

ATMS 211 class schedule: Climate and Climate Change

ATMS 211 Climate and Climate Change

(Download a [neater PDF version here](#).)

Schedule details are subject to change. Please check the class website for updates.

Day	Date	Lecture Topic	Weekly reading
PART 1: CLIMATE OF THE PRESENT			
<i>Week 1: The Earth System and Global Change</i>			
M	Jan 5	Course introduction	Chap 1 (all) Chap 3 (p.44-46)
Tu	Jan 6	Earth system intro: three global scale problems	
W	Jan 7	Atmospheric structure	
Th	Jan 8	Stratospheric ozone depletion: An introduction	
F	Jan 9	<i>Tutorial session: math & chem</i>	
<i>Week 2: Earth-System Case Study: Stratospheric Ozone and CFCs</i>			
M	Jan 12	Ozone, ultraviolet radiation, and biology	Chap 17 (all)
Tu	Jan 13	Ozone chemistry	
W	Jan 14	The Antarctic ozone hole	
Th	Jan 15	Ozone control	
F	Jan 16	<i>Tutorial session</i>	
<i>Week 3: Earth Systems Science: Feedbacks and Balance</i>			
M	Jan 19	Holiday	Chap 2 (all)
Tu	Jan 20	Feedbacks illustrated using "Daisyworld"	
W	Jan 21	No class; instructor away	
Th	Jan 22	No class; instructor away	
F	Jan 23	<i>Tutorial session: Climate system feedbacks</i>	
<i>Week 4: The Greenhouse Effect</i>			
M	Jan 26	Radiation	Chap 3 (all)
Tu	Jan 27	Planetary energy balance: Earth, Venus, Mars	
W	Jan 28	Atmospheric structure	
Th	Jan 29	Climate feedbacks and clouds	
F	Jan 30	<i>Tutorial session</i>	
<i>Week 5: Atmospheric and Oceanic Circulation</i>			
M	Feb 2	The large-scale movement of air	Chap 4: p.55-61, p.68-81; Chap 5, p.91-103. Chap 6 (all)
Tu	Feb 3	Regional climates	
W	Feb 4	Ocean circulation	
Th	Feb 5	Climate modeling	
F	Feb 6	<i>Tutorial session</i>	
PART 2: CLIMATES OF THE PAST			
<i>Week 6: Evolution of the Earth's Climate and Atmosphere</i>			
M	Feb 9	The history of Earth's atmosphere	Chap 10, p.193-197. Chap 11, p.207-220. Chap 12, p.230-244. "Snowball Earth" article
Tu	Feb 10	The carbon cycle	
W	Feb 11	The rise of oxygen and history of the biosphere	
Th	Feb 12	"Snowball Earth" events	
F	Feb 13	MIDTERM EXAM	
<i>Week 7: Ice ages; The Effect of Volcanoes and Solar Variability</i>			
M	Feb 16	Holiday	Chap 12, p.245-249. Chap 14 (all), Chap 15 (p.296-315)
Tu	Feb 17	The past 250 million years; Ice ages in the last 1 million years	
W	Feb 18	Astronomical "Milankovitch" theory of ice ages	
Th	Feb 19	The last 20,000 years	
F	Feb 20	<i>Tutorial session</i>	

ATMS 211 class schedule: Climate and Climate Change

PART 3: CLIMATE OF THE FUTURE			
<i>Week 8: Global Warming Science</i>			
M	Feb 23	Guest lecture: Prof. Richard Gammon: Evidence for global warming	Chap 16 (all)
Tu	Feb 24	The record of average global temperature	1) IPCC Summary for Policymakers 2) Jim Hansen article
W	Feb 25	The contemporary, perturbed carbon cycle	
Th	Feb 26	Projections of future climate change	
F	Feb 27	<i>Tutorial session</i>	
<i>Week 9: Global Warming Debate</i>			
M	Mar 1	Estimating the uncertainty in climate change	Article in <i>Science</i> by Prof. David King on US policy vs. the rest of the world on global warming.
Tu	Mar 2	Guest lecture: Prof. Tad Anderson: Aerosols and their contribution to uncertainty	
W	Mar 3	An analysis of the arguments of global warming “skeptics”	
Th	Mar 4	Overall global change: ecology, environment, human health	
F	Mar 5	<i>Tutorial session</i>	
<i>Week 10: Global Warming Impacts and Policy Solutions</i>			
M	Mar 8	Regional effects of climate change	Prof. John Houghton, Ch. 8 of his book “ <i>Global Warming: The Complete Briefing</i> ”
Tu	Mar 9	Why should we be concerned? Discussion	
W	Mar 10	Strategies to slow global warming	
Th	Mar 11	Current governmental policies on global change	
F	Mar 12	<i>Tutorial session: Review</i>	
<i>Week 11: FINALS WEEK</i>			
M	Mar 15	FINAL EXAM	