

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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