

# Astronomy 233 – Physical Cosmology – Spring 2011

Class regularly meets TTh 2-3:45PM, ISB 231

Website: <http://physics.ucsc.edu/~joel/Ay/233/>

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Office hours: Wednesdays 2:30-3:30 or by appointment

*Catalog description:* Survey of modern physical cosmology, including Newtonian cosmology, curved space-times, observational tests of cosmology, the early universe, inflation, nucleosynthesis, dark matter, and the formation of structure in the universe. Prerequisite(s): course 202. Offered in alternate academic years.

*Textbooks:* Highly recommended books are Scott Dodelson, *Modern Cosmology* (Academic Press, 2003), and Avi Loeb, *How Did the First Stars and Galaxies Form?* (Princeton University Press, 2010), both ordered at Bay Tree Bookstore. You may find other books to be of equal value in learning the material of this course. Steven Weinberg, *Cosmology* (Oxford University Press, 2008) is a reference book where you can find more information on subjects covered in lectures.

The organization of the course will depend on the interests and previous knowledge of the students, which I will learn from the questionnaire. Instead of a final exam, all of the students will prepare and present oral reports on topics relevant to this course. Some of these may involve original research.

Many of the weekly Astronomy colloquia and seminars this quarter are relevant to cosmology. In particular, there are a number of cosmology seminars in the Cosmoclub series on Mondays 12:30-1:30 in ISB 102. These are listed on the UCSC Astrogoogle Calendar.