**ESST 2300**

**INTRODUCTION TO ENVIRONMENTAL AND SUSTAINABILITY TOPICS**

Fall 2016

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**Office Hours:** MWF 2:00-4:00 pm, and by appointment.

**Section Information:** HIST 4388/001, GEOG 4350/002, ESST 2300/001

**Time and Place of Class Meetings:** MWF 11:00-11:50, ARCH 204

**DESCRIPTION OF COURSE CONTENT:**

This course will introduce students to basic concepts of sustainability by having them examine four disasters that occurred about 100 years ago: the Galveston Hurricane of 1900, the San Francisco Earthquake of 1906, the Paris Flood of 1910, and the world-wide Influenza Epidemic of 1918. Students will be asked to consider the causes, responses, and consequences of these catastrophes (environmental, social, political, economic, and scientific understanding), and to compare them to present-day disasters by seeking to understand past and present in terms of policy, politics, and science of sustainability. Along the way, the class will interrogate the meaning of the word “sustainable,” (and related concepts) by considering how it has been used, by whom, with what reasons, to sustain what, with what effect.

**STUDENT LEARNING OUTCOMES:**

By the end of the semester students will be able to explain the concept of sustainability and related concepts, and to apply those concepts critically and thoughtfully to issues and examples drawn from the relationship between people and the natural environment in the past and present, and to speculate thoughtfully and in an informed way on the future.

**REQUIRED TEXTBOOKS AND OTHER COURSE MATERIALS:**

There will be four primary textbooks. The book by Homer-Dixon will provided concepts for understanding disasters and ways of responding to them in a world that is increasing complex and increasingly prone to disasters. We will read this book over the semester. The other texts will discuss three historical disasters that the class will compare with recent events. Each of these texts will be the basis for a course section.

Thomas Homer-Dixon, *The Upside of Down: Catastrophe, Creativity, and the Renewal of Civilization*

Philip L. Fradkin, *The Great Earthquake and Firestorms of 1906*

Erik Larson, *Isaac’s Storm: A Man, A Time, and the Deadliest Hurricane in History*

Jeffrey H. Jackson, *Paris Under Water*

In addition, there will be reading assignments based on handouts made available to students on Blackboard. Of particular importance will be a selection of readings on the global influenza epidemic of 1918

**DESCRIPTIONS OF MAJOR ASSIGNMENTS AND EXAMINATIONS:**

**Exams:** There will be three midterm exams and a final exam covering class readings, discussions and student research. These exams will be take-home exams. Each exam will require students to be able to compare and contrast a past natural disaster with a more recent event, and to explain their points of comparison by using concepts from sustainability studies. The course is divided into four sections with a take-home exam due at the end of each section. Each exam will focus on material from its specific section and will therefore not be explicitly cumulative, however, students will be expected to draw on concepts and knowledge from previous sections to make sense of the issues raised in succeeding sections.

**Missed assignments and Exams:** Students with a valid, documented reason for missing a writing assignment or exam will be permitted an extension or make-up exam as arranged with the instructor.

**ATTENDANCE:**

At The University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students’ academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, I will not assign a grade specifically for attendance, however, I will take note of attendance for diagnostic reasons, to monitor student engagement, progress, reading comprehension, and oral communication skills.

**GRADING**:

Three Midterm Tests (20 points each) 60 points

Final Exam (20 points) 20 points

Discussion Participation (20 points) 20

TOTAL 100 points

A=90-100 B=80-89 C=70-79 D=60=69 F=<60

**Assessments:**

Each test and exam will ask students: **to summarize** an assigned text; **to describe** a past disaster as a historical event; **to research** a recent natural disaster event at a basic or preliminary level; **to analyze** past and present disaster events using key concepts related to natural disasters and sustainability; **to synthesize** specific information and formulate generalizations that offer new knowledge about past and present disaster events; **to communicate** summaries, descriptions, analyses, and syntheses in writing in clear, logically organized, grammatical essay, and orally through participation in class discussions.

**STUDENT RESPONSIBILITIES:**

Students are expected to keep track of their performance throughout the semester and seek guidance from available sources (including the instructor) if their performance drops below satisfactory levels; see “Student Support Services,” below.

As a general rule, for every credit hour earned, a student should spend 3 hours per week working outside of class. Hence, a 3-credit course might have a minimum expectation of 9 hours per week of their own time in course-related activities, including reading required materials, completing assignments, preparing for exams, etc.

