

A Course on Cosmology

Lecturer: Amjad Ashoorioon

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The course on cosmology will be mainly taught from “Cosmology” by S. Weinberg. I will also use the book, “Early Universe” from Kolb & Turner. I try to cover the following topics:

- 1) Standard Cosmology and the Expansion of the Universe
- 2) Cosmic Microwave Background Radiation
- 3) Thermodynamics of the Expanding Universe
- 4) Inflation
- 5) General Theory of Small fluctuations and their Evolutions

It is assumed that the students know the basics of quantum field theory and general relativity.

The course will be held on Sundays and Tuesdays from 15:30 to 17:30 in class B of the Physics Building of IPM, Farmanieh. The course will have assignments, final and take-home exams and the final score is provided based on the performance in these different parts. The classes start from Sunday, Mehr the 7th.

It is possible that students from outside IPM takes the course as guest students. For that they have to coordinate with the office of school of physics, physoffice@theory.ipm.ac.ir.

Regular participation in classes by the students are expected.