

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

Module name	Cryptography and data protection Lab
Module number	INF-25-Ba-P-KDS
Senior Lecturer	Dr Stefan Köpsell stefan.koepsell@tu-dresden.de
Qualification objectives	Students are able to work on technical, methodological and professional principles and methods of cryptography, data security and privacy-friendly technologies. They know the underlying security objectives and attacker models. They can assess the security of cryptographic and privacy-preserving procedures, apply them in practice and implement selected parts of the solution.
Contents	The content of the module is the linking of theoretical foundations from the fields of cryptography, data security, privacy-friendly technologies and steganography with practical tasks and the deepening of concepts, including the analysis of technical issues, the evaluation of selected procedures and the implementation of exemplary solutions. It also includes the mathematical foundations of data security, cryptographic methods for encryption and authentication, and selected approaches to privacy-friendly technologies and steganography.
Forms of teaching and learning	The module includes 4 SWS traineeships and self-study. The language of the traineeships is German.
Eligibility for participation	The computer science bachelor's programme requires the skills to be acquired in the modules INF-25-Ba-Ma1 Linear Algebra and Analysis, INF-25-Ba-Prg Programming and RoboLab, and INF-25-Ba-Si Security.
Usability	In the Bachelor's Informatics course, the module is a compulsory voting module for the Bachelor's Traineeship, to be selected in accordance with the annex to the exam rules. The module will create the conditions for the modules that it will be able to use under the conditions of participation.
Conditions for the award of credits	Credits are awarded when the module test is passed. The module test consists of a non-public oral test performance as an individual test lasting 15 minutes. The language of the exam is German.
Credits and marks	The module allows 6 credit points to be obtained. The module score corresponds to the test performance score.
Frequency of the module	The module is offered every winter semester.
Workload	The total workload is 180 hours.
Duration of the	The module includes a semester.

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