**ATTENDANCE:** At The University of Texas at Arlington, taking attendance is not required but attendance is a critical indicator in student success. Each faculty member is free to develop his or her own methods of evaluating students’ academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, I will assign no grade for attendance. However, attendance will be noted for diagnostic purposes; students who attend class reliably and who regularly participate in class discussions always do better on exams and assignments. Furthermore, while UT Arlington does not require instructors to take attendance in their courses, the U.S. Department of Education requires that the University have a mechanism in place to mark when Federal Student Aid recipients “begin attendance in a course.” UT Arlington instructors will report when students begin attendance in a course as part of the final grading process. Specifically, when assigning a student a grade of F, faculty report the last date a student attended their class based on evidence such as a test, participation in a class project or presentation, or an engagement online via Blackboard. This date is reported to the Department of Education for federal financial aid recipients.

**Drop Policy:** Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance**. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://wweb.uta.edu/aao/fao/>).

**Disability Accommodations:** UTArlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including *The Americans with Disabilities Act (ADA), The Americans with Disabilities Amendments Act (ADAAA),* and *Section 504 of the Rehabilitation Act.* All instructors at UT Arlington are required by law to provide “reasonable accommodations” to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of **a letter certified** by the Office for Students with Disabilities (OSD).Only those students who have officially documented a need for an accommodation will have their request honored. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:

**The Office for Students with Disabilities, (OSD)** [www.uta.edu/disability](http://www.uta.edu/disability) or calling 817-272-3364. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at [www.uta.edu/disability](http://www.uta.edu/disability).

Counseling and Psychological Services, (CAPS) [www.uta.edu/caps/](http://www.uta.edu/caps/) or calling 817-272-3671 is also available to all students to help increase their understanding of personal issues, address mental and behavioral health problems and make positive changes in their lives.

**Non-Discrimination Policy:** *The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit*[*uta.edu/eos*](http://www.uta.edu/hr/eos/index.php)*.*

**Title IX Policy:** The University of Texas at Arlington (“University”) is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE Act). Sexual misconduct is a form of sex discrimination and will not be tolerated.*For information regarding Title IX, visit* [www.uta.edu/titleIX](http://www.uta.edu/titleIX) or contact Ms. Jean Hood, Vice President and Title IX Coordinator at (817) 272-7091 or [jmhood@uta.edu](file:///%5C%5CJupiter.uta.edu%5Ccm%5Ccmorris%5C4388%20Unsustainable%20Destruction%2C%20Extinction%2C%20and%20Catastrophic%20Failure%20in%20History%5Cjmhood%40uta.edu).

**Academic Integrity:** Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

*I pledge, on my honor, to uphold UT Arlington’s tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*

*I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

UT Arlington faculty members may employ the Honor Code in their courses by having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents’ Rule* 50101, §2.2, suspected violations of university’s standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student’s suspension or expulsion from the University. Additional information is available at <https://www.uta.edu/conduct/>.

**Electronic Communication:** UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

**Campus Carry:** Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit <http://www.uta.edu/news/info/campus-carry/>

**Student Feedback Survey:** At the end of each term, students enrolled in face-to-face and online classes categorized as “lecture,” “seminar,” or “laboratory” are directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student’s feedback via the SFS database is aggregated with that of other students enrolled in the course. Students’ anonymity will be protected to the extent that the law allows. UT Arlington’s effort to solicit, gather, tabulate, and publish student feedback is required by state law and aggregate results are posted online. Data from SFS is also used for faculty and program evaluations. For more information, visit <http://www.uta.edu/sfs>.

**Final Review Week:** For semester-long courses**,** a period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

**Emergency Exit Procedures:** Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

**Student Support Services**:UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include [tutoring](http://www.uta.edu/universitycollege/current/academic-support/learning-center/tutoring/index.php), [major-based learning centers](http://www.uta.edu/universitycollege/resources/college-based-clinics-labs.php), developmental education, [advising and mentoring](http://www.uta.edu/universitycollege/resources/advising.php), personal counseling, and [federally funded programs](http://www.uta.edu/universitycollege/current/academic-support/mcnair/index.php). For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at <http://www.uta.edu/universitycollege/resources/index.php>.

**The IDEAS Center (**2nd Floor of Central Library) offers **free** tutoring to all students with a focus on transfer students, sophomores, veterans and others undergoing a transition to UT Arlington. To schedule an appointment with a peer tutor or mentor email IDEAS@uta.edu or call (817) 272-6593.

**The English Writing Center (411LIBR)**: The Writing Center Offers free tutoring in 20-, 40-, or 60-minute face-to-face and online sessions to all UTA students on any phase of their UTA coursework. Our hours are 9 am to 8 pm Mon.-Thurs., 9 am-3 pm Fri. and Noon-6 pm Sat. and Sun. Register and make appointments online at http://uta.mywconline.com. Classroom Visits, workshops, and specialized services for graduate students are also available. Please see [www.uta.edu/owl](http://www.uta.edu/owl) for detailed information on all our programs and services.

