

1-2014

ENST 391.50: Sustainability (Online)

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Environmental Studies 391.50
Sustainability: The Challenge of Change
SYLLABUS

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(406) 493-0761

Personal meetings can be arranged on the UM campus for those in the area.

Course Description

The course will consider the onset of a new geologic era, the *Anthropocene*, so-named because it is an era during which humans are the dominant force on the planet. Our domination arose quickly as a consequence of humankind's explosive growth of knowledge and its application to increasingly powerful technologies. The result was a cornucopia of products that fostered unbridled consumption and waste. The ascendance was so quick it happened unwittingly, but the impacts of our collective actions are now so great that the path that brought us to the present state can no longer be sustained. Change is called for, change that is transformative, not merely incremental. The class will consider how to initiate such needed dramatic change.

Challenges will not be equated with problems. Instead, the emphasis will be on opportunity. A different world need not be a worse world; the challenge is to make it a better one. Today's students are presented with an historic opportunity to leave a permanent mark on the course of civilization. Few generations are so blessed.

After reviewing the concept of Spaceship Earth, the course will describe impacts that are occurring throughout Earth's interconnected systems. Students will stake out their positions on some pending major decisions confronting us all. In doing so, they will weigh ecological, economic, and equity dimensions.

The primary course objective is that hopelessness, despair, and hand-wringing are replaced by hopefulness, optimism and positive action, in which people do what they can, where they are, with what they have.

Purpose


The purpose of the course is to nurture values and inspire actions transitioning humankind from the practices it established in the last century to sustainable practices in the current century. Approximately the first half of the course will be devoted to studying the past. Doing so should expose the unsustainability of civilization's present course. The intent is not to sow pessimism. Rather, it is to learn together what we can do to find a path to a sustainable future. The second half of the course therefore presents students an opportunity to be imaginative, creative and innovative. The course belongs to you and your fellow students, all of whom must engage in critical thinking to answer "What should we do?"

Objectives

Students should improve their abilities to:

- Think critically.
- Apply a holistic and systemic approach to solve problems and create opportunities for the benefit of society, now and in the future.
- Appreciate the values of services the natural and physical worlds provide to humans and the impact humans have on the natural and physical worlds' ability to continue providing them.
- Appreciate the temporal and spatial scales of change, including consequences of exponential growth.
- Develop communications skills – verbal, written, and electronic – enabling understanding across disciplines, sectors, and generations.
- Act ethically with respect to peoples from other cultures, future generations, and other species in the biosphere.
- Find information, evaluate its accuracy, and transform it into practical uses.
- Understand that humanity's current predicament is an opportunity for greatness rather than a cause of despair.

Required Online Tools

- Access to a personal computer with audio capabilities
- Internet access and a web browser
- Microsoft Word and PowerPoint (PowerPoint slides that contain speaker symbols  contain recorded messages. Click on symbol to hear them.)
- Ability to open pdf, jpg, and video files

I advise visiting umonline.umt.edu and studying the **Student Resources**. You will also see a location for **Tech Support**.

Required Textbooks

J. R. McNeill, **Something New under the Sun: An Environmental History of the Twentieth-Century World**, New York: W.W. Norton & Company paperback (2001), ISBN 03-393-04917-5.

McNeill's book recounts the interconnected history of humans and their environment during the last century. That forms the perfect springboard for writing a history of the century ahead, a history of tomorrow we are already writing today.

Eric Lambin (translated by M.B. DeBevoise), **The Middle Path: Avoiding Environmental Catastrophe**, Chicago: The University of Chicago Press (2007), ISBN 978-0-226-46853-2.

Lambin's book offers suggestions for improving our stewardship of the Earth.

Both books are available at the University of Montana Bookstore (among other places). You may order them online. Visit <http://www.montanabookstore.com>. Click on Course Materials/Mountain Campus/Buy and go from there.

Additional Educational Resources

The instructor has prepared several PowerPoint presentations, which you are required to watch and to listen to. You may wish to record notes from these presentations along with the highlights you are recording throughout the semester from the textbooks.

Among supplementary materials for several topics throughout the semester are articles from journals and magazines, videos posted on the WWW, and references to websites.

This whole combination of educational aids is to show specific topics from a variety of viewpoints using a variety of techniques. The more of this material you study, the greater the value this course will have for you.

Course Schedule

WEEK	TOPIC	TEXT ASSIGNMENT	POWER POINT?	ASSIGNED WRITING? ¹	ASSIGNED DISCUSSION ²
Jan 27-Feb 2	Space-Time-Life Orientation	McNeill Chs 1, 12	Y	N	Y
Feb 3-9	The Earth System	McNeill Chs 1, 12	Y	Y (200 pts)	Y
Feb 10-16	Lithosphere and Pedosphere	McNeill Ch 2, 9	Y	Y (160 pts)	Y
Feb 17-23	Atmosphere	McNeill Chs 3, 4	Y	Y (100 pts)	N
Feb 24-Mar 2	Hydrosphere	McNeill Chs 5, 6	Y	N	Y
Mar 3-9	Biosphere	McNeill Chs 7, 8	Y	Y (225 pts)	N
Mar 10-16	Anthrosphere	McNeill Chs 10,	Y	Y (100 pts)	N
Mar 17-23	Anthrosphere	11	Y	Y(225 pts)	N
Mar 24-30	Challenge of Change	Lambin Intro,Ch 1	N	N	Y
Mar 31-Apr 6	SPRING	BREAK			
Apr 7-20	Society and Ecology	Lambin Chs 2,3	Y	Y (400 pts)	Y
Apr 21-27	Your Great Work	Lambin Ch 4, 5	Y	N	Y
Apr 28-May 9	Ethics of Sustainability	Lambin Ch 6, 7	Y	Y (400 pts)	N
MAY 9 11:55 PM	FIRM	DEADLINE	ALL	WORK DUE	

Assignments

Assignments are posted in each week's or weeks' topic, available when you click on the appropriate folder on the Moodle site. During a typical week, you are assigned to view and listen to a PowerPoint presentation, complete the textbook assignment, and often to study some supplemental material (additional readings, videos, websites, and the like). Then you may be required to submit a written paper, participate in a class discussion, or both.

