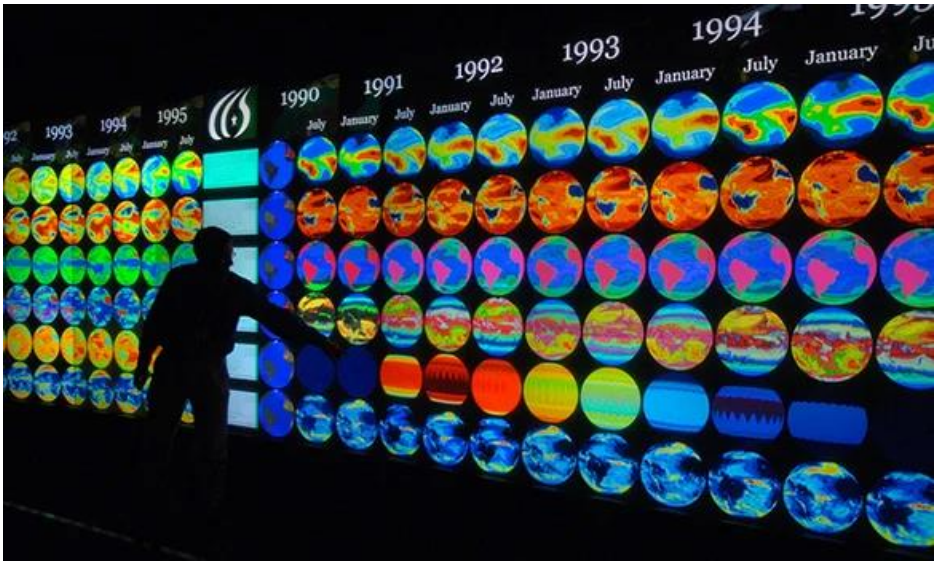
IDST 89 – 001 | "Says Who?": Climate Research and the Pursuit of Truth
Fall 2023



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Credits: 3

Requisites: None

Time and location:
Tuesdays and Thursdays, 9:30 – 10:45am
Genome Sciences Building, Room 1374

Office hours:
Tuesdays, 11:00am – 12:00pm
Mitchell Hall, Room 217

Thursdays, 11:00am – 1:00pm
Mitchell Hall, Room 217

Zoom link: https://unc.zoom.us/j/8613880798

I. COURSE DESCRIPTION

From battles in the courtroom to disputes in the comments section, scientific authority and its role in policy and practice are under increasing scrutiny. In 2021, more than 20% of adults in the United States were estimated to have little or no confidence in scientists and medical doctors. While distrust of research and academic institutions may seem like a uniquely modern issue, it is rooted in a broader history of anti-intellectualism, the "generalized suspicion and mistrust of intellectuals and experts". In fact, debates over the nature of truth and whose "truth" is considered fact have persisted since antiquity. This course will introduce students to different theories of knowledge (e.g., positivism, constructivism, critical theory) and examine how each impacts what types of questions are asked, how data are gathered and analyzed, and the ways by which evidence is appraised. We will apply these systems of knowledge production to ongoing debates about climate change and its impacts on health and well-being. Teachings will focus on the validity of the scientific process while critically reviewing its shortcomings, from embedded power imbalances to the proclamation of value-free research. Students will also engage in discussions and exercises focused on ways to improve upon the status quo, including identification of innovative scientific research methods that promote equity, sustainability, and inclusivity.

A. Student learning outcomes

Through active participation in this course, students will develop skills and knowledge that they will be able to apply throughout their undergraduate careers and beyond, including the ability to:

1. Understand different theories of knowledge and their impact on scientific inquiry, including positivism, constructivism, and critical theory.
2. Analyze the strengths and weaknesses of the scientific process and the current role of scientists and experts in society.
3. Evaluate ongoing debates about climate change, including the physical basis of climate change, its impacts on health and well-being, and policy responses.
4. Engage in discussions and exercises focused on improving the scientific process, including identifying innovative research methods that promote equity, sustainability, and inclusivity.
5. Apply critical thinking and analytical skills related to scientific inquiry, including the ability to evaluate diverse types of evidence, assess arguments, and identify biases.
6. Demonstrate effective communication skills, including the ability to articulate complex scientific concepts and engage in productive dialogue with others.
7. Describe the importance of scientific literacy and its impact on decision-making in both individual and societal contexts.

