2020

Perspectives of Global Warming

Diomaris Padilla Dr.
CUNY City College

Spring 2020

Perspectives of

Global Warming

EAS 104

Instructor's information:

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Office hours: By Appointment only

> *"The important thing in science is not so much to obtain new facts as to discover new ways of thinking about them."*
>
> *- William Lawrence Bragg*

Course information:

Term and date: Spring 2020, 01/27/2020 - 05/22/2020 ***Credits:*** 3.00

Course number and section: EAS-104; ND, ND2, ND3, ND4, ND5, ND6

Meeting times (Lecture): Mon/Fri: 12:30PM - 1:45PM, meets in MR2

Meeting times (Labs): Once a week meets for 50 min., meets in MR 044

No Required Materials:

Course description:

This course is designed to foster an interest in global environmental issues by informing the student of both the anthropogenic and natural causes for climate change. While focusing on the scientific aspects of climate change, a broader study will include issues pertaining to global policy and economics in order to engage the student in public policy debates.

Course objectives include:

a) Obtaining basic content-knowledge associated with climate studies:
b) Developing an understanding of a scientific process and fostering a scientific approach to the world (quantitative reasoning skills, problem solving skills and critical thinking skills).

Unlike a typical science course, this course aims to engage students in new ways of thinking. The course is interdisciplinary and interactive.

List of learning outcomes for the course:

As part of the College's General Education Curriculum, this course is designed to enhance your understanding of science. Students successfully completing this course will be able to:

- Identify and apply the fundamental concepts and methods of a life or physical science.
- Apply the scientific method to explore natural phenomena, including hypothesis development, observation, experimentation, measurement, data analysis, and data presentation.
- Use the tools of a scientific discipline to carry out collaborative laboratory investigations.
- Gather, analyze, and interpret data and present it in an effective written laboratory or fieldwork report.
- Identify and apply research ethics and unbiased assessment in gathering and reporting scientific data.

Assessment & Grading formula:

- Daily Blackboard Assignments 20 %
- In Class Participation 20 %
    - Contributing to discussions
    - In-class assignments
- Lab Participation 20 %
- Midterm Exam 20 %
- Final Exam 20 %

Notes relevant to the Assessment:

All assignments (weekly readings, Blackbaord assignments, etc.) will be posted on Blackboard site, under folder "Assignments". Therefore, you are responsible to check this folder every week. **Late Assignments Not Accepted.**

Attendance policy: Attendance at all class sessions and labs is required. Labs are highly participatory and interactive. If you are absent on a given day, you will receive a zero for any activities completed in lab that day; large numbers of absences will undoubtedly hurt your grade.

Academic integrity and plagiarism policies:

Cheating on exams or plagiarizing someone else's work constitutes as a violation of the rules of CUNY-CCNY academic integrity policies.

For rules on academic integrity please visit: http://www1.ccny.cuny.edu/current/integrity.cfm

CLASS SCHEDULE:

Dates	Course Topic	Lecture #
1/28/2020	Introduction to Course	Lecture 1
1/31/2020	Introduction to the Climate Problem: What is climate?	Lecture 2
2/4/2020	Introduction to the Climate Problem: What is climate?	Lecture 3
2/7/2020	Is the Climate Changing?	Lecture 4
2/11/2020	Is the Climate Changing?	Lecture 5
2/14/2020	Radiation and Energy Balance	Lecture 6
2/18/2020	Radiation and Energy Balance	Lecture 7
2/21/2020	*Global Warming Film*	
2/25/2020	Introduction to Climate Models & the Greenhouse Effect	Lecture 8
2/28/2020	Climate Models: One, Two, and Multilayer Models	Lecture 9
3/3/2020	Climate Models: One, Two, and Multilayer Models	Lecture 10
3/6/2020	The Carbon Cycle: Greenhouse Gases and Atmosphere	Lecture 11
3/10/2020	The Carbon Cycle: Atmosphere-Land-Ocean Exchange	Lecture 12
3/13/2020	The Carbon Cycle: Human Influence	Lecture 13
3/17/2020	Carbon Film	
3/20/2020	Midterm Review	
3/24/2020	Midterm Exam	
3/27/2020	Exponential Growth: Ecosystems	Lecture 14
3/31/2020	Exponential Growth: Ecosystems	Lecture 15
4/3/2020	Forcing, Feedbacks, and Climate Sensitivity	Lecture 16
4/7/2020	***No Lecture***: Classes Follow Wednesday Schedule	
4/10/2020	***Spring Break*** Forcing, Feedbacks	
4/14/2020	***Spring Break***	
4/17/2020	Forcing, Feedbacks, and Climate Sensitivity	Lecture 17
4/21/2020	Climate Impacts	Lecture 18
4/24/2020	Climate Impacts	Lecture 19
4/28/2020	Fundamentals of Climate Policy	Lecture 20
5/1/2020	Fundamentals of Climate Policy	Lecture 21
5/5/2020	Mitigation Policies	Lecture 22
5/8/2020	Mitigation Policies	Lecture 23
5/12/2020	Review Last Day of Classes	
5/22/2020	Final Exam	