

INTRODUCTION to ENVIRONMENTAL SCIENCE
EVR 1001 3 SEMESTER HOURS
SYLLABUS AND COURSE OUTLINE, Fall SEMESTER, 2017

NOTE: There are **TWO** Sections of this course. You are **REQUIRED** to come to the section that you are signed up for.

CLASS MEETING TIMES (Section 1): Tu,Th: 12:30-1:45
PLACE: FLH 255

CLASS MEETING TIMES (Section 2): Tu,Th: 2:00-3:15
PLACE: FLH 255

NOTE: TopHat (<https://tophat.com/>) is required for this class.

Instructors: Dr. Mike Stukel mstukel@fsu.edu; room 323 OSB
Dr. Rob Spencer rgspencer@fsu.edu; room 303 OSB

TA's: Tristyn Bercel tbercel@fsu.edu; room 505 OSB (TopHat Quiz Make-up)

Casey Luzius cr11g@my.fsu.edu; room 331A OSB
Taylor Shropshire tas14j@my.fsu.edu; room 303 OSB
Matt Ware mw15w@my.fsu.edu; room 435A OSB
Bryan Keller bkeller@fsu.edu; room 429 OSB

Office hours: Stukel – Wed 1:00-3:00 PM – 323 OSB
Spencer – Wed 1:00-3:00 PM – 303 OSB
Bercel – Fri 2:00-4:00 PM – 505 OSB

Required textbook:

Essential Environment: The Science behind the Stories, 5th Edition by Withgott & Laposata (ISBN- 978-032198457).

Purpose/Objectives At the end of this class students:

1. will be able to describe the relationships between components of the natural world and the effect of the built world upon it.
2. will be able to analyze environmental problems and identify the risks caused by them.
3. will have a basic knowledge of hazardous materials.
4. will understand basic concepts of air and water pollution, especially nutrient pollution.
5. will be able to describe solid and liquid waste disposal and treatment issues.

In addition

Scientific Method and Reasoning.

Students will demonstrate the ability to:

- think critically and cogently about causal relationships with scientific reasoning.
- assess previous experimentation and published scientific results.
- critically examine and evaluate scientific observation, hypothesis or model construction.
- articulate a variety of issues created by the complex interactions among science, technology, and society.
- use scientific perspectives to evaluate contemporary problems facing society.

This Class will be a combination of independent reading of the textbook and lectures by the instructors.

<u>Week</u>	<u>Dates</u>	<u>Topic</u>	<u>Text</u>	<u>Instructor</u>
1	Aug 28-Sept 1	Key themes in env sci / Population	W&L Ch1&Ch6	Stukel / Spencer
2*	Sept 4-8	Critical thinking in env sci	B&K Ch2	Spencer
3	Sept 11-15	Unique Earth / Energy & hydrologic cycles	W&L Ch2 Garrison Ch7	Stukel
4*	Sept 18-22	Biogeochemical cycles	W&L Ch2	Stukel
5	Sept 25-29	Ecosystems & Ecology	W&L Ch4	Stukel
6*	Oct 2-6	Biodiversity, Conservation biology & Ecological Restoration	W&L Ch3&Ch8	Stukel / Spencer
7	Oct 9-13	Fossil Fuels / Climate Change	W&L 11/15 Hough Ch4	Spencer / Stukel
8*	Oct 16-20	Climate Change / Mid-term review	W&L Ch 14	Stukel
9	Oct 23-27	Mid-term exam / Climate Change Impacts: Ecosystems		Stukel
10	Oct 30-Nov 3	Climate Change Impacts: Humankind / Assignment	W&L Ch14	Stukel
11*	Nov 6-10	Agriculture and Food Supply	W&L Ch7	Spencer
12	Nov 13-17	Water Resources & Pollution	W&L Ch12	Spencer
13*	Nov 20-24	Waste Management / Thanksgiving	W&L Ch17&Ch10	Spencer
14	Nov 27-Dec 1	Environmental Health /Alternative Energy	W&L Ch16	Spencer
15*	Dec 4-8	Env policy & economics / Review for final	W&L Ch5	Spencer
Final Exams	Dec 11-15	Final Exams		

