



**Course: EADP 3035 Hazard Mitigation and Preparedness**

**Instructor:** Eric Hutmacher

**Office Hours:** By appointment only

**Office Location:** Chilton Hall 302

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**Communication Expectations:** Canvas is our learning management system and all assignments, lectures, grades and course-related material will be communicated through Canvas. Email and text messages are the best contact method and I generally respond within 24-hours during the week (48-hours on the weekend). Graded materials are typically returned within one to two weeks following the due date depending on the length of the assignment. Check your UNT email regularly for updated course information. When sending an email, include a subject line, greeting, the course, section number, and sign it with your name. By practicing your email communication with your instructors and fellow classmates now, you'll be more prepared for your career after college. Check out these links for help with [Writing Professional Emails](#) or [Online Communication Tips](#).

**Course Description**

This course provides an overview of mitigation and preparedness within the field of emergency management. Throughout the semester we move from discussing specific hazards and their characteristics to exploring techniques that can be used to minimize and plan for potential impacts from these hazards. Hands-on assignments introduce students to government roles, programs, and guidance on mitigation and preparedness at federal, state, local levels, tribal, private, and non-profit organizations.

**Course Objectives**

By the end of the course, successful students will be able to:

- Explore the causes and impacts of meteorological, hydrological, geological, and human-made hazards.
- Outline strategies that can be undertaken to mitigate loss of life and property from multiple hazards.
- Examine the roles of federal, state, and local governments in administering mitigation and preparedness programs.
- Identify, profile, and assess hazard risk and vulnerability as necessary for hazard mitigation and preparedness planning.
- Practice data analysis and technical writing skills.
- Utilize FEMA's Mitigation Plan Guidance to review local hazard mitigation plans.
- Utilize critical planning and preparedness elements in the field of emergency management.

## Required Materials

All assigned readings are required, and due dates are listed on the course calendar. Portions of the required readings are meant to augment, not mirror, the lectures and class discussions- which means keep up with the readings regardless of how much time is devoted to them on any one class day.

- Hazard Mitigation and Preparedness: An Introductory Text for Emergency Management and Planning Professionals. (2022). Sandler, D. and Schwab. 3<sup>rd</sup> edition ISBN#9780367635770
- Additional and supplemental readings will be posted on course website.

## Technical Assistance

Here at UNT we have a Student Help Desk that you can contact for help with Canvas or other technology issues. The University is committed to providing a reliable online course system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty, which prevents students from completing a time sensitive assessment activity, the instructor will extend the time windows and provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and contact the UNT Student Help Desk: [helpdesk@unt.edu](mailto:helpdesk@unt.edu) or 940-565-2324 and obtain a ticket number. The instructor and the UNT Student Help Desk will work with the student to resolve any issues at the earliest possible time.

## UIT Help Desk: [UIT Student Help Desk site](#)

[helpdesk@unt.edu](mailto:helpdesk@unt.edu) 940-565-2324 In Person: Sage Hall, Room 130 Walk-In Availability: 8am-9pm  
Telephone Availability:

- Sunday: noon-midnight
- Monday-Thursday: 8am-midnight
- Friday: 8am-8pm
- Saturday: 9am-5pm

Laptop Checkout: 8am-7pm

For additional support, visit Canvas Technical Help (<https://community.canvaslms.com/docs/DOC-10554-4212710328>)

## Grading

5 points Attendance

5 points Assignment 1: Stop Disasters Game: Challenges in Mitigation & Preparedness

15 points Assignment 2: Local Hazard Identification and Risk Assessment

10 points Skills Demo (3 short assignments)

25 points Project: Local Hazard Mitigation Plan Review

20 points Midterm Exam

20 points Final Exam

**Total: 100 points**

## Attendance

Every class is essential to your success. To encourage your attendance, punctuality, and learning, attendance will be taken at the beginning of class. Please plan to arrive on time and plan to stay the entire class. Students will be allowed 2 absences before their overall grade will be lowered 1 point for each additional absence (e.g. from 5 to 4), up to a total of 5 points. Therefore, there are no excused absences. However, this rule may be waived on a case-by-case basis for documented circumstances, (e.g., serious illness, death in the family, injury, etc.). In these special cases please contact me before class so I can work with you.

