GEOG 6240-223: Seminar in Resource and Environment Geography: Climate Change and Society

Course Description:

This course will provide an overview of the mutual interactions of climate and human activity and will also examine examples of significant climatic impacts and adaptation approaches past, present, and future. We will investigate the nature of the Earth's climate and present a synthesis of contemporary scientific ideas about the climate of the earth and its environmental and societal impacts. Topics to be covered include examples of historic impacts of climate and the potential economic and societal impacts of future climatic change as well as strategies for climate adaptation and mitigation. Ultimately, the overall focus will be on the impacts of climate change and related policy and adaptation strategies.

Class Dates, Format, Location and Hours:

Dates:	September 21-26, 2021
Format:	On-site
Location:	Rue de L'Escaut, Building 212, Room 120, SHAPE, Mons, Belgium
Hours:	Tuesday - Friday 6:00-9:30 pm; Saturday and Sunday 8:30 a.m.-4:30 p.m.

Last day to enroll or drop without penalty: August 23, 2021

Site Director:

Name:	Ms. Kristin Bizzell
Location:	Rue de L'Escaut, Building 212, Room 109, SHAPE, Mons, Belgium
Office hours:	Monday- Thursday- 0900-1530
Email:	apshape@ou.edu
Phone:	DSN: 597-7429 or CIV: 32-65-75-7429

Professor Contact Information:

Course Professor:	Scott Greene
Mailing Address:	510C Sarkeys Energy Center, OU Norman, OK 73019
Telephone Number:	(405) 325-4319
E-mail Address:	jgreene@ou.edu
Professor availability:	The professor will be available via email to students before and after the class sessions. On-site office hours are half an hour before and after each class session, by appointment.

Instructional Materials:

Due to the dynamic nature of the materials for the class, all course materials will be posted on the OU Canvas system two months before the start of the class. These will consist of refereed scientific

papers on the topics we will be discussing (approximately one-two 20-30 page papers for each of the class sessions). The reading assignments for each session will be clearly labeled and available as PDF files on canvas. The initial required book report will come from a selection of books posted on Canvas as well. To access Canvas at http://canvas.ou.edu; enter your OU NetID and password, and select course to access material. If you require assistance with Canvas, please click on the Help icon. You can search the Canvas guides, chat with Canvas support, or contact OU IT.

Course Objectives:

The overall objectives are to understand the mutual interactions between climate and human society and to investigate potential adaptation and mitigation strategies.

Student Learning outcomes

- Identify the major drivers of climate change at different time scales
- Analyze future projections of climate change
- Interpret the impacts of historical climate change and its impacts on society
- Explain the historical and present adaptive and maladaptive responses that society has exhibited to changes in climate
- Communicate effective mitigation and adaption strategies to reduce and respond to climate change

Course Outline

The course will track climate changes and economic and societal impacts and responses past, present, and future. Topics to be discussed include:

1. Introduction and Overview
2. Climates of the Distant Past
3. Examples of Climate and History – The rise and fall of the Norse Greenland colony
4. Examples of Climate and History – Drought and the Mayans and Anasazi
5. Examples of Climate and History – Medieval Europe (aka climate and witch burning)
6. Examples of Climate and History – The Dust bowl and its implications
7. Ozone in the Atmosphere and its impacts
8. Acid Rain
9. Climate, Health, and Comfort
10. Science of Global Warming
11. Impacts of Global Warming
12. Future Mitigation and Adaptation Strategies

Readings for all these topics will be available on Canvas.ou.edu two months before the start of the class.

Format:
The course will consist of lectures, discussions, writing assignments, group activities and presentations.

Description of Assignments
As part of the course activities, there will be two team assignments. One will center around historical climate adaptation and other will examine regional and local current and future climate impacts and policy efforts. All of the work associated with the team activities will be performed during class hours. Students will be asked to present their team finding in short presentations during the weekend sessions. In addition, there will be writing assignments and discussion for each day based upon the readings and upon the sessions lecture material.

Grading and Due Dates:

Grades will be based upon the total points accumulated by the end of the course.

