Department of Public Health Sciences

Syllabus

Course: PH 653 Global Health and Human Security (3 Credits)

Semester: Spring 2015

Meeting: Off-campus external course online in Laulima. No on-site attendance required.

Instructor: Deon V. Canyon PhD DBA MPH FACTM
Office Hours: By appointment; dcanyon@hawaii.edu

Description: Terrorist activities since the beginning of this century and the resulting geo-political state of affairs have created a need for those in the global and public health sector to be well versed in health security, preparedness and population protection. It is essential in this socio-political climate that public health professionals have a rational approach to managing public perceptions regarding health protection issues and are able to lead an appropriate response to suspected health security events. This course will provide students with a broad geo-political and historical understanding of health security. It will develop an awareness of the increased focus and attention on bioterrorism research and preparedness and explore the implications for the public health sector.

Objectives: The course will provide students with an overview of the knowledge, skills and attitudes necessary to manage a program of bioterrorism preparedness that focuses on information dissemination and educating the public. Students will be required to think critically, analyze and evaluate the key issues, and to communicate new understandings effectively using different media. Emphasis will be placed on developing a sound understanding of actual risk, as well as developing response plans in anticipation of a health security event. On completion of this course, students will be able to:

• Understand relevant definitions, context and historical background of health protection and security
• Understand the relationship between the public health sector and any activities related to preparedness or response to a health security event
• Know the most likely agents used in bioterrorism and be able to describe their mode of infection, disease potential, and who is most at risk
• For each agent describe the barriers in use for bioterrorism
• Describe the appropriate protocols for treating and containing each of the agents
• Understand ethical issues associated with health security research, preparedness and response
• Describe what a response plan to a suspected health security event would constitute and discuss the issues related to information, communication, risk assessment and the management of public anxiety and understanding.
There are four key themes that thread throughout the course:

1. Understanding the role of public health in health security, prevention, education and response
2. Modes and methods of bioterrorism
3. Context and ethical issues
4. Information management and control

The methodological aim is to enable the student to arrive at an understanding of the intricate interactions between health security issues, environments, humans, cultures, policies and public health by personal discovery in addition to the absorption of text.

Textbook: There is no set textbook for this course. All course materials will be available for downloading at https://laulima.hawaii.edu/portal.

Delivery: This is an asynchronous online course that is completed in external/distance mode. Students will experience the benefits of reduced time commitment, reduced commuting and the ability to control their own learning environment. This course consists of a coherent series of lectures delivered online via Laulima. Course materials will be made available for downloading at https://laulima.hawaii.edu/portal. Announcements will be posted to the site to communicate with the class and email will be used to communicate with students individually at their @hawaii.edu email address. Students are required to be aware of this information. Please contact teaching faculty with your questions or arrange an appointment if necessary. Contact the Instructor for advice if you are in an internet-restricted zone.

The emergent nature of the topic means that new information and understanding of bioterrorism is emerging every day. Thus, the materials collected and referenced in the course are the best available at the time of development. The course is responsive to new information and ideas and provides students with an underpinning framework of understanding – most of the concepts and ideas remain consistent. It is expected that students will use the information as a jumping point for further exploration of the topic through the web, the literature and perhaps through experience.

The syllabus, readings and assignments may change to meet arising needs.

Policies: The expectations of students in this course are:

- All assessment items must be completed to pass this course
- Assessment items must be received when due to receive full credit
- Extensions must be requested by email before the due date
- Standardized citation and reference formatting is expected (e.g. APA)
- Use peer-reviewed literature when references are required, not lecture notes
- Plagiarism will result in a fail (see UH Student Conduct Code)
- Use your name, headings, 12 point font and single spacing in assignments
Schedule: The syllabus, readings and assignments may change to meet arising needs. Weekly materials are provided mid-week or sooner. In week 1, be sure to access Laulima, review course requirements and introduce yourself in the Student Lounge Discussion Forum.