B. <u>IDEAs in Action course attributes, outcomes, and questions</u>

1. First-Year Foundations: First-Year Seminar
    a. Connect with a faculty member early in the educational process.
    b. Learn intensively among a small cohort of students.
    c. Apply methods for how scholars pose problems, discover solutions, resolve controversies, and evaluate knowledge.
    d. Produce knowledge through self-directed inquiry and active learning.
2. Focus Capacity: Ways of Knowing
    a. Recognize and use one or more approach(es) to developing and validating knowledge of the unfamiliar world.
    b. Evaluate ways that temporal, spatial, scientific, and philosophical categories structure knowledge.
    c. Interrogate assumptions that underlie our own perceptions of the world.

d. Employ strategies to mitigate or adjust for preconceptions and biases.
e. Apply critical insights to understand patterns of experience and belief.
f. Develop skills and knowledge required to answer the following questions.
    i. What norms and expectations do I take for granted?
    ii. What categories and concepts frame my assumptions, experiences, and beliefs?
    iii. What practices of investigation or inquiry best challenge those assumptions and expectations?
    iv. How can I consider whether my beliefs might be wrong?

II. COURSE STRUCTURE

The typical amount of time required to complete work for the course is 12 hours per week, including class attendance and synchronous activities. The target audience for this course is first-year undergraduate students.

A. Student expectations

1. Attend all classes and arrive on time, ready to learn.
2. Participate actively in class discussions and activities.
3. Complete all readings, assignments, and assessments on time and to the best of your ability.
4. Communicate with your instructors if you have questions or concerns.
5. Treat your peers and instructors with respect and create a positive and inclusive learning environment.

B. Instructor expectations

1. Attend all classes and arrive on time, prepared and organized.
2. Provide engaging and interactive instruction that meets the needs of all learners.
3. Provide clear and timely feedback on assignments and assessments.
4. Be available to meet with students during office hours or by appointment.
5. Treat students with respect and create a positive and inclusive learning environment.

C. Expectations for both students and instructors

1. Value and prioritize academic integrity, avoiding plagiarism or cheating.
2. Practice active listening and open communication.
3. Be responsive to emails and other forms of communication in a timely manner.
4. Work to create a collaborative and inclusive learning community where all students feel welcomed and valued.
5. Continuously strive to improve and learn from both successes and mistakes.

These expectations are intended to establish a clear understanding of the roles and responsibilities of both students and instructors, and to promote a positive and productive learning environment for all involved. We will review these policies and set class expectations during our first session.

D. Teaching philosophy

We are committed to working together to provide a seamless and cohesive learning experience for you while bringing our unique expertise and perspectives to course themes. We believe that effective teaching requires a multi-faceted approach that addresses the diverse needs and learning styles of enrolled students. To achieve this, we will employ a variety of instructional

methods, including lectures, discussions, group work, and hands-on activities. We will also use technology and multimedia tools to enhance the learning experience and create an interactive and immersive environment.

We recognize that every student brings a unique perspective and set of experiences to the classroom, and we will work to create a supportive and inclusive learning community that values diversity and promotes equity. We will encourage open dialogue and constructive feedback, with the goal of fostering a culture of mutual respect and understanding.

Our goal is not just to teach the course material, but also to equip you with the skills and knowledge you need to become critical thinkers, effective problem solvers, and lifelong learners.

E. Course materials
All course materials are freely accessible online. Supplementary texts that students may find valuable include “Science in a Democratic Society” (Philip Kitcher, 2011) and “Spacing Repetitions Over Long Timescales: A Review and a Reconsolidation Explanation” (Christopher Smith & Damian Scarf, 2017).

III. GRADING

A. Assignment weights
- Epistemic evaluations (20%, 5% per evaluation)
- Vocabulary packets (15%, 5% per packet)
- Assessment 1 (20%)
- Assessment 2 (20%)
- Final written reflection (20%)
- Participation (5%)

B. Grading criteria for each assessment

i. Epistemic Evaluations (EE)
At four different points throughout the semester, you will be asked to read a recent scholarly or newspaper article of your choosing. For each article, you will answer four questions that prompt you to critically assess the epistemological aspects of the article. This exercise is designed to help you build a ‘critical thinking reflex’, where you learn to question the source of information before assessing its quality. Each EE should be submitted as a PDF or Word document through the online Canvas portal.

