

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

Module name	Decentralised systems
Module number	INF-25a-Ma-FSA-Dec
Senior Lecturer	Prof. Dr. Florian Chorsch florian.tschorsch@tu-dresden.de
Qualification objectives	Students are able to assess the functioning and use of decentralised approaches across different application areas.
Contents	The module provides a comprehensive overview of decentralised systems and their design space. The focus is on the basic concepts, principles and applications of decentralised systems, as well as the related challenges and innovations. This includes protocols, algorithms and incentive systems for the fault-tolerant and secure functioning of distributed systems, in particular the design principles of blockchain technologies and, on that basis, system features such as decentralisation, openness and distributed trust.
Forms of teaching and learning	The module includes lectures of 2 SWS, exercises of 2 SWS and self-study. The language of instruction of the Lectures and exercises are in English.
Eligibility for participation	The computer science diploma requires the skills to be acquired in the modules INF-25-Ba-AUD algorithms and data structures and INF-25-Ba-RN computer networks. The Master's in Computer Science requires basic knowledge of algorithms and data structures, distributed systems and computer networks at bachelor's level.
Usability	The module is a compulsory optional module in the field of Systems Architecture in the computer science diploma course in the main course of study, to be chosen in accordance with Annex 2 to the test rules. In the Computer Science Masters Course, the module is a compulsory voting module in the Open Track in the field of Systems Architecture and the Supplement, to be selected in accordance with Annex 2 to the exam rules, and in the Distributed Systems Engineering Track, to be selected in accordance with Annex 3 to the exam rules. The module can only be selected once in the Master's in Computer Science. The module cannot be chosen in the Computer Science Masters Course if that module, or a module with substantially the same content, from a course of study which met the entry requirements under Paragraph 3 of the Studienordnung has already been completed. The module provides the pre-requisites for the modules it designates under the pre-requisites for participation.
Conditions for the award of credits	Credits are awarded when the module test is passed. The module test consists of a 90-minute shift and a 60-hour unmarked complex. The examination language of the Away Days and the Complex service is English.
Credits and marks	The module allows 6 credit points to be obtained. Taking into account the

	sixth sentence of Section 15(1) of the Rules of Procedure, the module score results from the unweighted average of the scores for the individual examination services.
Frequency of the module	The module is offered every winter semester.
Workload	The total workload is 180 hours.
Duration of the module	The module includes a semester.