ENR 2100 – INTRODUCTION TO ENVIRONMENTAL SCIENCE
GE Natural Science: Biological Science Class (3 credits)
SUMMER SEMESTER 2016 (SU16)

Professor
Ms. Kylienne Clark, M.S.
Email
clark.1912@osu.edu
Office Hours
By Appointment, I will also be available before and after class

Grading (% of final grade)
Midterm Exam (25%)
Final Exam (30%)
ScienceBite Article (30%)
Quizzes (7%)
Participation (8%)

Lecture
Class Number 3573
Monday, Wednesday, Friday,
9:50 AM – 11:25 AM
Ramseyer Hall, Room 009
June 8 – July 29, 2016

Course Description and Learning Outcomes

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. By the end of this course, students will be able to:

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

Course Material

Textbook (recommended resource; read the textbook before coming to class)

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. If you attend all classes you likely will NOT need to purchase the textbook. Save some money, attend class!

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.

The University Library has a limited number of copies of the textbook for checkout. Additional copies have been placed on reserve. Take advantage of this resource.
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.

**Grading and Faculty Response**

**Final Grade**
Your final grade will be based on 1 midterm exam (25%), 1 final exam (30%), 1 ScienceBite article (30%), quizzes (7%), and class participation (8%).

**Exams taken on CARMEN**
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 the lecture. 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 lecture notes and slides during the exam. Additional details will be provided in class.

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. I 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. An approved make-up exam will NOT be administered online but rather will be taken in person with paper and pencil.

**ScienceBite Assignments on CARMEN**
You will write a short-format science article, which we call a ScienceBite. A ScienceBite is a short-format article 1,000 to 1,250 words in length that presents one specific topic, which you choose from the field of environmental science. The article should include 4 to 6 figures (illustrations, graphs, tables, photographs) that are of high quality and help describe your topic. The article must also contain a minimum of 10 references and 6 of these must be from primary sources (i.e., journal articles). Your ScienceBite article should be written for an audience of university students, faculty and professionals. This assignment is designed to enhance your understanding of key concepts and develop your scientific literacy about a topic that you select. You will need to find scientific journal articles from well-respected primary sources and newspaper articles from well-respected secondary sources (see example list below or use any of the sources that @OSUEnViRo is currently following on Twitter).

Examples of published ScienceBite articles are available in the book “Environmental ScienceBites”, which was written by students who had previously taken ENR2100. This book is available free of charge from The Ohio State University and can be downloaded to any electronic device from the Apple iBooks Store or Google Play: [https://digitalbookstore.osu.edu/book/environmental-sciencebites](https://digitalbookstore.osu.edu/book/environmental-sciencebites).


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

**Quizzes taken on CARMEN**
Approximately one quiz will be given every other week. Quizzes will be announced during lecture. Many of these questions will be based on assigned readings and videos. You will take these quizzes either during lecture or online using Carmen. Your lowest quiz grade (or the one quiz that you forget to take) will be dropped.
Participation
Attendance and participation is important to your success in this course. Participation will be based on assignments given at the end of a class session, one each week. The assignment will not be posted on Carmen. If you are absent on the day a participation assignment is given, you can email me to receive the assignment details only if the absence is valid (e.g. a documented illness, a student organization/sports related activity, or for some other legitimate reason). Two essential rules must be followed: (1) non-illness absences must be requested BEFORE the class session for which the absence will occur; and (2) the absence requires documentation which must be on official letterhead, a legible signature, and a phone number to the clinic/coach/student organization advisor for verification.

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
F  0.00 to  59.99

Feedback and Response Time
I am providing the following list to give you an idea of my intended availability throughout the course. (Remember that you can call 614-688-HELP at any time if you have a technical problem.)

Grading and feedback: For large weekly assignments, you can generally expect feedback within 7 days.

E-mail: I will reply to e-mails within 24 hours on school days. I 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, I will NEVER send emails to these other accounts.

Course Policies

Discussion and communication guidelines
The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

• Tone and civility: Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm isn't always apparent.

• Citing your sources: When we have academic discussions, please cite your sources to back up what you say.

Policies for this online course

• Quizzes and exams: You must complete the midterm and final exams yourself, without any external help or communication. Weekly quizzes are included as self-checks without points attached.

• Written assignments: Your written assignments should be your own original work. In formal assignments, you should follow APA style to cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in--but no one else should revise or rewrite your work.

• Reusing past work: In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. If you want to build on past research or revisit a topic you've explored in previous courses, please discuss the situation with me.

• Falsifying research or results: All research you will conduct in this course is intended to be a learning experience; you should never feel tempted to make your results or your library research look more successful than it was.

