

GGY 480/GGY592: HUMAN FOOTPRINT ON THE LANDSCAPE

SPRING 2014

Meeting times: Mondays and Wednesdays from 4 to 5:15pm



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Office hours: M: 11 to 3, W: 13 to 3, T: 12 to 3 or by appt.

Course Objective: This course will take a systems' approach to understanding past, present and future human impacts on the natural environment, including changes and impacts on the hydrosphere, atmosphere, biosphere, geosphere and cryosphere. The class is structured as a team-based learning experience, with emphasis on socio-environmental synthesis and application of concepts by working through a series of case studies to supplement discussions. Science, philosophy, and everyday lived experiences show us that we, as a species, are the primary shapers of the surface of the earth. Recently, we have begun to better understand that we too are influenced by the earth, and indeed are part of it. This course will take us on a journey through the history of our species and planet to the present day, paying special attention to disentangling the different types of changes our natural environment has undergone particularly in recent decades.

Required Textbook: Andrew S. Goudie (2013): *The Human Impact on the Natural Environment: Past, Present and Future*, 7th edition, Wiley (Paperback or Digital). There is also a Student Companion Site available for this textbook (without login info) on the [Wiley website](#). You may also rent the textbook from [CourseMart](#).

Course structure

GY480/GGY592 – The Human Footprint on the Landscape is conceived as a mixed-approach case study-based and team-based learning experience in which students, both undergraduate and graduate, will be divided into teams and tasked with working through a series of applied case studies. The case studies will address complex topics at different scales of application that range from local to regional to international, in fields spanning socio-environment interactions around water management, pollution, resource allocation, conflict resolution, and coastal management. The class is structured as a survey of human impacts on the natural world in the past, present and future and emphasizes ways we can minimize, mitigate and best adapt to these changes and their consequences.

During the first week, **five** teams will be established. The students will be assigned to take the Briggs-Myers personality test and we will use these typologies to determine the most effective and conflict-free groups ([Access the test here](#)). The class will commence with an overview of a case study focused on the complex socio-environmental dynamics and management challenges in the Florida Everglades, the world's most engineered and managed ecological system. This will present students with a real-world example of human-environment interactions in a system currently receiving billions of dollars in restoration funds. For the remainder of the semester, the course material will be divided into **six** main two-week long modules, each focused on exploring processes, changes, and policy responses around the five main "spheres" of Earth: biosphere, atmosphere, hydrosphere, geosphere and coastal environments, and the cryosphere, with a smaller week-long discussion of drylands ecosystems. The relationships among these spheres will be considered at all times in discussions.

The overall approach will consist of full immersion of each of the teams in a case study every other week for a total of five illustrative case studies that deepen the understanding gained during the first week's discussions when students will be introduced to the broad topic through readings, lectures or discussions. The five case studies students are peer-reviewed studies hosted by the National Center for Case Study Teaching in Science (NCCSTS) database at Buffalo University (<http://sciencecases.lib.buffalo.edu/cs/>), one published by myself and the other four selected based on their relevance to each of the remaining modules. At the end of each week dedicated to a

topic/module, the students will be responsible for writing a “reaction paper” to a subtopic or issue encountered during the readings or lectures. The second week of each major topic will be dedicated to the applied case study group work. At the end of the second week of each two-week module, one of the five teams will be responsible for making a class presentation that details their approach to solving the case study and puts it into perspective with the larger topic being discussed. All groups will hand in their completed case study assignments at the end of the two-week period.

Course Grading

I will use a combination of instructor and peer evaluation in determining the course grade for each student. Overall, the final grade for the semester will be composed of the following categories: 1) individual course participation and class engagement (10%); 2) reaction papers (20%); 3) group activities consisting of a) leading a 15-minute ‘view from the balcony’ discussion and b) case study work and group presentations (40% of final grade total), and 4) midterm and final exam (30% of final grade). The group presentations and case study reports are graded as a combination of instructor and peer evaluation (we will discuss how peer grading will be conducted during the first session of the semester).

Individual course participation: Your individual contribution to the course will be graded using the guidelines presented in the second table below. Attendance makes up a large portion of this assessment; it would be difficult to assess you on these if you are not present.

Reaction papers: As part of your work in this class you are asked to write short reaction papers to a particular aspect of interest to you from the chapter under discussion. You are required to write FIVE OF THESE PAPERS, no more, no less. Extra papers DO NOT count as extra credit. The paper should list a title indicating the issue/aspect that attracted your attention and you are addressing. Be sure to put your name, the date, and assignment number in the upper right hand corner of the page and submit them on Blackboard before the due date. Late submissions will incur a 10%/day grade deduction. These papers have different length requirements which should be adhered to but they could be written in much less than that assuming you get your point across. Formal writing is stressed: the rigor of logic and evidence and the conciseness of language. Belief alone is insufficient; verbiage distracts. Strunk and White’s *Elements of Style* is recommended reading, as are the **Writing Services** at the University Learning Center (see below for more info). Instructions are provided below. These five papers are worth 100 points each for a total of 20% of your final grade. You may not exceed the word limit listed with the paper assignment. Papers will be graded based on grammar and style, depth of answer, and attribution.