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<tr>
<th>Wk</th>
<th>Week of</th>
<th>Study Module and Assessment Activities</th>
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<tr>
<td>1</td>
<td>Jan 12</td>
<td>Introduction to health security</td>
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<tr>
<td>2</td>
<td>Jan 19</td>
<td>Threat and intent</td>
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<td>3</td>
<td>Jan 26</td>
<td>Anthrax</td>
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<td>4</td>
<td>Feb 02</td>
<td><em>Discussion Topics 1 &amp; 2</em></td>
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<td>5</td>
<td>Feb 09</td>
<td>Smallpox</td>
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<td>6</td>
<td>Feb 16</td>
<td>Plague and botulism</td>
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<td>Feb 23</td>
<td>Tularemia and viral hemorrhagic fevers</td>
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<td>Mar 02</td>
<td>Category B and C agents</td>
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<td>Mar 09</td>
<td>Bioterrorism and food safety</td>
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<td>10</td>
<td>Mar 16</td>
<td><em>Discussion Topics 3 &amp; 4</em></td>
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<td>11</td>
<td>Mar 23</td>
<td>RECESS</td>
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<td>12</td>
<td>Mar 30</td>
<td>Outbreaks and white powder events</td>
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<td>13</td>
<td>Apr 06</td>
<td>Diagnostics and surveillance</td>
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<td>14</td>
<td>Apr 13</td>
<td>Planning, logistics and response</td>
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<td>15</td>
<td>Apr 20</td>
<td>Information management and risk communication</td>
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<td>16</td>
<td>Apr 27</td>
<td><em>Finalize Health Security Report</em></td>
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<td>17</td>
<td>May 04</td>
<td>STUDY WEEK</td>
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<td>18</td>
<td>May 11</td>
<td>EXAMINATION WEEK</td>
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Most courses are better understood by students with work experience. Students who are currently working within a health program or service will thus be able to see how the assessments help in the analysis and planning of their own work. If you are not currently involved in health program work or are not working in a health service of some kind, this will not be an issue. You will simply need to consider previous or future work opportunities and apply these to the assessments in a more theoretical way.

Assessment: In all assessments, combine a written description with a data in a table or graph where possible. Note that inadequate overall presentation, including grammar, spelling, sentence structure, syntax, referencing, etc. will result in point deductions.

Discussions (40%): Four topics will be posted in weeks 4 and 10. There is no word limit. Discussions are due by end of week Sunday midnight. Each discussion is worth 10% of your final grade.

Health Security Report (30%): A scenario will be provided with background information and students will play the role of a bioterrorism expert that has been hired as a consultant to help prepare a city for an attack. This assignment is due by end of week 16 Sunday midnight.
Examination (30%): Available in Laulima on 01 Aug and can be completed any time until Thu 10 Aug midnight – online unsupervised

Discussions: Students will be marked for their participation in online discussions at Laulima.

- Your postings should be written in such a way so as to provoke comment, support and constructive criticism from other students
- Our goal is to encourage a lively and vibrant debate but please be mindful of the viewpoints of others and be considerate and polite at all times
- Formal referencing of material is not required but please supply enough information so that fellow students and markers can identify your sources
- Please be careful if you use websites or URLs because some are not suitable for promoting in the public arena and some are closely monitored by security agencies – we don’t want to attract unwarranted attention from them

The topics for the On-Line Discussions:

Topic 1: Respond to the following statement: The threat of bioterrorism is only a political stunt. The fact that there has not been a bioterrorism attack in the last 10 years means that the terrorists have discarded it as a viable weapon or that there are adequate safeguards in place to prevent an attack happening. The money being spent on bioterrorism defence should be re-diverted to general public and preventative health.

Topic 2: One of the required readings in Module 2 is “The Danger within” by Bhattacharee. It talks about the use of Anthrax apparently obtained from within the laboratories of the US Department of Defence by a disgruntled employee. Could an “insider” bioterrorism attack happen in Hawaii? Does Hawaii have enough safeguards to prevent it? If not, what safeguards should be put in place?

Topic 3: In reality, category B bioterrorism agents pose more of a risk to Hawaii than category A agents. Do you agree or disagree? Explain why.

Topic 4: The paper by George Annas “Bioterrorism, Public Health and Civil Liberties” included in the readings for Module 2, asks the question: should we be prepared to give up any civil liberties to fight this “different king of war” (bioterrorism)? Should we? The paper also outlines a “model act” to deal with bioterrorism. Does Hawaii have similar legislation? If not, should such legislation be introduced?

Health Security Report

The prosperous city-state of Zizabea occupies most of the tropical island of Zagzig. The Zizabean population of 1.1 million live in modern high-rise, air-conditioned apartment buildings each containing about 1200 people.
There is a workforce of around 30,000 from India and Bangladesh who live in a shanty town. They are mostly poorly educated, do not speak or read Zizabean and are usually employed as domestic servants. They arrive at the house before breakfast time and remain there until after the evening meal.

There is an 800 bed teaching hospital with a well-equipped emergency medicine department. Scattered around the city are four smaller hospitals of around 100 beds each with an emergency clinic and outpatient services. Unfortunately many hospital beds are occupied by those with chronic diseases and there is a shortage of beds for acute cases.

There are 30 family medicine clinics, but none of these are in the shanty town. The shanty town residents rely upon “traditional healers” who have a rudimentary grasp of basic primary health care and first aid. They only refer patients to health facilities outside the shanty town when they have exhausted their repertoire of traditional remedies, a process that could take several days.

Pathology services have been contracted to a private company. Their laboratories in Zizabea are able to carry out basic microbiology, but any unusual isolates are sent to the company’s central laboratory on the mainland for identification. Reports often take a week to get back to Zizabea.

