

Portland State University

Department of Physics

Fall 2005

Physics 375: The Earth's Atmosphere:

Global Change and Human Life

(CRN 12993)

Instructor: Aslam Khalil, Professor

Time and Place: Tu & Th 1000-1150 CH, Rm 269

Office Hours: Tu & Th 1230-1330; 1600-1700 SB2 Rm 410

Contact Information: Call anytime: (503) 725-8396 or FAX: (503) 725-8550

e-mail: aslamk@pdx.edu (Preferred means of contact)

SCHEDULE

Day	Date	CH	Wk	Lect	
-----	------	----	----	------	--

September

Foundations: The Atmosphere and Global Environmental Problems

T	27	1	1	1	Introduction. Nature and Scale of Global Atmospheric Issues
---	----	---	---	---	---

Th	29			2	X Atmospheric Composition. <<Pre-Test Due>>
----	----	--	--	---	---

October

The Changing Atmosphere and the Role of Human Activities

T	4	-	2	3	Atmospheric Composition and Structure
---	---	---	---	---	---------------------------------------

Th	6	4		4	Atmospheric Circulation
----	---	---	--	---	-------------------------

T	11	8,14	3	5	Global Budgets. Sources, Sinks and Trends
---	----	------	---	---	---

Th	13	7,8		6	Atmospheric Chemistry and Other Sinks
----	----	-----	--	---	---------------------------------------

T	18	12,13	4	7	Observed Past and Current Trends
---	----	-------	---	---	----------------------------------

The Greenhouse Effect and Global Warming

Th	20	3		8	Greenhouse Effect
----	----	---	--	---	-------------------

T	25	6,11,17	5	9	X Global Warming and Climate Change <<Progress Report #1 >>
---	----	---------	---	---	---

Th	27	-		10	Climate Change
----	----	---	--	----	----------------

November

T	1	-	6		X <<Problem Set 1 Due>> Review and Problem Solutions
---	---	---	---	--	--

Th	3	1,7,8			X <<Mid-term Exam>>
----	---	-------	--	--	---------------------

Ozone Depletion

T	8	-	7	11	The Stratospheric Ozone Layer
---	---	---	---	----	-------------------------------

Th	10	-		12	X Consequences of Ozone Depletion <<Progress Report #2>>
----	----	---	--	----	--

				13	State of the Chlorofluorocarbons and Replacement Compounds
--	--	--	--	----	--

T	15	17,19	8	14	Connections Between Climate, Ozone Depletion and Other Issues
---	----	-------	---	----	---

Environmental Management Issues

Th	17	-		15	Economic Issues
----	----	---	--	----	-----------------

T	22	-	9		X <<Problem Set 2 Due>> << Post-Test Due >> Problem Solutions and discussion
---	----	---	---	--	--

Th	24				Thanksgiving Holiday
----	----	--	--	--	----------------------

December

T	29	-	10		X <<Group Project Presentations>> Post-Test results
---	----	---	----	--	---

Th	1	-			X <<Group Project Presentations>>
----	---	---	--	--	-----------------------------------

Tu	6	-	11		X <<Final Exam>> 10:15 - 12:05
----	---	---	----	--	--------------------------------