Robotics (BA)

University: TalTech
Level: BA all years
Teaching mode: blended: mostly online, but presence on campus required in specific period
Instructor(s): Valery Vodovozov

Description

https://moodle.taltech.ee/course/view.php?id=12702

Learning outcomes

- knowledge of historical developments of robots as universal machines and automata and skills of their classification on the basis of design, application field or level of a control system;
- knowledge about the construction of robot manipulators and design and control principles of robot's control systems, skills to describe mathematically and solve the problems of robots;
- knowledge about components used in robotics and skills to select and apply needed components for the composition of a robot or its control system;
- skills to calculate the load of robot actuators and to select and apply an equipment or a control unit required;
- skills to program and apply the robots for automation of production processes;
- knowledge about software packages of virtual robotics and skills in their usage for robot system development.

General information

Contact hours per week: 3
Total workload: 156
ECTS credits: 6
Language: English

Course start date: 01/02/2022
Course end date: 01/07/2022
Add. info about start date:
Weekly teaching day/time:

Time zone:	CET +1 (Estonia, Israel)
Further information:	
Prerequisites:	basic knowledge of algebra, geometry, vector and matrix calculations, differential and integral calculus; basic knowledge of physics, at least mechanics, electricity, and optics; computer proficiency at the level of a qualified end user and knowledge of office tools and computer graphics; basic skill in programming, at least Basic language and operating systems. Separate knowledge deficiencies can be replenished during learning. In-depth knowledge in these areas is welcome.
Activities and methods:	Lectures, Lab-work, Self-study, Exercises
Presence on campus:	10 days

Final examination

Form:	assignment
Date:	01/06/2022
Location/format:	
Re-sit possibility:	
Transcript available:	on request
Add. info/requirements:	

Registration

To register for this course, follow the registration requirements of your **home university** as specified here: www.euroteq.eu/courses-registration.

Administration

Number of places:	
Minimum participants:	
Internal course code:	ATR0030
Contact:	valery.vodovozov@ttu.ee

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