Students will also be penalized for arriving late to class or leaving early. After 2 tardies, each tardy or leaving early occurrence will result in a .5-point deduction from the attendance grade.

If you have to miss class for any reason, please arrange to get notes from a fellow classmate. Though I do post my slides on Canvas, there is often a lot of information discussed and diagramed on the board during lecture. All material covered in class is important.

### **Midterm and Final Exam**

To encourage you to keep up with the readings, lectures, and documentaries, a midterm and final exam will be given. The **midterm exam is scheduled for October 13th**, and the **final exam will be December 8th** from 6:00 to 8:00 p.m. These exams will consist of a combination of true/false, multiple-choice, short answer, and short essay questions. The final exam is not cumulative. Exams must be completed on the scheduled exam date. Exam make-ups and rescheduled exams will be limited to special circumstances (e.g. illness, death in the family, etc.) and with **prior** notification only. Make-up exams, if granted, may be different than the one given in class.

**Assignment 1: Leveraging Artificial Intelligence in Emergency Management.** Artificial Intelligence (AI) rapidly transforms the landscape of emergency management—from predictive analytics and resource allocation to real-time decision-making and public communication. In this assignment, you will explore how AI technologies can be integrated into emergency management practices to enhance preparedness, response, recovery, and mitigation efforts.

Your task is to research, analyze, and propose innovative applications of AI in one or more phases of emergency management. You will present your findings in a structured report that demonstrates both technical understanding and strategic insight.

### **Assignment 2: Local Hazard Identification and Risk Assessment with Artificial Intelligence**

You will be responsible for completing a risk assessment on a single hazard for a county of your choice. We will work on the steps of a hazard risk assessment in stages over the course of the semester with iterative due dates including initial topics; a practice activity; a rough draft for peer review; and a final paper. See course calendar and canvas for due dates. We will use the techniques, tricks, and tips from class to expedite with oversight on identifying, assessing, and mitigating risk with A.I. tools.

### **Mini-activities**

Over the course of the semester, some lessons will utilize podcasts, videos, and online resources to help you gain hands-on experience with hazard mitigation and preparedness actions. Three assigned activities will utilize external resources popular in the emergency management field. These mini-activities are designed to focus your attention on the main takeaway lessons of the activity and provide an opportunity to connect the activity with course readings and lecture topics.

### **Exams**

Over the course of the semester, there will be two exams listed on the course calendar. Material for exams will be taken from previous modules' lecture presentations, readings, and activities. Exams will be conducted in Canvas and consist of multiple choice, true/false, short answers and essays. See course calendar and canvas for due dates.

### Grading Scale

A: 90% or greater

C: 70-79.9%

F: 0-59.9%

B: 80-89.9%

D: 60-69.9%

Your grades in this course are earned, at the end of the semester I only report earned credit. I will **not** add any points or tenths of a point to your grade. *I will not respond to any emails at the end of the semester asking for unearned points to boost your grade or extra credit opportunities.*

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### Course Calendar

*(Subject to change with warning)*

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#### **Week 1 (August 18<sup>th</sup>): Introduction to Course**

- Review of Hazard and Disasters
- What is Mitigation and Preparedness?
- For next week: Read Schwab Chapters 1, 2 & Syllabus

#### **Week 2 (August 25<sup>th</sup>): Mitigation and Preparedness Tools, Techniques, Legislation, and Politics**

- Preparedness and mitigation history
- Artificial Intelligence: Friend or foe for emergency managers?
- An introduction to who's who in the zoo for emergency managers
- For next week: Read Schwab Chapter 3

#### **Week 3 (September 1<sup>st</sup>) Labor Day – No Class, Have Fun!**

#### **Week 4 (September 8<sup>th</sup>): Introduction to Hazards by Type**

- Weather-related (Meteorological) & Climatological hazards
  - Hurricanes, In-land Flooding, Tornadoes, Severe Winter Weather, and more!
- Mitigation & Preparedness strategies by type
- For next week: Read Schwab Chapter 3; Mini-activity 1- Flood risk

