

t.ROB - Robotik

Person responsible for the course: Peter Engel, enpe

Credits: 4

Valid for: 2011/2012

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Learning objectives:

- Overview of design, properties and practical use of industrial robots
 - Interaction of industrial robots with peripheral devices and industrial processes
 - On- and offline programming of industrial robots
 - Industrial vision systems as part of the robot cell
 - Conceptual layout, planning and realisation of a robot project
 - Provide an insight to the responsibilities of a project engineer working with robot applications
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Course content:

Lecture:

- Design and classification of industrial robots and their programming (ABB, Fanuc, Kuka)
- Possibilities and limitations of offline programming methods
- Peripheral devices as base for the communication between robot and environment
- Gripper systems and their specific area of application
- Sensors and vision systems
- Kinematics of robots, Denavit-Hartenberg-Transformation, quaternions

Practical Training

- Programming and simulation of robots
 - Autonomous realisation of practical samples in our laboratory
 - Realizing of a robotic project
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Previous knowledge:

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Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	14x2L
Tutorial/Practicum	
Group teaching	14x2L
Block instruction	
Seminar	

Assessment:

According to the table or as specified in writing by the lecture at the beginning of the semester!

Number	Type	Weighting
1	End of term exam	
	Exam during the semester	
1	Further assessments	

Language of instruction:

Deutsch

Instruction material:

Scripte, Buchauszüge und Foliensätze zu ausgewählten Kapiteln

-ISBN Titel Autor(en) Verlag Auflage Ausgabejahr

- 3935772009 Automatisieren mit Know-How: Handhabung, Robotik, Montage Hesse Stefan Hoppenstedt
Bonnier 1 2002

- 3528049510 Robotik: Grundwissen für die berufliche Bildung Hesse Stefan Vieweg 1996

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Comments:

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