

ENVS103/104 Natural Disasters

I. General Information

Course syllabus fall 2016
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Prerequisites: none

Book: Abbott, P. A. 2014. Natural Disasters. Ninth edition. The McGraw-Hill Companies Inc., New York, NY, USA.

II. 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.

III. Student Learning Objectives

Describe the physical mechanisms that combine to form both normal and extreme weather patterns.

Explain how tectonic plate dynamics result in earthquakes, volcanoes, and other geologic natural disasters.

List the factors that contribute to other types of disasters such as biological, cosmological, 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.

IV. Learning strategies

Lectures
Reading assignments to be discussed in class
Analysis of Case Study Samples
Individual work, analysis of free reading
Homework

V. 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.

VI. Tentative course outline

Part I. Introduction and basic principles of Natural Disasters (ch. 1)

Most used terms

Human landscapes

Natural hazards

week: 1

Part II. Plate tectonics and volcanism (chs. 2-8)

Plate tectonics

Earthquake geology and seismology

Volcanic eruptions

Tsunamis

week: 2-5

Part III. Weather and Climate

External energy (chs. 9-11, 13-14, 12)

Tornados, lightning

Hurricanes

Floods

Fire

Climate Change

week: 6-11

Part IV. Mass movements and Coastal Processes (chs. 15-16)

Mass movements

Coastal processes and hazards

week: 12-13

Part V. Extraterrestrial objects (ch. 17)

Space objects

week: 14

VII. Course Requirement and Evaluation Method

Attendance and punctuality is required and non-negotiable.

Homework, quizzes, exams, and term paper are required.

Activities that distract surrounding people are inconsiderate and disrespectful.

Activities such as texting, emailing, browsing or using cellular phones are prohibited.

We encourage student contribution to the overall progress of the group. We encourage interactive participation.

It is necessary that students have a professional and ethic behavior through the entire course.

Lectures are a group activity, and so it requires social consideration and respect amongst members of the group, teachers and professors.

Grade basis:

15 quizzes (150 points)

Case study (50 points)

1 class presentation (10 points)

1 final exam (30 points)

Total 240 points

Penalty enforcement (I reserve the right to adjust your grade for violation of the minimum expectations).

Make-up exams will only be given if arrangements are made with the instructor before missing the scheduled exam. A documented excuse will be required. Otherwise, missing exams will be counted as zeroes in the overall grade computation.

Grading Scale: The following scale is adhered to strictly.

90.0 - 100% = A

80.0 - 89.9% = B

70.0 - 79.9% = C

60.0 - 69.9% = D

<60.0% = F

Case Study

Each student will identify a case study exemplifying Natural Disasters. You will be responsible of understand and apply this scenario to other potential case studies. You also will propose alternative solutions to complement and improve the example you are presenting. You will develop an essay (800-1000 words) to document your case study.

Deadline is the last day of class.

Format for the case study:

I. Describe the problem or case question.

II. Describe the case

Introduction

Background

Affected area, species, communities, ecosystems

Implications

III. Conclusions

VIII. Course and University and Policies

Responsible Use of Technology — It is expected that all students will only use cellphones, PDAs, laptop computers, MP3 players and other technology outside of class time or when appropriate in class. Answering a cell phone, texting, listening to music or using a laptop computer for matters unrelated to the course may be grounds for dismissal from class and/or other penalties. Students are not allowed to use image, video, nor audio recording devices of any kind during class time without prior consent of the instructor.

University Specific Procedures:

ADA Statement-Students with Disabilities:

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-Commerce

Gee Library

Room 132

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

Fax (903) 468-8148

StudentDisabilityServices@tamuc.edu

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.

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment.

Campus Concealed Carry - 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

((<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>) and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.