1. Content (50%): The EE should apply concepts covered in class, including theories of knowledge, the process of scientific inquiry, and ongoing debates about climate change. The EE should demonstrate critical thinking skills and offer innovative suggestions for promoting equity, sustainability, and inclusivity.
2. Organization (20%): The EE should be well-organized and easy to follow, with a clear structure and logical flow. Submissions should follow the template provided on Canvas, with little to no alterations to the provided structure. Exceptions will be made if you need more space than is provided in the template to fully articulate your answer.
3. Clarity (15%): The EE should be clear and concise, with well-written sentences and proper grammar and punctuation. The EE should be easy to read and understand, even for someone who is not familiar with the course material.
4. Creativity (10%): The EE should demonstrate creativity and originality of thought.

5. References (5%): The EE should include appropriate references to the course material and other sources used to develop the evaluation. References should be cited using an established citation style, such as APA or MLA.

ii. Vocabulary packets

At the end of each of the three units for this course, you will be asked to turn in a vocabulary packet that defines and properly situates the technical terminology in each corresponding unit. This packet is meant to help you remember and be able to apply the terms and phrases taught in class. In accordance with Ebbinghaus's Forgetting Curve (see "Spacing Repetitions Over Long Timescales: A Review and a Reconsolidation Explanation"), we recommend you define terms upon first discovery. That is, you should complete the packets throughout the course of each unit as opposed to the days immediately before they are due. Each vocabulary packet should be submitted as a PDF or Word document through the online Canvas portal.

1. Content (50%): The vocabulary packets should be an accurate retelling of the assigned vocabulary words, including their definitions, uses, and relevant examples. The packets should also include any salient context or background information that helps to explain the meaning of the words.
2. Organization (20%): The vocabulary packets should be well-organized and easy to follow, with a clear structure and logical flow. The packets should use headings, subheadings, and other formatting features to aid in organization.
3. Clarity (20%): The vocabulary packets should be clear and concise, with well-written sentences and proper grammar and punctuation. The packets should be easy to read and understand, even for someone who is not familiar with the vocabulary words.
4. Creativity (10%): The vocabulary packets should demonstrate creativity and originality. Students should try to incorporate visuals, such as images or diagrams, to help illustrate the meaning of the words.

iii. Assessments 1 & 2

There will be an assessment at the end of Unit 1 and Unit 2. Assessment 1 asks you to interview someone outside of the course about a climate-related topic and present your findings to your classmates. Assessment 2 will ask you delve into the state of knowledge regarding climate in a region of your choice. All assessment grades will reflect the rubric below. More details will be given in class and shared via Canvas.

1. Content (50%)
2. Organization (20%)
3. Clarity (20%)
4. Creativity (10%)

iv. Final written reflection

A written reflection will take the place of an in-class final exam. You will be asked to summarize what you learned throughout the semester, specify times when your worldview or perspectives were challenged, and describe how knowledge and skills developed throughout the course can be applied to future work. In particular, you should draw on your experiences from the culminating in-class case study. Grades will reflect the rubric below. More details will be given in class and shared via Canvas.

1. Content (50%)
2. Organization (20%)

3. Clarity (20%)
4. Creativity (10%)

v. Participation

1. Active engagement (60%): You should demonstrate engagement with the course material by attending class regularly, arriving on time, being prepared for each class session, and participating in in-class activities. You should also attend office hours or other designated support sessions as needed to clarify concepts and ask questions.
2. Communication and support of peers (20%): You should regularly communicate with the instructors and your peers in a professional and respectful manner. This includes responding to messages in a timely manner and asking for clarification when needed. Peer feedback should be clear, constructive, and contribute to a positive and positive and inclusive learning environment.

