

AOS 405 Senior Capstone Seminar Spring 2009

W 1:20 - 3:15 823 AOSS Building

Professor Matthew Hitchman 262-4653 1303 AOSS Building

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Office Hours: M W 11 am, and by appointment

Professor Ankur Desai 265-9201 1549 AOSS Building

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Office Hours: T W 12 pm, and by appointment

Course Description: Required senior seminar for AOS majors which provides a synthesis and overview of atmospheric and oceanic sciences through guest lectures, group discussion, and small research projects. Prerequisites: AOS 310, 311, 330, 340, and senior standing.

Course Content: Lectures by the instructor and guests will highlight particular subfields and current research and how these contribute toward earth science. Readings will be assigned the week prior to the lecture and significant class time will be devoted to discussion.

A major component of this course is the writing and presentation of a scientific paper. The assignment should be either 1) a report of an independent research project carried out with the guidance of a faculty or research staff member or 2) a literature review synthesis of a research topic. The paper is to be about 10 pages, plus figures. You should use at least six citations from peer-reviewed literature, although this may be tailored by mutual agreement. The paper should follow scientific journal writing conventions. As part of learning about the scientific research process, we will be conducting a peer-review of this paper. Each student will be assigned two papers for anonymous reviews. You will then write a response to reviews of your paper and modify your draft accordingly. During the class conference each student will give a 15 minute presentation of the major findings of their research paper.

Grading:

Class participation, including attendance and discussion (25%)

Paper draft (10%)

Peer reviews and responses (15%)

Final paper (25%)

Oral Presentation (25%)

Recommended Reference:

Alley, M., 2003, *The Craft of Scientific Presentations*, Springer-Verlag.
On reserve in the Schwertfeger Library.

<u>Date</u>	<u>Topics and Activities</u>
January 21	Introduction, Syllabus
January 28	Prof. Ankur Desai “.ppt Research Talk” <i>Discuss assignments</i>
February 4	Prof. Matt Hitchman “Effects of Volcanic Eruptions on the General Circulation”
February 11	Prof. Ankur Desai “Why Has Wind Speed Increased Over Lake Superior?” <i>Plan for written assignments due</i>
February 18	Prof. Stefan Hastenrath “Drought in Northeast Brazil”
February 25	Jean Phillips “Library Resources for Papers”
March 4	Prof. Tracey Holloway “Great Lakes Pollution Issues”
March 11	Prof. Ralf Bennartz “Clouds, Aerosols, and Climate”
March 14-22	Spring Break
March 25	Prof. Matt Hitchman “Adventures On NASA Flight Campaigns” <i>Paper due</i>
April 1	Dr. Will Lewis “3D Hurricane Winds from Space” <i>Peer reviews assigned</i>
April 8	<i>Peer reviews due</i>
April 15	Class Conference <i>Revised paper and response to reviewers due</i>
April 22	Class Conference <i>Paper returned with comments</i>
April 29	Class Conference
May 6	Class Conference