

COURSE DETAIL

DYNAMICS

Country

United Kingdom - England

Host Institution

Imperial College London

Program(s)

Imperial College London

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Mechanical Engineering

UCEAP Course Number

122

UCEAP Course Suffix

Y

UCEAP Official Title

DYNAMICS

UCEAP Transcript Title

DYNAMICS

UCEAP Quarter Units

5.00

UCEAP Semester Units

3.30

Course Description

This course enables students to master essential topics in vibrations and dynamics and contributes to the development of their analytical, design, and communication skills. Upon completion of the course, students are able to discuss the dynamical behavior of one-degree-of-freedom dynamical systems in general terms using the concepts of natural frequency, damping, free response, forced response, transmissibility, isolation, phasor diagrams, and Bode plots; discuss the dynamical behavior of multi-degree-of-freedom systems in terms of natural frequencies and associated mode shapes; use the concept of modal summation; discuss the concepts of energy-work done; and understand linear momentum, linear impulse, angular momentum, angular impulse, and simple gyroscopic motion.

Language(s) of Instruction

English

Host Institution Course Number

MECH50008

Host Institution Course Title

DYNAMICS

Host Institution Course Details

[https://www.imperial.ac.uk/mechanical-
engineering/study/undergraduate/detailed-...](https://www.imperial.ac.uk/mechanical-engineering/study/undergraduate/detailed-...)

Host Institution Campus

Imperial College London

Host Institution Faculty

Faculty of Engineering

Host Institution Degree

Host Institution Department

Department of Mechanical Engineering

Course Last Reviewed

2023-2024

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