Students will be expected to complete pre- and post-class and in-class exercises and a term paper worth a

total of 70% of the final grade. The specific percentage breakdown of these items is as follows: the pre-class book report will be worth 20% of the grade, the post-class paper will be 30% of the grade, and the in-class exercises will be worth the remaining 20%. The exercises and term paper are intended to foster understanding of particular problems, solutions, and management strategies, and to broaden personal responses and critical thinking to include multicultural perspectives and approaches. There will be several short writing assignments and in-class participatory activities as well. A final to be administered on the last day of class will constitute the remaining 30% of the grade.

Pre-Seminar Assignment:

The goal of this assignment is to examine how historical examples of climatic impacts are portrayed in literature. Ideally, this would involve reading a fiction book where climate or climatic variability plays an important role. However, there are many interesting non-fiction books on this topic as well, and you may read one of those if you prefer. The report will consist of an essay (approximately 1500 words) reviewing the book while focusing specifically on the role that climate played in the story that you will have read. A list of suggested books is found on canvas.ou.edu. Due Date: Beginning of first day of class.

Post-Seminar Assignment:

As part of the course, each student is also expected to prepare a research paper on a topic relevant to the items discussed in class. Each term paper (of at least 15 pages) will focus on a particular economic impact, geographic region and/or environmental/climatic problem. Papers must be submitted electronically via the course website at canvas.ou.edu. Specific details will be discussed in class and posted on canvas. Due Date: October 10, 2021.

Final Exam:

There will be a final at the end of the course that will be worth 30% of the grade.

Grading:

This is a letter-graded course: A, B, C, D, or F.

Assignment	Percent of Course Grade
Pre-Seminar Assignment	20%
In-Class Exercises	15%
Final Exam	30%
Post-Seminar Assignment	35%

Notice: Failure to meet assignment due dates could result in a grade of I (Incomplete) and may adversely impact Tuition Assistance and/or Financial Aid.

POLICIES AND NOTICES

Attendance/Grade Policy

Attendance and participation in interaction, individual assignments, group exercises, simulations, role playing, etc. are valuable aspects of any course because much of the learning comes from discussions in class with other students. It is expected that you attend all classes and be on time except for excused emergencies.

Excused absences are given for professor mandated activities or legally required activities such as emergencies or military assignments. It is the policy of the University to excuse absences of students that result from religious observances and to provide without penalty for the rescheduling of examinations and additional required class work that may fall on religious holidays. Unavoidable personal emergencies, including (but not limited to) serious illness; delays in getting to class because of accidents, etc.; deaths and funerals, and hazardous road conditions will be excused.

If you are obtaining financial assistance (TA, STAP, FA, VA, Scholarship, etc.) to pay all or part of your tuition cost, you must follow your funding agency/institution's policy regarding "I" (Incomplete) grades unless the timeline is longer than what the University policy allows then you must adhere to the University policy. Students who receive Financial Aid must resolve/complete any "I" (Incomplete) grades by the end of the term or he/she may be placed on "financial aid probation." If the "I" grade is not resolved/completed by the end of the following term, the student's Financial Aid may be suspended make the student ineligible for further Financial Aid.

Students are responsible for meeting the guidelines of Tuition Assistance and Veterans Assistance. See the education counselor at your local education center for a complete description of your TA or VA requirements.

OU faculty will submit grades online through ONE not later than 30 days after the course end date. Course end dates are approximately one calendar month after the final seminar date on this syllabus and are provided on the official scheduling website for reference.

Academic Integrity and Student Conduct

Academic integrity means honesty and responsibility in scholarship. Academic assignments exist to help students learn; grades exist to show how fully this goal is attained. Therefore, all work and all grades should result from the student's own understanding and effort.

Academic misconduct is any act which improperly affects the evaluation of a student's academic performance or achievement. Misconduct occurs when the student either knows or reasonably should know that the act constitutes misconduct. Academic misconduct includes: cheating and using unauthorized materials on examinations and other assignments; improper collaboration, submitting the same assignment for different classes (self-plagiarism); fabrication, forgery, alteration of documents, lying, etc.…in order to obtain an academic advantage; assisting others in academic misconduct; attempting to commit academic misconduct; destruction of property, hacking, etc.…; intimidation and interference with integrity process; and plagiarism. All students should review the Student's Guide to Academic Integrity at http://integrity.ou.edu/students_guide.html

Students and faculty each have responsibility for maintaining an appropriate learning environment. All students should review policies regarding student conduct at http://studentconduct.ou.edu/

Accommodation Statement

The University of Oklahoma is committed to making its activities as accessible as possible. For accommodations on the basis of disability, please contact your local OU Site Director.