#### **Week 5 (September 15<sup>th</sup>): Hydrologic Hazards, Drought and Wildfire**

- Flood, Droughts, Wildfire, Extreme Heat
- Mitigation & Preparedness strategies by type
- For next week: Read Schwab Chapter 4; Assignment 1: Stop Disasters Game

#### **Week 6 (September 22<sup>nd</sup>): Geologic Hazards and Human-made Hazards**

- Assignment 1: due today
- Earthquakes, Tsunamis, Volcanoes
- Technological hazards, terrorism & civil unrest
- For next week: Read Schwab Chapter 4; Select county & environmental hazard type for Risk Assessment

#### **Week 7 (September 29<sup>th</sup>): Ok, So What's the Plan?**

- What plans, plan for what and why? (and when are they used?)
- HazMAP, EOPs, Debris Management, Evacuation, Terrorist Attacks, Kinetic Strikes, and more!
- For next week: Read Schwab Chapter 5

**Week 8 (October 6<sup>th</sup>): The Strategic Application of Emergency Management**

- A lot has changed – but what and how will it impact the field?
- Review for Midterm

**Week 9 (October 13<sup>th</sup>): Midterm Exam – Good Luck!**

**Week 10 (October 20<sup>th</sup>): Risk Assessment Introduction**

- Hazard mitigation plan process
- Related policies
- For next week: Read Schwab Chapter 10; Disaster Mitigation Act 2000 (Canvas); Mini-activity 2- Beyond the Basics

**Week 11 (October 27<sup>th</sup>): Risk Assessment Workshop**

- How to conduct a risk assessment lab activity (Assignment 2.2)
- Best practices
- For next week: Read Schwab Chapter 5; Assignment 2.2; Rough draft Assignment 2

**Week 12 (November 3<sup>rd</sup>): Risk Assessments and Rough Draft Review**

- Risk Assessment overview
- Review rough draft of Assignment 2- provides comments based on rubric

**Week 13 (November 10<sup>th</sup>): Planning and Preparedness**

- Review planning and preparedness activities
- Read Schwab Chapters 6 & 8

**Week 14 (November 17<sup>th</sup>): Government Roles in Disaster Management**

- Evolution of federal/state management
- FEMA, NFIP & federal programs
- State level mitigation & local planning
- For next week: Read Schwab Chapter 11

**Week 15 (November 24<sup>th</sup>) Preparedness Policy, Planning, and THIRAs**

- *Threat and Hazard Identification and Risk Assessment*
- Preparedness overview & programs
- For next week: read Schwab Chapter 13 and THIRA Summary (Canvas); Mini-activity 3

**Week 16 (December 1<sup>st</sup>): Final Exam Review**

- Future of emergency management
- Insights and professional advice

**Week 17 (December 8<sup>th</sup>): Final Exam – Good Luck!**

## DEPARTMENT POLICIES

### End of the Semester Evaluations

**Required:** The dates students can complete the SPOT assessment are **the final two weeks of the semester**. This is your opportunity to evaluate the instructor. Students can complete the on-line course evaluation at [my.unt.edu](http://my.unt.edu)

### Cheating and Plagiarism Policy and Definitions

Department and University regulations regarding academic honesty will be strictly enforced. The UNT Code of Student Conduct and Discipline ([www.unt.edu/csrr](http://www.unt.edu/csrr)) defines cheating and plagiarism “as the use of unauthorized books, notes, or otherwise securing help in a test; copying other’s tests, assignments, reports, or term papers; representing the work of another as one’s own; collaborating without authority with another student during an examination or in preparing academic work; or otherwise practicing scholastic dishonesty.”

### Penalties

Normally, the minimum penalty for cheating or plagiarism is a grade of “F” in the course. In the case of graduate departmental exams, the minimum penalty shall be failure of all fields of the exam. Determination of cheating or plagiarism shall be made by the instructor in the course, or by the departmental faculty in the case of departmental exams.

