Course Title: Public Health Preparedness & Response: Competency Based Local, Regional, National and Global Public Health Participation

Course Number: ENOH0561J-030-Fa13-7

Course Location: Room 306

Course Date & Time: Monday 2:30 PM – 5:00 PM

Course Instructor: George DiFerdinando, Jr., MD, MPH, FACP
Adjunct Professor Department of Epidemiology
Director, NJ Center for Public Health Preparedness
diferdge@umdnj.edu, diferdge@sph.rutgers.edu
609 – 688-1921

Office Hours: Monday, Room 109, 1:00PM – 2:30PM

Required Course Text: Emergency Public Health: Preparedness and Response
Kapur GB, Smith JP, Jones & Bartlett Learning, 2011

Additional/Supplemental Readings/Resources: Moodle

Course Description:

Public Health Preparedness and Response is a one semester course that teaches the theory and practice of public health emergency preparedness and response, based on the ASPH Public Health Preparedness & Response Core Competency Model (http://www.asph.org/document.cfm?page=1081). The course addresses planning for public health response to natural (severe weather, temperature extremes, earth quakes, droughts, tsunami, pandemics) and technological events (transportation crashes, chemical spills), as well as to intentional attacks using CBRNE (chemical, biological, radiological, nuclear, and explosive) agents; special emphasis in examples and exercises is placed on environmental hazards and events.

The public health infrastructure of the United States and the world exists in a wide variety of structures and with varying responsibilities at the global, Federal, State, and local levels. To provide coordinated response in all types of emergencies, public health practitioners must be aware of and be competent in their roles, as well as being integrated into community emergency management.
Selected Department Competencies Addressed:

Each Department identifies competencies for each degree offered. The competencies addressed in this course for the MPH for the Department of Environmental Health include:

- Competencies Primarily Gained in this Course:
  - Describe the major environmental health problems to the general public as well as specific communities within this population.
  - Describe the federal and state regulatory programs that relate to environmental (community) and worker (occupational) protection.
  - Specify current environmental risk assessment approaches and methods for a particular hazard or risk in the community.
- Competencies Reinforced in this Course:
  - Explain the basic mechanism of toxicology and dose-response regarding environmental toxicants.
  - Develop a testable model of environmental exposures and adverse health outcomes.

Please visit the Department webpages on the School of Public Health’s website at http://sph.rutgers.edu/ for additional competencies addressed by this course for other degrees and departments.

Course Objectives: By the completion of this course, students will be able to:

1. Describe the public health preparedness & response core competencies for individual members of the public health workforce, and capabilities for public health organizations.
2. Describe the essentials of public health preparedness and response, including control of infectious diseases, outbreak investigation, environmental health protection, and the role of emergency operations planning and exercises.
3. Explain the 5 phases of emergency response – Prevention, Preparedness, Response, Recovery, and Mitigation.
4. Describe, in detail, the environmental hazards discussed as examples in this course, including radiological, nuclear, chemical, and climate related hazards. This description includes:
   - Related health problems to the general public and specific individuals.
   - Basic toxicology and dose-response.
   - Federal, state, and local regulations and response.
   - Relation between exposure and adverse outcomes.
   - Risk assessment approaches.
5. Describe the responsibilities and capabilities of federal, state and local public health agencies to respond to incidents in an ‘all hazards’ approach.
6. Identify the initial and long-term roles of different public health professionals during a public health emergency event.
7. Identify populations with special sensitivities, needs, and/or vulnerabilities to emergencies.
8. Describe the likely mental health, psychological, and psychosocial effects of crises, emergencies, and disasters.
9. Explain how different public health and non-public health agencies, as well as private profit and not-for-profit entities, coordinate emergency preparedness and response activities and services.
10. Define strategies for limiting the impact of a public health emergency event, including mitigation.

