INTRODUCTION
The role of expertise is increasingly at the center of environmental policy and governance. Over the semester, we will develop an analytical understanding of the institutional environment within which expertise operates. Expertise can take many forms: advisors, expert committees, economic experts, private environmental consultants, carbon accountants, international organizations, and/or advocacy groups. We will consider the differences across these forms of experts, and what they contribute to the overall governance structure. Our purpose is to be critical but embracing of expertise in a way that helps us build better public policy.

We will derive our analysis from theory and apply it across a range of environmental policy issues such as banning plastics, managing fisheries, climate change, and endangered species. The course is not disciplinary focused but draws on fields of Environmental Sociology, Science and Technology Studies, and Political Science. Invited speakers – lawyers, scientists, NGO leaders, and industry experts – will speak from their professional experience on contemporary issues. We will learn to write policy memos, a specific form of writing common within the policy community. At the end of the course, students can expect to depart with a healthy skepticism toward any single narrative about expertise and learn to appreciate pluralism on matters of science and environmental policy.
COURSE OUTLINE
The course presents a broad overview of environmental policy issues. We will balance a deep theoretical understanding with many real-world cases.

- **Theoretically**, the class builds on contributions from Science and Technology Studies (STS), Policy Studies, Geography, Sociology, and Political Science. Readings comprise mainly of peer-reviewed journal articles but we also read book chapters, think tank reports, editorials, blogs, and videos.

- **Empirically**, we will discuss controversial environmental debates across domains of environmental regulation, environmental impact assessments, environmental certification, citizen science, and digital technologies. Through the cases, we will examine principal stakeholders, key arguments, and the institutional mechanisms through which expertise is incorporated into the design and implementation of environmental policies.

The course constitutes two modules.

**In Module 1**, we will consider major theoretical debates about the role of expertise in democracies. We will breakdown the debates on why expertise is important, fallibility of expert knowledge, and the outright risks to advancing an expert based approach.

**In Module 2**, we explore the different institutional forms for integrating and problematizing expertise. We go beyond theoretical puzzles, and analyze the practical trade-offs in building new environmental institutions. Module 2 meetings will tend to be more interactive than Module 1 as we deal with applied concepts. We will also host guest speakers in person or through skype. To optimize our time with the guests, we must come prepared for these sessions.

REQUIRED TEXTS

COURSE REQUIREMENTS AND GRADING

<table>
<thead>
<tr>
<th>Grading Components and Weights</th>
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Reading Reflections (5*4) | 20%
Policy Memo (3*10) | 30%
Prelim + Take-home Final (2*15) | 30%

1. ATTENDANCE (20%)
Attendance for all classes is compulsory. Expectations for participation go far beyond responding to questions when asked. When unclear about the material, please actively solicit responses from both the instructor and your classmates. Quite regularly, you will be asked to write a response to a pre-circulated prompt or do an in-class writing exercise. You are required to read course materials in advance and come to class prepared to ask and respond to questions. This course has a lot of reading and you are expected to come to class prepared. Reading volume will vary from week to week, but something around 60 pages of academic writing per week will be the norm. Please complete the readings BEFORE arriving at class on the day they are listed in the syllabus. Failing to do so, you will find it hard to follow what is going on in class, and may find yourself unprepared for in-class activities. Sometimes, you may be asked to come to class with a written on note responding to a pre-circulated prompt. Our weekly meetings will be far more valuable if everyone participates actively.

2. READING REFLECTIONS (20%)
You will be expected to write five 2-page (double-spaced) reflections on the readings. I will offer prompts to guide your response. In your essays, you will be expected to involve the texts directly and draw out broader themes. The exercise serves three objectives. First, this is a way to have you read specific materials more deeply. Second, putting your ideas down on paper forces you to articulate your ideas in a clear way. Lastly, this is a way for me to hear your reactions to the articles.

In order to encourage you to write freely, a submission will guarantee you the full four points for the assignment. You will not be evaluated on “correctness”. Having said that, I expect you to write clearly and carefully. Organizing your thoughts before penning them will help me understand where you are coming from.

