

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

Module name	Interactive information visualization
Module number	INF-25-Ma-FVC-IIV
Responsible lecturer	Prof. Dr. Raimund Dachzelt raimund.dachzelt@tu-dresden.de
Qualification objectives	Students have application-ready knowledge in the field of interactive information and data visualization and master techniques and basic principles related to modern computer environments. They can evaluate existing information visualization solutions and are able to select or develop appropriate visualization and interaction techniques depending on tasks and users. Students can apply modern information visualization techniques and implement implementations of various concrete interactive visualization techniques on the current state of research.
contents	Contents of the module are advanced techniques of information visualization and essential concepts of interactive visualization of multivariate data as well as networks and hierarchies. The focus is on concepts for the exploration and analysis of large data and information spaces, coordinated visualization views, zoomable user interfaces, focus-and-context techniques and magical lenses. Other content includes modern visualization environments with very large and very small displays as well as their combination, mobile devices, immersive mixed reality solutions and physical data representations.
Forms of teaching and learning	The module includes lectures in the scope of 2 SWS, exercises in the scope of 2 SWS and self-study. The teaching language of the lectures and exercises is English.
Requirements for participation	The competences to be acquired in the modules INF-25-Ma-FVC-FDV Foundations of Data Visualisation, INF-25-Ba-MCI Fundamentals of Human-Computer Interaction and INF-25-Ba-DMF Data Management Foundations are required in the Computer Science Diploma Programme. In the Master's program Computer Science, the competencies to be acquired in the module INF-25-Ma-FVC-FDV Foundations of Data Visualization are required.
usability	The module is a compulsory elective module in the field of Visual Computing and Machine Learning in the diploma course Computer Science in the main course of study, which must be chosen in accordance with Annex 2 to the examination regulations. The module in the Master's programme Computer Science is a compulsory elective module in the Open Track in the field of Visual Computing and Machine Learning as well as the supplement, which must be selected in accordance with Annex 2 to the examination regulations. The module can only be selected once in the Master's programme Computer Science. In the Master's programme in Media Informatics, the module is a compulsory elective module in the field of specialisation modules, which must be chosen in accordance with

	Section 27(3) of the Examination Regulations. The module cannot be selected in the Master's degree program Computer Science and the Master's degree program Media Informatics if this or a substantially identical module from a degree program with which the admission requirements according to § 3 of the study regulations have been fulfilled, has already been completed. The module creates the prerequisites for the modules, which it names under prerequisites for participation.
Conditions for awarding credits	The credit points are earned when the module examination has been passed. The module exam consists of a 90-minute exam. The language of the examination can be German or English and will be specified by the lecturer at the beginning of each semester and announced in the usual manner.
Credits and grades	6 credit points can be earned through the module. The module grade corresponds to the grade of the examination performance.
Frequency of the module	The module is offered every summer semester.
workload	The total workload is 180 hours.
Duration of the module	The module covers one semester.