

Earth System Science 55: EARTH'S ATMOSPHERE (Spring 2012)
(<http://www.ess.uci.edu/~yu/ess55.html>)

COURSE TIME

Lectures: Tuesdays & Thursdays 2:00-3:20pm, MSTB118

Discussion: Monday & Thursday 1:00-1:50, RH184

INSTRUCTOR

Professor Jin-Yi Yu

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Office Hour: 1-2pm Tuesday or by appt.

TEACHING ASSISTANT

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Office Hour: 1-2pm Friday or by appt.

COURSE DESCRIPTION

The course will cover some fundamentals of atmospheric science, such as the static atmosphere (including composition, hydrostatic balance and thermodynamics), the global energy balance, radiative transfer and climate, the hydrologic cycle, the general circulation and climate regimes.

Prerequisite: Mathematics 2B; Physics 3B or 7B

<u>WEEK</u>	<u>DATE</u>	<u>TOPICS</u>	<u>CHAPTER</u>
Week 1	4/03 & 4/05	A Brief Survey of the Atmosphere	Ch.1
Week 2	4/10 & 4/12	Global Energy Balance	Ch.2
Week 3	4/17 & 4/19	Radiation Transfer in the Atmosphere	Ch.2-3
Week 4	4/24 & 4/26	Atmospheric Motion	Ch.8-9
Week 5	5/01 & 5/03	Atmospheric General Circulation	Ch.10
Week 6	5/08 & 5/10	Moist Processes in the Atmosphere	Ch.4-5
Week 7	5/15 & 5/17	Cloud Development & Precipitation Process	Ch.6-7
Week 8	5/22 & 5/24	Mid-Latitude Weather	Ch.11-12
Week 9	5/29 & 5/31	Tropical Hurricane	Ch.15
Week 10	6/05 & 6/07	Climate Variability and Change	Ch.16-17

Textbook: "Meteorology Today", 9th Edition, by C. Donald Ahrens, Brooks/Cole, 2009.

Grades: Homework (30%), midterm (30%), Final Exam (30%), in-class participation (10%). It is student's responsibility to make sure that the TAs receive their homework.

Email answers are not acceptable. If you turn in your homework after the lectures, you should email TA to notify them where and when you drop the homeworks. You should also check the EEE grade book to make sure you receive accurate homework and exam grades. There is no dispute of the grades one week after the grades are posted on the grade book.

Homework: Usually issued on Thursday and due on the following Thursday. There is a 20% penalty per day for late homeworks. Group answers are not acceptable. Homeworks will be returned by TAs in the discussion section.