I. INTRODUCTION

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

B. This course is not a required course (it is an elective) in the Homeland Security – Emergency Management Associate of Applied Science Degree.

C. This course is occupationally related and serves as preparation for careers in: Homeland Security and Emergency Management.

D. Prerequisite(s): None

II. LEARNING OUTCOMES

Upon successful completion of this course, Introduction to Homeland Security the student will:

A. Learn how to build resilience at the community level.
B. Examine the major categories of hazards, including meteorological and hydrological hazards, geological hazards, and manmade hazards.
C. Understand the practice and politics of mitigation policy at the federal, state, and local government levels.
D. Explore how the private sector can contribute to strong local economies through wise land use and business protection planning.
E. Assess risk and vulnerability and identify hazards.
F. Apply appropriate mitigation tools and techniques to reduce vulnerability.
G. Prepare for potential hazards with preparedness activities.
H. Follow the process of hazard mitigation planning.
I. Foster a culture of prevention by applying the principles of sustainable development.

III. INSTRUCTIONAL MATERIALS

The instructional materials identified for this course are viewable through www.ctcd.edu/books
IV. COURSE REQUIREMENTS:

A. Class preparation:
Students are required to prepare for class in advance according to the schedule presented in the syllabus. Students should read about the next lesson and come to class ready to enhance that knowledge. In-class time should be spent with the instructor to get as much help and to ask as many questions as possible pertaining to the lesson that was already prepared for at home. Students should ask the instructor questions in class, before or after class, during office hours, or by making an appointment. Students are also strongly encouraged to E-mail the instructor if time is of the essence.

Reading Assignments:
Students are required to read the assigned lessons from the text book. There will be a written quiz on each lesson. Vocabulary from each lesson will be used in oral conversation during the class following the assignment.

Homework:
Will be assigned on a regular basis and students are expected to complete it in a timely fashion. The instructor is under no obligation to accept overdue homework assignments.

B. Project:
Students may be required to submit one individual and one collaborative project. Everything submitted to your instructor is graded accordingly and therefore contributes in the outcome of your final grade.

C. Class Performance:
If a class is missed, it is students’ responsibility to obtain the information missed during the class. The teacher will not repeat instructions or lessons for the classes the student misses. It is the student’s responsibility to make arrangements to take an exam early if he or she will not be able to attend class on one of those days. Failure to notify the instructor will result in a grade of zero on that test/quiz. There are no make-up quizzes.

D. Class Participation:
The percentage of students grades are based on attendance and participation. The student will practice conversation with a partner during part of each class and will be graded on the effort put into these exercises.

V. EXAMINATIONS

A. There will be a total of two exams: Midterm: Covering lessons 1 and 2; Final: Covering lessons 3 and 4.
B. A student must be present for all examinations. No make-up examinations will be given. Students who know in advance they will be absent from an examination due to valid reasons, must arrange to take an early examination if allowed by the instructor. Unexpected absences due to illness or extenuating circumstances require the student to see the instructor about individual make-up work in lieu of the missed examination. One exam maximum per semester may be allowed to be made due to valid reasons.

C. Students without excused absences will be given a zero for the examination missed. Quizzes will not be allowed to be made up under any circumstances.

VI. SEMESTER GRADE COMPUTATIONS

It is the student’s responsibility to complete the course requirements as defined within the syllabus.

The final grade for this course will consist of the following:

- Examinations: 40% 200 pts.
- Assignments: 20% 100 pts.
- Research Paper: 20% 100 pts.
- Participation: 20% 100 pts.
- Total: 100% 500 pts.

Grading will be done on a straight scale:

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VII. NOTES AND ADDITIONAL INSTRUCTIONS FROM THE INSTRUCTOR

A. Course Withdrawal: It is the student's responsibility to officially drop a class if circumstances prevent attendance. Any student who desires to, or must, officially withdraw from a course after the first scheduled class meeting must file an Application for Withdrawal or an Application for Refund. The withdrawal form must be signed by the student. Application for Withdrawal will be accepted at any time prior to Friday of the 12th week of classes during the 16-week fall and spring semesters. The deadline for sessions of other lengths is as follows: 11-week session Friday of the 8th week; 8-week session Friday of the 6th week; 5½-week session Friday of the 4th week. The equivalent date (75% of the semester) will be used for sessions of other lengths. The specific last day to withdraw is published each semester in the Schedule Bulletin. Students who officially withdraw will be awarded the grade of "W", provided the student's attendance and academic performance are satisfactory at the time of official withdrawal. Students must file
A withdrawal application with the college before they may be considered for withdrawal. A student may not withdraw from a class for which the instructor has previously issued the student a grade of "F" or "FN" for nonattendance.

