

## ENVS 103 01E Natural Disasters



### **ENVS 103 01W Natural Disasters**

COURSE SYLLABUS: Spring 2024

### **INSTRUCTOR INFORMATION**

Instructor: Dr. Johanna Delgado Acevedo.

Office Location: Science Building (STC), 262; Office hours: online by appointment

University Email Address: Johanna.Delgado-Acevedo@tamuc.edu

### **COURSE INFORMATION**

Materials – Textbooks, Readings, Supplementary Readings

Textbook(s) Recommended: Title: Natural Disasters, 10<sup>th</sup> Edition (NOT REQUIRED)

Year: 2017

Title status: Available

Imprint: The McGraw-Hill Companies Inc., New York, NY, USA. Author: Abbott, P. A.

ISBN: 9780078022982 Software

Required: MS Office

Optional Texts and/or Materials: Handouts and Academic worksheets

### **Course Description**

This course is designed to provide an overview of natural disasters, including an examination of the major disasters, plate tectonics, volcanism, tsunamis-hurricanes storms, tornados, climate change, floods, and fire among others. An emphasis will also be placed on understanding on the mechanisms of why natural disasters occur.

**Instructional Method:**                      **Online**

### **Student Learning Outcomes**

#### **Learning Outcomes:**

1. **Critical Thinking:** Students will be able to differentiate between fact and opinion; be able to discern between relevant and irrelevant information, recognize bias in source material, and critically examine a diversity of source material. Students will be able to describe the physical mechanisms that combine to form both normal and extreme weather patterns. Students will also be able to distinguish which energy sources (internal and/or external energy) are fueling which natural disasters. Explain how tectonic plate

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dynamics result in earthquakes, volcanoes, and other geologic natural disasters. Students will be able to describe the list the factors that contribute to other types of disasters either natural or human-made disasters. Describe the factors that tend to increase or decrease the severity of natural disasters, and what the effects of natural disasters are on human populations worldwide. Students will also be able to describe the prediction phenomena, warning systems, and precautionary measures for individual natural disaster.

2. **Communication:** In written, oral, and/or visual communication, students will communicate in a manner appropriate to audience and occasion, with an evident message and organizational structure. The course is designed to present one natural disaster by a group of students at the end of the semester where students will answer the listed predetermined questions for their preselected disaster. Class presentation will help students to exchange their research findings on a specific disaster to the whole class.
3. **Teamwork:** Students will be able to work together toward a shared purpose relevant to the course or discipline with a sense of shared responsibility for meeting that purpose. Students must do their group study to develop a report for their preselected disaster. Students will learn how to work in a group, how to distribute workload among group members, and finally how to solve problems in a group. There will be equal group members for each group. In class, groups will work for 10 to 15 minutes to answer 1 or 2 questions. This way instructor will also be able to evaluate the teamwork performance for each group other than the quality of report and class presentations.
4. **Empirical and Quantitative Skills:** Students will be able understand and utilize mathematical functions and empirical principles and processes. There are calculations on how to measure the Adiabatic Lapse rate, atmospheric temperature and pressure gradient, how to calculate the flood intensity by measuring stream cross sectional areas.

### COURSE REQUIREMENTS

#### Minimal Technical Skills Needed

Algebra, engineering math, basic chemistry.

In addition, using the learning management system, using Microsoft Word and PowerPoint, using presentation and graphics programs, etc.

#### Instructional Methods

Conducting lectures, resorting to videos and visual-aid presentations, e.g., "PowerPoint" and "You tube", solving math problems together with the students in the classroom, expecting student participation in the classroom discussions, assigning Exams and homework assignments, etc.

#### Student Responsibilities or Tips for Success in the Course

Turn-in all the assigned academic work; actively participate in verbal discussions; take notes and copy written explanations during class periods; take assigned written Exams; log into the course website, regularly; complete the assigned weekly study.

#### Learning strategies

Lectures

Reading assignments to be discussed in class

Analysis of Case Study Samples

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Individual work, analysis of free reading Homework

### Assumptions, Expectations, Philosophy

University students are a select group of students soon to be professionals.

Instructors can have high expectations of student performance.

Demanding courses benefit students more than easy courses.

Assignments are due on time unless you have made a prior arrangement with me (only granted for unusual or extenuating circumstances and in case of health issues proper medical excuse is required).