Course Requirements and Grading:

Course work is evaluated as follows:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Punctual attendance at all classes</td>
<td>5%</td>
</tr>
<tr>
<td>Class discussion, paper summaries, and presentations</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Online Quizzes:</strong> Dates: Due 10/4; Due 10/25; Due 11/15; Due 12/16</td>
<td>30%</td>
</tr>
<tr>
<td><strong>Paper Topic:</strong> Due before class, November 4</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Paper Outline:</strong> Due before class, November 18</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Paper 20 pages+:</strong> Due by 5pm, Friday, December 6</td>
<td>40%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
</tr>
</tbody>
</table>

Student Research Papers

Students are to write a major paper, due by email. The paper should be approximately 20+ pages, (not including references) due by 5PM Friday, December xx.

I will work with each of you to help determine your paper topic. You will develop a researchable question for each paper based on the subjects you provide. No two students may have the exact same research paper topic.

Please note that your papers should be well researched, organized, written and edited, proofread and polished with footnotes/ endnotes and a reference page or bibliography of your major sources. The paper will be graded according to the "grading rubric."

You are welcome and encouraged to share draft copies, detailed outlines, research notes, etc., before you turn in your final version. Advice given on your preliminary work almost always helps you choose a better topic.
Draft Review Day: One of the class sessions in November will be identified as a review and discuss day for draft papers.

Presentations:

You are expected to provide the class with two presentations, on October xx and November xx.

The first presentation will be 5-10 minutes on a topic of your choice. Depending on class size, these will be scheduled during one or more classes in October.

The second will be a 10-15 minute summary presentation of your paper with a maximum of 18 slides.

Both presentations should be in PowerPoint. You will be graded based on a rubric

Reading summaries:

Everyone will summarize/highlight key points of one or more assigned readings and discuss them in the following week’s class. This should be approximately 1 to 2 pages and should be posted in your “drop box” prior to class.

Course Schedule: Attached

School of Public Health Honor Code: The School of Public Health Honor Code is found in the student bulletin (sph.rutgers.edu/academics/catalog/index.html). Each student bears a fundamental responsibility for maintaining academic integrity and intellectual honesty in his or her graduate work. For example, all students are expected to observe the generally accepted principles of scholarly work, to submit their own rather than another’s work, to refrain from falsifying data, and to refrain from receiving and/or giving aid on examinations or other assigned work requiring independent effort. In submitting written material, the writer takes full responsibility for the work as a whole and implies that, except as properly noted by use of quotation marks, footnotes, etc., both the ideas and the works used are his or her own. In addition to maintaining personal academic integrity, each student is expected to contribute to the academic integrity of the school community by not facilitating inappropriate use of her/his own work by others and by reporting acts of academic dishonesty by others to an appropriate school authority. It should be clearly understood that plagiarism, cheating, or other forms of academic dishonesty will not be tolerated and can lead to sanctions up to and including separation from the Rutgers School of Public Health.