Cases of cheating or plagiarism on graduate departmental exams, papers, theses, or dissertations shall automatically be referred to the departmental Curriculum and Degree Programs Committee. Cases of cheating or plagiarism in ordinary course work may, at the discretion of the instructor, be referred to the Curriculum and Degree Programs Committee in the case of either graduate or undergraduate students. This committee, acting as an agent of the Department, shall impose further penalties, or recommend further penalties to the Dean of Students, if they determine that the case warrants it. In all cases, the Dean of Students shall be informed in writing of the case.

Cheating and plagiarism will not be tolerated in this course. A student caught cheating or plagiarizing, or knowingly assisting, will receive a zero on the assignment and an “F” for the course. I also will report the student(s) to the Office of Academic Integrity for further review.

### Appeals

Students may appeal and decisions under this policy by following the procedure laid down in the UNT Code of Student Conduct and Discipline.

## **POLICY ON DISABILITY ACCOMMODATION**

The Department of Emergency Management and Disaster Science in cooperation with the Office of Disability Accommodation, complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disabilities. Please present your written accommodation request during regular office hours before the 12th class day of regular semesters (4th class day of summer sessions).

## **POLICY ON STUDENT BEHAVIOR IN THE CLASSROOM**

Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Center for Student Rights and Responsibilities to consider whether the student's conduct violated the Code of Student Conduct. The university's expectations for student conduct apply to all instructional forums, including university and electronic classroom, labs, discussion groups, field trips, etc. The Code of Student Conduct can be found at [www.unt.edu/csrr](http://www.unt.edu/csrr).

## **UNT Policies**

### **Academic Integrity Policy**

Academic Integrity Standards and Consequences. According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

### **ADA Policy**

UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the ODA website (<https://disability.unt.edu/>).

### **Prohibition of Discrimination, Harassment, and Retaliation (Policy 16.004)**

The University of North Texas (UNT) prohibits discrimination and harassment because of race, color, national origin, religion, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran status, or any other characteristic protected under applicable federal or state law in its application and admission processes; educational programs and activities; employment policies, procedures, and processes; and university facilities. The University takes active measures to prevent such conduct and investigates and takes remedial action when appropriate.

### **Emergency Notification & Procedures**

UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies such as chemical spills, fires, or active threat). In the event of a university closure, please refer to Canvas for contingency plans for covering course materials.

**Retention of Student Records**

Student records pertaining to this course are maintained in a secure location by the instructor of record. All records such as exams, answer sheets (with keys), and written papers submitted during the duration of the course are kept for at least one calendar year after course completion. Course work completed via the Canvas online system, including grading information and comments, is also stored in a safe electronic environment for one year. Students have the right to view their individual record; however, information about student's records will not be divulged to other individuals without proper written consent. Students are encouraged to review the Public Information Policy and the Family Educational Rights and Privacy Act (FERPA) laws and the University's policy. See UNT Policy 10.10, Records Management and Retention for additional information.

**Acceptable Student Behavior**

Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The University's expectations for student conduct apply to all instructional forums, including University and electronic classroom, labs, discussion groups, field trips, etc. Visit UNT's Code of Student Conduct (<https://deanofstudents.unt.edu/conduct>) to learn more.

**Access to Information - Eagle Connect**

Students' access point for business and academic services at UNT is located at: [my.unt.edu](http://my.unt.edu). All official communication from the University will be delivered to a student's Eagle Connect account. For more information, please visit the website that explains Eagle Connect and how to forward e-mail Eagle Connect (<https://it.unt.edu/eagleconnect>).

**Student Evaluation Administration Dates**

Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available during weeks 13, 14 and 15 [insert administration dates] of the long semesters to provide students with an opportunity to evaluate how this course is taught. Students will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" ([no-reply@iasystem.org](mailto:no-reply@iasystem.org)) with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey they will receive a confirmation email that the survey has been submitted. For additional information, please visit the SPOT website (<http://spot.unt.edu/>) or email [spot@unt.edu](mailto:spot@unt.edu).