B. **Administrative Withdrawal**: An administrative withdrawal may be initiated when the student fails to meet College attendance requirements. The instructor will assign the appropriate grade on the Administrative Withdrawal Form for submission to the registrar.

C. **Incomplete Grade**: The College catalog states, "An incomplete grade may be given in those cases where the student has completed the majority of the course work but, because of personal illness, death in the immediate family, or military orders, the student is unable to complete the requirements for a course..." Prior approval from the instructor is required before the grade of "I" is recorded. A student who merely fails to show for the final examination will receive a zero for the final and an "F" for the course.

D. **Cellular Phones and Beepers**: Students who receive cellular calls and pages during class disrupt the normal classroom learning environment. To avoid this disruption, students must turn off all cellular phones, pagers, and beepers when entering the classroom.

E. Students are expected to initiate outside help if needed. It is the student’s responsibility to monitor feedback provided by the instructor. There are various possibilities for obtaining outside help. Always see your instructor first for guidance.

F. **American’s with Disabilities Act (ADA)**: Disability Support Services provides services to students who have appropriate documentation of a disability. Students requiring accommodations for class are responsible for contacting the Office of Disability Support Services (DSS) located on the central campus. This service is available to all students, regardless of location. Explore the website at [www.ctcd.edu/disability-support](http://www.ctcd.edu/disability-support) for further information. Reasonable accommodations will be given in accordance with the federal and state laws through the DSS office.

G. **Instructor Discretion**: The instructor reserves the right of final decision in course requirements.

H. **Civility**: Individuals are expected to be cognizant of what a constructive educational experience is and respectful of those participating in a learning environment. Failure to do so can result in disciplinary action up to and including expulsion.
VIII. COURSE OUTLINE

A. Lesson One: Hazards vs. Disasters

1. Learning Outcomes: Upon successful completion of this lesson, the student will be able to:
   a. Illustrate how natural hazards relate to the Earth’s dynamic equilibrium.
   b. Distinguish between hazards and disasters.
   c. Analyze why there are more and bigger disasters.
   d. Discuss the potential costs of a disaster scenario.
   e. Apply the phases of comprehensive emergency management.
   f. Demonstrate where mitigation and preparedness fit into the emergency management cycle.

2. Learning Activities:
   a. Classroom lecture/discussion (C5, C9, F15)
   b. Reading assignment: Chapter 1 (F1, C1)

3. Lesson Outline:
   a. Types of natural and man-made hazards
   b. How hazards differ from disasters
   c. Types of costs associated with disasters
   d. Characteristics of a resilient community
   e. Phases of the comprehensive emergency management cycle
   f. Differences between preparedness and mitigation

B. Lesson Two: Meteorological and Hydrological Hazards

1. Learning Outcomes: Upon successful completion of this lesson, the student will be able to:
   a. Compare and contrast meteorological and hydrological hazards.
   b. Assess the features of a hurricane that are most damaging to property and human life.
   c. Discuss the relationship between floodplains and floods.
   d. Distinguish between intensities of hurricanes, tornadoes, and wind-chill.
   e. Compare several severe winter weather hazardsmands.

