COURSE DETAIL

INTRODUCTION TO MODERN PHYSICS
Country United Kingdom - England
Host Institution King's College London
Program(s) English Universities,King's College London
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Physics
UCEAP Course Number 112
UCEAP Course Suffix
UCEAP Official Title INTRODUCTION TO MODERN PHYSICS
UCEAP Transcript Title INTRO MODRN PHYSICS
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description
This course explores topics in modern physics such as quantum mechanics, special relativity, particle physics, and cosmology. The first section of the course is an introduction to Relativistic Mechanics, and it includes elements of special relativity, the Lorentz transformation, invariant (observer-independent) quantities, energy-mass equivalence, and the nonrelativistic limit: from Lorentz to Galilean mechanics. The second section involves quantum ideas for the microcosmos and includes topics such as particle-wave dualism, the unvertainty principle, the Photoelectric effect, the Davisson-Germer experiment, tunneling manifestation in nature, and nuclear fission and fusion. The third section looks at macroscosmos and cosmological scales, with attention to the known universe, dark energy, and dark matter.

Language(s) of Instruction
English

Host Institution Course Number
4CCP1905

Host Institution Course Title
INTRODUCTION TO MODERN PHYSICS

Host Institution Campus
King's College London

Host Institution Faculty

Host Institution Degree

Host Institution Department
Physics

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