**Sexual Assault Prevention**

UNT is committed to providing a safe learning environment free of all forms of sexual misconduct, including sexual harassment sexual assault, domestic violence, dating violence, and stalking. Federal laws (Title IX and the Violence Against Women Act) and UNT policies prohibit discrimination on the basis of sex, and therefore prohibit sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking, and/or sexual assault, there are campus resources available to provide support and assistance. UNT's Survivor Advocates can assist a student who has been impacted by violence by filing protective orders, completing crime victim's compensation applications,

contacting professors for absences related to an assault, working with housing to facilitate a room change where appropriate, and connecting students to other resources available both on and off campus. The Survivor Advocates can be reached at [SurvivorAdvocate@unt.edu](mailto:SurvivorAdvocate@unt.edu) or by calling the Dean of Students Office at 940-565- 2648. Additionally, alleged sexual misconduct can be non-confidentially reported to the Title IX Coordinator at [oeo@unt.edu](mailto:oeo@unt.edu) or at (940) 565 2759.

### **Use of Student Work**

A student owns the copyright for all work (e.g. software, photographs, reports, presentations, and email postings) he or she creates within a class and the University is not entitled to use any student work without the student's permission unless all of the following criteria are met:

- The work is used only once.
- The work is not used in its entirety.
- Use of the work does not affect any potential profits from the work.
- The student is not identified.
- The work is identified as student work.

If the use of the work does not meet all of the above criteria, then the University office or department using the work must obtain the student's written permission.

Class recordings are the intellectual property of the university or instructor and are reserved for use only by students in this class and only for educational purposes. Students may not post or otherwise share the recordings outside the class, or outside the Canvas Learning Management System, in any form. Failing to follow this restriction is a violation of the UNT Code of Student Conduct and could lead to disciplinary action.

## **Academic Support & Student Services**

### **Student Support Services**

#### **Mental Health**

UNT provides mental health resources to students to help ensure there are numerous outlets to turn to that wholeheartedly care for and are there for students in need, regardless of the nature of an issue or its severity. Listed below are several resources on campus that can support your academic success and mental well-being:

- Student Health and Wellness Center (<https://studentaffairs.unt.edu/student-health-and-wellness-center>)
- Counseling and Testing Services (<https://studentaffairs.unt.edu/counseling-and-testing-services>)
- UNT Care Team (<https://studentaffairs.unt.edu/care>)
- UNT Psychiatric Services (<https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry>)
- Individual Counseling (<https://studentaffairs.unt.edu/counseling-and-testing-services/services/individual-counseling>)

## Chosen Names

A chosen name is a name that a person goes by that may or may not match their legal name. If you have a chosen name that is different from your legal name and would like that to be used in class, please let the instructor know. Below is a list of resources for updating your chosen name at UNT.

- UNT [Records](#)
- UNT [ID Card](#)
- UNT [Email Address](#)
- [Legal Name](#)

*\*UNT eulDs cannot be changed at this time. The collaborating offices are working on a process to make this option accessible to UNT community members.*

## Additional Student Support Services

- Registrar (<https://registrar.unt.edu/registration>)
- Financial Aid (<https://financialaid.unt.edu/>)
- Student Legal Services (<https://studentaffairs.unt.edu/student-legal-services>)
- Career Center (<https://studentaffairs.unt.edu/career-center>)
- Multicultural Center (<https://edo.unt.edu/multicultural-center>)
- Counseling and Testing Services (<https://studentaffairs.unt.edu/counseling-and-testing-services>)
- Pride Alliance (<https://edo.unt.edu/pridealliance>)
- UNT Food Pantry (<https://deanofstudents.unt.edu/resources/food-pantry>)

## Academic Support Services

- Academic Resource Center (<https://clear.unt.edu/canvas/student-resources>)
- Academic Success Center (<https://success.unt.edu/asc>)
- UNT Libraries (<https://library.unt.edu/>)
- Writing Lab (<http://writingcenter.unt.edu/>)