Syllabus for G&G 322a/522a, Fall 2002

Chapters for reading refer to Wallace and Hobbs.

**Week 0.** (Thursday only)

Introduction

**Week 1.**

Ch. 1, 7.2.2-7.2.4; see also Lutgens and Tarbuck, Ch. 1

Composition of atmosphere, vertical structure and coordinates, winds.

**Weeks 2 - 3**

Ch. 2

Thermodynamics of gases and mixtures; latent heat; energy; water vapor. Instruments.

**Week 4**

Ch. 5 (5.1, 5.4; other parts of the chapter optional.)


**Week 5**

Ch. 4 (4.1-4.4; the rest optional)

Cloud "microphysics:" aerosols, precipitation formation; thunderstorm electrification.

**Week 6**

Ch. 3, and peruse Ch. 5.5; see also Lutgens and Tarbuck Ch. 9.

Extratropical weather; fronts and cyclones. Description of synoptic flow patterns.

**MIDTERM exam Tuesday, week 7 (not Thursday as indicated in info sheet!)**

**Weeks 7 - 8**

Ch. 6

Radiative transfer: gaseous absorption, blackbody radiation, introduction to scattering. Radar and satellite remote sensing.

**Week 9**

Ch. 7 (7.1, 7.3, 7.5)


**Weeks 10 - 11**

Ch. 8

Fluid mechanics: momentum equations; flow instability. Interpretation of synoptic flow patterns.

**FALL RECESS**

**Week 12**

Ch. 9 (9.1-9.4, 9.6, 9.8; the rest optional)

The general circulation. Review.

**FINAL Exam**