

## **Southeast Missouri State University**

Department of: Biology/Environmental Science

BI/EV 449/649

Vulnerability, Risk Reduction, and Critical Incident  
Management

New Fall 2013

### **I. Course Description and Credit Hours**

Course is designed to provide insight into the tasks, roles, and responsibilities required to design and conduct exercises as part of a long-term, carefully constructed plan to help a community prepare for disasters. Students will use community needs assessments to develop the case for exercises, design an exercise, and outline an evaluation plan aimed at improving competence in all emergency functions. Three lectures. (3)

### **II. Prerequisites for the Course**

Junior or graduate student standing, BI/EV 454/654, and BI/EV 448/648, or permission of instructor.

### **III. Purpose or Objectives of the Course**

Students who successfully complete this course should exhibit the following skills and knowledge:

1. Understand environmental, physical, social, and economical dimensions of vulnerability.
2. Identify processes and conditions that have an impact on vulnerability and determine vulnerability patterns.
3. Utilize methods and models to assess vulnerability.
4. Utilize measures and activities that enable shifting from vulnerability to resilience policy recommendations.
5. Be able to describe the emergency planning process.

### **IV. Student Learning Objectives**

**Students will be able to:**

1. Demonstrate an awareness of the multi-dimensional nature of vulnerability and the necessity for an interdisciplinary approach.
2. Demonstrate the ability to critically evaluate and understand different concepts and frameworks of vulnerability.
3. Demonstrate the ability to analyze the role of vulnerability and resilience in disaster risk management and development planning.

## V. Expectations of Students

1. Attend class regularly.
2. Participate in class discussions.
3. Complete out-of-class assignments by established deadlines.
4. Complete all exams.
5. Complete response communication plan by established deadline.
6. Turn off cell phones and tablets.

## VI. Course Content or Outline

<u>TOPIC</u>	<u>CLASS PERIODS</u>
Introduction to Course	1
Risk Management and Decision Tools	2
Introduction to Vulnerability Assessments	3
Cascading Risk Analysis Tools	6
Risk and Decision Analysis	2
Natural Disaster Threat Assessment	6
Building Threat Assessment	4
Accidents and Emergency Response	4
Disaster Analysis Tools	6
Compound Disaster Models	5
Examinations	3
Presentations	<u>3</u>
	45

## VII. Textbook

Boss, M.J. and D.W. Day. 2009. *Building Vulnerability Assessments. Industrial Hygiene and Engineering Concepts*. CRC Press, Boca Raton, FL.

FEMA. 2011. A Whole Community Approach to Emergency Management: Principles, Themes, and Pathways for Action (online).

<http://www.fema.gov/library/viewRecord.do?id=4941>

IS-235 Emergency Planning (FEMA)

## VIII. Basis for Student Evaluation

### Undergraduates:

Assignments	20%
Examinations	60%
Paper	<u>20%</u>
	100%

### Graduates:

Assignments	20%
Examinations	60%
Paper	10%
Presentation	<u>10%</u>
	100%

### Grading Scale:

#### Undergraduates:

90-100%	= A
80-89%	= B
70-79%	= C
60-69%	= D
<60 %	= F

#### Graduates:

90-100%	= A
80-89%	= B
70-79%	= C
<70%	= F

The weight of the evaluation criteria may vary according to each instructor and will be communicated at the beginning of the course.

## IX. Academic Policy Statement

Students will be expected to abide by the **University Policy for Academic Honesty** regarding plagiarism and academic honesty. Refer to: <http://www6.semo.edu/judaffairs/code.html>.

Questions, comments or requests regarding this course should be taken to your instructor. Unanswered questions or unresolved issues involving this class may be taken to the Chair of Biology.

## X. Students with Disabilities Statement

If a student has a special need addressed by the Americans with Disabilities Act (ADA) and requires materials in an alternate format, please notify the instructor at the beginning of the course. Reasonable efforts will be made to accommodate special needs. Refer to:

<http://www.semo.edu/ds>.