

# 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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