

**Climatological Analysis: AOS 575**  
**(Spring, 2008)**

**Instructor:**

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Course website: <http://www.aos.wisc.edu/~dvimont/aos575>

**Office Hours:** by Appointment

**Class Time and Location:** MWF 9:55 – 10:45, Room 811, AO & SS building

**Course Description:**

This course provides an overview of commonly used statistical techniques in atmospheric, oceanic, and climate sciences. The course will focus on applying these techniques to various problems and data sets in the atmospheric and oceanic sciences.

**Grading:**

Homework:	40%	Approx. 6 homeworks will be assigned
Discussions:	40%	Approx. 6 paper discussions will occur
Final Project:	20%	Due Thursday, 5/15

Homework will be assigned approximately every two weeks. Many of the homework assignments will require computations using MATLAB or some similar computing package. **If you do not currently have an account on the 14<sup>th</sup> floor computers, get one from Pete as soon as possible.**

Throughout the semester, we will read several papers that utilize the statistical techniques that we will be studying. Each member of the class will be required to present the results from one of the papers, and to lead a short discussion.

A Final Project will be due on the scheduled day of the final. Details are attached.

**Notes:** We will frequently be using notes provided courtesy of Profs. Dennis Hartmann and John M. Wallace (Dept. Atmos. Sciences, University of Washington). The class website will have links to these notes. These are copyrighted, so if you use them in your research, be sure to cite them!

**Recommended Books:** The following three books are on reserve in the Schwerdtfeger library:

*Statistical Analysis in Climate Research*, by Hans von Storch and Francis W. Zwiers, Cambridge University Press. This is a very useful reference for anyone pursuing a

career in atmospheric or oceanic sciences (it is a bit mathematically intense, though). The paperback version costs about \$60, and can be ordered from the bookstore (this is not required).

*Statistical Methods in the Atmospheric Sciences*, by Daniel S. Wilks, Academic Press. This is another excellent textbook that is more readable than von Storch and Zwiers.

*Linear Algebra and its Applications*, by Gilbert Strang, Harcourt Brace Jovanovich. This is a classic text on linear algebra that may be useful throughout the course.

**Class Schedule** (Attached)

**Paper Discussions** (Attached)