ENVS 131—**Introduction to Environmental Studies**
Oxford College of Emory University, Spring 2018

COURSE INFO

- Instructor: Dr. Melissa Hage, melissa.hage@emory.edu, Room OSB 224, 770-784-8345
- Lecture Time: Monday, Wednesday and Friday, 1:15 – 2:20 pm
- Lecture Location: OSB 223
- Textbook: Principles of Environmental Science: Inquiry and Application, 8th Edition, by Cunningham and Cunningham
- Lab Time: Monday 2:30 – 5:30 pm
- Lab Location: OSB 201

OFFICE HOURS

- Wednesday 2:30 pm – 4:30 pm
- By appointment or chance. I am usually in my office from 8:30 am – 5:00 pm, except for when I am teaching classes or attending meetings.

OVERVIEW

The environment impacts our way of life in many aspects (e.g., food and fiber production, resources for building shelter and infrastructure, water supplies, etc.). Adverse impacts to this environment affect the well-being of humans and other living organisms. Therefore, it is essential that students (majors and non-majors alike) understand natural environmental systems, physical and social causes of environmental problems, and strategies to mitigate or manage these issues.

This course provides the basic scientific knowledge and understanding of how our world works from an environmental perspective. It provides a framework of knowledge into which additional information can be readily integrated over a lifetime of continued learning. Topics covered include, but are not limited to, general issues on the environment, basic principles of ecology and ecosystem function, human population growth, production and distribution of food, water resources and management, water pollution, hazardous chemicals, air pollution and climate change, biodiversity and its conservation, energy resources, and sustainability.

OVERARCHING STUDENT LEARNING OBJECTIVES

The two **overarching goals** of this course are:

1) to peak your curiosity about the Earth they inhabit, gain knowledge about the natural world, and to share that curiosity and knowledge with others. You should be able to observe the world around them, marvel at what they see, and understand the processes at work.

2) to impart to you a relevance of scientific knowledge and processes so that you can become more critical thinkers and better decision-makers – economically, politically, socially, and personally.

At the completion of this course, you will be able to:

- Discuss the major themes in environmental science

- Understand the natural world and the human impact on its processes, and how those impacts can be mitigated
- Observe the natural world, generate questions, and evaluate evidence
- Use relevant field techniques and analyze real-world data
- Communicate scientific information both verbally and in writing

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GRADING AND ASSESSMENT

	%
Exam 1	10
Exam 2	10
Exam 3	10
Exam 4	10
Lab	30
In-Class and Homework Assignments	8
Final Project	8
In-Class Quizzes	8
Participation	6
Total	100

Letter Grade	Percent Equivalent
A	94-100
A-	90-93
B+	87-89
B	84-86

Letter Grade	Percent Equivalent
B-	80-83
C+	77-79
C	74-76
C-	70-73

Letter Grade	Percent Equivalent
D+	67-69
D	60-66
F	0-59

*Note: I do not curve grades. I also do not ***give*** grades. **Your final grade in this class will be based on what you have earned. If you do not pass lab, you will fail the course.**

** I am more than happy to discuss your overall grade or a grade you earned on a specific assignment. However, **I will not do so via email**. If you would like to discuss your grade, please come and see me in person during office hours or make an appointment.

COURSE POLICIES

Grading policies: Grades are assigned on a straight scale (not curved). In the case of grades near the cutoff, good attendance, class participation, and improvement over the course of the semester can have a (+) marginal effect on your final grade. Poor attendance and class participation can likewise have a (-) marginal effect.

Weekly Readings: The textbook readings are the primary source of information for this course. Class periods will be spent reviewing, discussing, and illustrating concepts presented in the text, thus *it is essential that you read the assigned materials before class meets on the assigned date*.

Canvas: Most of the course materials (syllabus, lecture notes, handouts, readings, videos, assignments, etc.) will be posted on Canvas. Several assignments will be submitted via Canvas. It is imperative that you feel comfortable using this website. If you have questions, please do not hesitate to come and talk to me about navigating Canvas.

