

Natural Science 150a Science Seminar: Global Climate Change Fall 2007

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This course examines the science behind what could be the most pressing issue affecting life on Earth. Topics include the heat budget of the Earth (the balance of incoming and outgoing radiation), the greenhouse effect, past climate change, climate modeling, the carbon cycle, and the impact of global climate change on human society and the biological world. Students will actively engage in scientific investigation, including collecting and analyzing data, and hypothesis forming and testing. They will also use mathematics and mathematical modeling, which will be introduced as needed. The course satisfies the science requirement, and is designed to be suitable for all students, regardless of previous science background. Prerequisite: placement into MATH 101 or above.

There will be two in-class exams and a comprehensive final exam. There will be weekly labs for which brief writeups will be due the following week. In the latter part of the semester, students (typically in pairs) will propose, research and give a brief oral presentation of a project to the rest of the class, along with a written report.

The course grade will be determined on the following basis (class participation — or lack thereof — can move your grade up or down one step (e.g., B to B+) or two steps in extraordinary circumstances):

In-class exam 1	15%
In-class exam 2	15%
Final exam	15%
Lab participation and writeups	20%
Project presentation and writeup	25%
Homework assignments	10%

The required text for the course is David Archer, *Global Warming: Understanding the Forecast*. Other readings will often be available on the Simon's Rock E-Reserves page for the Science Seminar (NATS150) with the password **bdmr-150** (the first letters in the last names of all the instructors of both sections).