

**STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK**



COURSE OUTLINE

EADM 205 – RISK AND HAZARD IMPACT STUDIES

Prepared By: Dr. Michael J. O'Connor Jr.

**SCHOOL OF BUSINSS AND LIBERAL ARTS
DEPARTMENT OF BUSINESS
MAY 2016**

- A. **TITLE:** Risk and Hazard Impact Studies
- B. **COURSE NUMBER:** EADM 205
- C. **CREDIT HOURS:** 3 credit hours.
- D. **WRITING INTENSIVE COURSE:** Yes
- E. **COURSE LENGTH:** 15 weeks
- F. **SEMESTER(S) OFFERED:** Fall and Spring
- G. **HOURS OF LECTURE, LABORATORY, RECITATION, TUTORIAL, ACTIVITY:** 3 lecture hours per week
- H. **CATALOG DESCRIPTION:** The course focuses on a generalized technical understanding and an awareness of various types of natural hazards. Central to the course is the understanding the technical cooperation regarding hazard and vulnerability assessments, inclusion of hazard mitigation measures in the formulation of investment projects, use of geographic information systems for mapping and analysis, and urban watershed planning for hazard and resource management. The course includes some, but not all, of the disaster mitigation and integrated development planning.
- I. **PRE-REQUISITES/CO-REQUISITES:** None.
- J. **GOALS (STUDENT LEARNING OUTCOMES):**
By the end of this course, the student will be able to:

<i>Course Objective</i>	<i>Institutional SLO</i>
Discuss examples of major disasters in recent decades in order to learn about historic events that were milestone events in the development of the Emergency Management field.	1. Crit. Thinking
Discuss the background of Federally-mandated requirements for hazard risk assessments, especially the pre-disaster mitigation concepts underlying the Disaster Mitigation Act of 2000.	1. Crit. Thinking
Review the issues related to all-hazards risk analysis and mitigation planning.	1. Crit. Thinking
Understand the context for statewide hazard mitigation planning assistance to local governments.	1. Crit. Thinking
Describe the basis for hazard assessment and vulnerability analysis.	1. Crit. Thinking
Produce a Hazard Analysis for your local area or an area assigned by your professor.	1. Prof. Competence
Produce a Vulnerability Assessment for your local area or an area assigned by the professor.	1. Prof. Competence
Understand the issues involved in ethical hazard mitigation planning and action.	1. Crit. Thinking

K. TEXTS:

Godschalk, D. (2004). *New Directions in Hazard Mitigation: Breaking the Disaster Cycle*. Washington DC: FEMA.

National Emergency Management Association (2006). *State Hazard Mitigation Officer (SHMO) 101 Training*. National Emergency Management Association.

Shaw, G., Haddow, G., Rubin, C., and Coppola, D. (2004). *Hazards Risk Management*. Washington DC: FEMA.

L. REFERENCES: None

M. EQUIPMENT: Internet access.

N. GRADING METHOD: A-F

O. MEASUREMENT CRITERIA/METHODS:

- Exams
- Quizzes
- Discussion Boards
- Papers
- Participation

P. DETAILED COURSE OUTLINE:

I. INTRODUCTION AND OVERVIEW

- A. Basic characteristics of the American federal system.
- B. Emergency management: what it is, why it is necessary, and its essential elements.
- C. Examples of major milestone disasters in recent decades.
- D. Formation of the Department of Homeland Security.

II. US HAZARDS AND HAZARD MITIGATION

- A. Examples of the principle environmental hazards.
- B. Types of physical processes, geographic areas at risk, and types and magnitude of specific potential hazards.

III. FEDERAL HAZARD MITIGATION POLICY

- A. Critique the various mitigation proposals in terms of impacts on stakeholders in the intergovernmental hazard mitigation policy system.
- B. Impact of major natural disasters on efforts to reshape federal mitigation policy.
- C. Pre-disaster mitigation concepts underlying the Disaster Mitigation Act of 2000.
- D. Review the Disaster Mitigation Act of 2000 provisions.

IV. MITIGATION STRATEGY: VOLUNTARY BUYOUTS

- A. Voluntary buyouts, their use, and the history of its practice.
- B. Use of voluntary buyouts as a form of mitigation against natural disasters.

V. MITIGATION STRATEGY: INSURANCE

- A. The history of Insurance.
- B. Use of insurance as a form of mitigation against natural and technological disasters.
- VI. MITIGATION STRATEGY: STRUCTURAL
 - A. Structural mitigation options.
 - B. History of structural mitigation.
- VII. MITIGATION AT THE STATE LEVEL
 - A. Federally-mandated requirements for hazard risk assessments.
 - B. Ways of imposing Federal requirements on State and local governments.
 - C. Issues related to all-hazards risk analysis and mitigation planning.
- VIII. MITIGATION AT THE LOCAL LEVEL
 - A. Statewide hazard mitigation planning assistance to local governments.
 - B. Issues encountered in mandating local hazard mitigation plans.
 - C. Problems of developing local hazard mitigation commitment and capacity.
 - D. Local hazard mitigation plans.
- IX. MITIGATION OF COASTAL EROSION
 - A. Nature of coastal erosion processes.
 - B. Political, social, and economic issues raised by erosion impacts.
 - C. Proposed structural and regulatory solutions to coastal erosion.
 - D. Costs of coastal hazards and how they are paid.
 - E. Issues of who should pay for protection of property in hazardous areas.
- X. PREPARING LOCAL HAZARD MITIGATION PLANS
 - A. Format and content of local hazard mitigation plans.
 - B. Relationship between hazard mitigation plans and land use plans.
 - C. Basis for hazard assessment and vulnerability analysis.
- XI. HAZARD ANALYSIS
 - A. Hazard Analysis.
- XII. VULNERABILITY ASSESSMENT
 - A. Vulnerability Assessment.
- XIII. MITIGATION OPTIONS
 - A. Project monitoring and review conducted throughout the planning process.
 - B. Evaluation in the planning and implementation phases.
 - C. Ways in which project plans are revised.
- XIV. HAZARD AREAS RISK NOTIFICATION
 - A. Current system of mapping hazards as a means of risk notification.
 - B. Strengths and weaknesses of the present system.
 - C. Innovative approaches to mapping and managing floodplains.
 - D. Context of relocation during disaster recovery.
 - E. Methods of achieving community resiliency through application of smart growth principles.
- XV. ETHICAL CONSIDERATIONS
 - A. Issues involved in ethical hazard mitigation planning and action.
 - B. Types of groups with ethical mitigation responsibilities.
 - C. Competing values that underlie mitigation programs and policies.

Q. LABORATORY OUTLINE: Not applicable.