

Term Information

Effective Term Summer 2015
[Previous Value](#) Summer 2012

Course Change Information

What change is being proposed? (If more than one, what changes are being proposed?)

Change in course components as well as an addition of an online version of the course

What is the rationale for the proposed change(s)?

Recitations were carried forward from quarters, not being offered in semesters. Online version will reach a wider audience of students interested in environmental science.

What are the programmatic implications of the proposed change(s)?

(e.g. program requirements to be added or removed, changes to be made in available resources, effect on other programs that use the course)?

n/a

Is approval of the request contingent upon the approval of other course or curricular program request? No

Is this a request to withdraw the course? No

General Information

Course Bulletin Listing/Subject Area Environment & Natural Resource
Fiscal Unit/Academic Org Sch of Enviro&Natural Res - D1173
College/Academic Group Food, Agric & Environ Science
Level/Career Undergraduate
Course Number/Catalog 2100
Course Title Introduction to Environmental Science
Transcript Abbreviation Intro Envrnmntl Sc
Course Description Introduction to environmental science, the ecological foundation of environmental systems, the ecological impacts of environmental degradation by humans, and strategies for sustainable management of environment and natural resources.
Au, Sp, Su Sems.
[Previous Value](#) *Introduction to environmental science, the ecological foundation of environmental systems, the ecological impacts of environmental degradation by humans, and strategies for sustainable management of environment and natural resources.
Au, Sp Sems.*
Semester Credit Hours/Units Fixed: 3

Offering Information

Length Of Course 14 Week
Flexibly Scheduled Course Never
Does any section of this course have a distance education component? Yes
Is any section of the course offered 100% at a distance
[Previous Value](#) No
Grading Basis Letter Grade
Repeatable No
Course Components Lecture
[Previous Value](#) Recitation, Lecture

Grade Roster Component	Lecture
Credit Available by Exam	Yes
Previous Value	No
Exam Type	Advanced Placement Program, EM Tests via Office of Testing
Admission Condition Course	No
Off Campus	Never
Campus of Offering	Columbus, Lima, Mansfield, Marion, Wooster

Prerequisites and Exclusions

Prerequisites/Corequisites	
Exclusions	Not open to students with credit for 201.

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code	03.0101
Subsidy Level	General Studies Course
Intended Rank	Freshman, Sophomore, Junior, Senior

Quarters to Semesters

Quarters to Semesters	Semester equivalent of a quarter course (e.g., a 5 credit hour course under quarters which becomes a 3 credit hour course under semesters)
List the number and title of current course being converted	ENR 201: Introduction to Environmental Science.

Requirement/Elective Designation

Required for this unit's degrees, majors, and/or minors
General Education course:
Biological Science

Course Details

Course goals or learning objectives/outcomes	<ul style="list-style-type: none">• Understand the basic facts, principles, theories, and methods of modern science• Learn key events in the history of science• Gain an understanding of the inter-dependence of scientific and technological developments• Explore social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world
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COURSE CHANGE REQUEST
2100 - Status: PENDING

Last Updated: Neal,Steven Michael
12/12/2014

Content Topic List

- Impact of global energy and climate on distribution of biomes and ecosystems
- Energy flow and materials cycles in ecosystems
- Population and community dynamics
- Biodiversity
- Environmental issues: climate change, clean water, human population, and land degradation

Attachments

- ENR2100 Su15 Syllabus (2).doc: ENR 2100

(Syllabus. Owner: Johnston,Renee L)

Comments

- Changes to syllabus complete. *(by Johnston,Renee L on 12/12/2014 09:33 AM)*
- Please make changes to the syllabus requested by COAA. *(by Neal,Steven Michael on 11/26/2014 03:15 PM)*
- AT the request of the department *(by Pfister,Jill Ann on 11/12/2014 02:17 PM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Johnston,Renee L	04/18/2012 11:13 AM	Submitted for Approval
Revision Requested	Pfister,Jill Ann	11/12/2014 02:17 PM	Unit Approval
Submitted	Johnston,Renee L	11/16/2014 07:39 PM	Submitted for Approval
Revision Requested	Neal,Steven Michael	11/26/2014 03:15 PM	Unit Approval
Submitted	Johnston,Renee L	12/12/2014 09:34 AM	Submitted for Approval
Approved	Neal,Steven Michael	12/12/2014 10:34 AM	Unit Approval
Approved	Neal,Steven Michael	12/12/2014 10:34 AM	SubCollege Approval
Approved	Neal,Steven Michael	12/12/2014 10:35 AM	College Approval
Pending Approval	Nolen,Dawn Vankeerbergen,Bernadette Chantal Hanlin,Deborah Kay Jenkins,Mary Ellen Bigler Hogle,Danielle Nicole	12/12/2014 10:35 AM	ASCCAO Approval

**ENR 2100 – INTRODUCTION TO ENVIRONMENTAL SCIENCE
THE OHIO STATE UNIVERSITY, SUMMER SEMESTER 2015 (Su15)
GE Natural Science: Biological Science Class (3 credits)**

Course Delivery

This is a completely on-line course that will utilize multiple platforms supported by OSU. Course content, including lecture presentations and videos, will be delivered using iTunes U. Carmen will be used to complete quizzes, exams, and other assignments. Other resources, such as u.osu, will also be used. This course is self-paced yet all course requirements must be completed during the semester of offering.

