Module name	**Foundations of Virtual Reality**
Module number	CMS-TRK-FVR
Senior Lecturer	Jun Prof. Dr. Matthew McGinity matthew.mcginity@tu-dresden.de
Qualification objectives	Students are familiar with the basics of virtual reality and immersive media technologies. This includes knowledge of the perception and psychological foundations of immersive media and basic knowledge of the technical challenges of developing immersive systems and experiences.
Contents	The content of the module includes definitions and history of immersive media and related concepts, basics of visual, acoustic, haptic and multisensory perception, head-tracking and head-mounted displays, 3D tracking, spatial audio and haptic interfaces, embodiment, social presence, software architectures and world models for immersive in-situ simulations.
Forms of teaching and learning	The module includes lectures of 2 SWS, exercises of 2 SWS and self-study. The language of the lectures and exercises will be English.
Eligibility for participation	Basic skills on human-computer interaction, software technology and computer graphics at bachelor's level are required.
Usability	In the Masters Course Computational Modeling and Simulation, the module is a compulsory optional module in Track Visual Computing and in Track Computational Life Science, to be selected in accordance with Annex 2 to the Specific Examination Regulations. The module cannot be chosen in the Master's Course Computational Modeling and Simulation if this or a module with substantially the same content from a Course with which the entry conditions under § 3 of the Studienordnung have been met 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 120-minute away day. The language of the test will be English.
Credits and marks	The module allows 5 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 150 hours.
Duration of the module	The module covers 1 semester.