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# ES 490 Honors

## PRACTICING INTEGRATED ENVIRONMENTAL RESEARCH

Spring 2021  
Wednesdays 11-1:30

Professor Anne Rademacher  
Office: 285 Mercer 704  
Office Hours: By appointment

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### Course Overview

This course explores the intellectual and practical challenges of formulating integrated environmental research. Its centerpiece is your individual, independent research project. Throughout the semester, we will examine the core theoretical and methodological tools that allow environmental studies researchers to think and work in a way that integrates analytics from the biophysical and social sciences.

Specifically, we will address the following questions:

What is the difference between problem formulation and problem-solving? How do different epistemologies condition specific ways of 'seeing' and identifying environmental problems?

How do specific methodological approaches enable or constrain particular kinds of environmental knowledge?

What dimensions of the social and natural world do specific epistemologies foreground and background?

You will formulate a clear research question, relate it to major academic literature, and develop, pursue, and complete a comprehensive and appropriate integrated research strategy for addressing that question – your honors thesis in environmental studies.

### Evaluation

1. Attendance and Active Class Participation (20%)
2. Précis work (20%)
3. Final Honors Thesis (30%)
4. Final Presentation (20%)
5. IRB exam (10%)

### Class Format: Seminar

We meet on Wednesdays. Attendance and participation are mandatory for all sessions. This will ensure that you get the most out of the lecture content and the readings. All class content will be clarified through guided and informal discussion, and course participants will take turns leading discussion. We will also use class time to explore data, to develop research skills, and to learn from one another.

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### Course Commitments

- Mutual respect: careful listening and active discussion with everyone in the class. We're in this together, and we all have things to learn and things to teach.
- Careful and thorough engagement with course materials is the *only* way to get the most out of the class.
- Clear communication regarding unavoidable absences or incomplete work: If anything (e.g., religious observance, family duties, illness) hinders your participation in this course, please speak with me *in advance* of a necessary absence.
- Unexcused absences adversely affect your grade. This is in fairness to your colleagues.
- Give credit where credit is due: plagiarism is a serious offense. We check all work to be sure it is original and your own. It's not worth the risk.
- No food is permitted during our class sessions. Even in Zoomland.
- Please be patient with e-mail. I try to respond to class e-mail within 24 hours, but this cannot always be guaranteed. My response time will be slower on weekends and may sometimes exceed 24 hours. Your best bet: speak to me directly before, or just after, a class meeting. Plan ahead so that you can avoid email as a medium for dealing with questions that require immediate attention or detailed conversation.

## Major Due Dates

- **Precis papers:** as indicated on syllabus
- **Final Presentations Begin: April 21 & 28**
- **Final Thesis: May 5**
- **Dean's Research Conference: May 7**

\*Apply by **March 12** to the Dean's Undergraduate Research Conference: <https://cas.nyu.edu/undergraduate-research/undergraduate-research-conference.html>

Please review information about the DURF Research Grant here: <https://cas.nyu.edu/undergraduate-research/deans-undergraduate-research-fund/DURFG.html> and note that April 2 is the spring application deadline.

*Please note that to assure fairness in grading, late assignments are never accepted.*

## HONOR CODE AND ABILITIES

All written work in this course must be original and composed exclusively by you, the author. You must acknowledge in writing any assistance you receive from published or unpublished literature, other students, textbooks, the internet, or any other source. Plagiarism is a serious offense and will be immediately referred to the Dean's office.

Academic accommodations are available to any student with a chronic, psychological, visual, mobility, learning disability, or who is deaf or hard of hearing. Students should please register with the Moses Center for Students with Disabilities at [212-998-4980](tel:212-998-4980). NYU's Henry and Lucy Moses Center for Students with Disabilities /726 Broadway, 2nd Floor /New York, NY 10003-6675 /Telephone: [212-998-4980](tel:212-998-4980)/ Voice/TTY Fax: [212-995-4114](tel:212-995-4114)/ Web site: <http://www.nyu.edu/csd>

## Readings

All readings are available through Classes, Bobst Library, and the NYU Bookstore. You are required to read assigned texts **before class, by the day they are listed on the syllabus**. The Classes site will be the most updated resource for weekly readings, assignments, and other materials.

