

Hazard Mitigation and Debris Management (EMAP 1345)



Credit: 3 semester credit hours (3 hours lecture)

Prerequisite/Co-requisite: None.

Course Description

Hazard mitigation process and available methodologies which, when applied, will contribute to reducing the vulnerability of a jurisdiction. Include an in-depth study of potential funding mechanisms including the Hazard Mitigation Grant Program.

Required Textbook and Materials

1. *Hazard Mitigation and Preparedness* by A. Schwab, D. Sandler, and D. Brower; 2nd edition. CRC Press.
 - a. ISBN number is 978-1-4665-9556-9.
2. All students must register with FEMA and obtain a Student Identification Number (SID); <https://cdp.dhs.gov/femasid/register>

Course Objectives

Upon completion of this course, the student will be able to:

1. Describe hazard mitigation.
2. Identify the various methods that reduce the vulnerability of a jurisdiction.
3. Identify the potential funding mechanisms available to the emergency manager.
4. Explain the importance of grant funding to emergency management.

Course Outline

1. Welcome to the Course
 - a. Introduction of faculty and students
 - i. Instructor Resume and Experience
 - b. Overview of this course
 - c. Hazards and Disasters
 - i. Hazards: Part of the Natural Environment
 - ii. Hazards and Disasters: Not the Same
 - iii. The Many Costs of Disasters
 - iv. Impacts of Climate Change on Natural Hazards
2. SECTION 1: Mitigation Overview
 - a. Preparedness, Hazard Mitigation, and Climate Change Adaptation: An Overview
 - i. The Emergency Management Cycle
 - ii. Climate Change Adaptation
 - iii. Hazard Mitigation and Adaptation Strategies
 - iv. The Value of Hazard Mitigation and Preparedness
 - v. Sustainability and Disaster Resilience
 - b. IS-393.b Introduction to Hazard Mitigation
 - i. Hazard Mitigation: Managing Risk

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- ii. Supporting Community-Based Actions
 - iii. Identifying and Assessing Risks
 - iv. Development Techniques
 - v. Finding Opportunities for Pre- and Post-Disaster Mitigation
3. SECTION 2: Governmental Roles
- a. Role of the Federal Government in Disaster Management
 - i. Involvement in Hazards Management
 - ii. Evolution of Federal Emergency Management
 - iii. Hazard Mitigation Programs
 - iv. Reducing Risk
 - v. Federal Disaster Assistance
 - b. Mitigating Hazards at the State Level: Divergent Views and Outcomes
 - i. State Emergency Management
 - ii. Mitigation Planning
 - iii. Climate Change Adaptation Planning
 - iv. Mandates for Local Land Use Planning
 - v. Regulation of Environmentally Sensitive Areas
 - vi. Provision of Infrastructure
 - vii. Building Codes
 - viii. Regulation of Hazard Insurance
 - c. Local Government Powers: Building Resilience from the Ground Up
 - i. Local Authority: Exercising Police Power
 - ii. Managing growth and development in Hazard areas
 - iii. Local Government Structure
 - iv. Making It Happen
 - d. IS-2700: National Mitigation Framework, an Introduction
4. Section 3: Mitigation Planning
- a. Risk Assessment: Identifying Hazards and Assessing Vulnerability
 - i. Purpose of Risk Assessment
 - ii. Steps in Risk Assessment
 - b. Hazard Mitigation Activities: Creating Strategies to Reduce Vulnerability
 - i. Types of Mitigation Tools and Techniques
 - ii. Engineering Projects
 - iii. Stormwater Management
 - iv. Prevention
 - v. Property Protection
 - vi. Natural Resource Protection
 - vii. Public Information
 - viii. Mitigation Funding
 - ix. Strategies for Human-Made Hazards
 - x. Local Mitigation Planning
 - c. IS-318: Mitigation Planning for Local and Tribal Communities
 - i. Defining Mitigation &

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- Mitigation Planning
 - ii. The Planning Process
 - iii. Assessing Risk
 - iv. Preparing the Mitigation Strategy
 - v. Implementing and Maintaining the Mitigation Plan
 - vi. Reviewing the Mitigation Plan
 - vii. Updating the Plan-Showing Progress Over Time
5. SECTION 4: Debris Management Overview
- a. IS-632.a: Introduction to Debris Operations
 - i. Roles and Responsibilities for Debris Operations
 - ii. Strategies and Procedures for Debris Removal
- iii. Key Issues for Debris Operations
6. SECTION 5: Debris Management Planning
- a. IS-633 Debris Management Plan Development
 - i. Debris management Plan Overview
 - ii. Plan Development Process
 - iii. Debris Management Team
 - iv. Disaster Events/ Assumptions
 - v. Debris Operations Strategy
 - vi. Private Property Debris Removal and Demolition
 - vii. Contracted Services
 - viii. Health and Safety
 - ix. Environmental and Other Regulatory Requirements
 - x. Public Information

Grade Scale

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

Course Evaluation

Final grades will be calculated according to the following criteria:

- 1. Unit Tests 60%
- 2. Course Assignments 40%

Course Policies

- 1. No food, drinks, or use of tobacco products in class.
- 2. Computers, telephones, headphones, and any other electronic devices must be turned off while in class or used only with permission of the instructor.
- 3. Do not bring children to class.
- 4. If you wish to drop a course, the student is responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an 'F' in the course.

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5. Additional class policies as defined by the individual course instructor.

Technical Requirements

The latest technical requirements, including hardware, compatible browsers, operating systems, software, Java, etc. can be found online at: https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support/Browser_Checker A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of the online technology and resources.

Disabilities Statement

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the office in Student Services, Cecil Beeson Building. You may also visit the online resource at <http://www.lit.edu/depts/stuserv/special/defaults.aspx>

Student Code of Conduct Statement

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at www.lit.edu or obtained in print upon request at the Student Services Office. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document

Starfish

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

