ENVS103/104 Natural Disasters

I. General Information
Course syllabus fall 2016
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Prerequisites: none


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)
   Tornadoes, 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](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.