3. POLICY MEMO (3*10%)
Students will be expected to complete three substantial writing assignments on a given policy theme (4 pages single-spaced). For students encountering policy memos for the first time, I assure you the training is useful. It is particularly so for students interested in careers in law and policy. The policy memo is a tightly argued piece of writing directed at a specific stakeholder or policy-maker. Memos are widely circulated within governments, international NGOs, and large companies as the way to share information in a clear, concise, and actionable manner. The focus is not on generating new insights but on working through existing concerns and arguments. In the final section, the memo must present a policy position for the intended reader to pursue. Students will be assessed on their ability to review, analyze, propose, and defend a particular course of action. Effective writing and analysis is a core skill set you will
develop through this course. More guidance and detail on the format and expectations will be provided closer to the first assignment.

4. PRELIMS (15*2%)
The course has one prelim and a take-home exam. The prelim will be held in class. The prelim is meant to force a review function; it is not meant to trick you. For the most part, the prelim will comprise a combination of short essay-styled (4–6 sentences) questions and a medium-length reflective essay. Questions will draw directly from readings, lectures, and discussions but independent critical thinking will be needed. Prior to the prelim, we will organize a review session where you can pose questions to me about the exam, course themes, and specific materials.

The final take-home exam will be a long-essay format and will focus on synthesis, reflection, and original insights. Consider it an extension of your reflection pieces but with more coherent literature engagement and argumentation. You will need to integrate and reflect on material across all areas of the course. A choice of prompts for the take-home essay will be provided two weeks prior to the deadline.

*EXTRA CREDIT: You will receive an extra credit (+2*3) for attending environment-themed lectures and discussions on campus. If you have one in mind, please share with me. If suitable, I will announce the event details to the rest of the class. Informing me after the fact will not qualify the event for extra credit.

To receive credit, you must submit a one-page (double-spaced) summary of the event with your critical reflections within one week of the event. In this essay, you are expected to summarize what motivated you to attend, your key takeaways from the talk, how the talk connects with course themes, and your own insights about the talk. There is a six-point limit (half a grade) on this. Events attended without prior notification to the instructor do not count for extra credit. This is a relatively easy and fun way to bump up your grades. Please capitalize on this.

III. COURSE POLICIES
This is a ‘living document’, which means I will regularly update the document and upload the most recent version on NYU Classes. You will also find additional documents on NYU Classes laying out specifics of all the assignments and the discussion sessions. Assignments are to be submitted directly through NYU Classes.

COMMUNICATION
This syllabus contains most of the information you will need about class logistics, readings, deliverables, deadlines etc. As a general policy, first look to the syllabus for answers to your question. If not in the syllabus, check NYU Classes. If you do not find an answer to your question here or online, you should definitely write to me. I will be available during office hours, by appointment (schedule here), and on-email. You are also invited to stop by my office
for a chat – casual or formal. It would be most productive for you and me to ensure that our interactions are toward substantive themes rather than about logistics. While it is not a formal rule, I expect all students to come see me in person at least once through the semester.

**SUBMISSION AND DEADLINE POLICY**

All assignments must be submitted electronically (MS–word compatible formats only) through NYU Classes. No handwritten work will be accepted without prior consent. More information about the actual submission process will be outlined closer to the deadlines.

Assignments turned in after the deadline will be reduced at the rate of one point per day (i.e. a paper that would otherwise receive 90 would receive 89 for delay between 1–24 hours). It is important to respect the deadline for our own self–discipline and in fairness to the trade–offs made by others to submit on time. The point deduction system is also a way to balance your own trade–offs. I understand that you have multiple priorities and this in–built flexibility is meant to help compute your options.

Under a limited set of conditions, a deadline extension may be granted. Conditions include documented emergencies (illness, family emergencies etc.) or circumstances cleared with the instructor (e.g. religious holidays). Extension requests will not be considered if the request is based on poor preparation or negligence.

**LAPTOP AND SCREEN POLICIES**

I do not follow any particular laptop or phone policy (laptops banned, laptops in first or last rows, etc.). But it is important that we establish some group rules early in the semester. I want us all to be mindful of the potential impact of laptops and phones on the quality of the learning experience and those around you. Used well, computers and phones are powerful tools for learning – for note taking, for collaborative group work, and for looking up class–relevant questions and items on the fly (which I encourage you to do). However, when used poorly, they distract you and those around you. I encourage all students to exercise common sense and respect for those around you. Shopping or checking social media during our meetings is certainly not permitted.

