

COURSE DETAIL

SERVICE ROBOTICS

Country

Sweden

Host Institution

Lund University

Program(s)

Lund University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Mechanical Engineering

UCEAP Course Number

143

UCEAP Course Suffix**UCEAP Official Title**

SERVICE ROBOTICS

UCEAP Transcript Title

SERVICE ROBOTICS

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

The course consists of a part with a practically oriented project assignment and a theoretical part. Working in groups, choose a service robotics topic to study and present this orally to the other students. The theoretical part is deepened at a literature seminar where scientific articles are discussed. Examples of service robotics topics include different service robotics applications, human-robot interaction, levels of robot autonomy, navigation of mobile robots, SLAM (simultaneous localization and mapping), maze-solving algorithms, line-following algorithms, wheeled locomotion, odometry, anthropomorphic robots, robot ethics or a service robotics topics of the students' own choice. The practical part consists of a project in one or more of the above-mentioned areas which is carried out in groups of usually four students. A functioning service robot is developed by integrating an Arduino controller, servos, sensors and mechanical components produced by for example laser cutting or 3D printing. The project applies knowledge in mechanics, electronics and programming.

Language(s) of Instruction

English

Host Institution Course Number

TNSN01

Host Institution Course Title

SERVICE ROBOTICS

Host Institution Course Details

https://kurser.lth.se/lot/course-syllabus-en/25_26/TNSN01

Host Institution Campus

Lund

Host Institution Faculty

Engineering

Host Institution Degree

Host Institution Department

Course Last Reviewed

2025-2026

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