Zurich University of Applied Sciences

School of Engineering

t.MSRT1 - Mess-, Steuer- und Regelungstechnik 1

Person responsible for the course:	Urs Glauser, glsu
Credits:	4
Valid for:	2010/2011
Last saved:	20.08.2010 16:31

Learning objectives:

- Method for measuring of mechanic, fluid dynamic and thermodynamic quantities
- Functionality of Programmable Logic Controllers (PLC) and its programming
- Functionality of PID-controllers

Course content:

- Measuring methods, open and closed loop controlling, block diagrams presentations
- Sensors, converters, amplifiers, analog and digital signal processing
- Actuators
- Programmable logic controller, programming tool Step 7, logic and sequential control
- Basics of PID-control, steady behaviour of closed loop elements

Lab:

- Building and testing electro-pneumatic applications
- Getting familiar with PLCs
- Programming logic and sequential control applications
- Setting up, measuring and testing the steady behaviour of PID-controlled plants

Previous knowledge:

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Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	14x2L
Tutorial/Practicum	7x4L
Group teaching	
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	60%
1	Exam during the semester	20%
8	Further assessments	20%

Language of instruction:

Deutsch

Instruction material:

Skript

Automatisieren mit SPS - Theorie und Praxis, Zastrow Dieter, Wellenreuther, Günter; Vieweg 4. Aufl. 2008

Einführung in die Regelungstechnik, Mann Heinz, Schiffelgen Horst, Froriep Rainer, Hanser 11. Aufl. 2009

Comments:

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