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

Module name	**IT Security in Cloud Computing**
Module number	INF-25-Ma-FSC-CSec
Responsible lecturer	Prof. Dr. Ivan Gudymenko ivan.gudymenko@tu-dresden.de
Qualification objec-Tives	Students will acquire fundamental skills for holistically assessing threats and risks related to cloud applications. They will be able to perform threat analysis and identify protection goals and attacker models, as well as analyze security risks in the context of cloud computing and the corresponding protective measures. Students are able to understand the fundamentals of important modern security technologies in the field of cloud security and name their typical areas of application. They have basic knowledge in the field of data protection in cloud computing and can name requirements and mechanisms of action.
Content	The module covers the basics of IT security in cloud computing, in particular typical practical methods and procedures for assessing the general security posture and specific risks and initiating appropriate countermeasures, threat analysis techniques, and innovations and case studies from the field of IT security, such as confidential computing, zero trust, and self-sovereign identity, as well as data protection considerations regarding the cloud and cloud applications.
Teaching and learning methods	The module comprises lectures of 1 SWS, exercises of 1 SWS and self-study. The language of instruction for lectures and exercises is English.
Prerequisites for par-ticipation	The diploma program in computer science requires students to have acquired the skills taught in the INF-25-Ba-Si Security module. The master's program in computer science requires students to have bachelor's-level skills in IT security.
Applicability	The module is a compulsory elective module in the field of secure computing in the main study period of the computer science degree program, which must be selected in accordance with Appendix 2 of the examination regulations. The module is a compulsory elective module in the OpenTrack in the field of Secure Computing and the supplement in the Master's program in Computer Science, which must be selected in accordance with Appendix 2 of the examination regulations. The module establishes the prerequisites for the modules that are specified 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 non-public oral examination as an individual examination lasting 20 minutes. The examination language is English.
Credit points and grades	3 credit points can be earned through the module. The module grade corresponds to the grade of the examination.

Module frequency	The module is offered every summer semester.
Workload	The total workload is 90 hours.
Module duration	The module comprises one semester.