COURSE DETAIL

FUNDAMENTALS OF ASTROPHYSICS
Country Italy
Host Institution University of Bologna
Program(s) University of Bologna
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Physics
UCEAP Course Number 168
UCEAP Course Suffix
UCEAP Official Title FUNDAMENTALS OF ASTROPHYSICS
UCEAP Transcript Title FNDMNTLS ASTRPHYSCS
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

This course is part of the Laurea Magistrale program. The course is intended for advanced level students only. Enrollment is by consent of the instructor. The aim of this course is to obtain a general understanding of physical properties of stars and galaxies. At the end of the lectures the student is familiar with the equations that regulate the internal structure of the stars, the sources of energy production, the structure of stellar atmosphere, and the formation theory of the spectral lines. Students acquire a general knowledge of morphological, structural, and dynamical properties of stellar systems (stellar clusters, galaxies). Hence, students acquire the necessary bases to understand the structural and evolutionary properties of stars and galaxies. The course discusses topics including :astronomical data and tools; celestial mechanics and the solar system; radiative processes; classification of stars and stellar atmospheres; stellar interiors; stellar evolution; fate of massive stars and stellar remnants; the interstellar medium; star formation; origin of the solar system and extra-solar planets; galaxies and galaxy clusters; and cosmology and large scale structure.

Language(s) of Instruction
English

Host Institution Course Number
91187

Host Institution Course Title
FUNDAMENTALS OF ASTROPHYSICS

Host Institution Course Details
https://www.unibo.it/en/teaching/course-unit-catalogue/course-unit/2022/445904

Host Institution Campus
BOLOGNA

Host Institution Faculty

Host Institution Degree
LM in PHYSICS

Host Institution Department
Physics and Astronomy

Course Last Reviewed
2022-2023

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