

# SYLLABUS GEOF327

## Spring 2018

**Book: J. R. Holton: An introduction to Dynamical Meteorology. 4<sup>th</sup> edition**

### **Chapter. 10**

With the following exceptions  
10.7 and 10.8

### **Chapter. 11**

With the following exceptions  
11.5

### **Additional material on**

Rossby wave handout: Barotropic Model

ENSO handout: The Delayed Action Oscillator and Recharge Oscillator Models

Hadley cell handout: Held and Hou model

Monsoon handout: Mean monsoon and monsoon location

Madden Julian Oscillation

Mid-latitude Ocean Atmosphere interaction

### **Articles:**

Hoskins, B. J. and P. J. Valdes, 1990: On the Existence of Storm-Tracks. *Journal of the Atmospheric Sciences*, 47, 1854-1864.

Frankignoul, C., 1985: Sea-Surface Temperature Anomalies, Planetary-Waves, and Air-Sea Feedback in the Middle Latitudes. *Reviews of Geophysics*, 23, 357-390.

Kushnir, Y., W. A. Robinson, I. Blade, N. M. J. Hall, S. Peng, and R. Sutton, 2002: Atmospheric GCM response to extratropical SST anomalies: Synthesis and evaluation. *Journal of Climate*, 15, 2233-2256.

Zhang, C. D., 2005: Madden-Julian oscillation. *Reviews of Geophysics*, 43.

Feldstein and Lee (1996): Mechanisms of Zonal Index Variability In a Aquaplanet GCM. *Journal of Atm. Science Vol. 53, No 23*.

Jin and Hoskins (1995) The direct response to tropical heating in a baroclinic atmosphere. *Journal of Atm. Science Vol. 52, No 3*.

Lu et al. (2006): Expansion of the Hadley cell under global warming. *Geophys. Res. Lett.*, 34, L06805, doi:10.1029/2006GL028443.

Johanson and Fu (2009): Hadley Cell Widening: Model Simulations versus Observations. *J. of Climate Vol. 22, DOI: 10.1175/2008JCLI2620.1*

Boos and Kuang (2010): Dominant control of the South Asian monsoon by orographic insulation versus plateau heating. *Nature, Vol 46. doi:10.1038*

Knopf et al (2008): Sensitivity of the Indian Monsoon to Human Activities. *Advances in Atm.*