

GEO 3930/6938: EXTREME DROUGHTS/WATER WARS

3 Credit Hour

Fall 2018

INSTRUCTOR: Dr. Joann Mossa, Professor

CONTACT INFORMATION: mossa@ufl.edu, (352) 294-7510

COURSE HOURS: T: 9:35-10:25; R: 9:35-11:30 (USUALLY ENDS EARLIER)

OFFICE HOURS: T-R: 11:30-12:30

COURSE WEBSITE: <http://elearning.ufl.edu>

COURSE COMMUNICATIONS: I prefer traditional e-mail to Canvas messaging. If you have a general question of likely interest to other students, feel free to post on the class Course Questions discussion board or ask in class.

REQUIRED OR RECOMMENDED TEXTBOOKS: *No textbooks required. Readings embedded in Canvas, e-learning.*

MATERIALS AND SUPPLIES FEES: *None*

PREREQUISITE KNOWLEDGE AND SKILLS: None, but be willing to think, analyze, discuss, write and present.

COURSE DESCRIPTION: *Examines water resources and the physical, social and economic consequences when the quantity or quality of water is limited and/or decreasing through case studies in different environments (rivers, lakes, groundwater, etc.) and different countries. The goals for this course are as follows:*

COURSE GOALS AND/OR OBJECTIVES:

- Describe the two-way relationship between water resources and human society
- Interpret graphical representations of scientific data
- Know data types and synthesize data and information from multiple reliable sources to investigate quantify water problems using spreadsheets
- Communicate scientific information effectively (in terms that can be understood by the general public) using graphs, maps, and comparative synthesis
- Synthesize scientific and social information about drought and it's relation to other fields

HOW THIS COURSE RELATES TO THE STUDENT LEARNING OUTCOMES IN THE

GEOGRAPHY MAJOR: *Extreme Droughts is a course that provides mostly content learning in environmental geography for our majors Student Learning Outcomes. We capture Content learning through varied assignments and Critical Thinking and Communication Skills through assignments and group projects.*

INSTRUCTIONAL METHODS: *In this course, much of the learning is done through assignments and discussions that involve paying attention and critical thinking.*

COURSE POLICIES:

ATTENDANCE POLICY: It is expected that you will attend and participate in the course throughout the duration of the term. In addition to assigned readings and lecture videos, students are required to complete assignments and participate in discussion forums of various forms. All assignments will be listed in the course schedule, and specific due dates can be found in the calendar. Requirements for class attendance and assignments in this course are consistent with university policies that can be found at: [UF Undergraduate Catalog 2018-19 Attendance Policies](#)

LATE WORK AND MAKE-UP POLICY: Clemency is granted for late work with valid excuse. Any major assignment turned in late without a valid excuse will be penalized. Please communicate with the instructor regarding any problems *assignments submissions or discussions. Please document your problems as best possible (doctor's or ER slip, obituary, etc.)*

COURSE TECHNOLOGY: Access to and on-going use of a computer is required for all students. Competency in the basic use of a computer is required. Course work will require use of a computer and a broadband connection to the Internet. For additional information on UF College of Liberal Arts and Sciences policy regarding computer requirements you can visit: <http://it.clas.ufl.edu/policies/student-computer-requirement/>

For technology related issues the UF computing help desk can be reached at:

- <http://helpdesk.ufl.edu>
- (352) 392-HELP - select option 2

DISCUSSION/PEER REVIEW POLICY: Students should adhere to professional etiquette/netiquette standards (see UF Policies below) in all posts and to engage in CONSTRUCTIVE dialogue. Posts should be thoughtful, detailed responses (i.e., "yes," "no," "I agree," or "I disagree" answer is not sufficient). In most cases, discussions require some research prior to their initial post. Follow-up posts are typically required. For both discussion forums **timeliness is critical** and due dates should be strongly adhered to. Please check the course Calendar for the specific due dates.

ASSIGNMENT POLICY: Each module has assignments associated with it (combined 50% of overall grade). Due dates are specified on the course calendar, and timely submission is expected. Assignments must be submitted to Canvas via the assignment page and any instructions detailed therein. Assignments will be graded before the end of the subsequent course module.

UF POLICIES:

UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES: "Students with disabilities requesting accommodations should first register with the [Disability Resource Center](#) (352-392-8565) by providing appropriate documentation. Once registered, students will receive an accommodation letter that must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester."

UNIVERSITY POLICY ON ACADEMIC CONDUCT: UF students are bound by The Honor Pledge as follows: "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." [The Honor Code](#) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor of this class.

CLASS DEMEANOR OR NETIQUETTE: Class members must follow rules of common courtesy in all discussions/ electronic communication. Consequences for violating UF netiquette guidelines include zeroes or reporting. See info at <http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf>.

U MATTER WE CARE: Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

GETTING HELP:

For issues with technical difficulties for Canvas, please contact the UF Help Desk at:

- <http://helpdesk.ufl.edu>; (352) 392-HELP (4357); Walk-in: HUB 132

Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from the Help Desk when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you need to resubmit.