The Library’s 2nd floor Academic Plaza offers students a central hub of support services, including IDEAS Center, University Advising Services, Transfer UTA and various college/school advising hours. Services are available during the library’s hours of operation. <http://library.uta.edu/academic-plaza>

**COURSE SCHEDULE**

*NOTE: As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course.*

WEEK ONE

Aug. 26 Introduction: What Do We Mean by Nature? The Environment? Sustainability?

**SECTION ONE: Earthquake: San Francisco 1906/Nepal, 2015**

WEEK TWO

Aug. 29 Sustainability and the laws of thermodynamics

Aug. 31 Closed-loops, Steady States, Footprints

Sept. 2 Energy Return on Investment (EROI)

 READING ASSIGNMENT: Homer-Dixon, Prologue, plus chapters 1 and 2.

WEEK THREE

Sept. 5 LABOR DAY HOLIDAY: No Class

Sept. 7 Before

Sept. 9 During

READING ASSIGNMENT: Fradkin, *Great Earthquake*, section one, “Before,” and section two, “During”

WEEK FOUR

Sept. 12 After

Sept. 14 Learning from the San Francisco Earthquake of 1906

Sept. 16 Nepal, 2015 (and Haiti, 2010, and Loma Prieta, 1989)

 READING ASSIGNMENT: Fradkin, *Great Earthquake*, section three, “After”

WEEK FIVE

Sept. 19 discussion continued, Nepal

Sept. 21 discussion continued, Haiti

Sept. 23 discussion continued; Loma Prieta

**First take-home essay due on Blackboard**

**SECTION TWO: Flood: Paris 1910/Paris 2016/Louisiana 2016**

WEEK SIX

Sept. 26 Complexity and the Butterfly Effect

Sept. 28 Cities, Megacities, and Global Connectivity

Sept. 30 Synergy and Negative Synergy

 READING ASSIGNMENT: Homer-Dixon, chapters 3-5

WEEK SEVEN

Oct. 3 What Happened? (Prologue, intro, chapters 1-3)

Oct. 5 Response? (chapters 4-5)

Oct. 7 Water as Invading Enemy: Metaphors of Nature and Natural Disaster

READING ASSIGNMENT: Jackson, *Paris Under Water*, prologue, introduction, chapters 1-5

WEEK EIGHT

Oct. 10 Aftermath (chapters 6-7)

Oct. 12 Lessons Learned? (chapters 8-9)

Oct. 14 Paris 2016

 READING ASSIGNMENT: Jackson, *Paris Under Water*, chapters 6-9, epilogue

WEEK NINE

Oct. 17 Paris 2016, continued

Oct. 19 Louisiana 2016

Oct. 21 Louisiana 2016, continued

**Second take-home essay due on Blackboard**

**SECTION THREE: Hurricane: Galveston 1900/New Orleans 2005/New Jersey 2012**

WEEK TEN

Oct. 24 Anthropocene

Oct. 26 Climate Change

Oct. 28 Capitalism

 READING ASSIGNMENT: Homer-Dixon, chapters 6-8

WEEK ELEVEN

Oct. 31 The How-Tos of Hurricanes: Complex Systems (chapter 1)

Nov. 2 Hurricanes and Galveston in 1900 (chapters 2-3)

Nov. 4 NO CLASS; Students will research Hurricanes Katrina and Sandy

 READING ASSIGNMENT: Larson, *Isaac’s Storm*, chapters 1-3

WEEK TWELVE

Nov. 7 Isaac Cline (chapter 4)

Nov. 9 tracking and forecasting (chapter 5)

Nov. 11 Hurricanes Katrina and Sandy (Chapter 6)

 READING ASSIGNMENT: Larson, *Isaac’s Storm*, chapters 4-6.

WEEK THIRTEEN

Nov. 14 Hurricanes Katrina and Sandy, continued

Nov. 16 Hurricanes Katrina and Sandy, continued

Nov. 18 NO CLASS: Students will turn in Blackboard assignment

**Third take-home essay due on Blackboard**

**SECTION FOUR: Epidemic: Influenza 1918/Ebola 2014/Zika 2016**

WEEK FOURTEEN

Nov. 21 Weak Sustainability, Strong Sustainability

Nov. 23 Catagenesis

Nov. 25 THANKSGIVING HOLIDAY: No Class

 READING ASSIGNMENT: Homer-Dixon, chapters 9-12

WEEK FIFTEEN

Nov. 28 Influenza 1918

Nov. 30 Influenza 1918, continued

Dec. 2 Influenza 1918, continued

 READING ASSIGNMENT: Handouts on Blackboard

WEEK SIXTEEN

Dec. 5 Ebola, 2014; Zika 2016

Dec. 7 Ebola, 2014, Zika 2016

**Wednesday, December 14, 11:00 a.m.: Final take-home essay due on Blackboard**