

ENVIRONMENTAL SCIENCE

ENVR112, FALL 2015

PROFESSOR NICHOLAS HENSHUE

Syllabus last updated Friday, August 28, 2015

Lecture Location: 204 Collier Hall of Science

Lecture Time: 10:20-11:30AM Tuesdays and Thursdays

Lab Location: Collier Hall of Science 302

Lab Time: 12:45-3:45PM Tuesdays

Office Hours: Thursday after class, by appointment only

Cell Phone (for emergencies only): 610.704.7344

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Required Course Materials: SmartBook Online and Connect Access for Environmental Science, 13th Edition, by William Cunningham

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. You will be exposed to the (very) basic introductions of many environmental fields. Topics include ecology, pollution, energy, and population. To this end, each of you are expected to work to your 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 you, 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. 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.

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/static/studentLife/handbook/academic/academic2.html>.

GRADED WORK:

3 tests @ \cong 100Pts each (300)

Homework Assignments: 20@ \cong 10Pts each (200)

Labs (packet, formal write-up, or participation, depending) 10@ \cong 20Pts (200)

Lab Final @ \cong 100Pts (100)

Final Exam @ \cong 200Pts (200)

Total will be roughly 1000 points.

Tests will consist of short answer, multiple choice/fill-in-the-blank AND essay questions. They will contain questions from the readings, discussions, notes, and in-class activities. EVERYTHING IS FAIR GAME FOR THE TESTS. 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 tests 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 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 test 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 test. 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 in addition to the text, and they are good. No, really. All of the reading not in the text online will be provided for you as PDF files on Blackboard or Connect. The syllabus contains all the assignment titles and the dates they are due. Please check Connect 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.

OBJECTIVES

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

- 1) Possess 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) Have an understanding of terminology commonly used in environmental science.
- 3) Briefly summarize and describe global, regional, and landscape scale environmental processes and systems.
- 4) List common and adverse human impacts on biotic communities, soil, water, and air quality and suggest sustainable strategies to mitigate these impacts.
- 5) Read, critically evaluate presented information and data using scientific principles and concepts, synthesize popular media reports/articles discussing environmental issues, and verbally discuss and defend their positions on scientific issues.
- 6) Integrate concepts within and among scientific and liberal arts disciplines.
- 7) Objectively analyze and interpret data and a knowledge of and ability to apply the scientific process.
- 8) Apply learned information to postulated environmental scenarios to predict potential outcomes.

GRADING SCALE:

:	A (93-100)	B- (80-82)	D+ (67-69)
	A- (90-92)	C+ (77-79)	D (63-66)
	B+ (87-89)	C (73-76)	D- (60-62)
	B (83-87)	C- (70-72)	F (0-59)

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 lunch. 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 ½ 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.

ATTENDANCE POLICY:

As a college student, your main job is to be a college student. Clubs, sports, other jobs, hangovers- it's all secondary to the real reason you are here. Being in class is the best, most effective way to ensure success in all your courses.

1. Miss more than three lectures, you will drop one full letter grade for each three you miss.
2. Miss more than two labs, you will drop one full letter grade as well.
3. Miss more than one week's worth (the combo platter of two lectures and one lab), you will drop one full letter grade.
4. Even with sports or other commitments, this gives you a tremendous amount of flexibility.

COURSE OUTLINE

This schedule is tentative, and may (will, for sure) 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 extra reading/ assignments (other than Homework Due) to complete that we did not finish in class. This column will vary significantly based on the class's progress. The Chapter Reading column will not.

	Date	Type	Topic	Chapter to read	Extra readings	Homework
Week 1	9/1/15	Lect	Intro To Course, Understanding Our Environment	1		MGH Connect
	9/1/15	Lab	Nature Walk Or Footprint Calculator			
	9/3/15	Lect	Principles Of Systems	2	Hardin Paper	MGH Connect
Week 2	9/8/15	Lect	Energy And Trophic Levels	3		MGH Connect
	9/8/15	Lab	The 10% Rule And Mealworms			
	9/10/15	Lect	Ecology And Species Interactions	4		MGH Connect
Week 3	9/15/15	Lect	The Origin Of Species By Means Of Natural Selection		Homo Evolutis (Kindle Single) *optional but really good.	
	9/15/15	Lab	Caminicule Lab			
	9/17/15	Lect	Biomes	5	Netflix "Planet Earth: Pole to Pole" (optional)	MGH Connect
Week 4	9/22/15	Lect	Population Biology	6		MGH Connect
	9/22/15	Lab	Simbio Barnacle Lab		Connell Paper	
	9/24/15	Lect	Human Population I	7		MGH Connect
Week 5	9/29/15	Lect	Human Population II		Dailey/Ehrlich paper	
	9/29/15	Lab	Excel Population Lab			
	10/1/15	Lect	Test #1, Chapters 1-7			

	Date	Type	Topic	Chapter to read	Extra readings	Homework
Week 6	10/6/15	Lect	Health And Toxicology	8	Bullard Paper	MGH Connect
	10/6/15	Lab	Soils Lab		(Don't wear nice clothes)	
	10/8/15	Lect	Food And Hunger	9	Pollan Paper 1	MGH Connect
Week 7	10/13/15	Lect	No Class, Fall Break			
	10/13/15	Lab	No Class, Fall Break			
	10/15/15	Lect	Agriculture	10		MGH Connect
Week 8	10/20/15	Lect	Biodiversity I	11	Hoekstra Paper	MGH Connect
	10/20/15	Lab	Bean Biodiversity Lab			
	10/22/15	Lect	Biodiversity II	12		MGH Connect
Week 9	10/27/15	Lect	Ecological Restoration	13		MGH Connect
	10/27/15	Lab	Palmerton With 1/2 Students		Palmerton Journal Articles	
	10/29/15	Lect	Air Pollution	16		MGH Connect
Week 10	11/3/15	Lect	Climate Change I	15		MGH Connect
	11/3/15	Lab	Palmerton With 1/2 Students			
	11/5/15	Lect	Test #2, Chapters 8-13, 15, 16			
Week 11	11/10/15	Lect	Climate Change II		McKibben Paper	
	11/10/15	Lab	Ice Core Simulation			
	11/12/15	Lect	Fossil Fuels And Conventional Energy	19	https://youtu.be/odCZpBPfFQk (optional, but great)	MGH Connect
Week 12	11/17/15	Lect	Solid, Toxic And Hazardous Waste	21		MGH Connect
	11/17/15	Lab	Landfill With 1/2 Students			
	11/19/15	Lect	Renewable Energy	20		MGH Connect

	Date	Type	Topic	Chapter to read	Extra readings	Homework
Week 13	11/24/15	Lect	Ecological Economics	23	Costanza paper	MGH Connect
	11/24/15	Lab	Landfill With 1/2 Students			
	11/26/15	Lect	No class, Thanksgiving		Total carbon miles on your plate, extra credit!	
Week 14	12/1/15	Lect	Water Use And Management	17		MGH Connect
	12/1/15	Lab	Water Testing Lab			
	12/3/15	Lect	Water Pollution	18		MGH Connect
Week 15	12/8/15	Lect	Environmental Policy, Law, And Planning	24		MGH Connect
	12/8/15	Lab	Lab Final			
	12/10/15	Lect	What, Then, Shall We Do?	25	Pollan Paper	MGH Connect
Final Exam	12/17/15		1:30pm, Dana Lecture Hall			

**"The Environment is
everything
that isn't me".**

-Albert Einstein