In-Class and Homework Activities: Class attendance is important and you are expected to show up to class on time, prepared, and ready to participate. You should bring your textbook, calculator, pencil, and more than one color pen to every class. That being said, you are all adults and capable of making the decision about whether you chose to come to class or not. Thus, attendance will not be taken in the traditional way. There will be in-class activities designed to check for preparation and understanding, generate discussion, encourage participation, and deepen comprehension of the course material. For some of these activities, full points will be awarded for completion. For other activities, points will be awarded based on correctness. Some activities will be completed in class; other activities will need to be finished outside of class. There will be no make-ups for missed activities; however, the lowest 3 grades will be dropped at the end of the semester. There are no excused absences for lecture. The dropping of the 3 lowest activities grades act as your missing class freebies and can be used for any reason (illness, studying, travel, athletic event, family emergency, wild monkeys breaking into your dorm, etc.). Any additional missed classes will count as zeros for those days' activities. Missing class regularly will have a detrimental effect on your grade. There will be a handful of homework assignments given throughout the semester, but these assignments will NOT be allowed to be any of the 3 lowest activities grades dropped.

Class Participation: You are required to actively participate in class discussions in order to enhance and facilitate student dialogue and learning. You are encouraged to share your experience, perspective, questions, and analysis of text, reading materials and assignments. No one is allowed to be a spectator! Therefore, you must be prepared by reading and having assignments completed prior to class. Please bring the required text, readings, and questions you have to each class!

You will receive up to 6% for attendance and participation in discussions, as follows:

- Little or no attendance – 0 points; Spotty attendance – 1 point; Regular attendance – 2 points
- Rare or uninformed contributions to discussion – 1 point; Occasional useful contributions to discussion – 3 points; Frequent useful contributions to discussion – 4 points.

In-class quizzes: Quizzes will be administered throughout the semester to check for content understanding and to ensure you are engaging in distributive studying. These will be cooperative quizzes:

Part 1: You will independently take the quiz
Part 2 (optional): You can re-take the quiz, but will work in a group

Your final quiz score is based upon 75% from Part 1 and 25% from Part 2. If you choose not to complete the group quiz or if your grade on Part 1 is higher than Part 2, only your grade from Part 1 will count. Bottom line: taking the cooperative quiz will not negatively affect your quiz grade. Some quizzes will be announced, others will not, and quizzes cannot be made up. However, I will drop the lowest quiz grade to help offset possible extenuating circumstances such as illness or absence due to an athletic competition. Quizzes are administered at the start of class. Late arrivals will not be given additional time and cannot take Part 1 if Part 2 has already or is about to begin.

Late Assignments: All assignments will be due at the start of class, whether the assignment is due in class or on Canvas. If you are late to class on a day an assignment is due, the assignment will be considered late. Assignments will be accepted up to 3 days past the due date. Scores on late assignments will be penalized 10 points each day they are late. So, if an assignment is due in class on a Monday at 1:15 pm and you turn it in between Monday at 1:16 pm and Tuesday at 1:15 pm, you will

lose 10 points. If you turn it in between Tuesday at 1:16 pm and Wednesday at 1:15 pm, you will lose 20 points. If you turn it in between Wednesday at 1:16 pm and Thursday at 1:15 pm, you will lose 20 points. You may not turn in the assignment after 1:15 pm on Thursday.

Exams: There are 4 exams: 3 in-class exams and a final. The three in-class exams will cover course materials directly preceding them. The final will be partially comprehensive. This means that the majority of the exam will cover the course material directly preceding it, however some of the larger-scale concepts that we keep coming back to throughout the semester will also be on the exam. Ordinarily, exams cannot be made up. If you miss an exam due to an excused absence, you must notify me prior to the time of the exam and schedule a time to take the exam. If the absence is not excused, you will be given a zero for the missed exam. Students are cautioned that any excuse for missing an exam will come under sever scrutiny and the instructor will make the final decision regarding whether or not a missed exam is acceptable. **All exam and due date conflicts must be resolved within the first two weeks of the semester.**

The college sets the final exam schedule. Leaving early for rides or flights, vacations, relatives' or friends' weddings or graduation, jobs, having more than one exam on one day, etc. are NOT considered valid reasons to request an earlier or later exam date/time.