Policy Concerning Use of Recording Devices and Other Electronic Communications Systems: When personally owned communication/recording devices are used by students to record lectures and/or classroom lessons, such use must be authorized by the faculty member or instructor who must give either oral or written permission prior to the start of the semester and identify restrictions, if any, on the use of mobile communications or recording devices.
<table>
<thead>
<tr>
<th>Date</th>
<th>Class Week</th>
<th>Topic and Readings</th>
<th>Readings</th>
</tr>
</thead>
</table>
| Sept 9   | 1          | Lecture: Protecting Populations During Emergencies  
Exercise: How to Use the Federal Emergency Management Agency (FEMA) Independent Study (IS) Training System  
Lecture: PHP&R Competencies & Capabilities                                                                                                          | Kapur Ch. 1  
Computer Exercise  
PowerPoint                                                                                                    |
|          |            | **Home Exercise**  
IS-318, Module 3: Assessing Risk  
http://emilms.fema.gov/IS318/MP03moduleMenu.htm  
IS-100.B: Introduction to Incident Command System (ICS) ICS-100  
http://training.fema.gov/EMIWeb/IS/courseOverview.aspx?code=is-100.b                                                                 | From the FEMA Emergency Management Institute                                                                                                    |
| Sept 16  | 2          | Lecture: Hazards & Risk, Emergencies, Crisis & and Disasters  
Exercise: Hazard Categories  
Lecture: Government Capacity: Federal State & Local Agendas and Responsibilities                                                                                          | Kapur Ch. 2  
Kapur Ch. 3                                                                                                           |
|          |            | **Home Exercise**  
IS-1.a Emergency Manager: An Orientation to the Position  
http://training.fema.gov/EMIWeb/IS/courseOverview.aspx?code=IS-1.a                                                                                           | From the FEMA Emergency Management Institute                                                                                                    |
| Sept 23  | 3          | Lecture: The 5 Phases of Emergency Management: Prevention, Preparedness, Response, Recovery, and Mitigation, & the ICS  
Exercise: ICS Exercise  
Lecture: The 5 Phases of Emergency Management: The National Response Framework (NRF) and the National Incident Management System (NIMS) | Online FEMA ICS Course  
Kapur Ch. 4                                                                                                           |
|          |            | **Home Exercise**  
IS-808: Emergency Support Function (ESF) #8 – Public Health and Medical Services  
IS-662: Improving Preparedness and Resilience through Public-Private Partnerships  
http://emilms.fema.gov/is662/index.htm                                                                                      | From the FEMA Emergency Management Institute                                                                                                    |
| Sept 30  | 4          | Lecture: PH&R Competencies & Capabilities  
Exercise: NJ ESF-8  
Lecture: Non-Governmental Roles: Public Private Partnerships, NGOs                                                                                                 | Kapur Ch. 6 & 7  
From the University of Minnesota (U-SEEE PERL) Center  
Online                                                                                                                 |
| Oct 7    | 5          | **Quiz 1 (Weeks 1-4) Online**  
Lecture: Epidemiology in PHP&R  
Lecture: Pre-disaster & post-disaster assessment                                                                                                                      | Kapur Ch. 9 & 10                                                                                               |
|          |            | **Home Exercise**  
Overview of Rapid Needs Assessments (RNAs)  
http://cphp.sph.unc.edu/training/HEP_RNA1/certificate.php  
Methods of RNAs  
http://cphp.sph.unc.edu/training/HEP_RNA2/certificate.php                                                                                          | From the UNC CPHP Training Web Site  
http://cphp.sph.unc.edu/training/index.php                                                                                           |
| Oct 14   | 6          | Lecture: RNA, Technology in PH R&R  
Exercise: RNA In Class Review                                                                                                                                             | Kapur Ch. 8 & 11                                                                                               |