Come to class prepared, having read and thought about the assigned readings; course materials are meant to be studied, not merely read. Actively participate in class discussions; ask questions.

In university, a lot of your learning will occur outside of the classroom, during your own research, and in formal and informal interactions with your peers– both here and at meetings, correspondence, etc. Therefore, I expect you to take full advantage of ALL learning opportunities, including seminars and invited speakers.

Reading and assimilating information is a critical part of your current and continuing education. This will help you become a better writer, a more rounded individual, and expose you to subjects outside of your immediate knowledge.

### GRADING

Final grades in this course will be based on the following scale:

A= 90%-100%; B = 80%-89%; C = 70%-79%; D = 60%-69%; F = 59% or Below

### Tentative course outline

Date	Topics (Book Chapters)	Subtopics
Jan 10-13	Introduction/Welcome	<b>Student and Faculty introduction</b> Introduction to Natural Disasters Global Scenarios of Natural Disasters Socioeconomic Impacts of Natural Disasters Examples of Different Natural Disasters
Jan 15-29	Chapter 2 - 6 Plate Tectonics, Earthquakes, volcanic eruption, Tsunami	
Feb 5	Quiz	Quiz will from any chapters of 2 through 6
Feb 5-Mar 2	Chapter 9 -14 External energy Tornados Lightening Hurricanes Floods	Quiz will from any chapters of 9 through 14 Note: Beginning of the week Instructor will announce the date for quiz (if any for that week) <b>Quiz 17<sup>th</sup> and 18<sup>th</sup> October</b>
Mar 4-16	Chapter 15 – 16 Mass movements	

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	Coastal processes and hazards	
04/23	<b>Exam #2 Chapters:</b> Tsunami, Flood, Mass Movement, Coastal processes and hazards	
Apr 1-29	Space objects Natural Disasters and Human Populations	Consider a Disaster for Assignment
May 4	<b>Final Assignment submission (Case Study)</b>	

### One (1) Case study Or Assignment (50%)

1. Consider one Natural Disaster.
2. Why are you interested of that Disaster? Example: explain about their local or regional or worldwide activities.
3. Consider one specific geographic location of that hazard
4. Methods to predict that hazard (if any)
5. Explain How did that hazard started to form at that location:
  - a. Factors Influencing that hazard to take place
6. Risk Assessment of that specific hazard
  - a. Human Fatalities
  - b. Economic Loss
7. Potential suggestions (at least 2) to avoid or minimize the loss.
8. You will create a 5-minutes video presenting your case study

### Assessments

#### Exam:

There will be a total of 2 **exams** for the course. Exams will be designed to evaluate the student's understanding of the subjects covered in class and empirical and quantitative skills.

#### Grades:

2 Quizzes, 20 points each

2 Exams, 100 points each

One Case study and video presentation, 100 points

### **COURSE AND UNIVERSITY PROCEDURES/POLICIES**

**NOTE #1: Late assignments are not accepted. Very, very extreme circumstances may or may not provide a warranted exception. This course moves very fast and there is not enough time to catch up.** In case of extreme circumstances, I may accept late work. However, 10 points will be deducted from late assignments.

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**NOTE #2: Missed Homework and Exams are not acceptable. Very, very extreme circumstances may or may not provide a warranted exception. This course moves very fast and there is not enough time to catch up.**

### TECHNOLOGY REQUIREMENTS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo. Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

[https://documentation.brightspace.com/EN/brightspace/requirements/all/browser\\_support.htm](https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm)

YouSeeU Virtual Classroom Requirements: <https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-SystemRequirements>

### ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu).

**Note:** Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

### COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

#### Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

#### Interaction with Instructor Statement

Weekdays: 1-24 hours; Evenings, Weekends: 5~48 hours

#### Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

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### University Specific Procedures

#### Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](#).

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum:

<https://www.britannica.com/topic/netiquette>

#### TAMUC Attendance

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

#### Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

[Graduate Student Academic Dishonesty 13.99.99.R0.10](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

#### Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

#### Office of Student Disability Resources and Services

Texas A&M University-Commerce

Gee Library- Room 132

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

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Email: [studentdisabilityservices@tamuc.edu](mailto:studentdisabilityservices@tamuc.edu)

Website: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

### **Nondiscrimination Notice**

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

### **Campus Concealed Carry Statement**

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url: <http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&MCommerce campuses. Report violations to the University Police Department at 903886-5868 or 9-1-1

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