

**Schedule for Spring 2024**  
**AOS/NIES 171**  
**Global Change: Atmospheric Issues and Problems**  
**Prof. Matt Hitchman**

- T 1/23 L1. Introduction to the earth system and global change (Chapter 1)  
R 1/25 L2. Current issues; Changes in atmospheric composition (Chapter 1)  
T 1/30 L3. Evolution of the earth system (Chapter 1)  
R 2/1 L4. Electromagnetic spectrum, visual perception, temperature (Chapter 2)  
T 2/6 L5. Density and pressure; Chaco Canyon (Chapter 2); *Oral assignment 1*  
R 2/8 L6. Atmospheric greenhouse effect (Chapter 2); *Written assignment 1 (W1) due*  
T 2/13 L7. General circulation: heat transport, monsoon structures (Chapter 3)  
R 2/15 L8. General circulation: role of synoptic weather patterns (Chapter 3)  
T 2/20 L9. Ocean gyres, thermohaline circulation (Chapter 3)  
R 2/22 L10. Interannual variability: ENSO and NAM (Chapter 3); *Revised W1 due*  
T 2/27 *In-class review*  
R 2/29 *Exam 1*  
T 3/5 L11. The paleoclimatic record; Theory of ice age / interglacial cycles (Chapter 4)  
R 3/7 L12. Millennial cycles, the AMOC, and the Holocene (Chapter 4)  
T 3/12 L13. Volcanoes and climate; the QBO (Chapter 4)  
R 3/14 L14. Biodiversity (Chapter 10)  
T 3/19 L15. The stratospheric ozone layer (Chapter 5); *Written assignment 2 due*  
R 3/21 L16. The ozone hole, NASA flight campaigns, future prospects (Chapter 5)  
*March 23-31 Spring Break*  
T 4/2 L17. Tropospheric pollution (Chapter 6); *Oral assignment 2*  
R 4/4 L18. Sulfate aerosol and acid rain (Chapter 6)  
T 4/9 L19. Hydrologic cycle (Chapter 7); Vegetation and climate (Chapter 8);  
*Revised written assignment 2 due*  
R 4/11 L20. Carbon cycle (Chapter 9); Limits to Human Habitation (Chapter 11)  
T 4/16 *In-class review*  
R 4/18 *Exam 2*  
T 4/23 L21. Energy Use, Environmental Engineering, Alternative energy (Chapter 11)  
R 4/25 L22. Value systems and strategies (Ch. 12)  
*Select debate topics; Term paper due; Optional student presentations*  
T 4/30 *Oral Assignment 3: Global Change Debates*  
R 5/2 *Oral Assignment 3: Global Change Debates*