Section 1 (12:30 - 1:45): Final Exam is on Wednesday December 13th at 7:30-9:30am

Section 2 (2:00 - 3:15): Final Exam is on Friday December 15th at 3:00-5:00pm

All final exam schedules are available at this weblink:

registrar.fsu.edu/registration_guide/fall/exam_schedule/

ALL Students will find it necessary to take detailed notes during lectures/videos and will be encouraged to contribute to class discussion. As needed the instructors will provide useful literature to read as well as the suggested text in the table above. Students will also be expected to familiarize themselves with nomenclature used in discussions and lectures. Nomenclature may be presented as vocabulary items on quizzes and tests.

Course Evaluation by Point System: Class attendance is required.

Your grade will be determined from 5 weighted components

- Class attendance & participation (5 points per class, 140 points total)
- Quizzes (generally given every other Thursday based on the previous 2 weeks material) (20 points each – 140 points total). Quizzes will be in weeks 2, 4, 6, 8, 11, 13 and 15.
- Midterm (140 points)
- Final (210 points)
- Scientific Reasoning assignment (70 points)
- Total # points = **700** – A=>**92.5%** (>**647 points**), A->=**90%** (>**630 points**)
B+=>**87.5%** (>**612 pts**), B=>**82.5%** (>**577 pts**), B->=**80%** (>**560 pts**)
C+=>**77.5%** (>**542 pts**), C=>**72.5%** (>**507 pts**), C->=**70%** (>**490 pts**)
D+=>**67.5%** (>**472 pts**), D=>**62.5%** (>**437 pts**), D->=**60%** (>**420 pts**)

Class attendance and participation are mandatory. Attendance & participation will be assessed using the TopHat system (<https://tophat.com/>). Throughout each lecture, questions will be asked using the TopHat system. Questions can be answered using a smart phone and TopHat, a tablet or laptop, or by texting answers in from a “dumb” phone. We will give full participation credit for every question that you answer (whether correctly or incorrectly). We will give 150% participation credit for every question that you answer correctly. This means that if you correctly answer every question, you will receive 210 out of 140 participation points. This basically means that you could get a 67% on the final and still receive a 100% overall in the class. It really pays for you to come to class and pay attention!

Scientific Reasoning Assignment.

Students will read a controversial scientific paper and break into groups to discuss it. In this discussion they will think critically about the causal relationships, critically examine the hypotheses and model construction, and articulate the issues and tensions created between science and society, and evaluate the work in terms of the contemporary problems facing society. Each student will write a 5 page paper expounding on these concepts following the discussion groups. Each paper will be evaluated by the TA and course instructor. The papers would also be examined by a teaching assistant or by the instructor to check for duplication. This assignment will be given in week 9, discussed in class in week 10 and submission is required by 5pm on Tuesday November 21st (the end of the Tuesday before Thanksgiving break) via the online course management system.

Grading of this assignment will be based on the following rubric. Where 4 is A, 3 is a B, 2 is a C and 1 is a D.

Scoring level	Scientific Reasoning	Evaluate model and assumptions	Interaction of science and society and problems facing society from a scientific perspective
4. Accomplished	Able to clearly demonstrate scientific reasoning, understands what a hypothesis is and how they are tested.	Clearly understands and articulates what a scientific model is and how they are applied.	Clear articulates the problems facing society from a scientific perspective
3. Competent	Shows more advanced understanding of hypotheses and testing.	Shows clear comprehension of basic scientific concepts when applied to model construction	Shows comprehension of the interaction of science and society
2. Developing	Has some comprehension of scientific reasoning, understands what a hypothesis is and how they are tested	Able to state basic principles of a model	Provides simplistic or incomplete explanations
1. Beginning	Not able to clearly state what scientific hypotheses are or how they are tested.	Does not understand concept of a model	Does not understand the difference between scientific approaches and political/religious solutions

Note that attendance, quizzes and assignment are similar in weight to the final & midterm scores. Often, the main factor that differentiates scores (A's from C's) is attendance & participation.