Environmental Controversy Project: Students will find a partner in class and investigate a disputed environmental science issue that is most interesting and meaningful to both students. You and your partner will take opposite sides of the debate for your specific topic. You will communicate your side of the issue using a medium you are most comfortable with (each person can choose their own medium), such as:

- Children's book
- Song
- Photographs
- Short video
- Podcast
- Website
- Letter to the editor
- Letter to a politician
- K-12 classroom activity
- Popular press article
- Brochure/pamphlet/infographic
- Community outreach event
- Etc…

Products that involve some sort of implementation (ex., class room activity) are not required to be implemented for credit on the assignment, but the planning and materials are the relevant products produced. Although the product is a big part of the project, you will also turn in a written report that will require you to meet with your partner to discuss what you each have learned about your side of the debate and that addresses the following questions:

- What is the background information about your environmental issue that is central to understanding the debate and what is the significance of this issue (why should I or others care about this issue)?
- How is your chosen communication medium suited to the argument you want to make?
- What do you think the most convincing argument is for your side and why?
- What did you learn from your partner regarding the other side of the argument? What was their most convincing argument?
- What about your product is designed to address the argument raised by your partner?

We will be working on these projects throughout the semester. You and your partner will present your products to the class during our last lab in a 10-min presentation. Due dates are as follows:

Feb. 12 – Controversy Proposal

> Each set of partners will submit a proposal where they distill their environmental controversy down to a yes or no question and provide three arguments for each side. Each person also needs to list their chosen medium for presenting their side of the argument.
>
> Example question: Should the government pay to relocate people from disaster prone areas?

March 26 – Project Check-In #1

April 16 – Project Check-In #2

April 30 – Final Project and Reports Due

Sharing Science News: Science dramatically affects the society in which we all live. New discoveries and applications are constantly being discovered. It is important for you as students to know and understand the impact science has in your daily life. As a means of encouraging you to be aware of the world around you, and to develop critical thinking skills, "Sharing Science News" assignments will be required. These will be turned in as an assignment and as a discussion on Canvas and count towards your homework grade.

Two "Sharing Science News" writing assignments are assigned this semester. These essays will be your evaluation of a recent environmental science news story in the newspaper, on the radio, or on the Internet. Recent means within the last 3 months. Basic Information: 2 pages, double-spaced, 12-point font, 1 inch margins on all sides. Make sure there is a citation/link for the article you reviewed and any other sources you may have used. You should, however, be thoughtful and analytical in your reading and writing about the articles you choose. If you do not understand anything you have read, get another article! Additionally, you will also be responsible for responding to one of your peer's posted summaries. A grading rubric is found below:

Mechanics	**Total Points Possible: _____/5**
Article is cited in report and can be easily located	_____/2
Grammar and Spelling	_____/2
Organization and Content	**Total Points Possible: _____/21**

• Article summarized in your own words
  o Answers the 6 questions:
  ▪ Who's involved in the article?
  ▪ Where is the situation happening?
  ▪ What is happening in the article?
  ▪ When did the situation occur or when was the info gathered?
  ▪ Why is the article important to science?
  o Provides your opinion/point of view on the article's topic; any biases evident
	_____/6
	
	_____/5

(who wrote/funded)? ○ Expresses the impact of the article on your own personal life, community, and/or world ○ Explains how the article is relevant to the field of science and to class	_____/5 _____/5
Response to Peer's Report • Demonstrates careful reading and inquiry of peer's summary and opinion • Respectfully responds to peer's stated opinion. Do you agree or disagree and why? • Expresses impact of the article to own personal life, community, and/or world	**Total Points Possible: _____/10**
Total Score	**_____/35 points**

