

Human Impact on the Environment

Geography 304

3 Credits

This course fulfills the advanced Natural Science requirement (non-lab) for the Bachelor in Science degree in the School of Letters and Science. It is not open to graduate students for credit.



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Office Hours:	By appointment or if my door is open, feel free to drop in!!
Time / Location:	Monday & Wednesday 12:30-1:45pm, Bolton B95
Final exam:	Thursday 15 May 2014, Bolton B95, 12.30-2.30pm

Course introduction

Humans have continuously influenced and manipulated the environment since they first inhabited Earth more than 2 million years ago. When we think of how humans impact the environment today, we may consider such things as the development of cities, exploration of space and notable technological advances but equally we may also consider the number of species rendered extinct, the vast amounts of waste and pollution generated and the level of inequality in society. Whatever way we look at it, of all living species, humans have had the greatest influence on our planet.

Central to this course is an understanding of what we mean by 'humans' and what we mean by 'environment' in order to investigate when and in what ways humans began to have a detectable impact on their surroundings. We will start at the beginning with 'Lucy', the real first lady and explore how early humans abandoned hunting and gathering and took up a more sedentary lifestyle. We will examine how the global population expanded and review the consequences of this expansion on natural resources and on the environment in general. Anthropogenic (caused by humans) activity has resulted in such considerable changes to the

environment that the term Anthropocene has been coined to describe a new geological epoch, in recognition of the significant alteration to the Earth's environment as a result of human activity. The precise start date of this era still remains to be established, but the current debate centres on determining the time when humans first had a significant impact on the environment, such as, at the dawn of agriculture, during the industrial revolution or at some other time in history.



The purpose of this course is to trace the impact of human activity on Earth throughout history. We will pay particular attention to the damage we caused but also to our recent endeavors to address our negative impacts and enhance our positive impacts. Understanding the need to use natural resources in a sustainable manner, for the benefit of all species and not just humans will be a key theme running through all aspects of this course.

Furthermore, one of the fundamental principles of this course is the recognition that environmental impacts, whether positive or negative, are intrinsically linked to social, cultural, political, and economic processes. While, this course is primarily an environmental science course, we will also examine some policies that have been established to address environmental issues at a global level. Finally, this course aims to enable you to become a

more informed and thoughtful citizen able to recognize the powerful influence you have on the environment.

Course format

The course is divided into 3 blocks each of which comprises 5 weeks. Each block will consist of a series of lectures, some kind of in-class practical work and an assessment.

Lectures The lectures will be approximately 1hr and 15 mins in length and will be available on the course website on D2L.

Practical work The practical work will take the form of a debate in the first block, group presentations in the second block and a field-trip to Downer Woods in the third block. Each of these activities will be conducted during class time.

Assessment The debate and the fieldtrip will be assessed on an individual basis whereas the group presentation will be assessed according to the performance of each group. In addition, there will be a mid-term exam and a final exam both of which will comprise a series of short questions based on material covered in the lectures.

Required Course Materials

Textbook:

Goudie, A. *The human impact on the natural environment; past, present and future*, 7th edition, Blackwell Publishing, 2006.



Not required but contains lots of useful information:

Knox, P.L and McCarthy, L.M. *Urbanization: an introduction to urban geography*. 3rd edition, Prentice Hall, 2012

Burroughs, W.J. *Climate change: a multidisciplinary approach*, 2nd edition. Cambridge University Press, 2007.

Withgott, J. and Laposata, M. *Essential environment: the science behind the stories*, 4th edition. Pearson Press, 2012.

Other material will be made available as necessary on D2L.

UWM email account: In order to succeed in this course, you need to check your UWM email account regularly. When composing emails please be sure to write “Geog. 304” at the beginning of the subject line in any emails you send; address your emails to me by name; consider the *tone* of your emails carefully; and, finally, sign your emails by name. Please do not send emails from any non-UWM email account.

The best way to reach me outside of class is via email (donnela@uwm.edu). I generally check and respond to email frequently, and except in unusual circumstances I will try to answer you within 24 hours. Finally, I would be delighted to meet with you in person. Please set up an appointment, or if my office door is open, you’re free to drop in if you have a question.

