t.RT2 - Regelungstechnik 2

Person responsible for the course:	Ruprecht Altenburger, altb
Responsible OU:	
ECTS:	4
Valid for:	2012/2013
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Expertise:
-

Methodological skills:
-

Social skills:
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Personal skills:
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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 conceps of modern control algorithms

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

Previous knowledge:

Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	14*2
Tutorial/Practicum	14*2
Block instruction	

Assessment:

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

description	type	form	scope	assessment	weighting
Performance records during school hours					
Semester end exam					

Language of instruction:

Deutsch

Instruction material:

-lecture notes

-exercises

Additional literature:

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Comments:

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