COURSE DETAIL

PHYSICS 2: PHYSICAL SCIENCE & TECHNOLOGY
Country Australia
Host Institution University of Melbourne
Program(s) University of Melbourne
UCEAP Course Level Lower Division
UCEAP Subject Area(s) Physics
UCEAP Course Number 16
UCEAP Course Suffix
UCEAP Official Title PHYSICS 2: PHYSICAL SCIENCE & TECHNOLOGY
UCEAP Transcript Title PHYSICAL SCI & TECH
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

This course introduces calculus techniques to the study of the range of principles and applications presented. Topics include: fluids such as water and air pressure, breathing, hydraulics, flight (pressure in fluids, buoyancy, fluid flow, viscosity, surface tension); electricity and magnetism such as electrical devices, lightning, household electricity and electrical safety, electric motors, power generation and transmission, Earth's magnetic field, particle accelerators, communications (electric charge and field, conductors and insulators, electric potential, capacitance, resistance, electric circuits, magnetic field, Faraday's law of induction, Maxwell's equations, electromagnetic waves); Quantum and atomic physics such as spectroscopy, lasers (photon, blackbody radiation, matter waves, quantization in atoms, interaction of light with matter, x-rays); and nuclear physics and radiation such as: nuclear energy, radiation safety, formation of atoms in stars, carbon dating (the atomic nucleus, radioactive decay, half-life, ionizing radiation, nuclear fission and fusion).

Language(s) of Instruction
English

Host Institution Course Number
PHYC10004

Host Institution Course Title
PHYSICS 2: PHYSICAL SCIENCE & TECHNOLOGY

Host Institution Course Details
https://handbook.unimelb.edu.au/subjects/phyc10004

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Course Last Reviewed
2024-2025

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