



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Cosmologia

2021-1-F5801Q048

Aims

Knowledge of the structure of the Universe and of the main stages of the cosmic history, from the big bang to the cosmic microwave background.

Contents

Classical cosmology, Friedman models. Cosmic microwave background. Cosmological nucleosynthesis. Inflation.

Detailed program

Large scale homogeneity and isotropy of the Universe. The Hubble law. The Robertson Walker metric. The Friedmann Equation and Friedmann models. Measures of the cosmological parameters. Problems in the standard Big bang model and the inflation solution. Cosmic nucleosynthesis. Recombination. Cosmic microwave background.

Prerequisites

Mathematics and Physics for undergraduates.

Teaching form

Lessons (6 CFU).

During the Covid-19 emergency period the lectures will be given in a remote and asynchronous form, with some synchronous events in videoconference.

Textbook and teaching resource

B. Ryden, "Introduction to cosmology".

Semester

Second semester.

Assessment method

Oral examination. The exam consists of three parts: the discussion of an argument picked by the student, the analysis of a multicomponent Friedmann model, and a third more general part to test the student's knowledge of the other argument discussed during the class.

During the Covid-19 emergency period the oral exams will be telematic only. The public link for attendance will be posted on the e-learning web-page of the course.

Office hours

Wednesday 16:00-18:00