C. Grading schema

A	93-100	**C**	73-76
A-	90-92	**C-**	70-72
B+	87-89	**D+**	67-69
B	83-86	**D**	60-66
B-	80-82	**F**	Below 60
C+	77-79		

D. Late work

We encourage you to reach out to any of the instructors if you have an assignment that you know will be late. We are flexible and understanding of life circumstances. *If you communicate with us what is going on, we will be able to offer appropriate strategies for supporting your progression through the course (e.g., extensions, alternative assignments) and potential resources for enhancing your learning and well-being.* If we don't hear from you and your work is later than 24 hours, you will lose 10 percentage points from the total grade for the assignments. You will lose 5 more percentage points for every additional 24 hours.

IV. COURSE POLICIES

A. Course technology

All course content, including readings and lectures, will be uploaded to or linked in Canvas. Students will submit assignments through the "Assignments" tab on Canvas. Perusall, a collaborative online platform for reading and annotating course materials, will be piloted. To enroll in the course's Perusall page, use the following code after creating your account: MILLER-QKJ8N.

B. Optional mask use

UNC-Chapel Hill is committed to the well-being of our community – not just physically, but emotionally. The indoor mask requirement was lifted for most of campus on March 7, 2022. If you feel more comfortable wearing a mask, you are free to do so. There are many reasons why a person may wear a mask, and we respect that choice.

C. Grade appeal

If you feel you have been awarded an incorrect grade, please share this with us. If we cannot resolve the issue, you may talk to our departmental director of undergraduate studies or appeal the grade through a formal university process based on arithmetic/clerical error, arbitrariness,

discrimination, harassment, or personal malice. To learn more, go to the Academic Advising Program website.

D. Syllabus changes
The instructors reserve the right to make changes to the syllabus, including project due dates and test dates. These changes will be announced as early as possible.

E. Attendance
Overall, class participation grades should reflect a student's effort and commitment to meaningfully engaging with the course material and their peers. Participation and attendance is graded not only in terms of quantity, but also quality. Students are expected to attend all classes in person, although there is the option to join remotely via Zoom if students are sick or have a suspected illness.

Only university-approved absences are officially recognized. Importantly, though, we understand that life happens and additional accommodations are sometimes needed. If this applies to you, please contact us as soon as possible and we will do our best to accommodate you.

As stated in the University's Class Attendance Policy, no right or privilege exists that permits a student to be absent from any class meetings, except for these University Approved Absences:

1. Authorized University activities.
2. Disability/religious observance/pregnancy, as required by law and approved by Accessibility Resources and Service or the Equal Opportunity and Compliance Office.
3. Significant health condition or personal/family emergency as approved by the Office of the Dean of Students, Gender Violence Service Coordinators, or the Equal Opportunity and Compliance Office.

F. Honor Code
Students are bound by the Honor Code when taking exams and in written work. The Honor Code of the University is always in effect; the submission of work signifies understanding and acceptance of those requirements. Plagiarism will not be tolerated. Please consult with us if you have any questions about the Honor Code.

The student-led Honor System is responsible for adjudicating any suspected violations of the Honor Code and all suspected instances of academic dishonesty will be reported to the Honor System. Information, including your responsibilities as a student, is outlined in the Instrument of Student Judicial Governance.

If you do not understand some aspect of the Honor Code, or how it applies to this course, ask the instructors. *Ignorance does not exempt you from its consequences*. If an honor violation is identified, the instructors will follow the approved Honor System procedures.

G. Be understanding of yourself and others
There are going to be many things that we as instructors and you as students cannot anticipate. There will be technical difficulties, scheduling mishaps, and accidental errors in presented content – on your end, perhaps, but on ours, most definitely. We believe it is possible to critically engage with these issues as they arise while still being compassionate. We will strive to embody and practice this daily and encourage you to offer grace to yourself and others.

H. Acceptable use
By enrolling as a student in this course, you agree to abide by the policies related to the acceptable use of IT systems and services at UNC-Chapel Hill. You may be asked to participate in online discussions or other online activities that may include personal information about you or other students in the course. The rights and protection of other participants are protected under the UNC-Chapel Hill Information Technology Acceptable Use Policy, which covers topics related to using digital resources, such as privacy, confidentiality, and intellectual property.

Consult the University website "Safe Computing at UNC" for information about data security policies, updates, and tips on keeping your identity, information, and devices safe.

