

Winter 2022
POL395/EPC390: Science and Knowledge in Global Climate Governance
Northwestern University
Thursdays 2:00 pm – 4:50 pm, Scott Hall 107
Updated January 6, 2022

Instructor

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Office Hours (virtual only):

Mondays 1:30 – 3:30; Wednesdays 3:00 – 5:00
Sign up for an appointment at
<http://calendly.com/kimberly-marion>); other
times available by appointment only

“What is hardest of all? That which seems most simple: to see with your eyes what is before your eyes.”

— J. W. von Goethe

“Research is formalized curiosity. It is poking and prying with a purpose.”

— Zora Neale Hurston

Course Description and Philosophy

Despite decades of climate science research, current climate action remains limited in its ability to effectively mitigate the impacts of climate change. Efforts to reduce emissions are well-intentioned attempts to avoid the most severe effects of climate change, but have yet to spur the magnitude of action required. In this course we will explore the intersections of climate science, traditional ecological knowledge, and climate justice to unpack how different knowledge systems inform and impact effective climate governance and policy. Often unrecognized in science and policy arenas, traditional ecological knowledge generates insights for strengthening efforts to effectively address climate change. In this course, we ask: to what extent and how do different knowledge systems gain and lose traction in different climate policy arenas? How, why, and with what effects are the science and policy of climate change far removed from the people most vulnerable to its impacts? Is the exclusivity of science—marginalization of knowledge systems and extricating climate science from climate change experiences—the greatest threat to effective climate action? And, how might policy arenas facilitate the introduction, deliberation, and circulation of plural worldviews and knowledge systems?

In this research seminar, students will directly engage with an ongoing collaborative research project that seeks to answer these questions. The seminar is structured to reflect the research process. Students enrolled in this course should consider themselves research apprentices and collaborators. There are three parts to this course: literature review, data analysis, and execution. In the first part of the course, we begin by first identifying and engaging with the empirical puzzles around science and knowledge in global climate governance to formulate a series of questions that emerge from these puzzles. We will engage the literature on global climate governance, climate policy, and knowledge politics, explore different research methods and approaches, including ethnography, content and discourse analysis, and quantitative interpretation of qualitative data. Each student will then conduct a mini-literature review on one of our broader questions and propose a research question, hypothesis (argument), and methodological strategy for carrying out the research. In the second part of the course, we will work to develop data collection and analysis skills. We will conclude by completing the execution of the project, with each student developing and strengthening analytical writing skills by producing an original research paper.

Learning Objectives

By the end of the course, students will be able to:

- (1) Develop empirical insights about the relationships between climate science, climate justice, and climate governance
- (2) Devise appropriate methodological approaches for analyzing diverse types of data
- (3) Design, plan, and produce a problem-based empirical research paper
- (4) Integrate collaborative approaches in learning, leadership, and problem-solving endeavors
- (5) Seek and cultivate meaningful modes of engagement to advance learning

Course Materials

Materials required for this course are available through the library or for purchase at Beck's Bookstore. You can use any format you choose (electronic, hard cover, paperback). Information on course material accessibility and support is available in the Course Policies document. Please secure a copy of the following:

1. Smith, Linda Tuhiwai. *Decolonizing methodologies: Research and indigenous peoples*. Zed Books Ltd., 2021. ISBN: 9781786998163.
 - *Older editions are available but may not have all of the same chapters. Please compare the table of contents to make sure you have access to the readings.*
2. Additional materials available online through University Library

Course Format and Requirements

This course is organized as an upper division research seminar and, as such, students are expected to come to class fully prepared each day by having completed the readings and weekly assignments before class. One part of each session is discussion and contextualization of course readings; the second part is discussing research design and preparations for your research project.

