

Quest III Bio 104 “Ecosphere in Crisis”

Lecture + Lab (4 credits)

Spring 2017 Syllabus

Course Overview

All of Earth’s biota, including humans, ultimately relies on the natural environment for existence; yet human actions often compromise the availability of resources necessary for life. This course will address sustainability of human interactions with the environment. This Quest III course will specifically address the signature question, “**How do people understand and create a more sustainable world?**” To answer this question, we will study specific examples of environmental issues in enough depth for you develop an appreciation for their complexity. As part of Quest III, your **community-based learning experiences** will be based in environmental stewardship. By the end of this course, you should attain a good understanding and appreciation of the interconnections between human actions and the natural environment. Further, you will be empowered to lead environmental stewardship activities as an investment in the future of humanity.

Instructor

Shannon Davis-Foust, PhD

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424-1548 (email is usually more efficient for getting in contact with me)

Office hours: Mondays 10:30-11:30, Thursdays 8:00-9:00, or by appointment.

Office: 255 Halsey

Class meeting times/locations

Lecture: Monday, Wednesday, Friday; 9:10 - 10:10 am; Halsey Science 367

Lab : Thursday, 10:20-1:20, Halsey Science 110

Required Materials

- E-Book with Launchpad (the online platform for this textbook): Karr, S., Interlandi, J., and Houtman, A. 2015. Environmental Science for a Changing World, Second Edition. W.H. Freeman and Scientific American. ISBN/SKU: 9781464179730
 - To register for the course go to:
<http://www.macmillanhighered.com/launchpad/saes2e/5296034>
 - A paper copy of the textbook is optional
- A calculator or any kind.
- Readings and laboratory materials to be downloaded and printed from D2L

Liberal Arts Education

An additional goal of this class is to further your liberal arts education. What does this mean? The liberal arts education focuses on general learning, intellectual ability, and critical thinking rather than technical or professional skills. The goal of this class is not just to convey specific information about environmental issues (although you will learn much about this) but to teach you how to interpret this information critically, and how to understand modern environmental issues in their social, historical, and political context. A liberal arts education provides the tools we need to be active citizens of our communities. As we will learn this semester, active citizenship plays a key role in resolving the complex environmental dilemmas that we as a society face today.

In spring 2008, UW Oshkosh adopted a set of Essential Learning Outcomes to help define the meaning of a liberal education. One of these outcomes is the recognition that a liberal education recognizes our “Responsibility, as individuals and communities.” This includes “Knowledge of sustainability and its applications.” This course is designed to help us think about our responsibilities to each other, to our communities, and to our environment.

USP and the Signature Question

The University Studies Program (USP) is your gateway to a 21st century college education at the University of Wisconsin Oshkosh. This Quest III course is the final in a series of courses you have taken to introduce you to the campus and all it has to offer, the vibrant Oshkosh community, and the challenges and opportunities of academic life as you pursue a liberal education. In these courses, you’ll be exposed to three “Signature Questions” that are central to a UW Oshkosh education:

- How do people understand and engage in community life?
- How do people understand and create a more sustainable world?
- How do people understand and bridge cultural differences?

The Quest classes are designed to provide a solid foundation for the rest of your education here, no matter which major you choose. Your USP courses will also provide the opportunity for you to Explore and Connect as you begin your college education. For further information about the unique general education at UW Oshkosh, visit the University Studies Program website <http://www.uwosh.edu/usp>

Significance of Community-Based Learning

Field-based “experiential learning” with community partners gives you direct experience with contemporary environmental issues. This teaching strategy will help you both apply your knowledge and make reflections based on real-world experience. Giving something back to the community is an important outcome of your college education.

Grading

Lecture - Online Assignments (100) + Quizzes (100) + Exams (4@100).....600 pts

Lab - Quizzes (50) + Lab assignments (150) + Participation (100).....300 pts

Grading Scale

93 – 100% = A

90 – 92.9% = A-

87 – 89.9% = B+

83 – 86.9% = B

80 – 82.9% = B-

77 – 79.9% = C+

73 – 76.9% = C

70 – 72.9% = C-

67 – 69.9% = D+

63 – 66.9% = D

60 – 62.9% = D-

< 60% = F

Lecture and Laboratory Exams and Quizzes

Lecture exams will be in multiple choice format. Lecture quizzes will be multiple choice and/or short answer. Laboratory quizzes will also be in the format of short answer. If you will miss an exam due to a University-sponsored activity (e.g. athletics contest), your coach should have provided you with a letter. Bring a copy of that letter to permit a make-up exam. If you miss an exam for any other UWO-approved reason (e.g. illness or bereavement), go to the Dean of Students Office in Dempsey Hall, obtain a written excuse, and bring the written excuse to permit a make-up exam. **Absolutely NO** late exams/quizzes will be scheduled for reasons of holiday, work, or travel.

