Eastern Illinois University
Revised Course Proposal
HST 3100, Disasters and Public Health: Planning and Response

Please check one: ☐ New course  ☐ Revised course

PART I: CATALOG DESCRIPTION

1. Course prefix and number, such as ART 1000: HST 3100
2. Title (may not exceed 30 characters, including spaces): Disasters and Public Health: Planning and Response
3. Long title, if any (may not exceed 100 characters, including spaces): Disasters and Public Health: Planning and Response
4. Class hours per week, lab hours per week, and credit [e.g., (3-0-3)]: 3-0-3
5. Term(s) to be offered: ☐ Fall  ☐ Spring  ☐ Summer  ☐ On demand
6. Initial term of offering: ☐ Fall  ☐ Spring  ☐ Summer  Year: 2012
7. Course description (not to exceed four lines):
   This course addresses the special needs of Community and Public Health professionals in response to incidents that have been caused by natural or manmade disasters. Subjects covered include preparedness and response to disasters threats, hazard mitigation, home/workplace preparedness, community preparedness, and protection for disaster workers. Students completing the course requirements will become certified as a member of the Community Emergency Response Team (CERT).
8. Registration restrictions:
   a. Identify any equivalent courses (e.g., cross-listed course, non-honors version of an honors course).
      None
   b. Prerequisite(s), including required test scores, courses, grades in courses, and technical skills. Indicate whether any prerequisite course(s) MAY be taken concurrently with the proposed/revised course.
      None
   c. Who can waive the prerequisite(s)?
      ☐ No one  ☐ Chair  ☐ Instructor  ☐ Advisor  ☐ Other (Please specify)
   d. Co-requisites (course(s) which MUST be taken concurrently with this one): None
   e. Repeat status: ☐ Course may not be repeated.
      ☐ Course may be repeated to a maximum of ______ hours or ______ times.
   f. Degree, college, major(s), level, or class to which registration in the course is restricted, if any: None
   g. Degree, college, major(s), level, or class to be excluded from the course, if any: None
9. Special course attributes [cultural diversity, general education (indicate component), honors, remedial, writing centered or writing intensive] Writing active
10. Grading methods (check all that apply): ☐ Standard letter  ☐ C/NC  ☐ Audit  ☐ ABC/NC (“Standard letter”—i.e., ABCDF--is assumed to be the default grading method unless the course description indicates otherwise.)
11. Instructional delivery method: ☐ lecture  ☐ lab  ☐ lecture/lab combined  ☐ independent study/research  ☐ internship  ☐ performance  ☐ practicum or clinical  ☐ study abroad  ☐ other
PART II: ASSURANCE OF STUDENT LEARNING

1. List the student learning objectives of this course:

<table>
<thead>
<tr>
<th>To achieve the objectives students will:</th>
<th>Evaluation of student learning/percent of grade</th>
<th>Total</th>
</tr>
</thead>
</table>
| Analyze the health implications of natural and manmade disasters including identifying significant incidents that have occurred within the United States. | • Class participation scenarios and discussion - 4%  
• Reflective writing assignments – 8%                                                                        | 12%   |
| Appraises hazardous circumstances and key indicators                                                    | • Class participation scenarios and discussion – 4%  
• Reflective writing assignments – 8%  
• Investigative papers – 10%  
• Problem solving scenarios – 10%                                                                            | 32%   |
| Synthesize the functions of Community Emergency Response Team(s) and their role in immediate response     | • Class participation scenarios and discussion – 4%  
• Reflective writing assignments – 8%  
• Investigative papers – 10%  
• Problem solving scenarios – 10%                                                                            | 32%   |
| Integrate self-protective measures                                                                       | • Class participation scenarios and discussion – 4%  
• Reflective writing assignments – 8%                                                                           | 12%   |
| Evaluate health considerations associated with biological, nuclear, incendiary, chemical, and explosive (B-NICE) incidents. | • Class participation scenarios and discussion – 4%  
• Reflective writing assignments – 8%                                                                           | 12%   |

2. Identify the assignments/activities the instructor will use to determine how well students attained the learning objectives:
   a. See above

3. Explain how the instructor will determine students’ grades for the course:
   a. Grades will be determined by evaluating the student’s participation, reflective writing assignments, problem solving scenarios, and an investigative paper. Rubrics will be instituted for the grading process.

4. For technology-delivered and other nontraditional-delivered courses/sections, address the following:
   a. N/A

5. For courses numbered 4750-4999, specify additional or more stringent requirements for students enrolling for graduate credit.
6. This course is writing active. There are frequent reflective in-class writing assignments, investigative papers and problem solving scenarios.

