

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



COURSE OUTLINE

EADM 435 – DISASTER SIMULATION

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

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

- A. **TITLE:** Disaster Simulation
- B. **COURSE NUMBER:** EADM 435
- C. **CREDIT HOURS:** 6 credit hours.
- D. **WRITING INTENSIVE COURSE:** Yes
- E. **COURSE LENGTH:** 15 weeks
- F. **SEMESTER(S) OFFERED:** Spring
- G. **HOURS OF LECTURE, LABORATORY, RECITATION, TUTORIAL, ACTIVITY:** 3 lecture hours per week
- H. **CATALOG DESCRIPTION:** The course is a highly structured applied interactive educational and training simulation experience that requires the student to participate in sequential exercises that focus on the application of skills and abilities in emergency and disaster management. Students will create an operational scenario, assess its application, calculate applicable scenario coordination and conduct the evaluation of exercise(s) participant performance associated with an actual emergency and/or disaster situation. Participants are required to develop, conduct, and evaluate these activities through the use of phased proficiency exercise applications.
- I. **PRE-REQUISITES/CO-REQUISITES:**
 a. Pre-requisite(s): Simulated Disaster Training (EADM 430) or permission of instructor.
 b. Co-requisite(s): 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>
Explain why traditional all-hazards uni-jurisdictional preparedness and response strategies fail to meet the needs provoked by catastrophes (and differentiate catastrophes from disasters).	1. Crit. Thinking
Describe and discuss the various aspects of catastrophes that could critically affect the U.S. disaster response system.	1. Crit. Thinking
Discuss major ethical issues and implications to be considered in catastrophe preparedness and response.	1. Crit. Thinking
Identify aspects of climate change that may alter risk, vulnerability and mitigation strategies in preparing for and recovering from catastrophes	1. Crit. Thinking
Use the potential New Madrid earthquake scenario to describe effects of a catastrophe, and the application of both traditional and newer methods of responding to the resulting needs.	1. Crit. Thinking
Describe current federal pandemic preparedness and response plans.	1. Crit. Thinking

Design and implement tabletop and other exercises as planning and readiness tools for catastrophe preparedness.	1. Prof. Competence
Perform decision-making skills and apply team leadership skills in conflict resolution in an emergency and/or disaster scenario.	1. Prof. Competence 2. Inter-Intrapersonal Skills
Understand what “professionalism” is in the context of emergency management.	1. Crit. Thinking

K. TEXTS:

Bissell, R. (2011). *Catastrophe Readiness and Response*. Washington DC: FEMA.

FEMA. (2004). *Earthquake Hazard and Emergency Management*. Washington DC: FEMA.

FEMA. (2006). *Hazard Mapping and Modeling*. Washington DC: FEMA.

Committee on Planning for Catastrophe: A Blueprint for Improving Geospatial Data, Tools, and Infrastructure, National Research Council. (2007). *Successful Response Starts with a Map: Improving Geospatial Support for Disaster Management*. Washington, DC: The National Academies Press.

National Research Council. (2006). *The Indian Ocean Tsunami Disaster: Implications for U.S. and Global Disaster Reduction and Preparedness - Summary of the June 21, 2005 Workshop of the Disasters Roundtable*. Washington, DC: The National Academies Press.

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 DEFINITIONS

- A. Differences between major disasters and catastrophes and their societal impacts.
- B. Conceptualize the emergency-disaster-catastrophe continuum (e.g. emergency → disaster → catastrophe → extinction level event).

- C. Difference between the all hazards approach and the hazards unique approach to catastrophe readiness and response.
 - D. Theoretical assumptions and policy implications of different definitions of catastrophes.
- II. COMPARISON OF DISASTER PLANNING AND CATASTROPHE PLANNING
- A. Differences between disaster and catastrophe planning.
 - B. Etiology of events in a catastrophe.
 - C. Commonalities between different catastrophes (e.g. they're all different, but there are commonalities).
- III. VULNERABILITY TO CATASTROPHES
- A. How catastrophes result from both hazards and, more importantly, vulnerability.
 - B. How numerous variables interact to produce disasters and catastrophes.
 - C. Impact of catastrophes and disablement of societal functioning.
- IV. ETHICAL ISSUES OF CATASTROPHES
- A. Concept of professional ethics and the application of codes of conduct to catastrophe readiness and response.
 - B. Relationship between ethics and law.
 - C. "Moral community;" and to what degree an ethical duty is owed to that community during planning for catastrophe readiness and response.
- V. POLITICAL AND LEGAL ISSUES
- A. National Response Framework.
 - B. National Preparedness Guidelines.
 - C. National Incident Management System
 - D. National Response Plan.
 - E. Posse Comitatus.
 - F. Government legal powers during catastrophes.
- VI. SOCIAL AND ECONOMIC ISSUES OF CATASTROPHES
- A. Social vulnerability approach to emergency management versus the traditional approach to emergency management.
 - B. Potential government, NGO, and volunteer responses to these social and economic crises.
 - C. Triggers/circumstances that would be more likely to create social disintegration rather than social cohesion post-catastrophe.
- VII. PUBLIC HEALTH
- A. Basic concepts and tools of public health.
 - B. Effects of a catastrophe on infrastructure and public health.
 - C. Role that public health plays in minimizing the effects of a catastrophe.
 - D. Critical infrastructure needs for disaster health and medical (ESF #8) response.
- VIII. LOGISTICS
- A. Convergence in catastrophic scenarios.
 - B. Logistical components of critical resource provision in disasters compared to that which takes place following catastrophes.
 - C. Challenges to critical resource provision during catastrophic events.
- IX. CRITICAL INFRASTRUCTURE AND KEY RESOURCES
- A. Overview of critical infrastructure and key resources (CI/KR).
 - B. Effects of a catastrophe on infrastructure.
 - C. Needs of responders for critical infrastructure.
- X. MASS EVACUATION AND RELOCATION