## Precis papers, Class discussions, and Participation

In the first half of the semester, you will prepare a short (3-page) précis of the specific week's readings, and come prepared to lead a substantive class discussion on the key issues the readings raise. Your précis will be posted to Classes before class meets, and will be available to the entire class. A précis addresses the following:

1. **How did the author formulate the core question in this article?**
2. **What is the author's core argument, and why does this argument matter?**
3. **What forms of evidence does the author use to substantiate this argument?**
4. **What forms of evidence are missing? What questions does this argument raise?**

5. How can you connect this reading to other readings and guiding questions for the course? Why is this connection significant?

Note that "how to" readings that discuss specific methods should be addressed as follows:

1. What is the methodological technique -- in your own words?
2. What dimensions of the human ecosystem is this methodological technique best suited to addressing?
3. What kinds of data/ways of knowing and understanding social-environmental change does this methodological technique inform?

## Weekly Schedule

### Feb 3: The Challenge of Studying Complex Environmental Systems + a visit from Dr. Natasha Zaretsky

Review past ES Honors Thesis topics and abstracts here: <https://as.nyu.edu/environment/undergraduate-program/student-awards/honors-in-environmental-studies.html>

James Speth, "The Green Transition and the Next System." <https://thenextsystem.org/learn/stories/introduction-green-transition-and-next-system>

Kaiser, D. In retrospect: The Structure of Scientific Revolutions. *Nature* 484, 164–165 (2012). <https://doi.org/10.1038/484164a>

Read these pieces, and **prepare a statement** of the general research topic you intend to investigate for your Honors Thesis. What forms of disciplinary expertise do you intend to draw from? In what ways is the research you envision integrative? What is the scale at which you intend to gather and analyze data? Remember that primary research addresses "how" and "why" questions. The "what" questions are answered in order to provide the background knowledge you need to undertake responsible primary research. **Your statement will be uploaded to a Classes file by 5pm on Monday, Feb 8. Note that you will also be preparing précis essays for next week's class.**

### Feb 10: Formulating a Research Question, Exploring the Facets of your Topic

Come to class prepared to present the following to the seminar group:

1. What thesis topic will you focus on?
2. What background knowledge/experience do you have on this topic? If you have no prior knowledge about it, what interests you about this topic? Why do you think it's important?
3. Bring a clear example of the research product on which you wish to base your honors project. If it's an academic article, what disciplinary audience / journal? If it's multimedia, bring an example you wish to emulate. Be able to clearly identify your target audience (graduate school admissions committee? Editor of an academic journal? The "general public" (which one)? A specific advocacy group or initiative?

Rademacher, Cadenasso, and Pickett. From Feedbacks to Coproduction: toward an integrated conceptual framework for urban ecosystems. *Urban Ecosystems*, 1-12. <https://doi.org/10.1007/s11252-018-0751-0>

Ogden, Laura. Forest Ethnography: an approach to study the environmental history and political ecology of urban forests. *Urban Ecosystems* 22:49-63.

Anand and Rademacher. Scale and History in the Urban Age. *Antipode*

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Prepare a précis for two of the three articles above. Come to class prepared to discuss all four, as methodological guides and as ways of thinking about your own research topic differently. **Your précis papers for the Feb 10 class are due to Classes by 5pm on Monday, Feb 8. Likewise, prepare a précis for one of the Dove and Kammen chapters OR the Huang et al paper required for Feb 17. Upload this précis by 5pm on Monday, Feb 15. Come to class on Feb 17 prepared to discuss all readings.**

### **Feb 17: Conceptualizing Integrated Research: Formulating a Question is Harder than it Sounds**

Dove and Kammen, 2015. *Science, Society, and the Environment: Applying Anthropology and Physics to Sustainability*, Chapters 1-2. Available via Bobst online library.