2. Learning Activities:
   a. Classroom lecture/discussion (C5, C9, F15)
   b. Reading assignments: Chapter 2 (F1, C1)

3. Lesson Outline:
   a. The difference between meteorological and hydrological hazards
   b. Characteristics of hurricanes
c. Types of flooding

d. The role of Flood Insurance Rate Maps (FIRM)

e. The ratings systems used to measure hurricanes and tornadoes

f. The types of severe winter hazards common in the United States

g. The impacts that major meteorological and hydrological hazards can have on a community

C. **Lesson Three: Geological Hazards**

1. **Learning Outcomes:** Upon successful completion of this lesson, the student will be able to:
   a. Differentiate the three layers of the Earth’s crust.
   b. Examine the relationship between geologic hazards and community planning.
   c. Distinguish between earthquakes based on intensity and effects.
   d. Examine areas of the United States to find those that are vulnerable to volcanoes.
   e. Examine the relationship between dynamic equilibrium and coastal erosion.
   f. Analyze the driving forces behind land subsidence.

2. **Learning Activities:**
   a. Classroom lecture/discussion (C5, C9, F15)
   b. Reading assignments: Chapter 3 (F1, C1)

3. **Lesson Outline:**
   a. Types of geological hazards
   b. How earthquakes happen
   c. Scales used to rate earthquakes
   d. Types of volcanoes and volcanic eruptions
   e. Causes of landslides and debris flows
   f. The definition of setback rules
   g. The consequences of excessive groundwater removal

D. **Lesson Four: Man-Made Hazards**

1. **Learning Outcomes:** Upon successful completion of this lesson, the student will be able to:
   a. Analyze the relationship between man-made hazards and the all-hazards approach.
   b. Identify the criteria for an act of terrorism.
   c. Examine how civil unrest fits into an emergency management plan.
   d. Illustrate how hazardous materials can be released into a community.
   e. Practice the process of mitigating hazards before they become disasters.
2. **Learning Activities:**
   a. Classroom lecture/discussion (C5, C9, F15)
   b. Reading assignments: Chapter 4 (F1, C1)

3. **Lesson Outline:**
   a. How man-made hazards differ from natural hazards
   b. Types of terrorist acts and tactics
   c. Ways that civil unrest can cause disorder and disruption
   d. Common hazardous materials
   e. Ways in which hazardous materials can affect humans
   f. The emotional consequences of man-made hazards
   g. Notable man-made events in U.S. History

E. **Lesson Five: Hazards Management Framework**

1. **Learning Outcomes:** Upon successful completion of this lesson, the student will be able to:
   a. Analyze how a land use management approach to hazard mitigation builds resilient communities.
   b. Compare the roles of various stakeholders in building resilient communities.
   c. Distinguish between federal, state, and local responsibilities.
   d. Examine how regional governments are suited to managing ecosystems.
   e. Categorize the rights and duties of private property owners.
   f. Apply the Fifth Amendment takings rule to land use regulations.
   g. Analyze cases in which government controls overstep private property rights.

2. **Learning Activities:**
   a. Classroom lecture/discussion (C5, C9, F15)
   b. Reading assignments: Chapter 5 (F1, C1)

3. **Lesson Outline:**
   a. Why land use is an important part of managing hazards
   b. The hierarchy of different government levels involved in hazards management
   c. Ways in which the federal, state, and local governments are involved in hazard areas
   d. Types of regional management
   e. The meaning of property ownership
   f. What land controls mean for landowners
   g. Constitutional limits on public land use controls
F. **Lesson Six: The Role of the Federal Government**

1. **Learning Outcomes:** Upon successful completion of this lesson, the student will be able to:
   a. Illustrate how federal programs encourage development in hazard areas.
   b. Examine the role of the FEMA in formulating mitigation policy.
   c. Appraise the strengths and weaknesses of various federal mitigation policies.
   d. Examine how federal programs can actually be counterproductive to hazard mitigation.
   e. Examine ways in which disaster assistance is counterproductive to mitigation.

2. **Learning Activities:**
   a. Classroom lecture/discussion (C5, C9, F15)
   b. Reading assignments: Chapter 6 (F1, C1)

3. **Lesson Outline:**
   a. How the federal role in emergency management has evolved
   b. Types of federal hazard mitigation programs
   c. The mission of the Federal Emergency Management Agency (FEMA)
   d. Which federal programs indirectly manage the impact of hazards
   e. Two ways the federal government gives incentives for development in hazards areas
   f. The role of federal disaster assistance in hazard mitigation

G. **Lesson Seven: Mitigating Hazards at the State Level**

1. **Learning Outcomes:** Upon successful completion of this lesson, the student will be able to:
   a. Examine differences in state management of hazard areas.
   b. Examine sources of funding for state mitigation programs.
   c. Analyze the drawbacks of hazard insurance.
   d. Analyze variations in effectiveness of state emergency management offices.
   e. Examine the application of statewide building codes.
   f. Distinguish weaknesses in hazard insurance programs.
   g. Appraise the potential effectiveness of regulatory setbacks.

