)</td>
</tr>
<tr>
<td>12</td>
<td>Food Safety</td>
<td>Chapter 11</td>
<td>TERM PROJECT DRAFT Due</td>
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<tr>
<td>3/31 &amp; 4/2</td>
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</tr>
<tr>
<td>13</td>
<td>Solid and Liquid Wastes</td>
<td>Chapter 12</td>
<td>Quiz 6 (Chapters 11 &amp; 12)</td>
</tr>
<tr>
<td>4/7 &amp; 4/9</td>
<td></td>
<td></td>
<td>Discussion 4: EH Concerns 2</td>
</tr>
<tr>
<td>14</td>
<td>Occupational Health</td>
<td>Chapter 13</td>
<td></td>
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<tr>
<td>4/14 &amp; 4/16</td>
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<tr>
<td>15</td>
<td>Unintentional Injuries and Deaths</td>
<td>Chapter 14</td>
<td>Quiz 7 (Chapters 13 &amp; 14)</td>
</tr>
<tr>
<td>4/21 &amp; 4/23</td>
<td></td>
<td></td>
<td>TERM PROJECT REPORT DUE</td>
</tr>
<tr>
<td>16</td>
<td>Term Project Presentations</td>
<td></td>
<td>PPT. PRESENTATIONS</td>
</tr>
<tr>
<td>4/28 &amp; 4/30</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>17</td>
<td>FINAL EXAM</td>
<td></td>
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<tr>
<td>5/5/15</td>
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</table>
Samples of your work may be reproduced for search purposes and/or inclusion in the professor’s teaching portfolio. You have the right to review anything selected for use, and subsequently ask for its removal.

**Instructional Methods:** The mode of instruction for this class is face-to-face; however, quizzes will be taken online via Folio. There will be three fieldtrip excursions. The course grade will be determined based on a combination of examinations, quizzes, a term project, discussions and fieldtrip attendance/write-up.

**Examinations:** You will have a week to complete your mid-term exam (“take home”). **The FINAL EXAM will be given in class!!!**

**Student Assessments:** Assessments are linked to the learning objectives for this class. Each assessment below is linked to the course learning objectives (LO 1-19) on pages 2 – 3 of this syllabus. Weighting of assignments for purposes of grading will be as follows:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-Term Exam (LO 1-7, 9-10, 12-14)</td>
<td>120</td>
</tr>
<tr>
<td>Module Quizzes (LO 1-19)</td>
<td>70</td>
</tr>
<tr>
<td>Term Project Draft and Presentation</td>
<td>30</td>
</tr>
<tr>
<td>Term Project Report</td>
<td>30</td>
</tr>
<tr>
<td>Field Trips (LO 3, 6-7, 12-14, 15-19)</td>
<td>40</td>
</tr>
<tr>
<td>Final Exam (LO 4-8, 10, 15-19)</td>
<td>120</td>
</tr>
<tr>
<td>In-Class Discussions and Participation</td>
<td>40</td>
</tr>
</tbody>
</table>

Total Possible Points (100%) 450 points

The following point scale will be utilized in grading:

<table>
<thead>
<tr>
<th>Points Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>405-to-450 points</td>
<td>A</td>
</tr>
<tr>
<td>360-to-404 points</td>
<td>B</td>
</tr>
<tr>
<td>315-to-359 points</td>
<td>C</td>
</tr>
<tr>
<td>270-to-314 points</td>
<td>D</td>
</tr>
<tr>
<td>Below 270 points</td>
<td>F</td>
</tr>
</tbody>
</table>

For the calculation of your final grade, all the grades above will be included. Your grades will be posted in the grade book and available to you as they are graded via Folio.

There are times when extraordinary circumstances occur (e.g., serious illness, death in the family, etc.). In such circumstances, and/or if you need additional time to satisfactorily complete any course requirement, please consult with the instructor within a reasonable amount of time.

**Note:** Extensions are not guaranteed and will be granted solely at the discretion of the instructor.
**Academic Misconduct:** As a student registered at this University, it is expected that you adhere to only the strictest standards of conduct. It is recommended that you review the latest edition of the *Student Conduct Code* book, as well as the latest *Undergraduate & Graduate Catalog* to familiarize yourself with the University’s policies in this regard. Your continued enrollment in this course is an implied contract between you and the instructor on this issue; from this point forward, it is assumed that you will conduct yourself appropriately.