Policy on missing class. Everyone will have excellent reasons to miss a class on occasion. Generally we would prefer not to be in a position of judging which reasons are acceptable and which are not. Since we have made it possible to achieve full participation points (by correctly answering in class questions), even if some classes are missed, we will not be giving participation points to students who have to miss class.

Policy on making up quizzes. We will give 7 quizzes. Makeup will occur on Friday afternoons, from 3 to 4pm. Make-up's will not be given in advance and advance notice must be given that the student will miss class. To get a makeup quiz, you must have a valid reason, like illness to yourself or a family member, something reasonable, and you should contact the TA as noted above responsible for TopHat quiz make-up.

Policy on final grades. All grades are final and not subject to negotiation.

READING ASSIGNMENTS (tentative, subject to change).

Tentative reading assignments are shown in the syllabus. However, specific reading assignments will be given during the preceding lecture (and posted to the online course

management system). Please do your reading prior to coming to class (this will help you to earn participation points, which are a large portion of your grade).

Reasonable Accommodation

Students with disabilities needing academic accommodations should:

1. Register with and provide documentation to the Student Disability Resource Center (SDRC).
2. Bring a letter to the instructor from the SDRC indicating you need academic accommodations. This should be done within the first week of class. (This syllabus and other class materials are available in alternative format upon request.)

Academic Honor Code see <http://fda.fsu.edu/Academics/Academic-Honor-Policy>

Students are expected to uphold the Academic Honor Code published in The Florida State University Bulletin and the Student Handbook and on line at the above web address. The Academic Honor System of Florida State University is based on the premise that each student has the responsibility:

- (1) to uphold the highest standards of academic integrity in the student's own work;
- (2) to refuse to tolerate violations of academic integrity in the University community, and
- (3) to foster a high sense of integrity and social responsibility on the part of the University community.

University Attendance Policy: Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

Academic Honor Policy: The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to ". . . be honest and truthful and . . . [to] strive for personal and institutional integrity at Florida State University." (Florida State University Academic Honor Policy, found at: <http://fda.fsu.edu/Academics/Academic-Honor-Policy>)

Americans With Disabilities Act: Students with disabilities needing academic accommodation should: (1) register with and provide documentation to the Student Disability Resource Center; and (2) bring a letter to the instructor indicating the need for accommodation and what type. This should be done during the first week of class.

This syllabus and other class materials are available in alternative format upon request.

For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center 874 Traditions Way 108 Student Services Building Florida State University Tallahassee, FL 32306-4167 (850) 644-9566 (voice) (850) 644-8504 (TDD)

sdrc@admin.fsu.edu; <http://www.disabilitycenter.fsu.edu/>

Free Tutoring from FSU For tutoring and writing help in any course at Florida State University, visit the Academic Center for Excellence (ACE) Tutoring Services' comprehensive list of tutoring options - see <http://ace.fsu.edu/tutoring> or contact tutor@fsu.edu for more information. High-quality tutoring is available by appointment and on a walk-in basis. These services are offered by tutors trained to encourage the highest level of individual academic success while upholding personal academic integrity.

Syllabus Change Policy

Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change without advance notice.

The Liberal Studies for the 21st Century Program at Florida State University builds an educational foundation that will enable FSU graduates to thrive both intellectually and materially and to support

themselves, their families, and their communities through a broad and critical engagement with the world in which they live and work. Liberal Studies offers a transformative experience; this course has been approved as meeting the Liberal Studies requirements and thus is designed to help you become a critical appraiser of scientific theories and the facts that support them.