Babbie, Earl. *The Practice of Social Research*. Chapter 5: Conceptualization, Operationalization, Measurement.

Huang, Zhou, and Cadenasso. 2011. Is everyone hot in the city? Spatial pattern of land surface temperatures, land cover and neighborhood socioeconomic characteristics in Baltimore, MD. *Journal of Environmental Management*.

*In addition:* write your research question, as you understand it at present. Sketch out the “what” dimensions of your topic, and then specify the “how” or “why” question that drives your research. Remember that a good research question usually prompts sub-questions that move from general (the question) to more specific (the sub-questions). Bring this to class and be prepared to present and discuss it. **For next week: prepare a summary of assigned readings for Feb 22 and upload it to the folder on our Classes site by 5pm Feb 22.**

### **Feb 24: How do I answer my “what” questions?**

Kanazawa. *Research Methods for Environmental Studies*. Chapters 3-8, Available to read online via Bobst.

Boellsdorf. 10 Myths about Ethnography.

+ following our library session, conduct one full week of review of available archival papers on your topic.

**By Next Wednesday, you are required to submit an annotated bibliography of 3 peer reviewed sources that are relevant to your topic.**

### **March 3: 11-noon: Crafting an Integrative Strategy; at 12:30 we will attend a departmental career event.**

Kanazawa. *Research Methods for Environmental Studies*, Chapters 9-13. Available via Bobst, electronically.

For today’s class, come prepared to sketch out a methodological design that follows from your research question and a week of archival work. We will do this exercise together, in class.

\*Be sure you have applied to the **Dean’s Undergraduate Research Conference** by March 12:

<https://cas.nyu.edu/undergraduate-research/undergraduate-research-conference.html>

### **March 10: Individual Consultations and Independent Research.**

Today each of you will have a one-on-one consultation with the professor, and you are strongly encouraged to devote the rest of the class period to undertaking the research for your thesis. You may also choose to schedule time with your faculty advisor at this stage...remember that you are required to meet with your advisor before Spring Break begins,

and provide a confirmation of that meeting.

**For next time: prepare a statement about the various ethical considerations that your research raises. Bring the statement to class with you, in a condition that is suitable to present and share with your colleagues.**

**March 17: the Position and Responsibilities of the Researcher**

<https://www.nyu.edu/research/resources-and-support-offices/getting-started-withyourresearch/human-subjects-research/tutorial.html>

<https://about.citiprogram.org/en/homepage/>

Scheper-Hughes, N. The Primacy of the Ethical. *Current Anthropology* 36: 3.

**For next time: Select two scholarly papers from your own research that pose what you regard to be a strong research question and an integrated methodological design. Prepare a brief presentation about these papers: what makes them a good example of ES research? Bring the presentation to class with you, in a condition that is suitable share with your colleagues.**

**March 24: Peer workshop: your thesis so far**

**March 31: Analytical Strategies and Making Claims**

Dove and Kammen, 2015. Science, Society, and the Environment: Applying Anthropology and Physics to Sustainability. Chapters 3-5. p 43-117. Available via Bobst, electronically.

**For next time: Select two scholarly papers from your own research that pose what you regard to be a strong analysis based on the research question. Prepare a brief presentation about these papers: what makes them a good example of ES research? Bring the presentation to class with you, in a condition that is suitable share with your colleagues.**

**April 7: Environmental Data and Statistical Analysis**

Koomy 2008. Chapter 13. All Numbers are not Created Equal. In *Turning Numbers into Knowledge*. Available via Bobst, electronically.

Jackson, J. & J. Jacquet. 2011. The shifting baselines syndrome: perception, deception and the future of our oceans. p 128-141 in *Ecosystem Approaches to Fisheries*. Cambridge University Press, Cambridge, UK.

**April 14: Peer Workshop: your final thesis drafts and Individual Consultations**

**April 21: Presentations, open to the ES and non-ES faculty community**

**April 28: Presentations, open to the ES and non-ES faculty community.**

**May 5: Final thesis is due in Class.**