Classroom Conduct: In order to maintain a good learning environment, rude and/or disruptive behavior will NOT be tolerated. You will be asked to leave the class if your behavior is deemed inappropriate. The following are considered rude and disruptive:

(1) Consistently arriving late to class
(2) Private conversations during class
(3) Lack of attention during class
(4) Habitually leaving and returning to class in one class period
(5) Allowing your cell phone to ring/vibrate on numerous occasions
(6) Paying more attention to your cell phone than to what's going on in class

Religious Holidays: Instructors are encouraged, not required, to accommodate students' academic needs related to religious holidays. Please make every effort to negotiate your religious holiday needs within the first two weeks of the semester; waiting longer may compromise your instructor's ability to extend satisfactory arrangements. If you need guidance negotiating your needs related to a religious holiday, the College Chaplain, Rev. Lyn Pace, ppace@emory.edu, Candler Hall 202, is willing and available to help. Rev. Pace is not tasked with excusing students from classes or writing excuses for students to take to their professors. Emory's official list of religious holidays may be found at http://www.religiouslife.emory.edu/faith_traditions/holidays.html

Cell Phones: The use of cell phones is not allowed in the classroom and the laboratory, unless you are given specific instructions to use them. Please turn off your phone before you come to class and leave your phone at the front during exams. Cell phones cannot be used as a calculator on any quizzes or exams.

Personal Computer: If you would like to take notes on your personal laptop in class you must come and talk to me first. Studies have shown that students retain material better if they manually write, rather than type class notes. Additionally, hand writing notes allow for the use of sketches, which is very important in science, and requires some processing of the information in order to decide what is important to write in your notes. Class PowerPoint Presentations will be provided to you after class via Canvas. Use of laptops to surf the web, login to Facebook, Skype or other networking/chat during class is unprofessional and unacceptable and will result in the loss of the privilege to use a laptop during class.

Caution: Students often think that they don't have to come to class because the lecture slides are posted on the web. Those students who skip commonly perform poorly on exams! This is a college level course with a tremendous amount of material that many students have never been exposed to before. Exams require that you do more than just memorize material; exam questions require you to think *and* apply what you have learned to specific problems presented to you. PowerPoint lectures will be posted online so that you can review and write material down after the class, as opposed to trying to **listen** to what is being discussed *and* **write down** what is on the slide *and* **look** at the visual material being presented. While you may be able to do 1 or 2 of the 3 tasks, it is a very rare person who can do all three of them at the same time without missing something!

Honor Code: All examinations and all work for credit in this course comes under the regulations of the Honor Code (http://oxford.emory.edu/catalog/regulations/honor-code.html). Your signature on your work attests to your upholding the Honor Code. Please read the information on **plagiarism** and always ask if you have any questions how the Honor Code applies to any assignment.

Policy regarding students with disabilities: The Office of Accessibility Services (OAS) works with students who have disabilities to provide reasonable accommodations. In order to receive consideration for reasonable accommodations, students must contact OAS and complete the registration process. Faculty may not provide disability accommodations until an accommodation letter has been processed; accommodations are not retroactive. Students registered with OAS who receives a letter outlining specific academic accommodations are strongly encouraged to coordinate a meeting time with their professor to discuss a protocol to implement the accommodations as needed throughout the semester. This meeting should occur as early in the semester as possible. Contact OAS for more information at (770) 784-4690 or oas_oxford@emory.edu. Additional information available at: http://equityandinclusion.emory.edu/access/students/index.html.

Lab Sessions: Introduction to Environmental Studies is a field-based observational science, and as such, laboratory sessions provide an excellent opportunity to learn environmental concepts and methods through applied activities. Labs are meant to supplement lecture material – to give opportunities for you apply new knowledge. You will work in research teams. Most of the labs will take place outside – expect to be outside even if conditions are uncomfortable and dress appropriately (layers, rain jackets, etc.). Being in the field can also be uncertain – although lab is scheduled to end at 5:30pm, keep in mind that traffic and other unforeseen events can delay that time and plan any Monday evening meetings accordingly.