Online Lecture LearningCurve Assignments

You must link your D2L account to your MacMillan Launchpad account to receive points for doing the online LearningCurve (LC) questions. You can access the questions either by going through D2L and clicking on the LearningCurve link, which will open up Launchpad. Your LC grades are based on percent of questions that you completed. LC will give you more questions to answer for each question answered incorrectly. LC questions must be completed by the day indicated on the schedule to receive credit. Each LC is worth 5 points; therefore, you only need to complete 20 of the 24 LC's assigned to receive the full 100 points for this category. Extra credit will not be given for doing additional LC's, but doing them is recommended for your own success. You can still receive credit for any LC's that are assigned, but end up not being covered.

Lab Assignments

There will be five graded laboratory assignments (please see the schedule for more details). One of these will be a Community-Based Learning project. You will be tasked with teaching elementary school children about environmental issues. (Examples and sources of information will be provided in class). During lab time, we will be going off campus to a school where you will work with one child or a group of children. Bussing services will be provided. We will also be doing outreach work for Earth Week, which will likely fall outside your lab hours. Note: A background check may be required for working with school children; if you fail the background check an appropriate alternative will be assigned.

Attendance and Participation

A significant part of your lab grade is based on attendance and participation. We will be having many discussions in lab. Practice is essential for gaining skills to effectively communicate your knowledge and ideas, and also to gain skill in responding to other points of view. The following rubric is a rough outline of the qualities you will be graded on for attendance and participation.

Exemplary (90-100%)	Perfect attendance/one excused absence or tardy, comes to class alert and prepared, maintains a positive attitude, team player, is engaged in projects inside and outside of the classroom, encourages others, respects others, is critical of class material
Good (80-90%)	One or two excused absences, seldom tardy, maintains a positive attitude, usually a team player, participates in most discussions, respects others, is critical of the material, usually alert
Average (60-80%)	One or two excused absences/one unexcused absence, seldom tardy, usually has a positive attitude, sometimes participates in discussions, respects others, occasionally daydreams
Below Average (50-60%)	Two or more unexcused absences, frequently tardy, complains, does not typically participate in discussions, respects others, sometimes falls asleep
Poor (below 50%)	Three or more unexcused absences, frequently tardy, complains and complains, prevents others from learning, almost never participates in discussions, disrespectful of others, does not complete assigned work, snores loudly

Policies

- It is your responsibility to be prepared for and attend each class. Notify me as soon as possible by email (or phone if necessary) if you plan to be miss lab for any reason. I consider infrequent absences as excused absences if I have been notified *in advance* of class.
- Arrangements for any special need must be made *in advance*, except in the case of unforeseen circumstances. Late assignments will be accepted if arrangements were made in advance, but with a point reduction of 10% per day.
- Email and D2L will be used throughout the term. Emails constitute legal, official University communication. Not checking your email is not an excuse for performance problems in the class. Contact Academic Computing or any Campus Computer Lab supervisor for assistance with email and D2L.
- As a courtesy to others - and to yourself - please turn off all electronic distractions during class. Texting, iPods, and electronic distractions of any kind are not allowed during class. If I see you using any unauthorized device during class, I may not say anything, but I will subtract 10 points from your participation grade for each time I make an observation.
- Laptops may be used as a tool in this class, but I generally do not recommend them. We will have some activities where internet access is helpful, and I will let you know when. I will subtract 10 points from your participation grade each time I see that are using your laptop for anything outside of class.
- Writing assignments are expected to be of the highest quality. Anything turned in shorthand will be given a 0 until you hand in a legitimate version (at which point penalties for handing in the work late will apply).