|          |            | **Home Exercise**  
IS-56: Hazardous Materials Contingency Planning  
http://emilms.fema.gov/IS56/index.htm  
IS-340: Hazardous Materials Prevention  
http://emilms.fema.gov/is340_HazMat/index.htm                                                                                       | From the FEMA Emergency Management Institute                                                                                                    |
| Oct 21   | 7          | **Quiz 2 (Weeks 5-7) Online**  
Environmental Hazards as a Paradigm for Public Health Preparedness & Response: Hazardous Materials  
http://emilms.fema.gov/IS3/FEMA_IS/is03/index.htm                                                                                     | From the FEMA Emergency Management Institute                                                                                                    |
<table>
<thead>
<tr>
<th>Date</th>
<th>Class Week</th>
<th>Topic and Readings</th>
<th>Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct 28</td>
<td>8</td>
<td><strong>Quiz 2 (Weeks 5-7) In Class Review</strong>&lt;br&gt;Environmental Hazards as a Paradigm for PHP&amp;R: Radiological Materials</td>
<td>Kapur Ch. 18 &amp; 23</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Home Exercise</strong>&lt;br&gt;Start IS-806: ESF#6 – Mass Care, Emergency Assistance, Housing, and Human Services&lt;br&gt;<a href="http://emilms.fema.gov/is806/index.htm">http://emilms.fema.gov/is806/index.htm</a></td>
<td>From the FEMA Emergency Management Institute</td>
</tr>
<tr>
<td>Nov 4</td>
<td>9</td>
<td><strong>Paper Topic Due</strong>&lt;br&gt;Environmental Hazards as a Paradigm for PHP&amp;R: Climate &amp; Climate Change</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Home Exercise</strong>&lt;br&gt;Finish IS-806: ESF #6 – Mass Care, Emergency Assistance, Housing, and Human Services&lt;br&gt;<a href="http://emilms.fema.gov/is806/index.htm">http://emilms.fema.gov/is806/index.htm</a></td>
<td>From the FEMA Emergency Management Institute</td>
</tr>
<tr>
<td>Nov 11</td>
<td>10</td>
<td>Lecture: Mass care, Emergency Assistance, Housing, and Human Services, including role of Voluntary Organizations</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Home Exercise</strong>&lt;br&gt;Emergency Risk Communication&lt;br&gt;<a href="http://www.nwcphp.org/training/opportunities/online-courses/emergency-risk-communication-for-public-health-professionals">http://www.nwcphp.org/training/opportunities/online-courses/emergency-risk-communication-for-public-health-professionals</a>&lt;br&gt;<strong>Test 3 (Weeks 8-10) Online</strong></td>
<td>From the Northwest Center for Public Health Practice</td>
</tr>
<tr>
<td>Nov 18</td>
<td>11</td>
<td><strong>Test 3 (Weeks 8-10) In Class Review</strong>&lt;br&gt;Lecture: Risk Communication in PHP&amp;R – Crisis and Emergency Response Risk Communication (CERC)&lt;br&gt;Exercise: Creating a CERC Message Map&lt;br&gt;<strong>Outline Due</strong></td>
<td>From the Northwest Center for Public Health Practice</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Home Exercise</strong>&lt;br&gt;Disaster Behavioral Health&lt;br&gt;<a href="http://www.nwcphp.org/training/opportunities/online-courses/disaster-behavioral-health">http://www.nwcphp.org/training/opportunities/online-courses/disaster-behavioral-health</a></td>
<td></td>
</tr>
<tr>
<td>Nov 25</td>
<td>12</td>
<td>Lecture: Preparedness for Special Populations: Behavioral and Mental Health Services&lt;br&gt;<strong>Exercise: Outline Discussion</strong></td>
<td>Kapur Ch. 24 &amp; 26</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Home Exercise</strong>&lt;br&gt;IS-36: Multi-hazard Planning for Childcare&lt;br&gt;<a href="http://emilms.fema.gov/is36/index.htm">http://emilms.fema.gov/is36/index.htm</a>&lt;br&gt;Special Populations (Public Health Emergency Training Series)&lt;br&gt;<a href="http://www.sph.umn.edu/details/course/6389/">http://www.sph.umn.edu/details/course/6389/</a></td>
<td>From the FEMA EMI and the University of Minnesota (U-SEEPEEL) Center</td>
</tr>
<tr>
<td>Dec 2</td>
<td>13</td>
<td><strong>Student Presentations</strong>&lt;br&gt;Lecture: Preparedness for Vulnerable Populations: Children</td>
<td>Kapur Ch. 25</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Home Exercise</strong>&lt;br&gt;FINISH YOUR PAPERS!</td>
<td></td>
</tr>
<tr>
<td>Dec 6</td>
<td></td>
<td><strong>Paper Due by 5pm via Email</strong></td>
<td></td>
</tr>
<tr>
<td>Dec 9</td>
<td>14</td>
<td>Lecture: International Public Health P&amp;R</td>
<td>Kapur Ch. 5, 6 &amp; 7</td>
</tr>
<tr>
<td>Dec 16</td>
<td>15</td>
<td><strong>Final - Test 4 (Weeks 11-14) and Cumulative</strong></td>
<td></td>
</tr>
</tbody>
</table>