2. **Learning Activities:**
   a. Classroom lecture/discussion (C5, C9, F15)
   b. Reading assignments: Chapter 7 (F1, C1)
3. **Lesson Outline:**
   a. Responsibilities of state emergency management offices
   b. The role of the State Hazard Mitigation Officer
   c. The two levels of state plans under the Disaster Mitigation Act
   d. Four elements of a building code
   e. Types of problems associated with hazard insurance
   f. Common environmentally sensitive land areas
   g. Ideas on how to increase the mitigation capabilities of the states

H. **Lesson Eight: Local Government Powers**

1. **Learning Outcomes:** Upon successful completion of this lesson, the student will be able to:
   a. Examine how the principles of resiliency contribute to a sustainable community.
   b. Analyze ways that local governments utilize police power.
   c. Describe mitigation tools that lie within local government authority.
   d. Diagram mitigation tools that lie within local government authority.
   e. Evaluate ways local governments can collaborate with each other for mitigation purposes.
   f. Examine how the characteristics of growth can determine local vulnerability to natural hazards.

2. **Learning Activities:**
   a. Classroom lecture/discussion (C5, C9, F15)
   b. Reading assignments: Chapter 8 (F1, C1)

3. **Lesson Outline:**
   a. The principles of sustainable development
   b. The duty of local governments to protect public health safety
   c. Forms of local authority
   d. Uses of powers delegated to local governments
   e. Types of local governments in the United States
   f. Ways of building resiliency at the local level

I. **Lesson Nine: Community Resilience and the Private Sector**

1. **Learning Outcomes:** Upon successful completion of this lesson, the student will be able to:
   a. Describe the foundations of a resilient economy.
   b. Role of private land ownership in creating resilient communities.
   c. Highlight the important aspects of small business continuity planning.
   d. Outline the process a business can follow to formulate a mitigation plan.
e. Appraise mitigation measures a business might use to reduce its vulnerability to hazards.
f. Explain how businesses and communities can work together to mitigate the impact of hazards.

2. **Learning Activities:**
   a. Classroom lecture/discussion (C5, C9, F15)
   b. Reading assignments: Chapter 9 (F1, C1)

3. **Lesson Outline:**
   a. The importance of economic resilience for a sustainable community
   b. Role of private land ownership in creating resilient communities
   c. Economic impacts of disasters on a community
   d. The planning process a business can use to become more resilient
   e. Mitigation actions a business can use to protect assets, inventories, and human resources
   f. Ways the private sector can participate in community mitigation efforts

J. **Lesson Ten: Risk Assessment**

1. **Learning Outcomes:** Upon successful completion of this lesson, the student will be able to:
   a. Analyze the role of risk assessment in hazard mitigation and preparedness.
   b. Appraise the probability of a hazard.
   c. Compare the differences between inventories for natural hazards and manmade hazards.
   d. Estimate hazard losses using risk assessment programs.
   e. Identify where undeveloped area intersect with hazard areas.
   f. Examine the advantages of a mitigation plan that is based on a risk assessment.

2. **Learning Activities:**
   a. Classroom lecture/discussion (C5, C9, F15)
   b. Reading assignments: Chapter 10 (F1, C1)

3. **Lesson Outline:**
   a. The purpose of a risk assessment
   b. The steps of the risk assessment process
   c. Sources of data to carry out a risk assessment
   d. Types of mapping and data collection
   e. The purpose of a hazard profile
The three tasks involved in inventorying assets and populations

Ways of estimating hazard loss

The role of future development and land use trends

Ways in which communities make use of risk assessment information

K. Lesson Eleven: Preparedness Activities

1. Learning Outcomes: Upon successful completion of this lesson, the student will be able to:
   a. Distinguish between hazard mitigation and preparedness actions.
   b. Illustrate how coordination between all preparedness programs is essential.
   c. Describe the vital responsibility of all citizens to cooperate in the continual updating of preparedness activity.
   d. Describe several types of exercises that are hazard-specific examples of preparedness.
   e. Describe several opportunities for further education and training of emergency managers and individuals.

