

Only the german version of the module description as part of the study regulations is legally binding.

Module name	Advanced Operating Systems
Module number	INF-25-Ma-FSA-AOS
Responsible lecturer	Prof. Dr. Horst Schirmeier horst.schirmeier@tu-dresden.de
Qualification objectives	Students are able to design scalable and efficient system software on modern multiprocessor architectures and distributed systems and understand the functional and non-functional properties of such systems.
Content	The module covers the basics of operating systems, such as synchronization, security and virtualization, as well as topics such as scalability, fault tolerance, trusted computing, real-time ling, mobile operating systems and cloud computing. Further content includes practical systems and their design principles as well as current research approaches and trends.
Teaching and learning methods	The module comprises lectures of 3 SWS, exercises of 1 SWS and the self bststudium. The language of instruction for the lectures and exercises is English.
Prerequisites for participation	In the Diploma degree program in Computer Science, the competencies to be acquired in the modules INF-25-Ba-RN Computer Networks, INF-25-Ba-BS Operating Systems, INF-25-Ba-RA Computer Architecture and Hardware Laboratory, INF-25-Ba-SWT Software Technology, INF-25-Ba-DMF Data Mana gement Foundations and INF-25-Ba-SWTP Software Technology Project are required.
Applicability	The module is a compulsory elective module in the Diploma degree program in Computer Science in the main study program in the subject area Systems Architecture, which must be selected in accordance with Annex 2 to the examination regulations. In the Master's degree program in Computer Science, the module is a compulsory module in the Distribute d Systems Engineering Track and in the Open Track a compulsory elective module in the subject area of Systems Architecture and the supplement, which must be selected in accordance with Annex 2 to the Examination Regulations. The module can only be selected once in the Master's degree program in Computer Science . The module cannot be selected in the Master's degree program in Computer Science if this module or a module with the same content from a degree program in which the admission requirements according to § 3 of the study regulations have already been met, has already been completed. The module fulfills the prerequisites for the modules listed under prerequisites for participation.
Requirements for earning credit points	The credit points are earned if the module examination is passed. The module examination consists of a written examination lasting 60 minutes. The examination language is English.
Credit points and	6 credit points can be earned through the module. The module grade

grades	corresponds to the grade of the examination.
Module frequency	The module is offered every summer semester.
Workload	The total workload is 180 hours.
Module duration	The module comprises one semester.