- (1) **Participation** (35%): Active and thoughtful participation—including the ability to listen—are an essential part of this seminar and will count for 35% of the course grade. Each student will be assigned a role for each course meeting; your participation grade is based on these active contributions to each session. These roles include: *Facilitator*, *Key Points*, *Glossary*, and *Archivist*. Each student will take on the archivist role at least once and at least two of the other roles during the quarter. When not assigned to one of these four roles, students will take on the Participant/Question Posing role. Additional details for each role will be provided in class. A sign-up sheet is available on Canvas.
- (2) **Research Paper** (65%): Each student will produce an original research paper. This includes: short preparatory assignments (ethics certification, research questions, annotated bibliography), research design proposal, draft, peer review, and final paper. The final paper should be 12-15 pages (max. 4,000 words) and follow standard formatting and referencing guidelines. The purpose of the scaffolded assignments is to support your development of and steady progress towards an excellent, original research paper. Due dates available on Canvas.

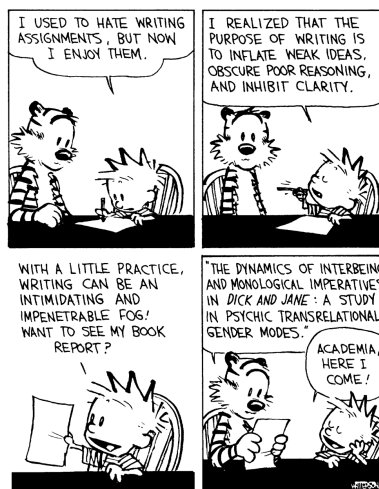
Course Policies

The **Course Policies** document, available on Canvas, details all of my course policies:

- Land Acknowledgement and Action Plan
- Collaboration Agreement
- General Expectations and Email Policy
- Office Hours
- Accessing Course Sessions and Materials; Representation in Materials
- Accommodation
- Citation, Plagiarism, and Academic Integrity
- Technology and Conduct During Remote Sessions
- Attendance; Support for Wellness and Mental Health
- COVID-19 Classroom Expectations
- COVID-19 Testing Compliance
- Learning Assessments and Grading
- Extra Credit
- Course Evaluations and Instructor Feedback

Students enrolled in this course are expected to read and comply with all course policies.

A Note on Writing...



Academic writing doesn't have to be like this.

Here are some resources that I highly recommend for strengthening your writing – these are resources that I continue to refer to year after year in my own writing.

1. Sword, Helen. *Stylish academic writing*. Harvard University Press, 2012.
2. Lamott, Anne. *Bird by bird: Some instructions on writing and life*. Anchor, 1995.
3. King, Stephen. *On writing: A memoir of the craft*. Simon and Schuster, 2000.
4. Clayton, Victoria. [“The needless complexity of academic writing.”](#) October 26, 2015 in *the Atlantic*. (commentary added just for fun)

Course Schedule Overview

A detailed course schedule with readings and assignments are available on Canvas.

Before the Quarter Begins

Familiarize yourself with Canvas and all of the course policies and requirements. Secure required reading materials.

Part I: Understanding Science and Knowledge in Global Climate Governance

The first part of our course will examine the roles of science and knowledge that have shaped global climate governance since the 1972 Stockholm Convention on Humans and the Environment. Attending to research design and methodological considerations, we will explore how researchers and knowledge producers ask and answer questions about how different knowledge systems impact effective climate governance and policy. We then turn to focus on two types of knowledge systems, climate science and traditional ecological knowledge, to investigate their intersections with climate justice. Throughout this first part of the course, we will assess the state of existing knowledge around these topics, identify knowledge gaps and explore empirical puzzles, refine our research questions, and finalize our research strategies for conducting original, empirical research that contributes to an ongoing, transdisciplinary research project called CIVIC-STRONG (NSF Award No. 2044053). Each project will contribute to understanding the role of science and knowledge in one of four broad topic areas: Greenhouse Gas Emissions, Mitigation, Adaptation, and Indigenous Climate Solutions. Students have the option of developing an individual project or participating in a group project.