Academic Integrity

Academic dishonesty will not be tolerated. If you decide to engage in academic misconduct you will be subject to the Student Academic Disciplinary Procedures as outlined in the Student Disciplinary Code (<http://www.uwosh.edu/dean>). Under Chapter UWS 14 (Student Academic Disciplinary Procedures), “academic misconduct” means an act in which a student (UWS 14.03):

- a) seeks to claim credit for the work or efforts of another without authorization or citation;
- b) uses unauthorized materials or fabricated data in any academic exercise;
- c) forges or falsifies academic documents or records;
- d) intentionally impedes or damages the academic work of others;
- e) engages in conduct aimed at making a false representation of a student’s academic performance; or
- f) assists other students in any of these acts.

Disabilities

Students who have physical or learning disabilities that wish to request academic adjustments should notify the Disabilities Office so that appropriate accommodations can be made. For more information contact the Counseling Center or Disabilities Services (424-2404).

Campus Resources

We want you to be successful. There are many campus resources in addition to getting help from your instructor. Please visit this resource page to read about all the campus services available to support your success <http://www.uwosh.edu/usp/resources>.

The Writing Center

The Writing Center helps students of all ability levels improve their writing. Trained peer consultants help writers understand an assignment, envision possibilities for a draft, and improve their writing process. They even help writers learn to identify their own proofreading errors. Students can make a free appointment or stop by to see whether a consultant is available. For more information, view their website (<http://www.uwosh.edu/wcenter>), call 920-424-1152, email wcenter@uwosh.edu, or visit them in Suite 102 of the Student Success Center.

Polk Library/Information Literacy

Polk Library offers many professional librarians who can help you find library resources for your research. Specifically, Ted Mulvey, the Information Literacy Librarian, is available to assist you as you access, evaluate, and use information in University Studies Program classes. Phone: 920-424-7329; email: mulveyt@uwosh.edu. You may also set up a research advisory session with a librarian at: rap@uwosh.edu.

Alumni Mentor(s)

UW Oshkosh Alumni care about you and your future. They have volunteered to support you in your Quest. As you participate in your Quest III Community Experience, an Alumni Mentor will be involved. The names of the Alumni Mentors and their roles in your Community Experience are as follows: TBD

Early Alert

Early Alert is a program that provides you with an Early Grade Report from faculty. Early Grade Reports will indicate if you have academic performance or attendance issues and specific steps you can take and resources available to help you improve. It is common for students to be unaware of or over-estimate their academic performance in classes so this will help you be aware early on of your progress and provide strategies for success in the classroom. You will receive an email during the 5th week of classes.

ePortfolio

As you are moving through your courses at UW Oshkosh, you are archiving your learning in your ePortfolio. The ePortfolio helps you keep track of papers, speeches, reports, projects, and other assignments in your Quest and Explore courses, so that you can see your progress and connect ideas across different classes. In this Quest III course, an assignment related to your Community Experience will be featured as an ePortfolio artifact. Further information about this assignment will be provided.

Student learning outcomes

Outcomes Specific to the University Studies Program:

- Understand why sustainability is a core component of a Liberal Arts Education.
- Be familiar with the expectations of a college-level education, the UW Oshkosh Essential Learning Outcomes, and the University Studies Program.
- Continue to use the academic resources and community engagement opportunities at UW Oshkosh.
- Engage in learning communities to enhance their connections to the class, the university, and one another.
- Further develop your ePortfolio archive.
- Participate in community-based learning projects to provide you with real-world experience and further your preparation for citizenship, work, and life.

Learning Outcomes Specific to Bio 104:

- Differentiate the roles of science and ethics in understanding and solving environmental issues.
- Critically analyze interrelations between humans and the environment.
- Describe basic ecological processes in relation to biodiversity and maintaining ecosystem goods and services
- Identify your own cultural lenses and biases and develop strategies to effectively communicate with those who may have different viewpoints from your own.
- Connect ecology, economy and society as interlinked facets of sustainability and identifies tradeoffs among them relate to the future of humanity.
- Synthesize sustainability as a lens of inquiry, or a way to look at, evaluate, and solve problems.

