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 Campus
sydney

Host Institution Faculty

Host Institution Degree

Host Institution Department
Aerospace, Mechanical and Mechatronic Engineering

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