Title	Code
(Robotyka)	**1010331151010330299**
Field: **Control Engineering and Robotics**	Year / Semester: **3 / 5**
Specialty: **-**	Course: **core**
Hours: Lectures: **2** Classes: **2** Laboratory: **-** Projects / seminars: **-**	Number of credits: **5**
	Language: **polish**

Lecturer:

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Status of the course in the study program:

Obligatory course, Faculty of Electrical Engineering, field Control Engineering and Ro-botics.

Assumptions and objectives of the course:

Acquaintance of knowledge about robot control algorithms and about controlling robot interactions with environment .

Contents of the course (course description):

Statics of robots. Robot control systems: Independent joint control. Point-to?point mo-tion control. Path motion control. Inverse dynamics control. Computed torque feedfor-ward control Manipulator interaction with environment: Compliance control. Force con-trol with inner position loop. Force control with inner velocity loop. Hybrid position/force control. Impedance control. Adaptive robot control. Basics of the trajectory planning and robot programming.

Introductory courses and the required pre-knowledge:

Basic knowledge of differential and matrix calculus, theory of mechanisms automatic control, and computer science, foundations of robotics of the 4-th semester

Courses form and teaching methods:

Lectures and exercises supported by transparencies, slides, and films.

Form and terms of complete the course - requirements and assessment methods:

Examinations and exercises.

Basic Bibliography:

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Additional Bibliography:

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