• Collaboration and informal peer-review: The course includes many opportunities for formal collaboration with your classmates. While study groups and peer-review of major written projects is
encouraged, remember that comparing answers on a quiz or assignment is not permitted. If you're unsure about a particular situation, please feel free just to ask ahead of time.

Ohio State's academic integrity policy
Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University’s Code of Student Conduct, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University’s Code of Student Conduct and this syllabus may constitute “Academic Misconduct.”

The Ohio State University’s Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: “Any activity that tends to compromise the academic integrity of the University, or subvert the educational process.” Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University’s Code of Student Conduct is never considered an “excuse” for academic misconduct, so I recommend that you review the Code of Student Conduct and, specifically, the sections dealing with academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the University’s Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me. Other sources of information on academic misconduct (integrity) to which you can refer include:
- The Committee on Academic Misconduct web pages (COAM Home)
- Ten Suggestions for Preserving Academic Integrity (Ten Suggestions)
- Eight Cardinal Rules of Academic Integrity (www.northwestern.edu/uacc/8cards.htm)

Statement on Title IX
Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

Accessibility accommodations for students with disabilities
Requesting accommodations
If you would like to request academic accommodations based on the impact of a disability qualified under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, contact your instructor privately as soon as possible to discuss your specific needs. Discussions are confidential.

In addition to contacting the instructor, please contact the Student Life Disability Services at 614-292-3307 or ods@osu.edu to register for services and/or to coordinate any accommodations you might need in your courses at The Ohio State University. Go to http://ods.osu.edu for more information.
## Course Schedule (tentative)

<table>
<thead>
<tr>
<th>Date</th>
<th>Topics: lecture topics subject to change, exact dates of quizzes &amp; exams will be announced during lecture, so come to class!</th>
<th>Textbook Chapters** or Directions</th>
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</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Introduction, Environmental Literacy</td>
<td>Appendix,1,2</td>
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<tr>
<td>Week 2</td>
<td>Scientific Process, Persistent Pollutants</td>
<td>2,3</td>
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<tr>
<td>June 17</td>
<td>QUIZ 1 – Using Web of Science</td>
<td>Due on-line using CARMEN</td>
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<tr>
<td>Week 3</td>
<td>Human Populations, Energy and Ecosystems</td>
<td>4,8,16,17</td>
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<tr>
<td>June 24</td>
<td>ScienceBite TITLE, ABSTRACT AND 10 REFERENCES ARE DUE (15% of your ScienceBite Grade)</td>
<td>Due on-line using CARMEN</td>
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<tr>
<td>Week 4</td>
<td>Earth’s Climate and Biomes, Population Ecology, Community Ecology</td>
<td>8,9,10</td>
</tr>
<tr>
<td>July 1</td>
<td>MIDTERM EXAM (Covers lectures from June 8 – June 29, NO CLASS)</td>
<td>Due on-line using CARMEN</td>
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<tr>
<td>July 4</td>
<td>NO CLASS, Happy Independence Day!</td>
<td>Have Fun!</td>
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<tr>
<td>Week 5</td>
<td>Freshwater Resources, Protecting Earth’s Freshwater</td>
<td>14,15</td>
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<tr>
<td>July 8</td>
<td>FIRST DRAFT DUE (20% of your ScienceBite grade)</td>
<td>Due on-line using CARMEN</td>
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<tr>
<td>Week 6</td>
<td>Protecting Earth’s Atmosphere, Environmental Cost of Coal</td>
<td>18,20</td>
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<tr>
<td>July 15</td>
<td>PEER REVIEWS ARE DUE (20% of your ScienceBite grade)</td>
<td>Due on-line using CARMEN</td>
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<tr>
<td>July 15</td>
<td>QUIZ 2 – PBS Frontline HEAT</td>
<td>Due on-line using CARMEN</td>
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<td>Week 7</td>
<td>Environmental Cost of Oil</td>
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<tr>
<td>July 22</td>
<td>FINAL DRAFT ARTICLE DUE (45% of your ScienceBite grade)</td>
<td>Due on-line using CARMEN</td>
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<tr>
<td>Week 8</td>
<td>Alternative and Renewable Energy</td>
<td>22,23</td>
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<tr>
<td>July 29</td>
<td>QUIZ 3 - TBA</td>
<td>Due on-line using CARMEN</td>
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<tr>
<td>July 29</td>
<td>FINAL EXAM, 8:00 am-9:45 am (Cumulative; covers lectures from June 8 – July 27)</td>
<td>Take exam on-line using CARMEN</td>
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*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. I will address any errors on this syllabus during lecture. 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.

**Chapter numbers are derived from the 2nd Edition of the textbook, Environmental Science for a Changing World, by Houtman, Karr, and Interlandi.