Faculty of Biotechnical Systems Engineering

Smart Biotechnical Systems
Field of study: Mechatronics and Robotics

Overview

Dive into the forefront of technology with our Master's program in smart IoT and Autonomous Systems. Explore the realms of advanced computer programming in Python and C++ before delving into specialized courses like Sensors and Transducers for both IoT and autonomous devices. Learn about cutting-edge communication protocols, cybersecurity measures, and smart embedded systems. For those interested in autonomous vehicles, courses cover the use of neural networks for computer vision in robotics, design of electric mobile equipment, sensor fusion, or motion planning. Gain hands-on experience and be at the forefront of innovation in this rapidly evolving field. Prepare for a dynamic career shaping the future of smart biotechnical systems and beyond.

Skills and Employability

Graduates of this specialization can pursue careers as IoT Solutions Architects, Autonomous Systems Engineers, Embedded Systems Developers, Data Scientists for IoT, Mobile Robotics Engineers, Smart Agriculture Specialists, IoT Product Managers, Research Scientists in IoT and Autonomous Systems and many more. These roles involve designing innovative IoT solutions, developing autonomous systems, ensuring cybersecurity in IoT ecosystems, optimizing embedded systems, analyzing sensor data, designing robotic systems, implementing precision solutions in diverse fields, contributing to self-driving equipment, managing IoT products, and conducting cutting-edge research. With a rich expertise in smart IoT and autonomous machines, graduates are well-equipped to drive innovation and shape the future of technology across various industries.

Courses (selection)

Computer Programming (C++ and Python); Sensors and Transducers for Smart Biotechnical Systems (sensors for self-driving systems, such as LIDAR, radar, GPS, proximity sensors, IMU, etc.; sensors for outdoor applications: air temperature and humidity, wind speed, soil pH, soil temperature and humidity, luminosity, air quality, water quality and more); Computer Vision and Image Processing; Sensor Fusion for Smart Biotechnical Systems; Neworks, Communication Protocols and Data Processing for IoT Systems; Smart Embedded Systems for IoT; Motion Planning, Control and Trajectory Tracking; Design of Electric Mobile Equipment, and more (Curriculum available here).

Other relevant information:

Accommodation; Scholarships; Erasmus+ scholarships for study and placement internships abroad; Psychopedagogical training for the teaching profession - level 2 (optional); Further studies leading to a PhD in Engineering or a university lecturer position.

Teaching language: English

Duration: 2 years

Contact details: https://isb.pub.ro/contact/