Introduction
This course focuses on the interplay between science, technology and policy-making from the perspective of science and technology studies (STS), which is an interdisciplinary field that examines the societal context in which science is conducted and the interplay between science and politics in identifying and addressing policy issues. Specifically, the course applies a STS perspective to climate change science and policy. It introduces students to STS and to central scientific and political debates that shape climate change policy. The goal is to understand the larger picture of intertwining relationships between scientific, technical and political systems that shape policy with a focus on climate change mitigation and adaptation.

The course, which is based on a combination of short lectures and extensive class discussion, begins with an introduction to STS and often very complex relationships between science, technology and policy-making. In parallel, the course explores the history of climate change science up to present days understanding of the climate system and climate change. Next, the course applies a multilevel governance perspective as it examines major climate change policy developments across global, regional, national and local levels. Finally, the course looks at the roles of different non-state actors and strategies for communicating climate change science and policy.

There are no formal prerequisites for this course, which is open to graduate students and qualified upper-level undergraduates.

Attendance & Assignments
Great importance will be placed on regular attendance (including arriving on time and not leaving early) and timely submission of assignments. There will be a penalty for irregular attendance and late submissions of assignments, although individual emergencies will be
accommodated as far as possible. In such cases, students should make every effort to talk with the instructor before the said class. The final grade for the class will be calculated as follows:

- **Class Participation** 30 points
- **Critical Review of STS** 40 points
- **Simulation Reflection** 30 points
- **Op-Ed** 30 points
- **Research Paper** 70 points

**TOTAL 200 points**

**CLASS PARTICIPATION (30 points)**
Class meetings are largely designed to be a series of discussion meetings with full participation by all students. Active and productive student participation is a critical part of the class, and students should come well prepared to speak their mind and to be called upon to speak their mind!

**CRITICAL REVIEW OF STS (40 points)**
Students write a critical review of STS. The review should discuss the strength and weaknesses of STS analysis as a means for understanding scientific investigation and science and politics interplay in theory and practice. Instructions will be handed out during class #4 (February 15th) and the critical review is due at the beginning of class #5 (February 22nd).

**SIMULATION REFLECTION (30 points)**
Students write a simulation reflection in connection with the global climate change simulation that will take place during class #8 (March 22nd). Instructions will be handed out during class #7 (March 15th) and the simulation reflection is due at the beginning of class #9 (March 29th).

**OP-ED (30 points)**
Students write a climate change related op-ed aimed for a newspaper. It should address some aspect of the climate change issue and follow the general guidelines for an op-ed. Instructions will be handed out during class #11 (April 12th) and the op-ed is due at the beginning of class #12 (April 26th).

**RESEARCH PAPER (70 points)**
Students will write a research paper (8 pages for undergraduates and 10 pages for graduate students, single spaced) that is due by beginning of class #13 (May 3rd). The research paper should analyze a particular aspect of climate change politics, policy-making or management. Additional information about the research paper will be given in class and each student is required to present a paper topic in class #9 (March 29th).

**Academic Honesty**
The *American College Dictionary* defines plagiarism as “Copying or imitating the language, ideas, or thoughts of another author and passing off the same as one’s original work.” Plagiarism is intellectual theft and violates the student honor code. Exact quotations must have quotation marks and the appropriate citation. Paraphrases, even if not exact quotes, must nonetheless have the appropriate citation. Submitting a paper written by someone else, whether ‘borrowed’ from a friend or purchased from a ‘service’, even if updated, constitutes plagiarism.

Using the Internet for research is encouraged, but plagiarizing resources is not allowed. Cheating of any sort, submitting the same work for more than one course, deliberately impeding the performance of others, and other forms of academic misconduct are serious offenses. As a general rule, if you have any doubts, give credit to the source; if you have any questions, talk to
the instructor. Refer to the Academic Conduct Code, which will be strictly enforced: http://www.bu.edu/academics/policies/academic-conduct-code.

Readings & Sources
There are three required books for the course, which are available for purchase at Boston University Bookstore and various web-based booksellers:


The course uses Blackboard Learn and additional readings beyond the three books listed in the syllabus are posted on Blackboard Learn under Course Documents.