I. Use of ChatGPT and Other AI
ChatGPT and other AI technologies can be powerful tools to help you in your education, although such tools should not replace original thinking and work. We therefore have developed ground rules and policies for the use of AI techologies in this course. Please don't hesitate to ask the instructors about circumstances that may not be covered in the below. Full disclosure: we have used ChatGPT here to help us craft our policies for its use in this course [OpenAI. (2023, August 8). ChatGPT (Version 4.0) Retrieved from https://openai.com].

- The use of AI technologies is for educational purposes only and should not involve any unethical or harmful activities and should not violate the Honor Code. Generating any content that violates academic integrity is prohibited. Students should critically evaluate and edit generated content to ensure accuracy and appropriateness as well as provide original thought.
- Students must properly cite the use of AI technologies in their assignments, just as you would with any other information source. For example: OpenAI. (Year, Month Day of Access). ChaptGPT (Version Number). Retrieved from https://openai.com.
- It is important that AI be used as a tool to enhance creativity and supplement your own ideas. It is not a replacement for your original thought process. Generated content should be critically analyzed and synthesized to create your own unique and original work.
- Be sure to thoroughly review and edit the content generated by AI technology to ensure accuracy, coherence, and alignment with the assignment's requirements. It is recommended to perform multiple iterations with the model to refine the output.
- AI technology is not flawless. It makes mistakes and has the potential for factual errors, biased responses, and inappropriateness. Therefore, use your discretion and critical thinking skills to evaluate the model's suggestions.
- Do not share any personal or sensitive information while interacting with AI. Only use secure and private platforms for communication with the model.
- As instructors, we are interested in the utility and possibilities of AI technology. Please share with us any feedback on your experience using AI for assignments, including any challenges you faced and how you overcame them.
- Although AI technologies may be able to help you find articles, they are not replacements for journal search engines such as Google Scholar. Therefore, do not rely on AI technologies if an assignment requires you to source primary literature or periodicals.
- Any misuse of AI technology, including plagiarism and claiming the output as your own work, can result in disciplinary actions per the University's policies and may result in a grade of zero for the assignment.

V. SERVICES & STUDENT RESOURCES

A. Accessibility Resources and Services
The University of North Carolina at Chapel Hill facilitates the implementation of accommodations, including resources and services, for students with disabilities, chronic medical conditions, a temporary disability, or pregnancy complications resulting in difficulties with accessing or engaging with learning opportunities. Accommodations are coordinated through the Office of Accessibility Resources and Service (ARS) for individuals with documented qualifying disabilities in accordance with applicable state and federal laws. See the ARS website for contact information or email ars@unc.edu.

Please communicate directly with your instructors about your accommodations! Relevant policy documents as they relate to registration, accommodations determination, and the student registration form are available online.

B. Counseling and Psychological Services (CAPS)
CAPS is strongly committed to addressing the mental health needs of a diverse student body through timely access to consultation and connection to clinically appropriate services, whether for short or long-term needs. Go to their website or visit their facilities on the third floor of the Campus Health Services building for a walk-in evaluation to learn more.

C. Title IX resources
Any student who is impacted by discrimination, harassment, interpersonal (relationship) violence, sexual violence, sexual exploitation, or stalking is encouraged to seek resources on campus or in the community. Reports can be made online to the EOC. Please contact the University's Title IX Coordinator (Elizabeth Hall, cehall@email.unc.edu), Report and Response Coordinators in the Equal Opportunity and Compliance Office (reportandresponse@unc.edu), Counseling and Psychological Services (caps@unc.edu; confidential), or the Gender Violence Services Coordinators (gvsc@unc.edu; confidential) to discuss your specific needs. Additional resources are available at safe.unc.edu.

D. Non-discrimination
The University is committed to providing an inclusive and welcoming environment for all members of our community and to ensuring that educational and employment decisions are based on individuals' abilities and qualifications. Consistent with this principle and applicable laws, the University's Policy Statement on Non-Discrimination offers access to its educational programs and activities as well as employment terms and conditions without respect to race, color, gender, national origin, age, religion, creed, genetic information, disability, veteran status, sexual orientation, gender identity, or gender expression. Such a policy ensures that only relevant factors are considered and that equitable and consistent standards of conduct and performance are applied.

If you are experiencing harassment or discrimination, you can seek assistance and file a report through the Report and Response Coordinators, the Equal Opportunity and Compliance Office, or online.