¹ The semester-long writing assignment asking you to log the critical points from the text (and PPT and other resources) is not included in this table. That is, if the entry is N, there is no writing expected in addition to the semester-long assignment.

² The maximum score for comments submitted to a Discussion is 50 points.

The course has two major themes. During the first, the focus is on the inseparable environmental and human histories of the twentieth century. During the second, the course deals with changes needed in the twenty-first century. Here, the burden shifts heavily from the instructor to you, the students. How will you create the future you and your descendants will want to live in? PowerPoint presentations by the instructor are shorter and none is presented at all one week.

Because the course had not begun when the entire curriculum was completed (a University of Montana requirement), it is possible that some changes will be made during the Spring 2014 semester; likely none, though, will be major.

Assignments are due by 11:55 PM of the Sunday ending a week's work (or occasionally two weeks' work). These deadlines are firm. Discussions end and papers will not be accepted after the posted deadlines.

- **Semester-Long Reading/Writing Assignments 1 and 2.** My wish is that this course will have some value lasting beyond its conclusion (May 9). One strategy I prescribe for lasting value is an assignment that you log highlights of the key points you wish to retain from the assigned readings, especially, but also from other material presented. You are free to design your own format for recording key points. The best way to compile meaningful information is to keep notes as you are studying the material. Assignment 1 records primarily notes from McNeill's book. Deadline for compiling these notes is 11:55 PM on Sunday, March 30, 2014. Assignment 2, due by 11:55 PM, May 9, 2014, records highlights from Lambin's book.
- **Written Assignments** during particular weeks will vary in length and depth, also in maximum points that can be earned.
- **Discussion Forums.** You may learn as much from each other as from me or various authors. That will be true only if everybody contributes to vigorous discussions. It will be especially true if each of you contributes more than once per discussion topic. Every forum has an early (approximately mid-week) deadline, as well as a final one at the Sunday night deadline (11:55 PM). Those who contribute only close to the deadline will post comments unlikely to be read and so late they prevent any reactions from fellow students; hence the mid-week deadlines. All are invited to respond to previous contributions, but also are expected to make original contributions themselves.

Grading

- **POINT SYSTEM**
 - ✓ **Semester-Long Assignment 1.** This is your record of the key points from the beginning of the semester through March 30, 2014. The hope is it will retain value for you well after this course has ended. Entries should be shared with me weekly. The maximum total is 100 points.
 - ✓ **Semester-Long Assignment 2.** These notes cover the period April 7 through May 9, 2014. This list of happenings on the path to sustainability is also worth a maximum of 100 points. Deadline is 11:55 PM, May 9, 2014.

- ✓ **Discussion Forums.** 50 points each. Given that there are eight discussions throughout the semester (two were assigned for Pedosphere/Lithosphere), as many as 400 points can be earned through active and thoughtful participation.
- ✓ **Written Assignments.** The assignments vary in depth requested. Accordingly, the points awarded vary among the assignments. The maximum total for all written assignments (not counting the two semester-long assignments) is 1810 points

- **RUBRIC**

The world, if it is ever to become sustainable, is in desperate need of creative, new ideas. Without them, we continue on a path that passes an ever-deepening challenge to the next generation. Accordingly, the grading system will emphasize this need. It will also heavily weigh the depth of your thinking, how critically you analyze the assigned issue, and the quality of your information sources. Of course, how well you express your thoughts will be a factor. Approximate relative weighting of these factors will be:

Quality of Analysis and its Cited Evidence:	45%
Originality:	35%
Organization of Thought and Its Expression:	25%
Details (Grammar, Spelling, Punctuation, etc.):	5%

Your grade for Discussions will be based primarily on the quality of your comments, much less so on their quantity. Another factor will be the extent to which your comments enhance discussion entries by others.

- **GRADE SCALING**

A	93-100%
A-	90-92%
B+	87-89%
B	83-86%
B-	80-82%
C+	77-79%
C	73-76%
C-	70-72%
D	60-69%
F	Less than 59%

Academic Integrity

Academic misconduct is subject to academic penalty by both the instructor and/or disciplinary sanction by the University. These penalties and sanctions may include a failing grade for an assignment, removal from class, or more serious actions depending upon the nature of the misconduct. All students must be familiar with, and adhere to, the Student Conduct Code. The Code is available at http://life.umt.edu/vpsa/student_conduct.php.

Disability Statement

If you have a disability for which accommodations are needed, please notify me in the first week of the semester. In addition, please contact:

Disability Services for Students (DSS)

Lommasson Center 154

The University of Montana

Missoula, MT 59812

(406) 243-2243 (Voice/Text)

(406) 243-5330 FAX

dss@umontana.edu

<http://life.umt.edu/dss/>