Just as assignments are meant to be a dialogue, the entire lab period is also meant for interactions – between you and your research team, between you and I, and between all of us and our environment. Take time to sit and observe your surroundings when possible.

Acceptable Laboratory Absences: There are no excused absences for lab. However, on rare occasions, illness, family emergencies and certain school-sponsored events may make it necessary for a student to miss a lab session. You must notify me BEFORE the day of the absence in all but the most extreme emergencies. In all cases, I will make the final decision regarding whether or not an absence is acceptable. An unexcused absence from lab results in a 5-point reduction in the final grade. Two unexcused lab absences will result in the failure of the course.

Lab and Field Safety:

Lab Notes:

- No food or drink
- Close-toed shoes required
- Cover your thighs
- Know the safety equipment in the lab (first aid kit, eye wash station, etc.)
- If you have any questions or concerns, ASK!

Field Notes:

- Wear layers (t-shirt, fleece/sweatshirt, rain jacket)
- Sturdy close-toed shoes
- Bug spray and sunscreen
- The field is uncertain, so be flexible
- If you have any questions or concerns, ASK

Field Dangers:

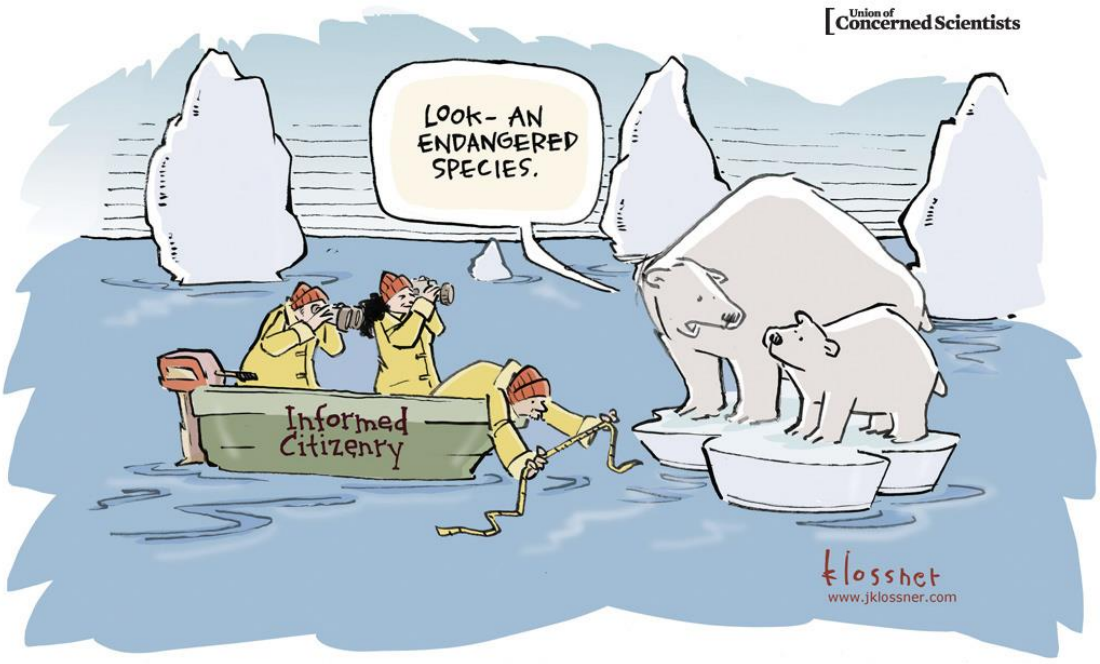
- Fire ants
- Venomous snakes
- Spiders
- Poison ivy

