Module name	**User Interface Engineering**
Module number	CMS-TRK-UI1
Senior Lecturer	Prof. Dr. Raimund Dachselt raimund.dachselt@tu-dresden.de
Qualification objectives	Students are familiar with the requirements and techniques for developing novel, natural user interfaces. In particular, they master scenario-based and user experience design techniques. They are able to apply in practice the concepts and techniques for the development of novel user interfaces.
Contents	The content of the module is the development of novel, more natural user interfaces based, for example, on yesterday or vision control and the related requirements, development processes and HCI techniques, with a focus on scenario-based design and user experience design. Other content includes engineer-centred approaches and creative design phases. These phases include drawing up sketches and early prototypes.
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	Knowledge of human-computer interaction at bachelor's level is required. The following literature is suitable for preparation: 1. Interaction design: Beyond Human Computer Interaction, 6th Edition. Yvonne Rogers, Helen Sharp, Jennifer Preece. John Willey Sons, 2023. ISBN: 978-1-119-90109-9, 2. Human Computer Interaction, 3 rd edition. Alan Dix, Janet E. Finlay, Gregory D. Abowd, Russell Beale. Pearson Prentice Hall, 2002. ISBN: 978-0-13-046109-4.
Usability	In the Computational Modeling and Simulation Masters Course, the module is an optional module in Track Visual Computing, Track Computational Life Science and Track Computational Engineering, 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 90-minute away day and a portfolio of 60 hours. Both audit services are relevant to success. The language of the test will be English.
Credits and marks	The module allows 5 credit points to be obtained. The module score is also the weighted average of the scores for the individual audit

	services. Time off work is given a threefold weighting and the portfolio a twofold weighting.
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.