

The Course Outline: Cosmology II, Winter-Spring 2017 (1395-96)

Cosmology is the science of the universe as a whole. A study of cosmology brings smallest scales, relevant to quantum mechanics and particle physics, in contact with the largest scales, scales as big as the size of the universe. Many progresses on the theoretical sides as well as numerous ground-based and space-based observations during past two decades made cosmology a very active area of research. In some senses, we are at the golden age of cosmology.

This course is Cosmology II, which is the continuation of the previous course Cosmology I.

There are numerous textbooks on this subject, many of them written by leading researchers of this field. In this course we will mainly follow the textbook by Steven Weinberg: “**Cosmology**”, Oxford University Press, 2008. This is an excellent textbook written by a leading theoretical physicist. Other useful books for this course are Mukhanov: “**Physical Foundations of Cosmology**” and Dodelson: “**Modern Cosmology**”, the latter is specially useful in dealing with CMB physics.

During this course we mainly cover chapters 5, 6, 7 and 10 of Weinberg with emphasis on cosmological perturbations in early universe and its implications for generating anisotropies in CMB maps and structure formation as elaborated in the above chapters.

Time and place of the course: Sunday and Tuesday, 15 - 16:30, IPM, School of Astronomy, Larak garden.

My Contact information

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