The Department of Emergency Services controls ambulance, fire, and police. Over half of these “first responders” belong to a religious group called the Zulk who have a strong mistrust of “Western Medicine”, especially treatments that involve skin penetration.

There is a TV station and three radio stations all broadcasting in Zizabea. They are state-owned and generally distrusted by the population. There are no newspapers, but on-line, government-originated news casts are available in most Zizabea homes.

The Zizabean government has received intelligence that an extremist group is planning a bioterrorism attack on ten high rise apartment buildings using small bombs packed with explosive and anthrax spores. A drawing of the bomb has been obtained. It contains enough explosive to seriously damage some of the apartments in the complex without causing its complete destruction. The “payload” of anthrax spores is estimated to be about 2 grams per bomb.

It is suspected that the attack will take place during elections scheduled for October and it is very likely that the bombs will be timed to explode during evening prayers which take place immediately before the evening meal.

Your Assignment: You are a health security expert that has been hired as a consultant to help prepare Zizabea for this bioterrorism attack. Write a formal report to Minister of Homeland Security (who is a lawyer by profession) that uses the following headings:

- Executive Summary
- Overview of anthrax as a bioterrorism agent
• Vulnerabilities (what makes Zizabea vulnerable to the threatened attack?)
• Likely Outcomes (describe the likely outcomes of such an attack)
• Recommendations (how should Zizabea prepare the health services, emergency services and the general population to deal with the threat?)
• Bibliography (a formal report does not have in-text references but you must provide a bibliography with 10 to 20 key references - choose carefully - junk references will lose marks)

Some pointers:

• Read the scenario carefully because there are some subtle issues that you will have to address
• Remember who you are writing for: A government minister and a lawyer who is not a trained scientist and is a very busy person
• Provide accurate facts written in a way that is suitable to the situation
• Use “dot points” and short paragraphs where appropriate
• Present data in tabular or graphical format to support your arguments

Submission: Submit your Position Paper in the “Assignments” area in Laulima. Include the following information on your assignment title page:

<table>
<thead>
<tr>
<th>ASSIGNMENT:</th>
<th>Health Security Report</th>
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</thead>
<tbody>
<tr>
<td>TITLE:</td>
<td></td>
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<tr>
<td>STUDENT NAME:</td>
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<td>STUDENT EMAIL:</td>
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<tr>
<td>STUDENT DECLARATION:</td>
<td>I declare that the work that I have submitted for assessment is my own, except where appropriately referenced and acknowledged. It has not been used for any other assessment. I am aware of the University’s policies on plagiarism and academic misconduct.</td>
</tr>
</tbody>
</table>

Marking: The assignment will be marked according to the following criteria:

• Followed instructions
• Relevance to the topic
• Quality of the content
• Quality of critical and original argument
• Spelling and grammar
• Suitability of figures, images, tables
• Referencing
• Presentation and formatting
The marking of these assignments involves a qualitative, subjective appraisal of many criteria that vary in importance depending on how they are satisfied.

Examination: Your knowledge and understanding of the subject will be examined in an exam that provides an opportunity to demonstrate what you have learnt.

Advice

- The exam will be made available online in Laulima and will be unsupervised and open-book
- Be sure you are prepared before you commence
- The exam description will tell you about the number and type of questions
- Questions will mostly be multiple choice and other short answer
- This exam is timed, so make a time plan before you start
- Feedback on the exam is automatically generated
- Your final mark will be posted in Laulima after it has been reviewed and corrected
- The duration of the exam may range from 1 to 3 hours

Study Advice: Past students have frequently commented that more guidance on how to study online courses would have been useful. Here are some pointers. As a general guide, students are required to put in around 10 hours of work a week for a 3-credit course. It is not uncommon to see students working very different hours depending on their capacity, experience, desire to excel and work commitments. Most of you will have established study patterns and do not require advice. Those of you that are new to online graduate study will find this course challenging. The best advice is ‘don’t let work pile up’ and ‘stay on course’. Heed the timetable or make your own timetable to suit your family and/or work commitments.

Readings: Lecture Notes will be available for each module in addition to the following readings. Additional readings are listed in the Lecture Notes.

Module 1


Module 2


Module 3


Module 4

• Henderson D et al. Smallpox as a biological weapon: Medical and public health management. JAMA 1999; 281:2127-2137.

Module 5


Module 6

Module 7


Module 8


Module 9


Module 10

• Buehler JW, Berkelman RL, Hartley DM& Peters CJ. Syndromic Surveillance and Bioterrorism-related Epidemics. Emerging Infectious Diseases. 2003; 9, 10; 1197-1204 http://www.cdc.gov/ncidod/EID/vol9no10/03-0231.htm

Module 11

• Davis DP, Poste JC, Hicks T, Polk D, Rymer TE, Jacoby I. Hospital bed surge capacity in the event of a mass-casualty incident. Prehospital Disaster Med. 2005; 20(3): 169-76.