Group work: Because we are dealing with intellectually difficult and compelling issues, it is crucial that we engage in meaningful discussion and participation in class especially during the weeks when you are working in groups on a case study pertaining to a module. We will usually spend the Monday class period working on the case study in class and the Wednesday to finish things up and you’re your class presentation. Each group member will be graded by both their group peer/s and the instructor for their overall effort on the case study. We will make the chapter/case study assignments for this activity during the first week of class when we establish the groups, based on everyone’s specific interest in a given broad topic (biosphere, atmosphere, etc.). You will also notice that at the beginning of each module, there is a question/discussion topic listed in the table. On the Wed. of the first week when you’re responsible to present on your case study/module, you will be given 15 min at the end of class to present the “view from the balcony” – simply a metaphor for a platform of discussion where you can discuss, debate, justify, or creatively approach the topic listed there from any angle you choose.

Exams: This course features two exams that reflect the main sections of this course. These exams will consist of short answer questions, concept identification, and short essays. The exams will be different for graduate vs. undergraduate students (more about this in class before the exams). While the final exam is not explicitly cumulative, you will be expected to be able to draw on information you have already learned to complete the final exam. Each exam is worth 15% of your final grade for a total of 30%. DO NOT MISS AN EXAM! They are listed on your syllabus so you have plenty of prior knowledge.

Course Grading Criteria

Group presentations of your case study work and relevant module will be graded using the following criteria:

- Time (10%)
- Organization & Coherence (20%)
- Case study presentation and justification (50%)
 - Uncertainties in your decision making
- Creativity & Effectiveness (10%)
- Response to Questions (10%)

Individual contribution to your team/group work will be peer graded using the following evaluation form:

Names (your name first followed by team members)	Name1	Name2	Name3	Name4	Name5
Rate yourself and your peers, (1 - 5 point scale) 5=superior, 4 = above average, 3 = average, 2=below average, 1=weak					
Participated in group discussions or meetings					
Helped keep the group focused on the task					
Contributed useful ideas					
Quantity of work done					
Quality of work done					
Comments:					
Sum values					

Developed by Thomas G. Thompson, Director of Undergraduate General Business and Human Resource Management Programs, University of Maryland University College

Individual course participation will be instructor graded using the following 4 point scale and criteria:

0	Absent
1	<ul style="list-style-type: none"> • Present, attentive. • Tries to respond when called on but does not offer much. • Demonstrates very infrequent involvement in discussion.
2	<ul style="list-style-type: none"> • Demonstrates adequate preparation: knows basic case or reading facts, but does not show evidence of trying to interpret or analyze them. • Offers straightforward information (e.g., straight from the case or reading), without elaboration or very infrequently (perhaps once a class). • Does not offer to contribute to discussion, but contributes to a moderate degree when called on. • Demonstrates sporadic involvement.
3	<ul style="list-style-type: none"> • Demonstrates good preparation: knows case or reading facts well, has thought through implications of them. • Offers interpretations and analysis of case material (more than just facts) to class. • Contributes well to discussion in an ongoing way: responds to other students' points, thinks through own points, questions others in a constructive way, offers and supports suggestions that may be counter to the majority opinion. • Demonstrates consistent ongoing involvement.
4	<ul style="list-style-type: none"> • Demonstrates excellent preparation: has analyzed case exceptionally well, relating it to readings and other material (e.g., readings, course material, discussions, experiences, etc.). • Offers analysis, synthesis, and evaluation of case material, e.g., puts together pieces of the discussion to develop new approaches that take the class further. <p>Contributes in a very significant way to ongoing discussion: keeps analysis focused, responds very thoughtfully to other students' comments, contributes to the cooperative argument-building, suggests alternative ways of approaching material and helps class analyze which approaches are appropriate, etc.</p> <p>Demonstrates ongoing very active involvement.</p>

Tentative Schedule (all assignment and activity topics are subject to change; the questions below are only a starting point for discussion):

