

INTRODUCTION TO ENVIRONMENTAL STUDIES

ENVR110, FALL 2014

PROFESSOR NICHOLAS HENSHUE

Syllabus last updated 9/4/14

Location: 5 Comenius Hall

Time: 7.30-8.40, Monday and Wednesday

Office Hours: Wednesday, by appointment only

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Email: henshuen@moravian.edu or nick@henshue.org

Required Course Materials: See bibliography

EXPECTATIONS

Environmental Science is a multi-disciplinary science, encompassing the best of chemistry, biology, earth science, and life science. Discussions about politics, consumerism, economics, and art are also prevalent in looking at “the big picture”. This is one of the few classes you can take to talk about everything from hunting to cars, and recycling to development. Students will be exposed to the (very) basic introductions of many environmental fields. Topics include ecology, pollution, energy, and population. To this end, each one of my students is expected to work to their full capability. You will be unable to merely show up for a class and anticipate a passing grade. Intensive reading, writing and higher level thought are expected of each of my students, with approximately an in-class to out-of-class preparation ratio of 1:1.

DISABILITIES

Should you have any individual concerns regarding a documented disability please discuss this with me privately before or during the first week of class in person or via email. To this end, Students who wish to request accommodations in this class for a disability should contact Elaine Mara, assistant director of learning services for academic and disability support in the lower level of Monocacy Hall, or by calling 610-861-1401. Accommodations cannot be provided until authorization is received from the Academic Support Center.

OBJECTIVES

Course Objectives: Upon completion of this course students will be able to demonstrate:

- 1) a knowledge of basic concepts in the environment, including understanding the dynamic nature of ecological processes and the importance of variation in space and time
- 2) an ability to integrate concepts within and among scientific disciplines
- 3) a knowledge of and ability to apply the scientific process
- 4) an ability to find, evaluate, & use published scientific information
- 5) an ability to objectively analyze and interpret data
- 6) the relevance of the environment to society
- 7) an ability to work together in teams

TESTS

6 bi-weekly quizzes @ ≈30Pts each (50%); homework assignments and participation (25%); and a final exam (25%)

Tests will consist of short answer, multiple choice/fill-in-the-blank AND essay questions. Typically quizzes will be 10 multiple choice and 3-5 short answers or essays. They will contain questions from the readings, discussions, notes, and in-class activities. EVERYTHING IS FAIR GAME FOR THE QUIZZES. If there is a disagreement with my grading of a particular question, you may submit a 'reevaluation request' in writing to me (an email is fine) no longer than one week after the quizzes have been handed back to you. This request should consist of the following: 1—identify the question in dispute, 2—provide an explanation as to why the question was incorrectly evaluated (in the your opinion), 3—propose a suggested remedy. I will then review this request carefully and return a written decision to you within a week. Please note that a re-evaluation on a quiz item can be scored either UP or DOWN from the current grade, and the final grade is binding. You must notify me beforehand if you need to reschedule a quiz. If you do not, you will receive a zero for that quiz. Period.

HOMEWORK

This course is structured to be very reading intensive. I have spent years putting together the list of articles that you will be reading, and they are good. No, really. All of the readings not located in the two books on the bookstore list will be provided for you as .PDF files on Blackboard. The syllabus contains all the assignment titles and the dates they are due. Please check Blackboard regularly for announcements and assignments. If you miss a class, be sure to check with a classmate for any missed assignments. You will not be given extra time to complete an assignment, simply because you have missed a class.

RULES and ACADEMIC HONESTY

Moravian College policies regarding academic honesty will be enforced. Please familiarize yourself with the Academic Honesty Policy included in your student handbook, and on the web at <http://www.moravian.edu/studentlife/handbook/academic/academic2.html>.

Grading Scale:

A (92-100)	B- (80-82)	D+ (68-70)
A- (90-92)	C+ (78-80)	D (62-68)
B+ (88-90)	C (72-78)	D- (60-62)
B (82-88)	C- (70-72)	F (0-60)

Class Rules:

I have been doing this a long time. If you have an issue, PLEASE come talk to me. There isn't too much I haven't heard or dealt with. Good communication is the root of any professional relationship.

The use of cell phones is not permitted in class. Stay on task with your electronics. Facebook and Reddit will be there after 9AM. You are paying to be in my class. Make it count.

RULES TO SUCCESS:

1. Work hard.
2. Make good choices.

Some other Policies of this Class:

1. Assignments will receive $\frac{1}{2}$ credit each day late, including weekends.
2. Do not criticize anyone for his or her ideas, beliefs, or statements.
3. You are responsible for the cleanliness of your desk and surrounding area.
4. Treat everything in the classroom as if it were your own.

BIBLIOGRAPHY:

Required books:

- Leopold, Aldo, and Charles Walsh. Schwartz. *A Sand County Almanac, and Sketches Here and There*. London: Oxford UP, 1968. Print.
- Martenson, Chris. *The Crash Course: The Unsustainable Future of Our Economy, Energy, and Environment*. Hoboken, NJ: Wiley, 2011. Print.

Both are available through the B&N Moravian bookstore, online, and in book stores. Rumor has it that the Oxford Publishers edition of *A Sand County Almanac* is the only one that has held all of Aldo Leopold's original text. Other editions have been edited for use in public schools in Kansas and Texas. Try and get the Oxford Press edition, if possible.

Bibliography for provided resources and further reading for ENVR110, F2014.

