

COURSE DETAIL

CLASSICAL PHYSICS

Country

United Kingdom - England

Host Institution

University of London, Queen Mary

Program(s)

University of London, Queen Mary

UCEAP Course Level

Lower Division

UCEAP Subject Area(s)

Physics

UCEAP Course Number**UCEAP Course Suffix****UCEAP Official Title**

CLASSICAL PHYSICS

UCEAP Transcript Title

CLASSICAL PHYSICS

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course reviews the classical understanding of space, time, and motion: the fundamental physical principles that underpin modern physics. It provides an overview of classical mechanics, looking at kinematics, dynamics, rotational motion; dynamics of a rigid body, the gyroscope, gravity, and planetary orbits. The course explores oscillatory phenomena and wave motion, which occur throughout nature in fields from biology to quantum mechanics. Topics include the 1D wave equation; free, damped, forced, and coupled oscillations; resonance and driven simple harmonic motion; calculations of normal modes for coupled oscillators; waves in linear media including gases and solids; dispersion, phase, and group velocity; interference, beats, and standing waves; simple diffraction phenomena; and the Doppler effect in sound and light.

Language(s) of Instruction

English

Host Institution Course Number

SPA4401

Host Institution Course Title

CLASSICAL PHYSICS

Host Institution Course Details

<https://qmplus.qmul.ac.uk/course/view.php?id=9282>

Host Institution Campus

Queen Mary University of London

Host Institution Faculty

Host Institution Degree

Host Institution Department

Physics and Astronomy

Course Last Reviewed

2019-2020

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