**ACADEMIC INTEGRITY**

Students are encouraged to work and study together within the bounds of NYU’s academic integrity policy. Sharing questions, ideas, and consulting with other students is important for learning. However, this permissible cooperation should never involve a student possessing a copy of all or part of work done by another student, in the form of an e–mail, an e–mail attachment file, a flash drive, diskette, cloud storage, or a hard copy. Should copying occur, both the student who copied work and the student who gave material to be copied would automatically receive a zero for the assignment. Penalty for violation of this Code can also be extended to include failure of the course and University disciplinary action.
Every student in the course must abide by New York University’s Policy of Academic Integrity (https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/academic-integrity-for-students-at-nyu.html). As the policy states, “NYU expects and requires its students to adhere to the highest standards of scholarship, research and academic conduct. Essential to the process of teaching and learning is the periodic assessment of students’ academic progress through measures such as papers, examinations, presentations, and other projects. Academic dishonesty compromises the validity of these assessments as well as the relationship of trust within the community. Students who engage in such behavior will be subject to review and the possible imposition of penalties in accordance with the standards, practices, and procedures of NYU and its colleges and schools. Violations may result in failure on a particular assignment, failure in a course, suspension or expulsion from the University, or other penalties.”

I encourage you to be mindful of the different kinds of academic integrity violations as detailed on the website. Always make sure in this class and elsewhere that the work you submit or present is entirely your own and any references to the work of others is clearly reported.

During the prelims, you must do your own work without talking to other students or use of any notes, other computers, or any other form external help. Talking is not permitted, nor may you compare papers, copy from others, or collaborate in any way. Any collaborative behavior during the examination will result in failure, and may lead to failure of the course and university disciplinary action.

STUDENT DISABILITY SERVICES
If you find yourself facing some personal challenge, I am available to discuss modifications to course expectations. If you have a disability, I encourage you to consult with the Henry and Lucy Moses Center for Students with Disabilities. In general, accommodations to students who have a documented disability (e.g., physical, learning, psychiatric, vision, hearing, or systemic) will follow university protocol. Personal difficulties can be easier to overcome through consultation with peers, family members, and experts. If facing personal challenges, reach out to as many people as you can, including the instructor.

IV. SCHEDULE

MODULE 1: THEORIZING SCIENCE AND DEMOCRACY
We build on the following tension: On one hand, there is growing demand for more science and more evidence-based policies but on the other, there is a weakening trust in scientific institutions, a characterization of experts as elites, and undemocratic. We discuss how the notion of an “expert” comes from and what it means to claim expertise. We then discuss some of the criticism of expanding the role of experts in environmental governance.
Wed 4–Sep: NO CLASSES (Instructor is at a conference)
- Please read the syllabus carefully and check the readings.
- No assigned reading. Come to the next class having read Merton.

Mon 9–Sep: What is Science? What is environmental policy?
- Introductions and syllabus review.

A) REGULATING RISK

Wed 11–Sep: Risk Assessment V Risk Management

SUN 15–SEP: READING REFLECTION 1 DUE 11:55PM
In your own words, present a summary of Merton's following statement: "The institutional goal of science is the extension of certified knowledge." What is does Merton mean by "institutional goal" and how do institutions of science organize to advance this goal. Provide your opinion on the importance of the stated goal, and whether Mertonian norms are a useful way to think about the role of science in society.

Mon 16–Sep: Enter the Risk Society
- Catching up on Jasanoff

Wed 18–Sep: Risk Society

Watch “Merchants of Doubt”. See trailer here.
- The movie is available on multiple online streaming platforms including NYU Library.
- Also see: YouTube, Amazon Prime. Depending on the platform, you may need to pay to watch the movie. A DVD is also available at the NYU library for free. Students are expected to watch the movie on their own time and money. We will discuss the movie during class next week, so please watch anytime between now and before next Wednesday.

