COURSE DETAIL

COMPUTATIONAL ASTROPHYSICS
Country United Kingdom - Scotland
Host Institution University of Edinburgh
Program(s) University of Edinburgh
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Physics
UCEAP Course Number 104
UCEAP Course Suffix
UCEAP Official Title COMPUTATIONAL ASTROPHYSICS
UCEAP Transcript Title COMPUTNAL ASTROPHYS
UCEAP Quarter Units 4.00
UCEAP Semester Units 2.70

Course Description
This course provides an introduction to advanced computational techniques used for numerical simulations in astrophysics involving gravity and/or fluids. The topics include N-body methods for solving gravity problems and numerical hydrodynamics techniques for fluids. Astrophysical topics for which the methods are used include cosmological simulations of structure formation in the Universe, the formation and evolution of galaxies, the formation and evolution of stars and planetary systems, and the collisions of neutron stars and black holes as a model for gamma-ray bursters.

Language(s) of Instruction
English

Host Institution Course Number
PHYS11037

Host Institution Course Title
COMPUTATIONAL ASTROPHYSICS

Host Institution Campus
Edinburgh

Host Institution Faculty

Host Institution Degree

Host Institution Department
Physics and Astronomy

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