Professor

Dr. Brian H. Lower, Ph.D.

Grading (% of final grade)

Midterm Exam (25%)
Final Exam (25%)
Poster (25%)
Quizzes (25%, drop lowest quiz)

Textbook (Required)

Scientific American
Environmental Science for a
Changing World (2014) by
Houtman, Karr, & Interlandi.
Published by W.H. Freeman

Teaching Associate

Ms. Kylienne Clark, M.S.

Email

OSUEnvironment@Gmail.com

Apple iTunes U

<https://itunes.apple.com/us/course/intro-environmental-science/id601450178>

Office Hours

Announced on Carmen

Twitter

@OSUEnviro

U.OSU

<https://u.osu.edu/introenvironmentalscience>

Date	Topics: lecture topics subject to change, exact dates of quizzes & exams will be announced during lecture, so come to class!	Textbook Chapters or Directions
Week 1	Introduction, syllabus, metric system, graphs, statistics	Appendix 1,2,3
Week 2	Environmental literacy, Scientific process, ozone and Antarctica, ecocentrism, EPA, risk assessment, scientific journals, peer review	1,2
May 25	Memorial Day – Offices Closed	
Week 3	DDT, PCB, CFCs, BPA, bioaccumulation, biomagnification, runoff pollution, Puget Sound, Chesapeake Bay, toxicology, epidemiology, Human population growth, carrying capacity, ecological footprint, food production, waste, ecosystems, biosphere, biomes, species, biodiversity, evolution, saving the rainforest	3,5
May 29	POSTER TITLE, ABSTRACT AND 10 REFERENCES ARE DUE (15% of your Poster Grade)	Due on-line
Week 4	Biomes, tolerance for life, energy flow, biogeochemical cycles, saving the elephants, population ecology, predator-prey, Yellowstone National Park	7,8
Week 5	Community ecology, food webs, ecological succession, freshwater resources, water and food production	9,17
June 12	FIRST DRAFT OF YOUR POSTER IS DUE (15% of your Poster Grade)	Due on-line
Week 6	Environmental cost of coal, carbon sequestration, greenhouse effect, climate change Nuclear Power, radioactive decay, waste storage, nuclear fission, review for exam	23, 27
June 18	MIDTERM EXAM (Covers lectures from Week 1 – Week 6)	Take exam on-line using CARMEN
Week 7	Water pollution, eutrophic, runoff, Pebble Mine, agriculture, U.S. Clean Water Act, agriculture and urban runoff, nonpoint source pollution	18,19,21,22
Week 8	Continue water resources, Superfund Sites, water recycling, fisheries and aquaculture, marine ecosystems, coral reefs	15,16
July 2	POSTER PEER REVIEWS ARE DUE (20% of your Poster Grade)	Due on-line
July 3	Independence Day – Offices Closed	
Week 9	Air pollution, acid rain, NO _x , SO ₂ , particulate, asbestos, Pb, Hg, ozone, CO	25
Week 10	U.S. Clean Air Act, coal ash waste ponds, heavy metal waste	23

Week 11	Environmental cost of petroleum, oil and tar sands, biofuel, catch up day, directions for poster symposium	24,29
July 23	POSTER SYMPOSIUM (On-line; 50% of your Poster Grade)	Virtual Symposium on u.osu
Week 12	Climate change, Milankovich cycles, greenhouse gases, alternative and renewable energy, hydrogen, solar, geothermal, biofuel	26,28,29
August 3-5	FINAL EXAM (Cumulative; covers material from Week 1 – Week 12)	Take exam on-line using CARMEN

**Every attempt has been made to ensure that the information in the syllabus is complete and accurate. However, mistakes such as typographical errors may occur on occasion. Professor Lower will address any errors on this syllabus during the semester. The schedule shown above is tentative and will likely change throughout the semester depending on how quickly or slowly we cover the material in class.*

Textbook (recommended resource; read the assigned textbook chapters)

Environmental Science for a Changing World, 1st Edition (2013) or 2nd Edition (2014), by Houtman, Karr, and Interlandi, published by W.H. Freeman. This textbook is available in two different formats: paperback (~\$100) or e-Book (\$50-\$75). The material in the 1st and 2nd editions of this textbook is very similar, however, some chapter numbers are different in these two editions.