Mon 23–Sep: Legal Case Study: Mass V EPA 2007
- Mass v EPA: Justice Steven’s statement
- Mass v EPA: Justice Scalia’s dissent
- (OPTIONAL) 2009 Endangerment Finding


**SUN 29–SEP: MEMO 1 DUE 11:55PM**
Proposal to regulate greenhouse gases.

**Mon 30–Sep: Case Study: GMO Controversy (Debate) – What role can science play?**

**Wed 2–Oct: When experts mismanage risks**

**SUN 6–OCT: READING REFLECTION 2 DUE 11:55PM**
Compare and contrast the role of scientists in the works of Sarewitz and the Merchants of Doubt movie. Where do the two align and where do they differ. Which approach to science-policy do you believe is most needed in resolving contemporary environmental controversies?

**Mon 7–Oct: When expert start to rule**
- Scott, James C. Seeing like a state: How certain schemes to improve the human condition have failed. Yale University Press, 1998 (Intro and Chapter 1)

**Wed 9–Oct: Blowing up “expert” as a category + Debrief Merchants of Doubt**

**Tue 15–Oct (Following 14–Oct schedule): Experts and Technocrats**
- Beck, Silke, “What does ‘Climategate’ tell us about Public Knowledge Controversies”.

**Pre-class (16th Oct) assignment:** Identify an environmental or climate scientist. Do some desk research and come to class with a response to the following: How do they fund their research? Potential sources:
- Websites
- Project documents/reports
- Potential collaborators
- Peer-reviewed articles – disclaimer statements
**Wed 16-Oct: Who should fund science?**

**SUN 20-OCT: READING REFLECTION 3 DUE 11:55PM**
Based on the readings on expertise and bureaucrats, write an essay on the problems with centralized knowledge. Present your own suggestions on how to strike a balance between expert-driven governance and the risks of technocracy.

**Mon 21-Oct: Democratize Science**

**Wed 23-Oct: Reviewing Module 1: Science and Democracy**

**MON 28-OCT: PRELIM 1**

**MODULE 2: INSTITUTIONAL MECHANISMS**

*In this module, we shift away from theoretical debates to specific institutional arrangements within which expertise comes to matter or not. We consider the importance of building formal and informal mechanisms through which experts are integrated into policy structures while also being held accountable for their policy involvement. Because this module involves guest speakers, scheduling in Module 2 is subject to change.*

**Wed 30-Oct: Introduction to Module 2: Solving science-policy problems**

**SUN 3-NOV: MEMO 2 DUE 11:55PM**
Analysis of EPA’s proposed Transparency Rule.

**Mon 4-Nov: Building future scientific institutions**
**Pre-class (4th Nov) assignment**: Select a science-based advocacy group. Do some desk research and come to class with a written response to the following:

- What is the mission of the organization?
- How does the organization go about its advocacy? Identify 1–2 strategies
- Do you think the organization is effective? Explain.
- If you were a part of the organization, what would you suggest they do differently?

We will spend some time working in groups to discuss each other’s organization and the instructor will collect the responses after class. So please bring them in writing.

**Wed 6–Nov: How science frames politics**


**SUN 10–NOV: READING REFLECTION 4 DUE 11:55PM**

What are some ways scientists become involved in public policy debates? What are some advantages and risks associated with the different ways? In your opinion, should scientists be more actively involved in policy debates? Defend your position with examples.

**MON 11–NOV: Science and legislature**


**Wed 13–Nov: GUEST SPEAKER: JACOB CARTER, UNION FOR CONCERNED SCIENTISTS**

TBD

**Mon 18–Nov: Scientific Assessment Panels (I)**

  
  o Chapt 1 and 5

**Wed 20–Nov: Scientific Assessment Panels (II) – Case analysis**

  
  o We will divide into groups to present cases on acid rain, ozone, and sea ice.

**SUN 24–NOV: READING REFLECTION 5 DUE 11:55PM**
Mon 25–Nov: Policy implementation

Wed 27–Nov: THANKSGIVING BREAK

Mon 2–Dec: Governance by indicators

Wed 4–Dec: TBD

**SUN 8–DEC: MEMO 3 DUE 11:55PM**
Proposal for boundary organization to provide endangered species science.

Mon 9–Dec: No classes (Replaced by movie)

Wed 11–Dec: No classes (Replaced by movie)

**SUN 15–DEC: TAKE HOME ESSAY DUE 11:55PM**