There are also many on-line sources devoted to climate change. The quality and reliability of these vary tremendously, but the following ones will be useful:

- REAL CLIMATE: http://www.realclimate.org

- IISD: http://www.iisd.ca/process/climate_atm.htm

- WORLD RESOURCES INSTITUTE: http://www.wri.org/our-work/topics/climate

- CENTER FOR CLIMATE AND ENERGY SOLUTIONS: http://www.c2es.org

To ensure meaningful class discussion, it is very important that students have read the assigned readings before each class and come prepared to discuss relevant topics!
## Course Outline

### Class #1

**Course Introduction**

- **SUMMARY PRESENTATION OF THE COURSE STRUCTURE AND CONTENT INCLUDING ALL ASSIGNMENTS.**

**Introduction to Science and Technology Studies I**


### Class #2

**Introduction to Science and Technology Studies II**


**Discovering Climate Change I**

- **SPENCER R. WEART:** [http://www.aip.org/history/climate/index.htm](http://www.aip.org/history/climate/index.htm)

### Class #3

**Introduction to Science and Technology Studies III**


**Discovering Climate Change II**


### Class #4

**Discovering Climate Change III**


**Science and Policy Interactions**


### Class #5

**Global Climate Change Science and Policy I**


• **THE 1992 UNFCCC TEXT** (Blackboard).

• **THE 1997 KYOTO PROTOCOL TEXT** (Blackboard).

• **THE 2009 COPENHAGEN ACCORD TEXT** (Blackboard).

• **UNFCCC:** http://newsroom.unfccc.int

• **INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE:** http://www.ipcc.ch

• **CAIT GHG DATA:** http://cait.wri.org

### Class #6

**Climate Science Lab Field Trip**

• **FIELD TRIP TO PROFESSOR DANIEL CZICZO’S RESEARCH GROUP AT MIT:** HTTPS://PAOCSWEB.MIT.EDU/RESEARCH/DANIEL-CZICZOS-GROUP

### Class #7

**Global Climate Change Science and Policy II**


• **THE 2015 PARIS AGREEMENT TEXT** (Blackboard).

• **INDCS:** http://cait.wri.org/indc/
Class #8

Global Climate Change Simulation

• GROUP BASED SIMULATION WHERE STUDENTS REPRESENTING BLOCS OF COUNTRIES SEEK TO REDUCE GHG EMISSIONS TOWARD GLOBAL POLICY GOALS.

Class #9

Circumpolar Climate Change Issues and Action

• BRANDON LUEDTKE AND ADRIAN HOWKINS. 2012. “Polarized Climates: The Distinctive Histories of Climate Change and Politics in the Arctic and Antarctica since the Beginning of the Cold War” Wiley Interdisciplinary Reviews: Climate Change 3(2): 145-159 (Blackboard).

Student Research Paper Discussion

• STUDENT ORAL PRESENTATIONS OF RESEARCH PAPER TOPICS AND SUBMISSIONS OF ONE PAGE PAPER OUTLINES.

Class #10

North American and U.S. Climate Change Policy and Politics

• REGIONAL GREENHOUSE GAS INITIATIVE: http://www.rggi.org.

Class #11
Business, NGOs, Universities and Climate Change


Class #12

Communicating Climate Change Science and Policy


Class #13

The Future of Climate Change Science and Policy

- CONCLUDING DISCUSSION BASED ON COURSE CONTENT AND FINDINGS FROM RESEARCH PAPERS.
## Summary Outline of Class Schedule

| Class #1 | January 25 | • Course Introduction  
|          |            | • Introduction to Science and Technology Studies I |
| Class #2 | February 1 | • Introduction to Science and Technology Studies II  
|          |            | • Discovering Climate Change I |
| Class #3 | February 8 | • Introduction to Science and Technology Studies III  
|          |            | • Discovering Climate Change II |
| Class #4 | February 15 | • Discovering Climate Change III  
|          |            | • Science and Policy Interactions |
| Class #5 | February 22 | • Global Climate Change Science and Policy I |
| Class #6 | March 1 | • Climate Science Lab Field Trip |
| Class #7 | March 15 | • Global Climate Change Science and Policy II |
| Class #8 | March 22 | • Global Climate Change Simulation |
| Class #9 | March 29 | • Circumpolar Climate Change Issues and Action  
|          |            | • Student Research Paper Discussion |
| Class #10 | April 5 | • North American and U.S. Climate Change Policy and Politics |
| Class #11 | April 12 | • Business, NGOs, Universities and Climate Change |
| Class #12 | April 26 | • Communicating Climate Change Science and Policy |
| Class #13 | May 3 | • The Future of Climate Change Science and Policy |