PART III: OUTLINE OF THE COURSE

1. Outline of the course
   a. Units of time: 3-1-3 course, 45 fifty-minute class periods over 15 weeks
      i. Week 1 – General Public Health Preparedness
         1. National approach
            a. U.S. Preparedness Infrastructure
         2. Fostering community resilience
         3. Motivating individual preparedness
            a. Defining individual preparedness
         4. Roles of the Public Health responder
      ii. Week 2 - Understanding and recognizing the health implication of natural and man-made disasters
         1. Course Overview
            a. Group activity
         2. Definitions
         3. Recent disasters and emergencies
         4. Disasters and disaster workers
         5. Disaster threats
         6. Impact on the infrastructure
         7. Structural and nonstructural hazards
         8. Hazard mitigation
            a. Home and worksite preparedness
            b. Individual, family and community preparedness
         9. Personal safety
         10. Protection for disaster workers
         11. Roles of the Public Health responder
      iii. Week 3 - Fire safety
         1. Fire chemistry
            a. Fire triangle
               i. Heat, fuel, oxygen
            2. Reducing fire hazards in the home and workplace
            3. Community Emergency Response Team size up
            4. Firefighting resources
            5. Fire suppression safety
            6. Hazardous materials
            7. Exercise
               a. Suppressing small fires
         8. Roles of the Public Health responder
      iv. Week 4 – Chemical Disasters
         1. Dose-response relationship
            a. Physical, physiological factors
            b. Environmental factors
         2. Unique treatment factors
            a. Public Health response
         3. Similarities between intentional and unintentional chemical release
            a. Indicators of chemical release
b. Vulnerable populations

4. Factors contributing to morbidity and mortality
   a. Prevention
   b. Immediate actions
   c. Recovery actions

v. Week 5 – Earthquakes
   1. Factors contributing to morbidity and mortality
   2. Scales used to measure the intensity and magnitude of earthquakes
      a. Impact upon the Public Health system
   3. Unique challenges
      a. Effects on the human body
         i. Crush injury
         ii. Compartment injuries
   4. Hazard recognition
      a. Responder safety
   5. Maximizing safety
      a. Populations at greatest risk

vi. Week 6 – Floods
   1. Types of floods
   2. Human factors contributing to flooding
   3. Flood related morbidity and mortality
   4. Risks associated with post-flood recovery
   5. Hazard recognition
      a. Responder safety
   6. Maximizing safety
      a. Populations at greatest risk

vii. Week 7 – Heat waves and Winter storms
   1. Types of warnings and watches
   2. The role of Public Health in prevention
   3. Heat waves
      a. Types of heat injuries and illnesses
         i. High risk populations
         ii. Community preparation
            1. Steps utilized to reduce heat injuries
   4. Winter storms
      a. Physical risk factors for cold injury
      b. Primary and secondary hazards created by winter storms
      c. Mechanisms responsible for heat depletion
      d. Freezing and nonfreezing cold injuries
         i. Severity of frostbite injuries
      e. Home and vehicle preparedness
      f. Shelter in Place (SIP)
   5. Weather related morbidity and mortality

viii. Week 8 – Hurricanes
   1. Factors that influence hurricane-associated morbidity and mortality patterns
      a. Lessons learned in Public Health
   2. Primary and secondary causes of hurricane associated deaths
   3. Mitigation strategies
      a. Home and worksite preparedness
b. Individual, family and community preparedness

c. Shelter in Place (SIP)

4. Evacuation and injury reduction

5. Hazards associated with recovery operations

ix. Week 9 – Thunderstorms/tornados

1. Hazards produced by thunderstorms
   a. Morbidity and mortality of lightning strikes

2. Factors contributing to morbidity and mortality
   a. Injury patterns seen with tornados

3. Tornado intensity
   a. Fujita scale
      i. Relationship to types of injuries seen

4. Recovery hazards

x. Week 10 - Nuclear/Radiological disasters

1. Health risks associated with different types of energy
   a. Units of measurement

2. Stages and effects of acute radiation syndrome

3. Factors that determine morbidity and mortality

4. Protective factors for responders/community

xi. Week 11 – Bombings and explosions

1. Trends in bombings

2. Blast patterns

3. Blast injuries
   a. Primary
   b. Secondary
   c. Tertiary
   d. Quaternary

4. Identifying and analyzing threats

5. Factors contributing to morbidity and mortality

xii. Week 12 – Bioterrorism

1. Differentiate between bioterrorism from emerging infectious diseases

2. Common characteristics of biological agents

3. Diagnostic and treatment recommendations of agents

4. Infection control precautions needed for responding to bioterrorism

5. Factors contributing to morbidity and mortality

xiii. Week 13 and 14: Disaster Medical Operations

1. Treating life threatening conditions
   a. Functions of disaster medical operations
   b. Simple triage and Rapid Treatment (SMART)
      i. Phase 1
      ii. Phase 2
      iii. Phase 3
   c. 3 “killers”
      i. Airway, bleeding, shock
   d. Public health considerations
      i. Blood borne pathogens
      ii. Infectious diseases
   e. Establishing treatment areas
      i. Burns
ii. Wound care  
iii. Fractures, sprains, strains  
iv. Splinting  
v. Nasal injuries  
vi. Cold and heat injuries  
f. Triage and assessment exercise

