

Schedule for Spring 2025
AOS/NIES 171
Global Change: Atmospheric Issues and Problems
Prof. Matt Hitchman

- T 1/21 L1. Introduction to the earth system and global change (Chapter 1)
R 1/23 L2. Current issues; Changes in atmospheric composition (Chapter 1)
T 1/28 L3. Evolution of the earth system (Chapter 1)
R 1/30 L4. Electromagnetic spectrum, visual perception, temperature (Chapter 2)
T 2/4 L5. Density and pressure; Chaco Canyon (Chapter 2); *Oral assignment 1*
R 2/6 L6. Atmospheric greenhouse effect (Chapter 2); *Written assignment 1 (W1) due*
T 2/11 L7. General circulation: heat transport, monsoon structures (Chapter 3)
R 2/13 L8. General circulation: role of synoptic weather patterns (Chapter 3)
T 2/18 L9. Ocean gyres, thermohaline circulation (Chapter 3)
R 2/20 L10. Interannual variability: ENSO and NAM (Chapter 3); *Revised W1 due*
T 2/25 *In-class review*
R 2/27 *Exam 1*
T 3/4 L11. The paleoclimatic record; Theory of ice age / interglacial cycles (Chapter 4)
R 3/6 L12. Millennial cycles, the AMOC, and the Holocene (Chapter 4)
T 3/11 L13. Volcanoes and climate; the QBO (Chapter 4)
R 3/13 L14. Biodiversity (Chapter 10)
T 3/18 L15. The stratospheric ozone layer (Chapter 5); *Written assignment 2 due*
R 3/20 L16. The ozone hole, NASA flight campaigns, future prospects (Chapter 5)
March 22-30 Spring Break
T 4/1 L17. Tropospheric pollution (Chapter 6); *Oral assignment 2*
R 4/3 L18. Sulfate aerosol and acid rain (Chapter 6)
T 4/8 L19. Hydrologic cycle (Chapter 7); Vegetation and climate (Chapter 8);
Revised written assignment 2 due
R 4/10 L20. Carbon cycle (Chapter 9); Limits to Human Habitation (Chapter 11)
T 4/15 *In-class review*
R 4/17 *Exam 2*
T 4/22 L21. Energy Use, Environmental Engineering, Alternative energy (Chapter 11)
R 4/24 L22. Value systems and strategies (Ch. 12)
Select debate topics; Term paper due; Optional student presentations
T 4/29 *Oral Assignment 3: Global Change Debates*
R 5/1 *Oral Assignment 3: Global Change Debates*