COURSE DETAIL

INTRODUCTION TO ROBOTICS
Country Hong Kong
Host Institution Chinese University of Hong Kong
Program(s) Hong Kong Summer, CUHK
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mechanical Engineering
UCEAP Course Number 120
UCEAP Course Suffix
UCEAP Official Title INTRODUCTION TO ROBOTICS
UCEAP Transcript Title INTRO TO ROBOTICS
UCEAP Quarter Units 4.50
UCEAP Semester Units 3.00

Course Description
The course covers the basic and fundamentals to the study of robotic manipulators, including: classification of robots, robot sensors and actuators, coordinate frames and homogeneous transformations, Denavit-Hartenberg notation, forwards and inverse kinematics, Jacobians and statics, singularity and workspace analysis, and trajectory generation. The course includes a creative project component for students to apply robot manipulators for a new and innovative application. This requires the students to design a new application for robot manipulators that would be useful to the community and globally. By using the introduction to the state-of-the-art in robotics around the world, and fundamentals learnt in the course, the students have to innovatively design and present the idea as a mock start-up company project.

Language(s) of Instruction
English

Host Institution Course Number
MAEG3060

Host Institution Course Title
INTRODUCTION TO ROBOTICS

Host Institution Course Details

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Mechanical & Automation Engineering

Course Last Reviewed

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