Academic integrity relates to the appropriate use of intellectual property. The syllabus, lecture notes, and all materials presented and/or distributed during this course are protected by copyright law. Students are authorized to take notes in class, but that authorization extends only to making one set of notes for personal (and no other) use. As such, students are not authorized to sell, license, commercially publish, distribute, transmit, display, or record notes in or from class without the express written permission of the instructor.

**Plagiarism** - According to the Academic Dishonesty Policy of GSU, Plagiarism includes (but is not limited to):

A. Directly quoting the words of others without using quotation marks or indented format to identify them.

B. Using published or unpublished sources of information without identifying them.

C. Paraphrasing material or ideas without identifying the source.

D. Unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic material.

If you are accused of plagiarism by a JPHCOPH faculty, the following policy, as per the Judicial Affairs website (http://students.georgiasouthern.edu/judicial/faculty.htm) will be enforced.

**PROCEDURES FOR ADJUDICATING ACADEMIC DISHONESTY CASES:**

**First Offense - In Violation Plea:**

1. If the professor and the Dean of Students agree that the evidence is sufficient to warrant a charge of academic dishonesty, the professor should contact the Office of
Judicial Affairs to determine if this is a first violation of academic dishonesty. The incident will be reported via the following website:
http://students.georgiasouthern.edu/judicial/faculty.htm

2. If it is a first violation, the professor should talk with the student about the violation. **If the student accepts responsibility in writing and the professor decides to adjudicate the case, the following procedures will be followed:**
   a. The student will be placed on disciplinary probation for a minimum of one semester by the Office of Judicial Affairs.
   b. The student will be subject to any academic sanctions imposed by the professor (from receiving a 0 on the assignment to receiving a failing grade in the class).
   c. A copy of all the material involved in the case (Academic Dishonesty Report Form and the Request For Instructor to Adjudicate Form) and a brief statement from the professor concerning the facts of the case and the course syllabus should be mailed to the Office of Judicial Affairs for inclusion in the student’s discipline record.

   **First Offense - Not In Violation Plea (student does not admit the violation)**

   If the professor and the Dean of Students agree that the evidence is sufficient to warrant a charge of academic dishonesty, the professor should contact the Office of Judicial Affairs to determine if this is the first or second violation of academic dishonesty. The student will be charged with academic dishonesty and the University Judicial Board or a University Hearing Officer would hear the case. If the student is found responsible, the following penalty will normally be imposed:
   a. The student will be placed on Disciplinary Probation for a minimum of one semester by the Office of Judicial Affairs.
   b. The student will be subject to any academic sanctions imposed by the professor.

   **Second Violation of Academic Dishonesty**

   If the professor and the Dean of Students agree that the evidence is sufficient to warrant a charge of academic dishonesty, and if it is determined this is the second violation,
the student will be charged with academic dishonesty and the
University Judicial Board or a University Hearing Officer
would hear the case.

If the student is found responsible, the following penalty
will normally be imposed:

a. Suspension for a minimum of one semester or expulsion.
b. The student will be subject to any academic sanctions
imposed by the professor.

NOT RESPONSIBLE FINDING
When a student is found not responsible of academic
dishonesty, the work in question (assignment, paper, test, etc.)
would be forwarded to the Department Chair. It is the
responsibility of the Department Chair to ensure that the work
is evaluated by a faculty member other than the individual who
brought the charge and, if necessary, submit a final grade to the
Registrar. For the protection of the faculty member and the
student, the work in question should not be referred back to the
faculty member who charged the student with academic
dishonesty. In the case of a Department Chair bringing charges
against a student, an administrator at the Dean’s level will
ensure that the student’s work is evaluated in an appropriate
manner.

Academic Handbook:
Students are expected to abide by the Academic Handbook,
located at http://students.georgiasouthern.edu/sta/guide/. Your
failure to comply with any part of this Handbook may be a
violation and thus, you may receive an F in the course and/or
be referred for disciplinary action.

University Calendar for the Semester:
The University Calendar is located with the semester schedule,
and can be found at:

http://students.georgiasouthern.edu/registrar

Attendance Policy:
Federal regulations require attendance be verified prior to
distribution of financial aid allotments. Attendance will not be
recorded after this initial period.

One Final Note:
The contents of this syllabus are as complete and accurate as
possible. The instructor reserves the right to make any changes
necessary to the syllabus and course material. The instructor
will make every effort to inform students of changes as they
occur. It is the responsibility of the student to know what
changes have been made in order to successfully complete the
requirements of the course.