Desire2Learn Website (D2L): We will use D2L for this course. You will gain access to lecture slides, assignments, and any other relevant information through the course D2L site (<http://d2l.uwm.edu/>). Lecture notes can be downloaded from the site. In addition, assignments and discussions will also be conducted through D2L.

Course Learning Objectives, Assessments, and Grades

By the end of the semester, you should be able to do the following:

Learning objective	Assessment	% of grade
1. Demonstrate knowledge of how humans impact many aspects of the environment both positively and negatively.	Midterm exam Final exam	15% 40%
2. Foster critical thinking of environmental issues.	Class debate	3%
3. Describe and evaluate how our energy needs may be met in future. Provides an opportunity to conduct research, convey the findings to the class, participate in public speaking and work as part of a team.	Presentation to class (10%)	20%
4. Design, plan and produce a group report on how energy needs may be met in future. Provides an opportunity to refine writing skills, design skills and work as part of a team.	Produce a report (10%)	
6. Observe, record and analyse spring phenology from a defined suite of trees.	Produce a report	20%
7. Demonstrate understanding of the link between climate warming and plant phenology.		

The final 2% will be for class attendance.

Grading information and attendance policies

1. **Lecture Attendance (2% of the final grade):** During each lecture session (except session 1 and the midterm—27 sessions in all), an attendance sheet will be circulated during the class.

If for any legitimate reason, such as medical, personal emergency, etc. you will miss a considerable (more than 2 in a row) number of lectures it is your responsibility to inform the instructor at the earliest possible opportunity.

2. **Examinations (55% of the final grade):** You will take 2 exams: a midterm worth 15% of your grade, and a final exam worth 40% of your grade. The exams will comprise short answer questions (based on material covered during lectures). Both exams are required. Later in the semester, you will receive more information about the exams. We will have a comprehensive in-class review session before each exam.

Make-up exams may be permitted at the discretion of the instructor for legitimate reasons only, such as a documented illness. However, requests for make-up exams will be considered *only* if the student contacts me in a timely manner, preferably before the exam, but within 24 hours following the date of the exam, and provides verifiable written documentation of their absence. *Do not assume* that you will automatically be allowed a make-up exam.

3. **Class debate (3% of the final grade):** A class debate will be held on a topic that relates to humans and the environment. This debate is designed to encourage critical thinking and to promote consideration of a range of viewpoints. All students must participate in the debate.
4. **Presentation and report (20% of the final grade):** This is a group exercise where you will be randomly assigned to a group of between 4-6 members. Each group will be given a topic to research, present to the class and to write-up in a report. The theme is 'Meeting the energy needs of the future'. So, for example, one group might examine the possibility of using oil, another may examine biomass crops, another wave energy, etc. This exercise is designed as a group exercise so participation and engagement from early on in the process is strongly recommended.
5. **Fieldtrip to Downer Woods (20% of the final grade):** This part of the course will give you the chance to observe some of the concepts we cover in class, in the real world. It will give students an opportunity to examine a woodland habitat with its range of plant species from ground plants, to shrubs and trees. More specifically, we will record the timing of when leaves begin to emerge out of their buds in spring and observe how this differs from one tree to the next. Since bud burst is triggered by rising temperatures we will investigate some of the consequences of global warming on the life-cycle of trees.

Grading Policy

See the following site for official UWM policy on grades and grading:
<http://www4.uwm.edu/secu/docs/other/S29.htm>

Guide to grades

93-100%	A	Achievement of outstanding quality
90-92%	A-	Achievement of slightly less than outstanding quality
86-89%	B+	Achievement of slightly more than high quality
83-85%	B	Achievement of high quality
80-82%	B-	Achievement of slightly less than high quality
76-79%	C+	Work of slightly more than acceptable quality
73-75%	C	Work of acceptable quality
70-72%	C-	Work of slightly less than acceptable quality
66-69%	D+	Work slightly below the quality expected
63-65%	D	Work below the quality expected
60-62%	D-	Work barely above failing
0-59%	F	Failure