- **Week 1: Introduction and Course Overview: Science, Knowledge, and Climate Governance**
- **Week 2: A History of Climate Science and Policy: from Stockholm to Glasgow**
 - Research Module: Exploring Ethical Commitments and Asking Questions
- **Week 3: Studying Global Climate Governance**
 - Research Module: Literature Reviews
- **Week 4: Climate Science**
 - Research Module: Designing Research and Collecting Data
- **Week 5: Traditional Ecological Knowledge and Climate Governance**
 - Research Module: Data Collection and Analysis

Part II: Analyzing the Politics of Science and Knowledge

The second part of our course focuses on applied research. Here, we will collect and analyze data to advance our research questions and engage with our empirical puzzles. Each week, we will delve more deeply into the empirical puzzles under each topical area: Greenhouse Gas Emissions, Mitigation, Adaptation, and Indigenous Climate Solutions. We will interrogate different data collection and analysis techniques, evaluate the relevancy and rigor of our approaches and findings, and consider the implications of our work for advancing more effective climate action and governance. At the end of the quarter, we will prepare a Summary of Findings to share with our CIVIC-STRONG research partners. Students interested in publishing their work are invited to discuss options with the project Principal Investigators in accordance with our Collaboration Agreement.

- **Week 6: Greenhouse Gas Emissions – A Super Wicked Problem**
 - Research Module: Writing and Analysis I
- **Week 7: Climate Change Mitigation**
 - Research Module: Writing and Analysis II
- **Week 8: Climate Change Adaptation**
 - Research Module: Member Checking and the Peer Review Process
- **Week 9: Indigenous Solutions to Climate Change**
 - Research Module: Revising and Responding to Feedback, Publishing Research

Navigating Canvas

Our course Canvas site contains the most up-to-date and detailed information about our course. The course homepage is organized into **six modules**:

- Welcome and General Course Information: *what is this course about?*
 - Land Recognition and Acknowledgement of Indigenous Caretakers and Action Plan
 - Welcome – introduces my approach to organizing and facilitating learning, including:
 - Structure of the course – how the course is designed
 - Schedule and Discussion Boards – links to calendar of events, discussion board etiquette
 - Student Lounge – links to a discussion board for peer-to-peer support
 - Support for Wellness and Mental Health –Northwestern resources for student wellbeing
 - Course Evaluations and Instructor Feedback – shares my approach to integrating student feedback into teaching, as well as resources on bias in course evaluations
- Contact Information and Troubleshooting: *how can I reach the professor?*
 - Office hours and Contact Information – details for signing up for and attending office hours; instructor office, phone, and email contact information
- Course Materials, Requirements, and Policies: *what do I need to do to learn in this course?*
 - Course materials – details on required materials and resources for accessing materials; introduces my approach to representation in course materials; includes reading guide on how to approach our materials
 - Course requirements – details our contract; provides links to course policies document; provides overview of course assessments; includes resources for academic writing
 - Course policies – provides a web version of course policies. Please note: in the event of a discrepancy between the web and PDF version of course policies, the PDF version presides
- Detailed Course Schedule, Parts I & II: *what do I need to do in the next week?*
 - These modules include questions to guide your preparation for each class; list of required readings and links to readings (when available); links to asynchronous and synchronous course meetings (when online); assignment links; supplementary resources for topic
 - Note: You are responsible for ensuring you have timely access to materials; please email me well in advance of our course meeting if you have trouble finding one.
- Resources: *where can I learn more about course topics and issues?*
 - Links to various organizations, resources, and fun stuff

Additional information to facilitate learning can be found using the left-hand navigation bar:

- Announcements: course updates, occasional event and internship information
- Modules: links to the **six** course modules detailed above
- Zoom: links to course zoom session and recordings (when available)
- Assignments: links to detailed instructions and submission for each learning assessment
 - Details, Submission Guidelines, and Feedback
- Discussion Boards: weekly discussion boards that include: facilitation questions, glossary, key points, and archival notes
- Collaborations: web-based tools for facilitating collaborative work
- Pages: a list of all pages available on our Canvas site, usually ordered alphabetically
- Calendar: includes entries for all course meetings, office hours, and assignment deadlines for all courses (when instructors use this function – I use this function)
- Grades: overview of assessment grades; click on a specific grade for details and feedback
- People: list of people engaged in our course
- CTEC: link to complete your course evaluations