ATM 622 General Circulation of the Atmosphere
Fall 2016
Class Number: 9929
Credits: 3

Mon. & Wed. 2:45 – 4:05 pm in ES 108
No Class: 9/5, 10/3, 10/12, 11/23

http://www.atmos.albany.edu/facstaff/tang/classes/atm622/

Professor:
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Office hours: Tues. & Thurs. 11 – noon & by appointment

Prerequisites:
ATM 511

Supplemental Texts:
Introduction to Circulating Atmospheres by James
Physics of Climate by Peixoto and Oort
Atmospheric and Oceanic Fluid Dynamics by Vallis
The General Circulation of the Atmosphere (lecture notes) by Randall

Course Requirements:
Assignments & Labs: 40%
Midterm Exam: 20%
Term Project and Presentation: 40%

Late assignments/labs, makeup exams, late term projects/presentations will only be allowed for university recognized reasons. Students are expected to uphold academic integrity standards.
Information can be found in the graduate bulletin at http://www.albany.edu/graduatebulletin/.

Grading:
A-E
Course Outline:

1. Earth’s radiation budget: The big picture of why a circulation exists
2. Observations of the Earth’s circulation
3. Mean and eddy decomposition of variables
4. Angular momentum budget
5. Total energy budget
6. Lorenz energetics and conversions between types of energy
7. Eulerian and Lagrangian views of the mean meridional circulation
8. Planetary waves and stationary eddies