Special Consideration. *The principle of equal treatment of all students shall be a fundamental guide in responding to requests for special consideration. No student should be given an opportunity to improve a grade that is not made available to all members of the class. This policy is not intended to exclude reasonable accommodation of verified student disability, or the completion of work missed as the result of religious observance, verified illness, or justified absence due to circumstances beyond the student's control.*

Comments: This policy applies to requests for special consideration both before and after a course is completed (See also Grade or Record Changes). It is usually impossible to make opportunities for grade improvement available to all students in a course after the course has ended. Examples of unacceptable opportunities for an individual student include extra work, retaking an examination, taking an extra examination, or an extension of time on an assignment or examination. The policy on incompletes (UWM Select Policies and Procedures, S-31) explains the circumstances in which a student may be given extra time for the completion of a course. This policy should reassure students who are not seeking special consideration and it should also protect instructors from student pressure for special consideration.

Workload

This is a 3-credit course. As a general rule of thumb, you should expect to spend 4-5 hours outside of class for every lecture. Since we will have 2 classes each week, you can expect to spend approximately 8-10 hours each week outside class preparing for class, working on assignments and studying for exams. You will be responsible for managing your time in order to complete your work.

Activity	# hrs
Time in the classroom (face-to-face lecturing) 20 sessions	25
Time spent online reading lecture and other material	32
Time doing fieldwork	2.5
Time taking exams (1hr 15 min midterm and 2hr final)	3.25
Time for class presentation plus debate	5
Time in tutorials (1 review session before final exam)	1.25
Time completing assignments (3h per week on average)	45
Time for preparation and study (2hrs on average per week)	30
Total for term	144
Average per week	9-10

NOTE: THESE NUMBERS ARE APPROXIMATE!!!

Classroom conduct

I expect that you will conduct yourself in lectures and during assignments in the same manner that you yourself would like to be treated and *to respect the rights of other students to learn*. Class disruptions will not be tolerated, as it erodes the educational environment for everyone. Please be respectful of your fellow classmates. **Come to class on time, stay until the end, and remain quiet during lectures** (unless I'm trying to get you to contribute to a conversation in class, in which case quiet is the last thing I want you to be!!). I also expect you to *acknowledge and respect the diversity of participants in the class*. Even if you disagree with points of view expressed by your instructor, or your fellow students, as citizens of this class you are responsible for considering different points of view respectfully. The instructor will do the same.

Unless you have a VISA from the Student Accessibility Center or other documentation that you have special needs, **you will not need laptops or other electronic devices during class**. All wireless and electronic devices must be shut down or in silent mode during the class period.

Late work

To be fair to students who turn their work in on time, **you will not receive credit for assignments turned in late**, unless a documented medical or personal emergency arises. Please contact the instructor immediately if an emergency arises, or if you know you will have a problem turning your work in on time. Please note that “the D2L dropbox didn’t work” is not an acceptable excuse for a late assignment; you are responsible for making sure your assignment reaches the dropbox or discussion forum. You should email the instructor immediately—and before the assignment is due—if you have technical difficulties submitting your assignment to the D2L site.

Make-up exams

In order to be fair to all students in the course, you may not make up exams or resubmit coursework unless a documented medical or personal emergency arises. In the event that you must be absent on the day of an exam, you must contact the instructor immediately to reschedule a make-up exam.

Technology

D2L site: You will gain access to lecture slides, assignments and other material through the course D2L site: (<http://d2l.uwm.edu/>). In order to reach the site, simply log in using your Panther ID and password, and then follow the instructions to find the course site. If you need help getting access to the site or to D2L, please use the UWM Help Desk (available 24 hours a day, 7 days a week), which should be your first point of contact for any technical issues you encounter:

Help Desk web site: (<http://www4.uwm.edu/technology/help/>)

Help Desk Telephone: (414) 229-4040

Submit Help Request: GetTechHelp.uwm.edu

Help Desk Location: Bolton 225

For a handout on accessing D2L visit:

(<http://www.uwm.edu/Dept/LTC/docs/firstdayhandout.doc>)

University policies and special notes

For the University of Wisconsin-Milwaukee's official policies on **disabilities, religious observances, active military duty, incompletes, discriminatory conduct, academic misconduct, complaint procedures, and grade appeal procedures**, please see the following web site: (<http://www.uwm.edu/Dept/SecU/SyllabusLinks.pdf>). Geography 125 adheres to these policies.

