

# COURSE DETAIL

## INTELLIGENT ROBOTICS

**Country**

Singapore

**Host Institution**

Singapore University of Technology and Design

**Program(s)**

Singapore University of Technology and Design

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Mechanical Engineering Electrical Engineering Computer Science

**UCEAP Course Number**

128

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

INTELLIGENT ROBOTICS

**UCEAP Transcript Title**

INTELLIGENT ROBOTIC

**UCEAP Quarter Units**

6.00

**UCEAP Semester Units**

4.00

## Course Description

This course provides an overview of robot mechanisms, dynamics, and intelligent controls. Topics include planar and spatial kinematics, and motion planning; mechanism design for manipulators and mobile robots; multi-body dynamics; control design, actuators, and sensors; sensing and perception to enable intelligent behavior; and computer vision. Weekly laboratories provide experience with servo drives, real-time control, task modelling and embedded software. Students will build working robotic systems in a group-based term project.

## Language(s) of Instruction

English

## Host Institution Course Number

30.119

## Host Institution Course Title

INTELLIGENT ROBOTICS

## Host Institution Course Details

<https://epd.sutd.edu.sg/undergraduate-courses/30119-intelligent-robotics/>

## Host Institution Campus

## Host Institution Faculty

## Host Institution Degree

## Host Institution Department

Engineering Product Development

## Course Last Reviewed

2023-2024

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