

Spring 2009

DEPARTMENT OF PHYSICS

B. Keating

Physics 162: Cosmology

Instructor: Prof. Brian Keating
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Office: SERF Building Room 333
Office Hours: Thursday 3:30 pm
Phone: 534-7930

Teaching Assistant: None (Thanks, UC Regents!)

Course Schedule: Lectures Tuesday & Thursdays at 2p–3:30 pm in SERF 329

About this course: This course gives an introduction to modern cosmology, which is the study of the origin and evolution of the universe. Topics include the expansion of the universe and the acceleration of this cosmic expansion; the size and age of the universe; Hot Big Bang; CMB (cosmic microwave background radiation) and its temperature and polarization anisotropy; the composition of the universe – ordinary matter, dark matter, radiation, dark energy; BBN (Big Bang Nucleosynthesis); inflation (early cosmic acceleration); and structure formation. We will follow the textbook and move at a pace of approximately one chapter per week, starting with chapter 2.

Grading: Homework 35% Midterm Exam 25% Final Exam 40%.

Course Text: Barbara Ryden, *Introduction to Cosmology*, Addison Wesley (2003). Homework problems will be assigned from Ryden.

Homework: Homework will be assigned from the textbook and/or “mini-projects”. Homework must be turned in on-time for full credit.

Midterm Exam: There will be an in-class midterm exam on Thursday April 30th.

Final Exam: The final exam will be in-class on June 10, 2009 at 3pm to 6pm in SERF 329. **It will not be possible to take the final early OR late for any reason.**