

Course

Operating Systems II

Jörg Kaiser
IVS - EOS

Embedded Systems and OS



General Course Information

Lecture:

Prof. Dr. Jörg Kaiser
Institut für Verteilte Systeme (IVS)
Arbeitsgruppe Eingebettete Systeme und Betriebssysteme

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Exercises:

Thomas Kiebel
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General Course Information

Time:

Lecture: Tuesday, 9:00 c.t.
Exercises: Monday, 15:00 c.t.

Location:

Lecture: G29-307
Exercises: G29-334

Qualifications:

Vordiplom, VL Betriebssysteme 1,
VL Technische Informatik II.

Creditpoints:

6 ECTS

Conditions for

successful participation: attendance, exercises, exam



- **Unbenoteter Schein:**

Theoretische Aufgabenblätter

alle mit mindestens 50% Punkten

Praktische Aufgabenblätter

80% (+1) erfüllt

- **Prüfung**

Zulassung: Kriterien unbenoteter Schein erfüllt

Durchführung: Klausur, bei weniger als 15 zu Prüfenden mündliche Prüfung

- **Anmeldung erforderlich**

Details in den Übungen erfragen



General Course Information

- Exercises, information etc. will be available on the web.
- Slides of the course will be made available **AFTER** the respective lecture

http://ivs.cs.uni-magdeburg.de/eos/lehre/ss2006/v1_bs2/

- information is also accessible via UNIVIS

Participation requires registration on the web-page !

https://bode.cs.uni-magdeburg.de/eos/anmeldung/form_in.php



Basic knowledge from OS I

Organization of a computer from the OS perspective
Basic concepts and mechanisms of an OS
Introduction to programming on low system levels

- memory and processor abstractions
- input/output and asynchronous operations
- processes and threads
- scheduling
- concurrency and synchronization



roadmap for OS II:

- file systems
- security and access control
- fundamentals in distributed OS
- distributed storage systems
- issues in embedded OS



Goals OS II

- Extending the basic knowledge of OS I
- Knowing the main principle problems and issues in the presented topics
- Understanding of the trade-offs and design decisions for the presented OS concepts
- Being able to assess the impact of a solution in an off-the-shelf OS



Literature:

Andrew S. Tanenbaum:

Moderne Betriebssysteme, 2. Auflage, Pearson Studium, 2003

William Stallings:

Betriebssysteme, Prinzipien und Umsetzung, 4. Auflage, Pearson Studium, 2003

G. Coulouris, J. Dollimore, T. Kindberg:

Verteilte Systeme - Konzepte und Design, Pearson Studium, 2002

Paulo Veríssimo, Luís Rodrigues:

Distributed Systems for System Architects, KluwerAcademic Publishers, 2001

further readings will be indicated during the course

