



UNIVERSITÀ
DI PAVIA

Ph.D. Program in Electronics, Computer Science and Electrical Engineering

COURSE

Advanced Robotics

Coordinator Prof H. Giberti

OBJECTIVES: The course aims to provide an overview of frontier technologies and applications in robotics, not only for the industrial sector. The course covers the fields of surgical robotics, bio-inspired robotics and soft robotics, discussing their basic principles and applications. The course is divided into three modules, with an additional optional module on robotic applications in the pharmaceutical sector.

Optional Module: Pharmaceutical manufacturing and Robotics (Ing. Andrea Tanzini, STÄUBLI Robotics) – This module will be held in Italian.

Date: 06/6/2025 – 10:00

Module 1: Surgical robotics (Ing. Cristian Tome, CMR Surgical)

Date: 11/6/2025 - 14:00

Module 2: Bio-inspired robotics (Prof. Simone Cinquemani, Politecnico di Milano)

Date: 20/6/2025 (to be confirmed)

Module 3: Soft Robotics (Ing. Barbara Mazzolai, ITT)

Date: 27/6/2025 (to be confirmed)

EVALUATION: Each student will be asked to prepare a short presentation on a topic of their choice related to a subject covered in the course taking inspiration from scientific papers and technical background. On a date to be agreed with the enrolled students, they will give a short presentation to the class.

ATTENDANCE: The course will be taken online via ZOOM link

LECTURES: 15h; **CREDITS:** 4 CFU

Ph.D. Coordinator

Prof.ssa Ilaria Cristiani

Seminar in English