E. Learning Center:
The UNC Learning Center is a great resource both for students who are struggling in their courses and for those who want to be proactive and develop sound study practices to prevent falling behind. They offer individual consultations, peer tutoring, academic coaching, test prep programming, study skills workshops, and peer study groups. If you think you might benefit from

their services, please visit them in Student and Academic Services Building North or visit their website to set up an appointment.

F. Writing Center:
The Writing Center is located in the Student and Academic Services Building and offers personalized writing consultations as well as a variety of other resources. This could be a wonderful resource to help with your writing assignments in this course (and any assignments in your other courses). You do not need a complete draft of your assignment to visit; they can help you at any stage! You can chat with someone in the writing center or set up as appointment on their website.

VI. COURSE SCHEDULE *(topics and assignment dates subject to change)*

Week	Meeting 1	Meeting 2	Assignments
Unit 1 | Dominant Epistemologies: From the Hellenistic Period to Modern Day			
Week of 8/20	Course Introduction	What Does it Mean to "Know" Something?	Pre-class readings and preparation
Week of 8/28	Philosophical Argumentation and Debate	Pre-Modern Epistemologies Pt. 1: Skeptics and the Nature of Knowing	Pre-class readings and preparation ***EE 1 (due 9/5)***
Week of 9/4	*Well-Being Day – No Class*	Pre-Modern Epistemologies Pt. 2: Stoicism and Epicureanism	Pre-class readings and preparation
Week of 9/11	Modern Epistemologies Pt. 1: Rationalism and Empiricism	Modern Epistemologies Pt. 2: Positivism, the Scientific Method, and Feminist Critiques	Pre-class readings and preparation ***EE 2 (due 9/19)***
Week of 9/18	Modern Epistemologies Pt. 3: Social Sciences as Distinct from the Physical and Natural Sciences	Modern Epistemologies Pt. 4: Postmodernism and Ongoing Epistemological Debates	Pre-class readings and preparation ***Vocab packet 1 (due 9/28)***
Week of 9/25	Course Check-in and Unit Review	Assessment I: Structured Interview Preparation	Review Unit 1 course material Preparation materials for field trip
Unit 2 | Epistemology Informs Methodology: Interdisciplinary Approaches to Studying Climate Change			
Week of 10/2	Climate Concepts: Past, Present, and Future	Whose "Knowledge" is Valued in Public Discussions about the Climate?	Pre-class readings and preparation ***Field trip to Carolina Meadows (10/6, 12:45 – 2:15pm)*** ***Assessment 1 (due 10/12)***
Week of 10/9	The Intergovernmental Panel on Climate Change	*University Day – No Class*	Pre-class readings and preparation
Week of 10/16	Student Presentations: IPCC AR6 Synthesis Pt. 1	*Fall Break – No Class*	Pre-class readings and preparation for class presentations

			EE 3 (due 10/24)
Week of 10/23	Student Presentations: IPCC AR6 Synthesis Pt. 2	Student Presentations: IPCC AR6 Synthesis Pt. 3	Pre-class readings and preparation ***Vocab packet 2 (due 10/31)***
Week of 10/30	Synthesis Report Wrap-up: Key Takeaways and Regional Assessment	Whose Knowledge is Valued in Climate Research?	Pre-class readings and preparation for class presentations
Week of 11/6	Evaluating Claims that "Climate Change is a Hoax"	Course Check-in and Unit Review	Review Unit 2 course material ***Assessment 2 (due 11/9)***
Unit 3 | Epistemology Guides Practice: Strategies to Address the Climate Crisis			
Week of 11/13	Environmental Justice and Scholar Activism	Multi-Stakeholder Governance and Scholar Activism	Pre-class readings and preparation ***EE 4 (due 11/21)***
Week of 11/20	Case Study Day 1: Role Assignment and Debate Preparation	*Thanksgiving Break – No Class*	Pre-class readings and preparation
Week of 11/27	Case Study Day 2: Debate	Case Study Day 3: Debrief	Pre-class readings and preparation ***Vocab packet 3 (due 12/5)***
Week of 12/4	So, Now What?	*No Class*	Complete course evaluation form
Week of 12/11	Final exam period (8:00am session)	*No Class*	***Final written reflection (due 12/12)***