COURSE DETAIL

INTRODUCTION TO AUTONOMOUS MOBILE ROBOTICS
Country Ireland
Host Institution Trinity College Dublin
Program(s) Trinity College Dublin
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mechanical Engineering
UCEAP Course Number 154
UCEAP Course Suffix
UCEAP Official Title INTRODUCTION TO AUTONOMOUS MOBILE ROBOTICS
UCEAP Transcript Title AUTON MOBILE ROBOT
UCEAP Quarter Units 5.00
UCEAP Semester Units 3.30

Course Description

This course presents a practical and theoretical introduction to modern autonomous mobile robot systems. It gives students a broad introduction to the field spanning topics including hardware, software, AI and machine learning, and human-robot interaction and robot ethics. Students study the technology and methods underlying a robot's ability to sense and act in its environment. Through a series of labs and assignments, students gain a proficiency in developing applications for robots in both simulation and real-world settings The course has the following key components: an introduction to mobile robots – sensors, actuators, and control paradigms; the fundamental theory for autonomous mobile robots (kinematics, localization, mapping, and path planning); the scientific methods for evaluating robot performance; an introduction to the field of human-robot interaction; and robots-in-the-wild: case studies of real-world robots and their ethical implications.

Language(s) of Instruction
English

Host Institution Course Number
MEU44B12

Host Institution Course Title
INTRODUCTION TO AUTONOMOUS MOBILE ROBOTICS

Host Institution Course Details
https://www.tcd.ie/media/tcd/engineering/pdfs/current-students/MEU44B12.pdf

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Engineering

Course Last Reviewed
2024-2025

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