Students with Disabilities: If you have a disability and need accommodations of any kind (e.g., a notetaker, special accommodations for tests, etc.), please see me and submit your VISA from the Student Accessibility Center ***within the first two weeks of the semester***. I'll be happy to work with you to make any necessary arrangements. For more information, see the following: (<http://www4.uwm.edu/sac/SACltr.pdf>).

Religious observances: If you require accommodations for religious observances, I'm happy to work with you to make necessary arrangements. Please note that ***you are required to notify me within the first three weeks of the semester*** of the specific dates on which you will request relief from an examination or academic requirement: (<https://www4.uwm.edu/secu/docs/other/S1.5.htm>).

Academic misconduct: You are responsible for reading and following UWM guidelines on academic misconduct, including cheating and plagiarism: (<http://www4.uwm.edu/dos/conduct/>). If any of the instructors suspects academic misconduct, we are required to follow the procedures described here: (http://www4.uwm.edu/acad_aff/policy/academicmisconduct.cfm).

Incompletes: "An Incomplete may be given to a student who has carried a subject successfully until near the end of the semester but, **because of illness or other unusual and substantiated cause beyond that student's control**, has been unable to take or complete the final examination or to complete some limited amount of term work. **An Incomplete is not given unless the student proves to the instructor that s/he was prevented from completing course requirements for just cause as indicated above.**" (quoted from UWM policy: <http://www4.uwm.edu/secu/docs/other/S31.pdf>)

If you have questions or concerns about the class, please do not hesitate to contact the instructor or the teaching assistant.

Tentative Lecture Schedule – subject to change at a moment’s notice!!!

Block 1: From zero to 7.1 billion - how it happened!			
Wk 1	Jan 22	1. Introduction to class	
Wk 2	Jan 27	2. Human evolution	Chpt. 1 + D2L
	Jan 29	3. Expansion of agriculture	Chpt. 1 + D2L
Wk 3	Feb 3	4. Human population growth	Chpt. 1 + D2L
	Feb 5	5. Urbanization and cities	Knox & McCarthy
Wk 4	Feb 10	6. Globalization	D2L + video
	Feb 12	7. Class debate: Globalization should be our top priority	D2L
Wk 5	Feb 17	8. Ecological footprint. Review for mid-term exam	Paper on D2L
	Feb 19	9. Mid-term exam	
Block 2: From zero to 7.1 billion – impact on resources!			
Wk 6	Feb 24	10. Energy	Withgott Chpt. 15
	Feb 26	11. Air	Chpt. 7
Wk 7	Mar 3	12. Air	Chpt. 7
	Mar 5	13. Water	Chpt. 5
Wk 8	Mar 10	14. Water	Chpt. 5
	Mar 12	16. Soil	Chpt. 4
Wk 9 March 16-23 Spring Recess – No classes			
Wk 10	Mar 24	16. Waste	D2L
	Mar 26	17. Class presentations	<i>Report due in dropbox 2 days after presentation</i>
Wk 11	Mar 31	18. Class presentations	
	Apr 2	19. Class presentations	
Block 3: From zero to 7.1 billion – major global implications!			
Wk 12	Apr 7	20. Climate change I	Burroughs
	Apr 9	21. Climate change II	D2L
Wk 13	Apr 14	22. Phenology	Burroughs
	Apr 16	23. Downer Woods field trip preparation	D2L
Wk 14	Apr 21	24. Downer Woods field trip	<i>Report due in dropbox Fri.2 May</i>
	Apr 23	25. Downer Woods field trip	
Wk 15	Apr 28	26. Ocean and lake acidification	Chpts. 4 & 5
	Apr 30	27. Biodiversity and conservation	Chpts. 2 & 3
Wk 16	May 5	28. Sustainable development	D2L
	May 7	29. Review for final exam	Blocks 2 and 3 only

Final exam: Thursday 15 May 2014, Bolton B95, 12.30-2.30pm