SYLLABUS
Cosmology
Physics 5970 sec. 001
Spring 2004

Instructor: R. Kantowski
Grader: 
Lectures: Mon. 3:00-4:15 NH 201 & Wed. 1:30-2:45 in NH 320
Office: 310 Nielsen Hall, 325-3961 ext. 36310
Office Hours: Tue. 2:00-4:00 and by appointment
e-mail: kantowski@nhn.ou.edu

Reference Materials:

Relativity: Special, General and Cosmology, Chapters 8,16-18
by Wolfgang Rindler (Oxford University Press, 2001)

Gravity: An Introduction To Einstein’s GR, Chapters 18,19
by James B. Hartle (Addison Wesley, 2003)

Cosmological Physics, Chapters 3-5
by John A. Peacock (Cambridge University Press, 1999)

Cosmology: The Origin and Evolution of Cosmic Structure, Chapters 1,2,etc.
Peter Coles & Francesco Lucchin (Wiley, 2002)

The Early Universe, Chapters 2,3
by Edward W. Kolb & Michael S. Turner (Addison-Wesley, 1990)

A web site containing info about this course can be reached by going to
the Physics and Astronomy page at “http://www.nhn.ou.edu/NHN/” and
opening “Classes”. The site will improve as time progresses.

Our class will meet Mon. 3:00-4:15 in room 201 of NH and Wed. 1:30-2:45 in room 320 of NH. Homework ordinarily is due Wednesday at 5:00pm.

The course contents will include:

1. The spatially homogeneous and isotropic metrics of Robertson-Walker (RW).
2. The Friedmann-Lemaitre (FL) solutions to Einstein’s equations.
3. Observations in FLRW models.
4. Effects of inhomogeneities on observations.
5. Gravitational lensing.

Course Grades

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<th>Homework</th>
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Your weekly homework assignment is ordinarily due Wednesday at 5:00pm. You may leave it at my office or put it in my mail box in the Phys & Astr Office. Please keep a Xerox copy for your notebook. Grades for late papers will be reduced by 25% per week. You will not be penalized for ‘officially’ excused absences. You may consult/discuss etc. homework with others; however, each of you should write up your own results to turn in. I don’t want to see identical papers turned in.

Assignment # 1 is due Tuesday January 20th. See Web for details.

Any student in this course who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact me personally as soon as possible so we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunities.