

t.RT2 - Regelungstechnik 2

Person responsible for the course: Ruprecht Altenburger, altb

Credits: 4

Valid for: 2011/2012

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Learning objectives:

- to be able to linearize nonlinear dynamic systems
 - describing linear systems in state space description
 - knowing state-space control and design them
 - knowing the possibilities of state-observers
 - to be able to describe discrete-time systems
 - applying discrete-time control
 - knowing effects of nonlinear controllers
 - knowing basic concepts of modern control algorithms
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Course content:

Lecture:

- linearize nonlinear systems
- state-space description of linear systems
- state-space control
- state-observers
- Discrete time control systems: Description methods, sample time, stability
- Design methods for discrete time control systems
- modern control concepts

Laboratory:

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

RT1

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	80%
2	Exam during the semester	20%
	Further assessments	lab report

Language of instruction:

Deutsch

Instruction material:

- lecture notes
 - exercises
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Comments:

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