Adjustment for Pregnancy/Childbirth-Related Issues

Should you need modifications or adjustments to your course requirements because of documented pregnancy-related or childbirth-related issues, please contact the Professor as soon as possible to discuss. Generally, modifications will be made where medically necessary and similar in scope to

accommodations based on temporary disability. Please see http://www.ou.edu/content/eoo/faqs/pregnancy-faqs.html.

Title IX Resources

For any concerns regarding gender-based discrimination, sexual harassment, sexual misconduct, stalking, or intimate partner violence, the University offers a variety of resources, including advocates on-call 24/7, counseling services, mutual no-contact orders, scheduling adjustments, and disciplinary sanctions against the perpetrator. Please contact the Sexual Misconduct Office at smo@ou.edu or (405) 325-2215 (8-5), or the Sexual Assault Response Team at (405) 615 -0013 (24/7) to report an incident. To learn more about Title IX, please visit the Institutional Equity Office's website at http://www.ou.edu/content/eoo.html

Course Policies

Extended Campus (also and formerly known as Advanced Programs) policy is to order books in paperback if available. Courses, dates, and professors are subject to change. Please check with your OU Site Director. Students should retain a copy of any assignments that are e/mailed to the professor for the course. Neither duplicating services nor office supplies are provided.

For more information about OU Extended Campus, visit our website at: http://www.goou.ou.edu/

INSTRUCTOR VITA

John Scott Greene, Ph.D.

Education

- 1994 Ph.D., Climatology, University of Delaware
- 1990 M.A., Geography, University of Hawaii, Manoa
- 1987 B.A., Majors in Applied Mathematics & Geography, University of California, Berkeley

Current Positions

- Advanced Programs Professor since 2000
- Professor of Geography and Environmental Sustainability, University of Oklahoma, Norman, OK
- Chair, Geography and Environmental Sustainability,

Frequently Taught Extended Campus (Advanced Programs) Courses

- GEOG 6413 Seminar on the Socio-Economic Impacts of Climate Change
- GEOG 5113 Quantitative Methods in Geographic Research
- GEOG 6240 Seminar in Resource Geography

Major Areas of Teaching and Research Interest

- Applied Climatology
- Environmental Impacts of Climate and Climate Change
- Geography of Renewable Energy
- Statistical Techniques

Representative Publications

- Castleberry, B., and J. S. Greene, 2018: Wind Power and Real Estate Prices in Oklahoma, *International Journal of Housing Markets and Analysis*, Vol. (5):808- 827
- Castleberry, B., and J. S. Greene, 2017: Impacts of wind power development on Oklahoma's public schools *J. Energ Sustain Soc*, 7: 34.
- Greene, *J.S., and M. Geisken, 2013:* Socioeconomic Impacts of A Wind Farm Development: A Case Study of Weatherford, Oklahoma, *Energy, Sustainability, and Society, 3(2):1-9.*
- Greene, J.S., Kalkstein, L.S., K. R. Kim, J-Y. Choi, and D. G. Lee, 2016: The Application of the European Heat Wave of 2003 to Korean Cities to Analyze Impacts on Heat-Related Mortality, *International Journal of Biometeorology, 60(2):231-243.*
- Greene, J.S., Kalkstein, LS., Mills, D., and Samenow, J., 2011: An examination of climate change on extreme heat events and climate/mortality relationships in large US cities, *Journal of Weather, Climate, and Society, 3*, 281-292.
- Greene, J.S., M.L. Morrissey, and S. Johnson, 2010: Wind Climatology, Climate Change, and Wind energy, *Geography Compass*, 4/11, 1592-1605.

Representative Honors and Awards Received

- Tromp Scientific Award (This award is given by the International Society of Biometeorology once every three years for outstanding research in biometeorology)
- University of Oklahoma Excellence in Research Award
- University of Oklahoma Teaching Scholars Initiative Award for Outstanding teaching
- University of Oklahoma Regents Award for Superior Teaching
- US Department of Energy National award for Outstanding Wind Energy Research and Outreach

Major Professional Affiliations

- American Geophysical Union
- Association of American Geographers
- International Society of Biometeorology