- A. Characteristics and dynamics of mass relocation.
 - B. Major forms that catastrophe driven mass relocation may take in the near future.
 - C. Key components of resettlement planning.
- XI. CATASTROPHE RESPONSE PLANNING
- A. Planning issues relating to the management of mass casualties.
 - B. Risk management system for catastrophe response.
 - C. Strategic thinking with regard to catastrophe response (e.g. where do we want to be and how do we get there under the circumstances of a catastrophe?).
 - D. Planning needs for management of voluntary responders (NGOs, PVOs, and spontaneous volunteers)
- XII. CATASTROPHE RECOVERY
- A. Disaster recovery, including the issues faced following a major and catastrophic disaster.
 - B. Stakeholders and their roles in disaster recovery.
 - C. United States Disaster Recovery Assistance Framework
- XIII. EMERGENT ORGANIZATIONS
- A. Strengths and short-comings of incident management systems in contending with emergent networks in catastrophic events.
 - B. Emergent groups and networks and the conditions under which they develop.
 - C. Role which people convergence plays in the development and functioning of emergent networks
- XIV. PLANNING FOR CATASTROPHIC DISASTERS
- A. Catastrophe planning context (e.g., environment).
 - B. New methodology and analytical tools for dealing with catastrophe planning.
 - C. Legislation for catastrophic planning.
 - D. Current national and international catastrophe response planning initiatives.
- XV. PANDEMIC
- A. Mechanisms of disease, spread, and control.
 - B. Current estimates of the social, economic, transportation, communications and health sector impacts of a pandemic, and their affects on critical systems (e.g. food, utilities, law enforcement, healthcare, etc.).
 - C. Current Federal pandemic preparedness and response plans.
 - D. Potential long range economic problems that may result from a pandemic.
 - E. Inter-jurisdictional issues (including international coordination) in a pandemic response.
- XVI. DYNAMICS OF CATASTROPHIES
- A. Why traditional all-hazards uni-jurisdictional preparedness and response strategies fail to meet the needs provoked by catastrophes.
 - B. Aspects of catastrophes that could critically affect the U.S. disaster response system.
 - C. How disasters and catastrophes result from a combination of hazards and vulnerabilities.
- XVII. TABLETOP DESIGN
- A. Homeland Security Exercise Evaluation Program (HSEEP).
 - B. Tabletop Exercises (TTX) and their role in the exercise continuum.
 - C. SITMAN Preparation and roleplay.

- XVIII. ANTRAX TABLETOP
- XIX. ANTHRAX PREPAREDNESS, RESPONSE AND RECOVERY
- XX. CHEMICAL ACCIDENT
- XXI. CHEMICAL ACCIDENT PREPAREDNESS, RESPONSE AND RECOVERY
- XXII. HURRICANE TABLETOP
- XXIII. HURRICANE PREPAREDNESS, RESPONSE AND RECOVERY
- XXIV. CRITICAL POWER FAILURE TABLETOP
- XXV. CRITICAL POWER FAILURE PREPAREDNESS, RESPONSE AND RECOVERY
- XXVI. EARTHQUAKE TABLETOP & PREPAREDNESS
- XXVII. EARTHQUAKE PREPAREDNESS, RESPONSE AND RECOVERY
- XXVIII. PAYING FOR DISASTERS
 - A. Public sector budget process.
 - B. Costs of large-scale disasters to governments and to individuals and private firms.
 - C. Federal funding process for disasters.
 - D. Issues of earthquake insurance and disaster insurance.
- XXIX. EMERGENCY MANAGEMENT OFFICE ORGANIZATION
 - A. Major views or theories of public sector organization.
 - B. Organization of emergency management offices and agencies.
 - C. Incident Command System.
 - D. Unified Command.
 - E. Multi-Agency Command System.
 - F. National Incident Management System.
- XXX. PROFESSIONALISM
 - A. "Professionalism" is in the context of emergency management.
 - B. Value education, training, credentialing and standards in the profession of emergency management.
 - C. Leadership qualities among those who work in emergency management.
 - D. Ethics and advocacy in emergency management.

Q. **LABORATORY OUTLINE:** Not applicable.