LAMAR UNIVERSITY, TSUS

Department: EARTH & SPACE SCIENCES

Course #: GEOL 1390-01

Title: INTRODUCTORY ENVIRONMENTAL & PHYSICAL GEOLOGY

Professor: Dr. Jim Westgate, GEOL 204, 880-7970, james.westgate@lamar.edu
          Office hrs: TBA and by appt.

Course Description:
This course is an introduction to the relationship between human activities, geologic resources and processes, and environmental quality. Topics include the relationship between human populations and geologic hazards, as well as how human activities may increase the chances of geologic hazards occurring. Emphasis will be from the geologic perspective, but will include all basic sciences. Field trips are an integral part of the course.

Texts: Montgomery, Carla, 2013, Environmental Geology, McGraw-Hill, 10th Ed. (or close to it).

Learning outcomes:
By the conclusion of the course you will 1. better understand the geologic systems which impact humans, 2. understand how human activities and political decisions impact our environment, and 3. know that environmental systems are in a dynamic state.

Core Curriculum Objectives:
Objectives met by this course deal with critical thinking, communication, empirical & quantitative skills, and teamwork. You will have gained experience and quantitative skills through communicating your team activities and be able to critically analyze the environmental geological threats in our area.

Classroom management policies:
Disability accommodation: It is the policy of Lamar University to accommodate students with disabilities, pursuant to federal and state law, and the University's commitment to equal educational opportunities. It is the student's responsibility to register with Lamar's Disability Support Services (880-8347) as quickly as possible. Any student who feels s/he may need an accommodation based on the impact of a disability should contact the professor directly during the first week of the course.

Academic Honesty: Lamar University students will not cheat, lie, plagiarize, or tolerate those who do. Academic dishonesty will not be tolerated on any course assignments. Should you be found responsible for a dishonest incident, you will be assigned a reasonable penalty, which may include failure of the course. If you do not consent to the findings and/or penalty, you must file an appeal with the department chairperson within five days, as specified in the student handbook (available at www.my.lamar.edu).

Drop: It is your responsibility to make sure that you are officially enrolled in this course. If, at any point, you decide to not participate in this course, it is your responsibility to officially drop or withdraw from enrollment. Failure to do so may result in a failing grade.

Attendance: Regular class attendance is essential for doing well on exams. Field trip attendance is required to earn group pts. A missed exam can be made-up by taking the optional comprehensive final exam.

Grading & Evaluation:
The lowest of the 3 exams (including a missed exam) [100 pts. each] will be dropped and replaced by the optional comprehensive final exam score, if you choose to take it. Exams will focus on information from
outside reading materials, videos, class discussions, field trips and the textbook. *Group field trip reports for Bolivar I. and the saltwater barrier are worth up to 50 pts. each. **Beach clean-off field trip participants earn 10 extra credit pts.

**GRADERS:** Are based on your semester total of possible points:

**TENTATIVE TOPIC SCHEDULE & READING ASSIGNMENTS**
WEEK 1 Intro. to the semester, The Blue Planet IMAX video
  2 Coastal hazards: hurricanes (Ch. 7)
  3 Coastal hazards: beach erosion; (Sat.) Coastal field trip to Bolivar Peninsula (9:30-4:00)
  Van-pool from Walden Rd. Holidome-50 pts*
  4 Floods & dams (Ch. 6); video “Flood;” (Sat.) TEXAS Beach trash-off- McFaddin NWR, (9:00-11:00) 10 extra credit pts.**
  5 **Exam 1** (10% from Archdruid Section 2- An island); “Texas- the State of water” video
  Last guaranteed Q/W date TBA
  6 Water resources & pollution (Ch. 11 & 16)
  7 Groundwater (Ch. 11)
  8 Gulf Dead zone, Neches R. saltwater barrier or Beaumont Wastewater Treatment Plant trip - 50 pts.*
  9 **Exam 2** (10% from Archdruid Section 3- A river); “An inconvenient truth” video pt. 1, Last drop TBA
  10 Global climate change (Ch. 10 & An inconvenient truth)
  11 Deepwell injection & hydrofracturing, Video- LNG
  12 Air pollution (coal, metal ore smelters, etc.) (Ch. 18) Video- Coal Country
  13 Volcanoes (Ch. 2)
  14 Earthquakes & tsunamis (Ch. 3)
  15 **Exam 3** (10% from Archdruid Section 1- A mountain), review
  16 Optional Comprehensive Final