

Course code: IF-I-B013

Course title : Operating Systems 1

Hours per week: 4

Semester: 4th semester (offered in every semester)

Number of Credits allocated/work load: 5 ECTS credits

Course contents: This course covers the tasks of an operating system, basic concepts about how those can be accomplished, and examples of the implementation in important, current operating systems. The topics covered include :

- Processes and Threads
- Interrupts
- Scheduling
- Synchronization Methods
- Memory Management

Prerequisites: Basic knowledge of the architecture and the use of computer systems.

Objective of the course/learning outcome: Knowledge of the fundamental concepts, algorithms, and data structures used by an operating system, as a prerequisite for

- assessing and selecting an operating system,
- writing high-performance applications,
- operating and troubleshooting an IT system.

Recommended Reading: One of the standard textbooks about operating systems, e.g.:

- Tanenbaum, Modern Operating Systems, Prentice Hall
- Stallings, Operating Systems, Prentice Hall
- Silberschatz et. al., Operating System Concepts, Addison Wesley

Teaching methods: Interactive Lecture with Lab Sessions

Assessment methods: Successful Solution of Lab Exercises
Written Examination

Language of instruction: German or English

Name of lecturer: Christian Vogt

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