

MICRO-427

Robotics for society

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Cursus	Sem.	Type
Managmt, dur et tech	MA1	Obl.

Language of teaching	English
Credits	4
Session	Winter
Semester	Fall
Exam	Written
Workload	120h
Weeks	14
Hours	4 weekly
Courses	2 weekly
Project	2 weekly
Number of positions	

Summary

This project based course addresses the topics of robotics and manufacturing. The theoretical basics of robotics are introduced. Systems, specifications and performances are discussed to understand well the technology and the related applications of robotics and its applications.

Learning Prerequisites**Required courses**

Basics of mathematics and physics.

Learning Outcomes

By the end of the course, the student must be able to:

- Classify industrial robotics and manufacturing solutions
- Define industrial robotics and manufacturing solutions
- Manage the requirements of a robotic platform
- Quantify the requirements of a robot
- Specify the architecture of a robotic solution
- Construct the architecture of a robotic solution

Transversal skills

- Manage priorities.
- Take feedback (critique) and respond in an appropriate manner.
- Use both general and domain specific IT resources and tools
- Communicate effectively with professionals from other disciplines.

Teaching methods

courses,
projects,
exercises

Expected student activities

exercises
projects in groups

Assessment methods

50 % : Written exam, December 22nd, 2022, Duration : 60 mins.

50 % : Group project (oral presentation , report and Q&A) - during the exam session, January, 2023.

Supervision

Office hours	Yes
Assistants	Yes
Forum	Yes

Resources**Moodle Link**

- <https://go.epfl.ch/MICRO-427>