- *A Crude Awakening: The Oil Crash*. Dir. Basil Gelpke and Raymond McCormack. Lava Productions, 2006. DVD.
- Abel, Daniel C. *Environmental Issues: Looking towards a Sustainable Future, Fourth Edition*. S.I.: Pearson Custom, 2012. Print.
- Bryson, Bill. *A Short History of Nearly Everything*. New York: Broadway, 2003. Print.
- Easton, Thomas A. *Taking Sides*. Boston: McGraw-Hill, 2010. Print.
- Graaf, John De, David Wann, and Thomas H. Naylor. *Affluenza: How Overconsumption Is Killing Us- and How We Can Fight Back*. Print.
- Majumdar, Shyamal K. *Biological Diversity: Problems and Challenges*. Easton, PA: Pennsylvania Academy of Science, 1994. Print.
- Majumdar, Shyamal K., and E. Willard Miller. *Pennsylvania Coal: Resources, Technology, and Utilization*. Easton, PA: Pennsylvania Academy of Science, 1983. Print.
- Morin, Peter Jay. *Community Ecology*. Chichester, West Sussex: Wiley, 2011. Print.
- Quammen, David. *The Song of the Dodo: Island Biogeography in an Age of Extinctions*. New York: Scribner, 1996. Print.
- Royte, Elizabeth. *Garbage Land: On the Secret Trail of Trash*. New York: Little, Brown, 2005. Print.
- Smith, Robert Leo., and T. M. Smith. *Ecology & Field Biology*. San Francisco: Benjamin Cummings, 2001. Print.
- Sodhi, Navjot S., and Paul R. Ehrlich. *Conservation Biology for All*. Oxford: Oxford UP, 2010. Print.
- Weber, Karl. *Food, Inc.: How Industrial Food Is Making Us Sicker, Fatter and Poorer - and What You Can Do about It*. New York: PublicAffairs, 2009. Print.

COURSE OUTLINE

This schedule is tentative, and may be revised as the semester moves forward. As noted, please allow sufficient time to prepare for each class, as most of the readings are greater than 20 pages. There will frequently be additional assignments (Homework Due) to complete that we did not finish in class. This column will vary significantly based on the class's progress. The Reading column will not.

		Topic	Reading due	Homework Due
Week 1	25-Aug	Introduction to environmental issues	The Tragedy of the Commons β	
	27-Aug	Environmental history	January-September, α	
Week 2	1-Sep	Ecology I	October-December α	Env opinion essays
	3-Sep	Ecology II	CH2 Cons Bio For All β	
Week 3	8-Sep	Biodiversity I	CH3 Cons Bio For All β	quiz 1
	10-Sep	Biodiversity II	CH4 Cons Bio For All β	
Week 4	15-Sep	Population Ecology I	Personal Recollections of the Passenger Pigeon β	Bean Biodiversity
	17-Sep	Population Ecology II	Chapter 10, Ecology and Field Bio β	
Week 5	22-Sep	Human population I	Part II (CH5-9) in δ	Quiz 2
	24-Sep	Human Population II	What's Eating America?	World Population Web Lab
Week 6	29-Sep	Agriculture	"The Worst Mistake..." β	Population Math Lab
	1-Oct	Agriculture II	Chapter 4 (Food, Science..) & 7 (Cheap Food), Food INC	
Week 7	6-Oct	Water resources	CH 21+22 δ	
	8-Oct	Water resources II	Flushing it Away, Garbage Land β	Quiz 3
Week 8	13-Oct	Fall Break, no class		
	15-Oct	Economics of nature	part III (CH 10-14) δ	
Week 9	20-Oct	Metals and minerals	CH 19+20 δ	Carrying Capacity Math Lab
	22-Oct	Nonrenewable Energy	Part IV (CH 15-18) δ	

Week 10	27-Oct	Coal	Origin, Char and Prop of PA Coal β	Quiz 4
	29-Oct	Natural Gas and Oil	A Crude Awakening - 1:22:00 on YouTube. MAY BE DEPRESSING β	Coal Math Lab
Week 11	3-Nov	Air Pollution I	Getting the Lead Out, Short History of Nearly Everything CH 10 β	
	5-Nov	Climate Change I	Global Warming's Terrifying New Math β	
Week 12	10-Nov	Climate Change II	Global Warming Skepticism, Taking Sides, Issue 8 β	Quiz 5
	12-Nov	Renewable Energy I	Biofuels and National Security, Taking Sides, Issue 11 β	Greenhouse Gas Math Lab I&II
Week 13	17-Nov	Renewable Energy II	Why Bother? β	
	19-Nov	Garbage/Recycling	Intro-CH 4 Garbage Land- NOTE- Long reading but worth it!	Blowing in the Wind Math Lab
Week 14	24-Nov	Stuff	Affluenza, CH 1, 2, 9, & 10	Quiz 6
	26-Nov	Thanksgiving break	Do the Green Home Audit while home on break!	
Week 15	1-Dec	Conservation	IL&IA, AZ&NM, Chihuahua & Sonora, OR&UT α	
	3-Dec	Land ethic	Part III (The Upshot) α	

11-Dec	Final Exam	0830, 005 Comenius Hall
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Reading codes:

α = A Sand County Almanac, by Aldo Leopold
β - found on course Blackboard website in that week's folder
δ - The Crash Course, by Chris Martenson