ANTHROPOCENE

GRG 356T, Fall 2015
TTh 11 AM, CLA 1.102

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Office hours: Tuesday, 2-4 PM; CLA 3.400 #22

Course description:
This course is designed to evaluate the cumulative effects of humans on Earth. It will use readings, lectures, and class exercises to examine the kinds of evidence used 1) to reconstruct past environments, 2) to decipher the ecological and biogeographical consequences of land use, 3) to measure altered surface processes, 4) to distinguish the anthropogenic contribution to climate change, and 5) to predict likely future scenarios. The course will explore the interaction of human history with altered biophysical patterns and processes. Finally, the class will collectively and critically assess the recognition of the Anthropocene as a potential new epoch in Earth history, including the implications of that recognition for environmental stewardship.

Students are expected to read the assigned readings and participate actively in class. The exams will test knowledge, vocabulary, and ability to explain and apply information. The class projects and writing assignment will work on the ability to synthesize and communicate on the associated scientific issues.

Prerequisites: Assumes background from GRG 301C, GRG 301K, or an equivalent course.
Required textbooks:


Readings:


Grading:
Two exams (vocabulary, short answer/essay)---200 points (100 points each).
Six in-class projects/discussions---60 points (10 points each).
One written independent project---40 points

Final letter grades for the course are assigned by percentages of the 300 total possible points: >92%=A; 90-91.99%=A-; 88-89.99%=B+; 82-87.99%=B; 80-81.99=B-; 78-79.99%=C+; 72-77.99%=C; 70-71.99%=C-; 68-69.99%=D+; 62-67.99%=D; 60-61.99%=D-; <60=F.

The exams will include vocabulary, short answers, and short essay questions. They will be based on the lectures and readings. Taking good notes in class in critical, as is reading and understanding the assigned texts. Attendance is very important---you will not do well if you miss lectures.

Class projects
The six 10-point projects are each based on participation in a group class exercise during the class period, and are designed to complement the assigned readings. They are meant to be low-stakes interactive activities that allow you to put general principles into perspective.

Independent final project
The final 40-point project is a 4 to 5 page essay (doublespaced) due on the last day of class and based on one article chosen by you from among the research or review articles published in the last two years in the journals Anthropocene, Elementa: Science of the Anthropocene, or The Anthropocene Review. Note that you must pick an article to write about that is not already chosen by a classmate (there will be a sign-up sheet sent around in the last several weeks of the semester to register your chosen article).
In your essay, use your knowledge of all the materials of the course to evaluate the particular article you have chosen in terms of principles, methods, and implications for further research. Make sure you explain clearly which article was chosen, what was done in terms of the research, what data was utilized, what analysis was carried out, and what conclusions were reached. If appropriate, feel free to also critique the article and/or suggest likely future research based on that work.

Note that this assignment replaces the final exam, and so needs to demonstrate mastery of the entire course. This project is to be done independently and is due on the last day of class, along with a brief informal oral presentation of findings to the class on either 1 or 3 December (Note that not giving a class presentation results in a 10% deduction, and any late papers will receive a letter grade penalty for each day late).

The essays will be graded based on the quality of the technical writing, their originality, and their relevance to the class. Format of any citations used should be given in the text as “Smith (1999) hypothesized that . . .” or “. . .can be hypothesized (Smith, 1999)”. References used should be listed completely at the end of the essay: author, date, title, journal or book chapter, pages, using the style found in Annals of the Association of American Geographers.

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<th>Date</th>
<th>Topic</th>
<th>Readings</th>
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<td>27 August</td>
<td>Introduction</td>
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<td>1-3 September</td>
<td>Studying the past</td>
<td>Roberts 1-2</td>
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<td>8-10 September</td>
<td>Last Glacial Maximum</td>
<td>Roberts 3</td>
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<td>15 September</td>
<td>Early Holocene</td>
<td>Roberts 4</td>
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<td>17 September</td>
<td>PROJECT#1: Novel ecosystems</td>
<td>Young, 2014</td>
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<td>22 September</td>
<td>Climate change</td>
<td>Archer 1-7</td>
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<td>24 September</td>
<td>PROJECT#2: Time scales &amp; change</td>
<td>Archer 1-7</td>
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<td>29 September</td>
<td>Review</td>
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<td>1 October</td>
<td>FIRST EXAM</td>
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<td>6-8 October</td>
<td>Farming</td>
<td>Roberts 5</td>
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<td>13-15 October</td>
<td>Domestication</td>
<td>Wuerthner et al. Parts I &amp; 2</td>
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<td>PROJECT#3: Conservation goals</td>
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<td>20-22 October</td>
<td>Domestication</td>
<td>Roberts 6</td>
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27 October Modernity Roberts 7
29 October PROJECT#4: Land use
3-5 November Future environments Archer 8-12
10 November Review
12 November SECOND EXAM
17-19 November Anthropocene Roberts 7
19 November PROJECT#5: Epoch? Ruddiman et al., 2015
23 November PROJECT#6: Preparing the future Wuerthner et al. Part III
1-3 December CLASS PRESENTATIONS
3 December INDEPENDENT ESSAY DUE

Course policies:

**Attendance and Participation:** Students are expected to attend every class and actively participate in discussions and any in-class projects. There will be no make-up exams or assignments. Extreme situations will be considered if brought to the instructor’s attention as early as possible.

**Documented Disability Statement:** The University of Texas at Austin provides upon request appropriate academic adjustments for qualified students with disabilities; for more information, contact the Office of the Dean of Students at 512-471-5017 or deanofstudents@austin.utexas.edu.

**Religious Holy Days:** By UT Austin policy, you must provide notification of a pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class day for this reason, you will have an opportunity to complete the missed work within a reasonable time period.

**Honor Code:** Students are expected to uphold the University of Texas’ Academic Honor Code: “As a student of The University of Texas at Austin, I shall abide by the core values of the University and uphold academic integrity.”

Intellectual integrity is expected in all work. Collaboration and the use of a wide range of references is encouraged, but any plagiarism, use of un-cited materials, or un-
credited project assistance will result in a recommendation of course failure. If you have any questions about what is acceptable and what is not, please ask. Also see: http://www.lib.utexas.edu/services/instruction/learningmodules/plagiarism/

Violations of the UT honor code, including cheating or plagiarism, will result in: 1) a zero for the assignment/exam; 2) an assigned ‘F’ for the final grade; and/or 3) notification to the UT Academic Judiciary Committee for further disciplinary measures.

Behavior Concerns Advice Line (BCAL): If you are worried about someone who is acting differently, you may use the Behavior Concerns Advice Line to discuss by phone your concerns about another individual's behavior. This service is provided through a partnership among the Office of the Dean of Students, the Counselling and Mental Health Centre (CMHC), the Employee Assistance Program (EAP), and the University of Texas Police Department (UTPD). Call 232-5050 or visit http://www.utexas.edu/safety/bcal.

Decorum: Computers and phones should be silenced (no vibration or ring). If you take notes on a laptop, the expectation is that you are fully engaged with the class and not reading the news, checking social media sites, doing homework for another class, or otherwise browsing the internet.