



**DEPARTMENT:** Environmental Health

**COURSE NUMBER:** EH 500

**SECTION NUMBER:** 1

**CREDIT HOURS:** 2

**SEMESTER:** S2020

**COURSE TITLE:** Perspectives in Environmental Health

**CLASS HOURS AND LOCATION:** Th 8:00AM - 9:50AM  
CNR Auditorium

**INSTRUCTOR NAME:** Jeremy A. Sarnat

**INSTRUCTOR CONTACT INFORMATION:**

**EMAIL:** jsarnat@emory.edu

**PHONE:** 404-712-9725

**SCHOOL ADDRESS OR MAILBOX LOCATION:** CNR 2029

**OFFICE HOURS:** By appointment

**Teaching Assistant(s):**

Aaron Blakney	ablakne@emory.edu
Cristina Meza	cmeza2@emory.edu
Alicia Wun	amwun@emory.edu

**COURSE DESCRIPTION**

EH 500 is a survey course designed to introduce public health students to basic concepts of environmental sciences, to the methods used to study the interface of health and the environment, to the health impacts of various environmental processes and exposures, and to the public health approach to controlling or eliminating environmental health risks. To address these concepts, basic environmental health principles (exposure assessment, environmental toxicology, environmental epidemiology, risk assessment), as well as specific environmental health issues including water and air pollution, hazardous chemical/waste exposures, climate change, and environmental drivers of disease ecology, will be covered.

## MPH/MSPH FOUNDATIONAL COMPETENCIES:

- Explain effects of environmental factors on a population's health
- Explain biological and genetic factors that affect a population's health
- Explain an ecological perspective on the connections among human health, animal health and ecosystem health (e.g., One Health)

## COURSE LEARNING OBJECTIVES:

Upon completion, students will be able to:

- Name the principal environmental exposures that threaten human health
- Describe sources of these exposures and their pathways to humans
- Discuss how upstream processes (urbanization, housing, transportation, energy use, industry/work organization, migration, globalization) create environmental risks for health
- Explain the types of evidence used to assess the health consequences of these exposures, including toxicology, epidemiology, and risk assessment
- Summarize known and suspected health consequences of these exposures
- Cite major preventive approaches used in environmental public health
- List major legal and policy approaches used in the United States to control environmental health hazards
- Apply systems thinking tools to a public health issue
- Define major features of environmental health hazards in developing countries

## EVALUATION

Evaluation will be based on your scores on two in-class exams and group discussions of the readings. These exercises are designed to assess your understanding of lecture materials and readings. The exams are in the form of multiple choice and short answer questions.

Final Grade		≥ 95 points	A
Exam I (3/5)	37 points	85 – 94 points	A-
Exam II (4/23)	53 points	78 – 84 points	B+
ADG questions	10+ points	75 – 77 points	B
(up to 15 possible)		70 – 74 points	B-
		50 – 69 points	C
		< 50 points	F

## COURSE STRUCTURE

EH 500 is a survey course designed to introduce public health students to basic concepts of environmental sciences, methods used to study the interface of health and the environment, health impacts of various environmental processes and exposures, and public health approaches to controlling or eliminating environmental health risks. While Dr. Sarnat, as course coordinator, will present many of the topics throughout the semester, guest speakers will be brought in, periodically, to supplement instruction by presenting material within their respective fields of expertise.

*Exams:* Exam I, worth 37 points, will be given in class on March 5th and will be 50 minutes long. If, for some very extenuating reason, you cannot take the exam that day, a make-up exam must be arranged with Dr. Sarnat and be taken prior to the scheduled exam dates. Exam II, worth 53 points, will be given once on April 23rd during our regularly scheduled class time and will occupy the entire 1 hour and 50 minutes; there will be no make-up exam. While the final is not cumulative (i.e., it only covers material from the second half of the course), there are key overarching concepts and themes addressed throughout the entire semester that may appear on Exam II. Both exams are closed book and closed note.

**PLEASE NOTE: The final will be administered during the last session of the semester; not during the designated exam week time slot.**

### Foundational Competencies and Knowledge Addressed:

- Select communication strategies for different audiences and sectors
- Evaluate policies for their impact on public health and health equity
- Apply systems thinking tools to a public health issue
- Explain effects of environmental factors on a population's health
- Explain biological and genetic factors that affect a population's health
- Explain an ecological perspective on the connections among human health, animal health and ecosystem health (e.g., One Health)

*Article Discussion Groups (ADGs):* A problem for large classes like EH 500 is the lack of interaction between students and speakers, and among students. "Article Discussion Groups" (ADGs) are one way we try to stimulate in-class and out-of-class discussion, deepen your understanding of the readings, and give you a chance to get to know and learn from your fellow students in other RSPH departments.

