

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

Module name	Technical logistics basics
Module number	INF-25-Ma-NGR-FL
Responsible lecturer	Prof. Dr. Thorsten Schmidt thorsten.schmidt@tu-dresden.de
Qualification objectives	The students are able to plan and design production and logistics systems with advanced knowledge, taking into account ergonomic aspects. They understand the fundamentals from product, process and resource analysis to the realization of production and logistics systems as part of engineering work and can carry this out responsibly. Students have skills in the technical and socio-technical design of production and logistics systems and are able to use a specific research task from the field of production, logistics and ergonomics to answer an engineering question, for example in the form of scientific research, a conceptual design or an experiment and can not only document the result correctly in writing, but also explain it concisely in a short oral presentation. They are familiar with the latest scientific findings in specific areas of production logistics and ergonomics and know practice-relevant methods, techniques and tools of scientific research work.
Content	The module covers the fundamentals, methods and calculation procedures for planning production and logistics systems as well as production ergonomics and occupational health and safety and practical and calculation examples. Furthermore, a research topic from production, logistics and ergonomics, including methods for sequence planning with composite priority rules , technologies for information acquisition and processing, analysis of logistical processes with ML methods, methods of industrial symbiosis, mapping of control processes with plant simulation are part of the module.
Teaching and learning methods	The module comprises lectures of 2 SWS, exercises of 2 SWS and the self bststudium. The language of instruction for the lectures and exercises is German.
Prerequisites for participation	No knowledge is required.
Applicability	The module is a compulsory module of the Non-Computer Science Supplement Factory and Logistics in the Diploma program in Computer Science. In the Master's degree program in Computer Science, the module is a compulsory elective module in the open track supplement, which must be selected in accordance with Annex 2 to the examination regulations. The module can only be selected in the Master's degree program in Computer Science in combination with the module INF- 25-Ma-NVE-FL Technische Logistik Vertiefung. The module cannot be selected in the Master's degree program in Computer Science if this module or a module with essentially the same content from a degree

	program with which the admission requirements according to § 3 of the study regulations have already been met has already been completed. The module fulfills the prerequisites for the modules listed 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 portfolio of 80 hours. The examination language is German.
Credit points and grades	6 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 winter semester.
Workload	The total workload is 180 hours.
Module duration	The module comprises one semester.