

t.BSY - Betriebssysteme

Person responsible for the course: Markus Thaler, tham

Credits: 4

Valid for: 2010/2011

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Learning objectives:

You understand the basic concepts of modern operating systems and can discuss them. You are able to discuss and evaluate operating systems with respect to a given application domain. You are able to implement demanding applications and drivers based on functionality and support of the operating system.

Course content:

lectures

- introduction and overview
- introduction to system administration
- process and thread description and control
- scheduling
- process synchronisation and inter-process communication
- memory management
- file systems
- I/O management

practical exercises

- a minimal shell
- processes and threads
- synchronisation
- inter-process communication

Systeminformatik (SI): additional practical exercises

- programming environment (C/C++ programming)
- implementation of a thread packet
- Linux-drivers

Unternehmensinformatik (UI): additional practical exercises

- introduction to C programming
 - system administration
 - shell scripts
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Previous knowledge:

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Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	14x2L
Tutorial/Practicum	14x2L
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%
	Short exams during the semester	accroding to lecturer
	Practical exercises	accroding to lecturer

Language of instruction:

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Instruction material:

- Copy of slides
- William Stallings, Operating Systems, 6th ed., Pearson Prentice Hall, 2006.
- Andrew S. Tanenbaum, Modern Operating Systems, Third Edition, Prentice Hall, 2006. -
- A.Silberschatz, P.Galvin,G. Gagne, Applied Operating System Concepts, 8th ed., 2009, John Wiley.
- H.Herold, Linux-Unix Systemprogrammierung, 3.Auflage, Addison Wesley, 2004.
- Ellen Siever ed. alt., Linux in a Nutshell, 3rd ed., 2005.

Comments:

- tests include topics from lectures as well as practical and theoretical exercises