dxiv. Week 15 – Light Search and Rescue Operations  
1. Introduction and unit overview  
2. Emergency Response Team Organization  
3. Search and rescue assessment  
   a. Conducting search operations  
   b. Conducting rescue operations  
4. Search and rescue exercise

xv. The distribution of lab hours is as follows:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Minutes</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard mitigation scenarios</td>
<td>150</td>
<td>2.5</td>
</tr>
<tr>
<td>Fire Suppression scenarios</td>
<td>75</td>
<td>1.15</td>
</tr>
<tr>
<td>Simple Triage and Rapid Treatment scenarios</td>
<td>150</td>
<td>2.5</td>
</tr>
<tr>
<td>Operations Structure scenarios</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disaster Medical Operations scenarios</td>
<td>300</td>
<td>5</td>
</tr>
<tr>
<td>Search and Rescue Size up scenarios</td>
<td>75</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>900</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

**PART IV: PURPOSE AND NEED**

1. **Explain the department’s rationale for developing and proposing the course.**  
   a. This course is primarily designed to provide students with information to implement individual and group planning and response to natural and man-made disasters. From the San Diego wildfires to multi-drug resistant strains of bacteria, communities are facing an ever-growing list of potential disasters. Some events, like pandemic influenza or anthrax attacks, are public health emergencies first and foremost. Hurricane Katrina taught us, however, that lack of planning can turn a natural disaster into a health care nightmare and lead to needless death and suffering. Emergency managers and public health professionals must integrate their prevention and response efforts to serve their communities effectively. This course will also implement the content for the Community Emergency Response Team. Students will become participants and leaders in their community.

2. **Justify the level of the course and any course prerequisites, co-requisites, or registration restrictions.**  
   a. This course provides information broad enough in scope to address the needs of individuals with and without prior training. Class assignments will require a higher order of thinking and application of ideas and concepts.

3. **If the course is similar to an existing course or courses, justify its development and offering.**  
   a. Although this course addresses natural and man-made disasters, it is limited in its scope. It is the intent of the course to focus upon the Community and Public Health response to such disasters.
4. **Impact on Program(s):**

   a. For undergraduate programs, specify whether this course will be required for a major or minor or used as an approved elective.
      i. This course is required for Health Studies Majors enrolled in the First Responder option. This course replaces the current course with the same number.
      ii. This course may be taken as an approved elective for Community Health Majors/Minors.
      iii. This course is open to nonmajors/nonminors.

**PART V: IMPLEMENTATION**

1. Faculty member(s) to whom the course may be assigned:
   a. Sheila R. Simons, Ph.D.
   b. Richard E. Cavanaugh, Ph.D.
   c. Or any qualified faculty member

2. Additional costs to students:
   None

3. Text and supplementary materials to be used (Include publication dates):

**PART VI: COMMUNITY COLLEGE TRANSFER**

A community college course will not be judged equivalent but may be accepted as a substitute; however, upper-division credit will not be awarded.

**PART VII: APPROVALS**

Date approved by the department or school: November 11, 2010

Date approved by the college curriculum committee: February 28, 2011

Date approved by the Honors Council (if this is an honors course):

Date approved by CAA: March 24, 2011

*In writing-active courses, frequent, brief writing activities and assignments are required. Such activities -- some of which are to be graded -- might include five-minute in-class writing assignments, journal keeping, lab reports, essay examinations, short papers, longer papers, or a variety of other writing-to-learn activities of the instructor's invention. Writing assignments and activities in writing-active courses are designed primarily to assist students in mastering course content, secondarily to strengthen students' writing skills.*
writing-intensive courses, several writing assignments and writing activities are required. These assignments and activities, which are to be spread over the course of the semester, serve the dual purpose of strengthening writing skills and deepening understanding of course content. At least one writing assignment is to be revised by the student after it has been read and commented on by the instructor. In writing-intensive courses, students’ writing should constitute no less than 35% of the final course grade. In writing-centered courses (English 1001G, English 1002G, and their honors equivalents), students learn the principles and the process of writing in all of its stages, from inception to completion. The quality of students' writing is the principal determinant of the course grade. The minimum writing requirement is 20 pages (5,000 words).