

t.RT2 - Regelungstechnik 2

Person responsible for the course: Ruprecht Altenburger, altb

Credits: 4

Valid for: 2010/2011

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Learning objectives:

- To know the commonly used controller types and their characteristics in a control loop
- To know and to apply the extended stability criteria
- To apply various controller design methods when specifications are given
- Targeted use of extended control systems structures
- To know and to apply description methods and design methods for discrete time control systems
- To be able to realize discrete time control systems

Course content:

Lecture:

- Introduction: Extension of the describing methods for the dynamic behaviour
- Set-up of system models for the simulation
- Extended controller types
- Extended stability analysis
- Systematic design of control systems: various design methods and criteria
- Discrete time control systems: Description methods, sample time, stability
- Design methods for discrete time control systems
- Anti reset windup measures for controllers with integral part

Laboratory:

- Set-up of control loops with various hardware laboratory models
- Testing various controller structures and concepts

Previous knowledge:

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Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	14*2
Tutorial/Practicum	14*2
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%
2	Exam during the semester	20%
	Further assessments	lab report

Language of instruction:

Deutsch

Instruction material:

- lecture notes
- exercises

Comments:

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