ASSIGNMENT TYPES:

Discussion Postings

- Detailed commentary on a thought-provoking comic/cartoon that can be interpreted different ways
- Respectful responses to other people's comments, where you disagree or expand on their comments

Video Worksheets

- Fill out pages given in class with information from the movie
- Some videos will be broken up over multiples classes, so bring in last sheet each class
- Problematic to miss classes

Article Reviews

Your main goal is to review the topic, summarize everything and present a clear understanding of the topic. It involves:

- Cite journal or report with author, date, title, journal, volume, or website according to a standard convention (APA)
- For each article, compose a very basic two sentence summary to get the major thrust of the paper: "The author's purpose in writing the article was..." "The author concluded...."
- List what struck you as being the four or five most important points in the article using your own words. Go beyond the author's conclusions or the abstract. News articles should have three points.
- Find one thought-provoking quote from the article that will generate discussion; followed by a brief response, statement, or question of your own about the quote to provoke discussion.
- Select an important figure or table from the article. Briefly state, and be prepared to discuss in class, why you think the figure or table is especially meaningful or interesting. If your news article does not have one, write N/A
- What is the theoretical and applied significance of this article? What (if anything) was interesting or innovative about the paper? News article might only have information on applied significance.
- Come up with one thought-provoking question related to each article for your classmates. Be prepared to express your own thoughts about this question.
- Graduate Students will review five journal articles, overview studies, historical & case studies (3-1-1 or 2-1-2) spread. Undergraduates will review a minimum of two (1-0-1) and up to three news articles (1-1-1, 2-0-1 or 1-0-2). Undergraduates may opt to review more journal articles if they prefer (recommended from overview or case studies) and fewer news articles.
- The current repository has some weak areas or may not align best with student interests. Am open to students recommending additions to repository
- Would prefer that 2 students not review the same article, so students will declare selection in Canvas posting when an article is assigned

Mini Assignments

- Adding to the repository of articles and figures, explain why
- Working with USGS streamflow data
- Google Earth Tours and responses
- Peer review of draft final project

Final Project

- Part 1: Proposal, your idea and background resources explained
- Part 2: Draft Presentation, can be Poster or power point, will be peer-reviewed in order to improve final product
- Part 3: Final presentation, given in class, standing beside a poster or giving a 10-minute Power Point or Prezi presentation

GRADING BREAKDOWN AND POLICIES:

Assignment Type	Percentage	Examples
Class Discussion and Discussion postings	10%	Class discussion. Reflect on a comic and share your view, comment on others' viewpoints
Video Worksheets	20%	Fill out a worksheet during videos 1-3 pts each
Article reviews	20%	Undergrads: news articles, grads: journals, undergrads: minimum 2 journal, 3 can be newspaper; 5 total, 4 pts. each
Mini-Assignments	20%	Examples: peer-review, working with water data, supplementing the repository, etc.
Final Project	30%	3 parts: Page-long proposal & page of preliminary sources, 5%, Draft presentation, 10%; Final class presentation, 15%

INFORMATION ON CURRENT UF GRADING POLICIES FOR ASSIGNING GRADE POINTS:

- This course follows policies of the UF Undergraduate Catalog 2018-19 [Grades and Grading Policies page](#).

GRADING SCALE: Grading Scale (& GPA equivalent):

Grade	%	Grade Points		Grade	%	Grade Points
A	≥ 93	4.0		C	70 – 76.9	2.0
A-	90 – 92.9	3.67		C-	68 – 69.9	1.67
B+	87 – 89.9	3.33		D+	66 – 67.9	1.33
B	83 – 86.9	3.0		D	60 – 65.9	1.0
B-	80 – 82.9	2.67		D-	57 – 59.9	0.67
C+	77– 79.9	2.33		E	< 56	0

Note: A grade of C- is not a qualifying grade for major, minor, Gen Ed, or College Basic distribution credit. For further information on UF's Grading Policy, see:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx#hgrades>

MODULE # 1: OVERVIEW: WATER SCARCITY AND ITS DRIVERS

OBJECTIVES:

- Analyze relations between land use, population, and access to fresh water
- Distinguish between direct and indirect water use
- Understand physical and human drivers influencing water scarcity
- Evaluate possible solutions to anticipated water shortages

MODULE # 2: HISTORICAL STUDIES AND ANALYZING DATA

OBJECTIVES:

- Know concepts such as the Palmer Drought Index and minimum flow levels
- Compute minimum environmental flows from data sets
- Know some important droughts in history

MODULE # 3: CASE STUDIES: IMPACTS AND MANAGEMENT OF WATER SCARCITY TO HUMANS AND BIOLOGICAL COMMUNITIES

OBJECTIVES:

- Critically evaluate case studies of drought impacts to humans and biota
- Evaluate preparedness, response, recovery and mitigation
- Reducing risk to humans and biological communities through better management and policy

MODULE # 4: SYNTHESIZING ANALYSIS OF DROUGHTS: STUDENT PROJECTS

- **OBJECTIVES:**
- Link varied aspects of droughts through case studies and projects
- Synthesize studies relating droughts to another topic (water scarcity, adaptation, famines, wildfires, dust storms, teleconnections, desertification, agricultural impacts, biological impacts, navigation problems, dams, health or disease or specific aspect, local or regional conflict, water use policy, industry, poverty/economic inequality, irrigation, fisheries, religion, conservation, increased mortality, children, the elderly, population migration, planning, food scarcity, disaster relief, climate change, communication, tourism, strategic management, specific historic (SW Native American, Mayan, Chinese, South Asian, etc.)