To purchase the textbook visit one of the following sites:

1. Go to <http://www.coursesmart.com> and type in **Houtman** in the Search box at the top of the page. Our textbook will appear and you can purchase an eBook for about \$75 for a 180-day rental.
2. Or you can purchase or rent the textbook from www.Amazon.com or another retail site.

Some exam questions will be taken from the assigned readings of this textbook or additional class assignments. I will not have time to lecture on every topic that is assigned from the textbook. However, you should read and understand the assigned pages whether I have time to present them during lecture or not.

Final Grade

Your final grade will be based on 1 midterm exam, 1 final exam, 1 scientific poster, and several quizzes. See the syllabus above for % of each component.

Exams

Examinations may consist of true/false, multiple choice, short answer, and essay questions. **All exams will be taken on-line using CARMEN.** You will NOT come to the classroom to take the exam. Rather, you take the exam from a location of your choosing that has Internet connection (e.g., dorm room, library). A significant number of exam questions will come from material presented in lecture videos and from the textbook. Additional material will be drawn from the textbook, assigned readings and videos. Each student must complete the exam on her or his own. You are NOT permitted to receive assistance from anyone else during the exam. You are NOT permitted to take the exams as part of a group. You ARE permitted to use your own notes and slides during the exam. Additional details will be provided during the semester.

There are **NO** make-up exams except for valid reasons (e.g., medical excuse). *If you are sick, you MUST have a note signed by your medical doctor (i.e. a licensed physician) and **dated the same day as the exam.*** Otherwise, you will receive a zero on the exam. **Dr. Lower will determine if your excuse is valid. If you do NOT have a reasonable excuse for missing an exam then you will receive a ZERO for the exam.** Approved make-up exams will consist of multiple choice, short-answer and essay questions.

Quizzes

Approximately one quiz will be given every week. Quizzes will be announced on Carmen. Many of these questions will be based on assigned readings and videos. You will take these quizzes online using Carmen. Your lowest quiz grade (or the one quiz that you forget to take) will be dropped.

Scientific Poster Presentation (details will be provided during the semester)

You will design, construct, and present a scientific poster to your classmates. First, you must pick a topic related to environmental science. Next, you should read at least 10 articles from well-respected sources (see example list below or **use any of the sources that @OSUEnViRo is currently following on Twitter**), which are related to this topic. After reading these articles, you will design and construct a poster describing the topic. Details will be provided during the semester.

Journals: Biological Conservation, Chemical & Engineering News, Ecology, Environmental Science & Technology, Proceedings of the National Academy of Sciences USA, Science, Nature.

Newspapers: BBC, New York Times, Washington Post, Chicago Tribune, Columbus Dispatch, NPR.

Grade Scale

A	93.00 to 100.00	A-	90.00 to 92.99		
B+	87.00 to 89.99	B	83.00 to 86.99	B-	80.00 to 82.99
C+	77.00 to 79.99	C	73.00 to 76.99	C-	70.00 to 72.99
D+	67.00 to 69.99	D	60.00 to 66.99		
E	0.00 to 59.99				

Apple iTunes U Intro Environmental Science

Class content will be delivered through **Apple iTunes: Intro Environmental Science**. You can subscribe to this class at <https://itunes.apple.com/us/course/intro-environmental-science/id601450178> which, will allow you to watch recorded lectures, download videos, slides, notes, apps and other material for class. This material is free.

U.OSU.EDU

A class page has been established for the virtual poster symposium. Details on the symposium will be given during the semester. A free u.osu account is required to participate. Visit u.osu.edu to sign up and visit the class news page at <https://u.osu.edu/introenvironmentalscience>.

GE Category and Expected learning outcomes

This course fulfills *GE Category Natural Science, Biological Science*. Natural Science coursework fosters students' understanding of the principles, theories, and methods of modern science, the relationship between science and technology, the implications of scientific discoveries and the potential of science and technology to address problems of the contemporary world.

1. Students understand the basic facts, principles, theories and methods of modern science.
2. Students learn key events in the development of science and recognize that science is an evolving body of knowledge.
3. Students describe the inter-dependence of scientific and technological developments.
4. Students recognize social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.

Academic Misconduct

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct (<http://studentconduct.osu.edu>).

Students with Disabilities

Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901.

<http://www.ods.ohio-state.edu/>

Communicating with Students

Periodic announcements and some lecture slides will be posted on Carmen. Announcements and news items will also be posted on Twitter: [@OSUEnVirO](#)

Dr. Lower has created a Gmail account specifically for this class: OSUEnvironment@Gmail.com

Dr. Lower will use your OSU email account to communicate with you. While many of you have other email accounts through services such as Goggle, Yahoo, or Hotmail, Dr. Lower will NEVER send email to these other accounts.