SYLLABUS OF LECTURE AND LABTOPICS

	Date	Lecture/Lab Topic	Textbook	HW/ Class Quizzes
W	Jan. 17	Class Cancelled		
F	Jan. 19	Class Overview and Intro to ENVS	Ch. 1	
M	Jan. 22	Sustainability and Tragedy of the Commons *Lab: Scientific Investigation*	Ch. 1; Hardin, 1968	Tragedy of the Commons Reflection
W	Jan. 24	Matter, Energy and Life	Ch. 2	Questionnaire; Quiz 1
F	Jan. 26	Biogeochemical Cycles	Ch. 2	
M	Jan. 29	Biogeochemical Cycles *Lab: Intro to the Piedmont Forest*	Ch. 2	
W	Jan. 31	Evolution, Species Interactions, Bio Communities	Ch. 3	Quiz 2
F	Feb. 2	Evolution, Species Interactions, Bio Communities	Ch. 3	
M	Feb. 5	Biomes and Biodiversity *Lab: Soils I*	Ch. 5	Quiz 3
W	Feb. 7	Biomes and Biodiversity	Ch. 5	
F	**Feb. 9**	**Exam 1**		
M	Feb. 12	Human Population Dynamics *Lab: Soils II*	Ch. 4	Proposals Due
W	Feb. 14	Human Population Dynamics	Ch. 4	
F	Feb. 16	Food and Agriculture	Ch. 7	Quiz 4
M	Feb. 19	Food and Agriculture *Lab: Terrestrial Investigation*	Ch. 7	
W	Feb. 21	Sustainable Farming Practices		
F	Feb. 23	Water Resources and Pollution	Ch. 11	Quiz 5
M	Feb. 26	Water Resources and Pollution *Lab: Wetland Investigation*	Ch. 11	SSN #1
W	Feb. 28	Water Resources and Pollution	Ch. 11	
F	Mar. 2	Environmental Health and Toxicology	Ch. 8	Quiz 6
M	Mar. 5	Environmental Health and Toxicology *Lab: Practical Exam 1*	Ch. 8	SSN#1 Reply
W	**Mar. 7**	**Exam 2**		
F	Mar. 9	TBD		
M	Mar. 12	SPRING BREAK		
W	Mar. 14	SPRING BREAK		
F	Mar. 16	SPRING BREAK		
M	Mar. 19	Atmosphere, Weather and Climate *Lab: Mineral and Rock ID*	Ch. 9	
W	Mar. 21	Chasing Coral		
F	Mar. 23	Climate Change	Ch. 9	Climate Change Fact or Fiction
M	Mar.26	Climate Change *Lab: Stream Assessment I*	Ch. 9	Project Check-In #1
W	Mar. 28	Geologic Resources	Ch. 12	Quiz 7

F	Mar. 30	Geologic Resources	Ch. 12	
M	Apr. 2	Energy *Lab: Stream Assessment II*	Ch. 13	Energy Pros and Cons; Quiz 8
W	Apr. 4	Energy	Ch. 13	
F	Apr. 6	Energy	Ch. 13	SSN #2
M	Apr. 9	Energy *Lab: Introduction to Granite Outcrops*	Ch. 13	Quiz 9
W	**Apr. 11**	**Exam 3**		
F	Apr. 13	Solid and Hazardous Waste	Ch. 14	SSN #2 Reply
M	Apr. 16	Solid and Hazardous Waste *Lab: Primary Succession Investigation*	Ch. 14	Project Check-In #2
W	Apr. 18	Urbanization	Ch. 15	Quiz 10
F	Apr. 20	Urbanization	Ch. 15	
M	Apr. 23	Environmental Policy *Lab: Practical Exam 2*	Ch. 16	Quiz 11
W	Apr. 25	Environmental Policy	Ch. 16	
F	Apr. 27	Environmental Policy	Ch. 16	
M	Apr. 30	Class Wrap-Up *Lab: Environmental Advocacy Presentations*		Quiz 12
Th	**May 3**	**Final Exam – 9:00 – 12:00**		

**** This is an ambitious schedule subject to change during the semester.** Updated syllabi will be posted to Canvas and an email will be sent out when changes have been made.
** **Not all homework assignments are listed here.** You will have additional homework assignments given throughout the semester.



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