Spring Schedule 2017*

Date	Lecture Topics	Readings/Films/Quizzes due	Lab Activities and Assignments (Thursdays)
<u>Week 1</u> Jan 30- Feb 3	Course Introduction Environmental Literacy (1)	M: None W: Ch 1 Learning Curve (LC) questions due at 9:00 am F: film	Introductory Discussions Discuss Feynman 1988 Review Scientific Method Assignment: "Critical Information Assessment"
<u>Week 2</u> Feb 6-10	Scientific Method (2) Human Population (4) Ecological Footprints (6)	M: Ch 2 LC due at 9:00 am W: Ch 4 LC due at 9:00 am F: Ch 6 LC due at 9:00 am	Due: "Science and the Media" in dropbox by the start of lab (20 pts) Transpiration experiment → Print from D2L
<u>Week 3</u> Feb 13-17	Waste Management (7) Environmental Toxicology (3)	M: Ch 7 LC due at 9:00 am W: Ch 3 LC due at 9:00 am	Due: "Transpiration Lab Report" in dropbox by the start of lab (20 pts) Discuss Weeks 2005 → print from D2L Field trip to Outagamie Co. Landfill and MRF → print from D2L Assignment: Ecological Footprint
<u>Week 4</u> Feb 20-24	Exam 1 Nutrient Cycling (8) Freshwater Resources (14)	M: Exam 1 W: Ch 8 LC due at 9:00 am F Ch 14 LC due at 9:00 am	Lab quiz 1 (25 pts) Water Quality lab → print from D2L Assignment: Water Footprint
<u>Week 5</u> Feb 27-Mar 3	Water Pollution (15) World Hunger (16)	M: Ch 15 LC due at 9:00 am W: Ch 16 LC due at 9:00 am	Due: Ecological Footprint in dropbox by the start of lab (20 pts) Field trip to Fond du Lac Wastewater Treatment Plant → print from D2L
<u>Week 6</u> Mar 6-10	Sustainable Agriculture (17) Raising Livestock (30) (You must use the online textbook for this chapter)	M: Ch 17 LC due at 9:00 am W: Ch 30 LC due at 9:00 am F: Guest speaker from Organic Valley, Melissa Weyland	Due: Water Footprint in dropbox by the start of lab (20 pts) Walking Field Trip - Campus sustainability and Growing Oshkosh → dress for the weather!!
<u>Week 7</u> Mar 13-17	Soils and Grasslands (27) (You must use the online textbook for this chapter) Exam 2	M: Ch 27 LC due at 9:00 am F: Exam 2	Discuss "Can We Feed the World and Sustain the Planet?" → print from D2L Introduce Nature Connection Program

Date	Lecture Topics	Lecture Assignments	Lab Activities and Assignments
Mar 20-24	Spring Break		
<u>Week 8</u> Mar 27- 31	Population Ecology (9) Community Ecology (10) Evolution & Extinction (11)	M: Ch 9 LC due at 9:00 am W: Ch 10 LC due at 9:00 am F: Ch 11 LC due at 9:00 am	Biodiversity reading → posted in D2L Field Trip Hobb's Woods → dress for the weather!!
<u>Week 9</u> Apr 3-7	Biodiversity (12) Preserving Biodiversity (13)	M: Ch 12 LC due at 9:00 am W: Ch 13 LC due at 9:00 am	Lab quiz 2 (25 pts) Work on Nature Connection Projects Due: Nature Connection Project Outlines due in dropbox by Friday midnight (20 pts)
<u>Week 10</u> Apr 10-14	Environmental Health (5) Exam 3	M: Ch 5 LC due at 9:00 am F: Exam 3	Field Trip Carl Traeger Middle School Nature Connection social media posts (up to 10 points extra credit each week)
<u>Week 11</u> Apr 17-21	Air Pollution (20) Climate Change (21)	M: Ch 20 LC due at 9:00 am W: Ch 21 LC due at 9:00 am F: Film or Guest speaker	Field Trip Carl Traeger Middle School Nature Connection social media posts (up to 10 points extra credit each week) Assignment: CO2 emissions
<u>Week 12</u> Apr 24-Apr 28	Climate Change (cont.)	W: Climate Change Role Play	Field Trip Carl Traeger Middle School Nature Connection social media posts (up to 10 points extra credit each week)
<u>Week 13</u> May 1-5	Environmental Policy (24) Coal (18)	M: Ch 24 LC due at 9:00 am W: Ch 18 LC due at 9:00 am	Due: CO₂ emissions assignment in dropbox by the start of lab (20 pts) Field Trip Carl Traeger Middle School Nature Connection social media posts (up to 10 points extra credit each week)
<u>Week 14</u> May 8-May 10	Oil and Natural Gas (19) Exam 4	M: Ch 19 LC due at 9:00 am F: Exam 4	Due: Nature Connection Project Summary and Reflection in dropbox by the start of lab (30 pts). (Upload to your ePortfolio)

*This schedule is subject to change.