Week	Date	Subject	Reading/media	Assignment/activity
1.	1/13	Introductions: The shape of the course	Chapter 1	Briggs-Myers Personality Test and typology description
	1/15	The case study in science approach: Florida Everglades	NASA: The Human Footprint	Q&A, concerns, class strategies and organization
2.	1/20	No class – Martin Luther King Day		
	1/22	Case study in science II: Florida Everglades	Florida CERP	Last of the Wild exploration (due 1/27/14)
3.	1/27	The biosphere (vegetation and animals)	Chapters 2, 3 and 8	Global Forest Loss exploration
	1/29	The biosphere		<i>Discussion topic (DT): human history is the history of environmental change.</i>
4.	2/3	Case Study 1	Readings on Blackboard	Chapter 2/3/8 (reaction paper 1 due this day) (500 words)
	2/5	Case Study 1	Group work	Case Study 1 assignment due
5.	2/10	The atmosphere	Chapters 7 and 8	<i>DT: What is the science of global environmental change?</i>
	2/12	The atmosphere		
6.	2/17	Case study 2	Readings on Blackboard	Chapter 7/8 (reaction paper 2 due this day) (500 words)
	2/19	Case study 2	Group work	Case study 2 assignment due
7.	2/24	The waters	Chapter 5 and 10	
	2/26	The waters	Chapter 5/10 (reaction paper 3 due this day) (500 words)	<i>DT: The wars of the future will be fought over water, not oil.</i>
8.	3/3	No classes – Spring Break		
	3/5			
9.	3/10	Case study 3	Readings assigned on Blackboard	
	3/12	Case study 3	Group work	Case study 3 assignment due
10.	3/17	The geosphere (human impacts on soils)	Chapter 4	
	3/19	MIDTERM EXAM (Narcisa in Berlin at the Global Land Project Open Science Meeting)		
11.	3/24	The geosphere (human agency in geomorphology)	Chapter 6 and 10	<i>DT: How will we feed more people with less land?</i>
	3/26	The geosphere		
12.	3/31	Coastal Environments	Chapter 9	Chapters 4 and 6 (reaction paper 4 due this day) (1000 words)
	4/2	Coastal Environments		<i>DT: What are the challenges of a rapidly-urbanizing coastal population?</i>
13.	4/7	Case study 4	Readings on BB	Chapter 9 (reaction paper 5 due this day) (750 words)
	4/9	Case study 4	Group work (Narcisa at the AAG Annual Meeting in Tampa,	Case study 4 assignment due

			FL)	
14.	4/14	The cryosphere	Chapter 11	
	4/16	The cryosphere	Chapter 11	
15.	4/21	World's drylands ecosystems	Chapter 12	<i>DT: What is the future of addressing global environmental change and what are our priorities?</i>
	4/23	Case study 5	Readings on BB	
16.	4/28	Case study 5		Case study 5 assignment due
	4/30	Conclusion	Chapter 13	Final exam TBD

E-mail Requirement

Since I will be sending messages to you each week about the course's progression and issues, all students taking this course **must** monitor their UNCW student email accounts. If you have your UNCW student account forwarded to another email service such as Gmail, it is your responsibility to ensure that the forwarding is working. Please check your email on a regular basis for important announcements.

Special considerations and Writing Support

Students requiring special accommodations should contact the Office of Disability Services in Westside Hall (962-7555), or at <http://www.uncw.edu/stuaff/disability/>. All of the assignments will be worked on outside of class, so I don't foresee any need for special accommodations but if you need some help let me know and I will work with you.

The **Writing Services** at the University Learning Center offers three ways to help with your writing: one-on-one appointments, online submissions, and a drop-in Writing Lab. Please make full use of this invaluable resource to ensure your written submissions to this class are of the highest quality.

Policy on absences and missed assignments

If you choose to miss a lecture, take responsibility for your action by arranging with your fellow students to collect missed notes. Even though I will post my lectures on our class Blackboard site, you will find that there is no substitute for being in class. However, I strongly encourage you to avoid missing discussion or case study class meetings as your absence will be recorded and cannot be made up.

Most assignments will be take-home and given to you with a specific deadline that they are to be handed in by and as such late assignments are unacceptable. If you miss a deadline because of an emergency, be prepared to make a good argument for your case and work with your teammates or individually, whichever the case to turn the assignment in as soon as possible. A 10% unexcused deduction will be taken from your grade for every day your assignment is late.

Policy on cheating

There will be only one version for each homework assignment, and unless you are working on a group project, you are not restricted from working together, but each person must hand in their own file.

Academic dishonesty, including cheating and plagiarism, are thus not tolerated in this class. Students must conform to the Academic Honor Code at all times. Please familiarize yourself with the Code as outlined in the UNCW Student handbook and at <http://www.uncw.edu/stuaff/odos/honorcode/>.

Religious Observance Policy

In accordance with NC SL 2013-14, you are entitled to two excused absences for religious observances **per academic year**. You must inform me in writing the first week of class if you will be missing any classes due to religious observance and using one of the two permissible absences for the academic year. In addition, please inform the Registrar the first week of class who

will then confirm your intentions to miss class with the impacted course instructors. Any absence for religious purposes will be considered unexcused unless you submit the request in writing the first week to either me or the Registrar.

The UNCW Statement on Diversity in the University Community

As an institution of higher learning, the University of North Carolina Wilmington represents a rich diversity of human beings among its faculty, staff, and students and is committed to maintaining a campus environment that values that diversity. Accordingly, the university supports policies, curricula, and co-curricular activities that encourage understanding of and appreciation for all members of its community and will not tolerate any harassment or disrespect for persons because of race, gender, age, color, national origin, ethnicity, creed, religion, disability, sexual orientation, political affiliation, marital status, or relationship to other university constituents.

Zero Tolerance Policy

UNCW practices a zero tolerance policy for violence and harassment of any kind. For emergencies contact UNCW CARE at 962-2273; Campus Police at 962-3184; or Wilmington Police at 911. For University or community resources visit: <http://www.uncw.edu/safe-relate/campusResources.htm>. Violence prevention information and resources available at <http://www.uncw.edu/safe%2Drelate/>