

COURSE DETAIL

ROBOT PERCEPTION AND LEARNING

Country

Taiwan

Host Institution

National Taiwan University

Program(s)

National Taiwan University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Computer Science

UCEAP Course Number

107

UCEAP Course Suffix**UCEAP Official Title**

ROBOT PERCEPTION AND LEARNING

UCEAP Transcript Title

ROBOT PERC LEARNING

UCEAP Quarter Units

4.50

UCEAP Semester Units

3.00

Course Description

This course provides a technical overview of decision making and action control in robotics with an emphasis on the development of generalist robots. The course covers:

- (1) fundamental robot kinematics that discusses geometric relationships between the robot's body and the end effector;
- (2) classical control and planning, that provides a theoretical basis, and
- (3) state-of-the-art robot learning that facilitates adaptive and continual learning of robot tasks.

Course Prerequisites: Machine learning; linear algebra; probability; computer vision; linux system; python programming, and pytorch programming.

Language(s) of Instruction

English

Host Institution Course Number

CSIE5117

Host Institution Course Title

ROBOT PERCEPTION AND LEARNING

Host Institution Course Details

https://nol.ntu.edu.tw/nol/coursesearch/print_table.php?course_id=922%20U3430&c...

Host Institution Campus

Host Institution Faculty

Graduate Institute of Computer Science and Information Engineering

Host Institution Degree

Host Institution Department

Department of Computer Science and Information Engineering

Course Last Reviewed

2025-2026

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