

COURSE DETAIL

ENGINEERING DYNAMICS

Country

Australia

Host Institution

University of Sydney

Program(s)

University of Sydney

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Mechanical Engineering

UCEAP Course Number

115

UCEAP Course Suffix**UCEAP Official Title**

ENGINEERING DYNAMICS

UCEAP Transcript Title

ENGINEERNG DYNAMICS

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course focuses on the principles governing the state of motion or rest of bodies under the influence of applied force and torque, according to classical mechanics. The course covers the fundamental principles of the kinematics and kinetics of systems of particles, rigid bodies, planar mechanisms, three-dimensional mechanisms, covering topics including kinematics in various coordinate systems, Newton's laws of motion, work and energy principles, impulse and momentum (linear and angular), gyroscopic motion and vibration. Students develop skills in analyzing and modeling dynamical systems, using both analytical methods and computer-based solutions using MATLAB. Students gain experience in approximating the dynamic behavior of real systems in engineering applications and an appreciation and understanding of the effect of approximations in the development and design of systems in real-world engineering tasks.

Language(s) of Instruction

English

Host Institution Course Number

AMME2500

Host Institution Course Title

ENGINEERING DYNAMICS

Host Institution Course Details

Host Institution Campus

sydney

Host Institution Faculty

Host Institution Degree

Host Institution Department

Aerospace, Mechanical and Mechatronic Engineering

Course Last Reviewed

[Print](#)