Module 12

• CDC: Communicating in a crisis: risk communication for public health officials,2002.
• http://www.riskcommunication.samhsa.gov/index.htm
Some useful websites:

- Federation of American Scientists: Biological and Chemical Weapons Control: [http://www.fas.org/main/content.jsp?formAction=325&projectId=4](http://www.fas.org/main/content.jsp?formAction=325&projectId=4)
- Association for Professionals in Infection Control and Epidemiology: [http://www.apic.org/Content/NavigationMenu/PracticeGuidance/Topics/Bioterrorism/Bioterrorism.htm](http://www.apic.org/Content/NavigationMenu/PracticeGuidance/Topics/Bioterrorism/Bioterrorism.htm)

Grading:

- 90-100  A - Excellent, distinctive and effective application of concepts, frameworks and theories and articulated in written work.
- 80-89   B - Above average accomplished thorough application of concepts, frameworks and theories and articulated in written work.
- 70-79   C - Average, non-distinctive, but acceptable work with some misconceptions; not fully supported; acceptable but limited application of concepts, frameworks and theories.
- 60-69   D – Poor, naïve or inadequate understanding: simplistic account and use of concepts, frameworks and theories. Unable to articulate thoughts in written work.
- < 60   F - Unacceptable work

HPM competencies

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<thead>
<tr>
<th>HPM competencies</th>
<th>All assignments</th>
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<tbody>
<tr>
<td>Apply &quot;systems thinking&quot; for resolving organizational problems</td>
<td>All assignments</td>
</tr>
<tr>
<td>Discuss the policy process for improving the health status of populations</td>
<td>All assignments</td>
</tr>
<tr>
<td>Apply principles of strategic planning and marketing to public health</td>
<td>Health Security Report assignment</td>
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<tr>
<td>Communicate health policy and management issues using appropriate channels and technologies</td>
<td>Course content and assignments</td>
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Cross-cutting competencies addressed

<table>
<thead>
<tr>
<th>Competency</th>
<th>Assignment</th>
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<tbody>
<tr>
<td>Leadership Competency: Organize community partnerships to create and communicate a shared vision for a changing future; discuss solutions to organizational and community challenges; and maximize motivation to reach public health goals.</td>
<td>Health Security Report assignment</td>
</tr>
<tr>
<td>Public Health Biology Competency: Discuss how public health biology – the biological and molecular context of public health – impacts public health practice.</td>
<td>Biology of bioterrorism agents</td>
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<tr>
<td>Systems Thinking Competency: Recognize system-level properties that result from dynamic interactions among human and social systems and how they affect the relationships among individuals, groups, organizations, communities, and environments.</td>
<td>Health Security Report assignment</td>
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<tr>
<td>Program Planning Competency: Plan for the design, development, implementation, and evaluation of strategies to improve individual and community health.</td>
<td>Health Security Report assignment</td>
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<tr>
<td>Ethics and Professionalism Competency: Demonstrate ethical choices, values and professional practices implicit in public health decisions; consider the effect of choices on community stewardship, equity, social justice and accountability; and to commit to personal and institutional development.</td>
<td>Course content</td>
</tr>
<tr>
<td>Communication and Informatics Competency: Collect, manage and organize data to produce information and demonstrate ability to present this information in meaningful ways to different audiences.</td>
<td>Course content and assignments</td>
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UH Policy: University Policy and Accommodation

Student conduct code: [http://studentaffairs.manoa.hawaii.edu/policies/conduct_code/](http://studentaffairs.manoa.hawaii.edu/policies/conduct_code/)
Campus policies. Note that breaches of academic integrity by cheating or plagiarism will result in a fail grade for the offending assessment item.
[http://www.catalog.hawaii.edu/about-uh/campus-policies1.htm](http://www.catalog.hawaii.edu/about-uh/campus-policies1.htm)

Academic grievance procedures: You will be required to provide evidence that you have made every effort to resolve your complaint with the Instructor before escalating.

Non Discrimination: The University is committed to a policy of nondiscrimination on the basis of race, sex, age, religion, color, national origin, ancestry, handicap, marital status, arrest and court record, sexual orientation, and veteran status. Accommodations: A student who may need an accommodation based on the impact of a disability is invited to contact me privately within the first weeks of the course. I would be happy to work with you and the KOKUA Program (Office for Students with Disabilities) to ensure reasonable accommodations in my course. KOKUA can be reached at 808-956-7511 or 808-956-7612 (voice/text) in room 013 of the Queen Liliuokalani Center for Student Services.