There will be 5 ADG assignments throughout the semester, as specified in the course schedule below. Each student will be placed in a five-person ADG at the beginning of the semester (ADG rosters will be posted on Canvas).

Your responsibility as part of this group will be to read and discuss assigned articles on the weekly topic and collectively submit a relevant question on the reading to the Canvas site. A link to each paper can be found in the Assignment tab on the EH 500 home page. Members of each ADG should work together to read, understand, and work

towards formulating a coherent and engaging question for discussion. For this, your group will receive 2 points. Questions that raise particularly insightful points and are selected to be read aloud in class will earn 3 points. (If you are called on in class and not there to respond, you will not receive bonus points). We will ask that you confirm participation of all ADG members in drafting the question. Failure to participate, even if your ADG group submits a question, will result in a grade of 0 for that assignment.

There is not a concrete formula for developing a suitable discussion question. However, each ADG question should demonstrate a deep understanding of the study and should seek to require the audience to leverage the information presented in the study to evolve their approach or thinking about the issue. In this sense, questions that address explicit knowledge that can easily be found in the paper or in another source are not considered robust. Once a question has been developed it can be submitted through the Submit Assignment tab.

Questions will be submitted by 12:00 noon on the Tuesday prior to Thursday's class. Instructions for submission will be posted on Canvas Information. (The sole exception to this is ADG #3, which is due the Tuesday following Thursday's class). Each week an ADG question is due, the instructor, TAs, and speakers will select several questions to be read aloud by students and answered by the speaker during that week's lecture.

#### Foundational Competencies and Knowledge Addressed:

- Select communication strategies for different audiences and sectors
- Explain effects of environmental factors on a population's health
- Explain biological and genetic factors that affect a population's health

## **COURSE POLICIES**

As the instructor of this course I endeavor to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me and the Office for Equity and Inclusion, 404-727-9877.

**ATTENDANCE.** One of the worst aspects of the spring EH 500 session is the 8 AM start time. I hate it, you hate it. I'm uncomfortable making attendance mandatory or taking weekly roll for graduate students. That said, I promise you at least two things regarding attendance and EH 500. First, this is a course that you get out what you put in - you will enjoy and benefit much more from EH 500 if you come to class. Second, you will find that the exams will be much easier to prepare for and successfully complete if you attend class. Exam material is taken from the in-class content, exclusively, and I frequently stress overarching concepts, themes, and interpretations in class to help you prepare for the exams.

**COURSE CANVAS SITE:** <https://canvas.emory.edu/courses/67485>; course title is EH500: Perspectives in Environmental Health – Spring 2020;

*TEXT (Optional):* Environmental Health: From Global to Local. 3rd Edition. Howard Frumkin, Editor. Jossey-Bass. San Francisco. (You may use the 1st and 2nd edition of this text as well). The text is available as an eBook through the Woodruff Library (<http://discover.emory.edu>). Using this text throughout the semester will enrich your understanding and appreciation of the in-class content. For those considering going into a field within Public Health, a solid environmental health reference text should be part of any complete professional library. The page numbers in the syllabus correspond to the 3rd edition of the eBook text.

## **RSPH POLICIES**

### **Accessibility and Accommodations**

Accessibility Services works with students who have disabilities to provide reasonable accommodations. In order to receive consideration for reasonable accommodations, you must contact the Office of Accessibility Services (OAS). It is the responsibility of the student to register with OAS. Please note that accommodations are not retroactive and that disability accommodations are not provided until an accommodation letter has been processed.

Students who registered with OAS and have a letter outlining their academic accommodations are strongly encouraged to coordinate a meeting time with me 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 Accessibility Services for more information at (404) 727-9877 or [accessibility@emory.edu](mailto:accessibility@emory.edu). Additional information is available at the OAS website at <http://equityandinclusion.emory.edu/access/students/index.html>

### **Honor Code**

**You are bound by Emory University's Student Honor and Conduct Code.** RSPH requires that all material submitted by a student fulfilling his or her academic course of study must be the original work of the student. Violations of academic honor include any action by a student indicating dishonesty or a lack of integrity in academic ethics. *Academic dishonesty refers to cheating, plagiarizing, assisting other students without authorization, lying, tampering, or stealing in performing any academic work, and will not be tolerated under any circumstances.*

The RSPH Honor Code states: "Plagiarism is the act of presenting as one's own work the expression, words, or ideas of another person whether published or unpublished (including the work of another student). A writer's work should be regarded as his/her own property."  
([http://www.sph.emory.edu/cms/current\\_students/enrollment\\_services/honor\\_code.html](http://www.sph.emory.edu/cms/current_students/enrollment_services/honor_code.html))