2. Learning Activities:
   a. Classroom lecture/discussion (C5, C9, F15)
   b. Reading assignments: Chapter 11 (F1, C1)

3. Lesson Outline:
   a. The role of preparedness as part of the emergency management cycle
   b. Responsibilities of government authorities in preparedness
   c. Responsibilities of businesses in preparedness
   d. Responsibilities of families and individuals in preparedness
   e. Hazard-specific examples of preparedness exercises

L. Lesson Twelve: Hazard Mitigation Tools and Techniques

1. Learning Outcomes: Upon successful completion of this lesson, the student will be able to:
   a. Examine the important factors in choosing a mitigation strategy.
   b. Discuss the disadvantages of structural engineering projects.
   c. Compare the benefits of disaster-prevention techniques.
   d. Appraise the role of building codes in hazards mitigation.
   e. Examine the role of real estate disclosure in hazard mitigation.
   f. Compare the differences between mitigation for natural and man-made disasters.

2. Learning Activities:
   a. Classroom lecture/discussion (C5, C9, F15)
   b. Reading assignments: Chapter 12 (F1, C1)
3. **Lesson Outline:**
   a. The major categories of mitigation strategies
   b. Common types of structural engineering projects
   c. Ways of protecting shorelines using structural engineering
   d. Community-level methods of structural engineering
   e. Three ways of preventing disasters
   f. The four strategies used to strengthen buildings and facilities
   g. The mitigation benefits of wetland preservation
   h. Ways of mitigating through public information
   i. Examples of funding sources for mitigation
   j. Mitigation techniques for man-made hazards

M. **Lesson Thirteen: Hazard Mitigation Planning**

1. **Learning Outcomes:** Upon successful completion of this lesson, the student will be able to:
   a. Examine an all-hazards approach to mitigation planning.
   b. Analyze the importance of public participation in the planning process.
   c. Practice the steps of risk assessment.
   d. Compare a mitigation plan’s goals and objectives.
   e. Appraise what it takes to create implementation procedures.
   f. Distinguish criteria for a periodic assessment of a plan.

2. **Learning Activities:**
   a. Classroom lecture/discussion (C5, C9, F15)
   b. Reading assignments: Chapter 13 (F1, C1)

3. **Lesson Outline:**
   a. Types of mitigation plans
   b. Steps common to successful planning
   c. Ways to organize before preparing a plan
   d. Components of a risk assessment
   e. Types of local government capabilities
   f. The difference between mitigation goals and objectives
   g. Types of mitigation actions
   h. Elements of plan implementation
   i. Procedures for monitoring and updating mitigation plan

N. **Lesson Fourteen: Building a Culture of Prevention**

1. **Learning Outcomes:** Upon successful completion of this lesson, the student will be able to:
   a. Illustrate how resiliency supports and complements community sustainability.
b. Examine the aspects of sustainable development that can change current thinking about hazard mitigation.

c. Examine the features of a resilient community.

d. Examine the linkages between the three spheres of community sustainability.

e. Analyze how unsustainable patterns of development increase community vulnerability to hazards.

f. Analyze how poverty exacerbates community vulnerability to hazards.

g. Appraise several pre-and post-disaster sustainable development opportunities.

2. **Learning Activities:**
   a. Classroom lecture/discussion (C5, C9, F15)
   b. Reading assignments: Chapter 14 (F1, C1)

3. **Lesson Outline:**
   a. Three spheres of sustainable development
   b. Ways hazard mitigation contributes to community sustainability
   c. The role of the private and nonprofit sectors in creating resilient communities
   d. Several structural and nonstructural mitigation strategies
   e. How economic vitality supports community sustainability
   f. Features of the natural environment that serve a mitigation function
   g. The importance of hazards awareness and risk terminology

Other time blocks not specifically allocated above are spent with introductory topics, administrative matters, exams, and review classes (both before and after exams).