Zurich University of Applied Sciences

School of Engineering

t.ROME1 - Robotik & Mechatronik 1

Person responsible for the course:	Joachim Wirth, wirj
Credits:	4
Valid for:	2011/2012
Last saved:	26.03.2012 10:11

Learning objectives:

- Overview of design, properties and practical use of robots in an industrial environment
- Interaction of industrial robots with peripheral devices and industrial processes
- On- and offline programming of industrial robots
- Conceptual layout, planning and realisation of a robot project
- Provide an insight to the responsibilities of a project engineers work with robot applications

Course content:

Lecture:

- Design and classification of industrial robots an their programming
- Possibilities and limitations of offline programming methods
- Peripheral devices as base for the communication between robot and its environment
- Gripper systems and their specific field of application
- Sensors and vision systems
- Kinematics of robots, Denavit-Hartenberg-Transformation, quarternions

Practical Training:

- Programming and simulation of robots
- Autonomous realisation of practical samples in our laboratory

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	0,7
	Exam during the semester	
1	Further assessments	0,3

Language of instruction:

German

Instruction material:

Scripte, Buchauszüge und Foliensätze zu ausgewählten Kapiteln

- Automatisieren mit Know-How: Handhabung, Robotik und Montage, Hesse Stefan, Hoppenstedt Bonnier, 2002, ISBN3935772009
- Robotik: Grundwissen für die berufliche Bildung, Hesse Stefan, Vieweg, 1996, ISBN3528049510

Comments:

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