

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

Module name	Production engineering specialization - production engineering and automated parts production
Module number	INF-25-Ma-NVE-PROD
Responsible lecturer	Prof. Dr. Hans Christian Schmale hans_christian.schmale@tu-dresden.de
Qualification objectives	Students have basic practical knowledge of the manufacture of products in mechanical, vehicle and plant engineering. They have advanced basic knowledge of the operating principles of selected processes and the technological parameters to be defined for these processes. Students know the procedures and methods for selecting the process steps, determining the operating ebsmittel and the process parameterization in the context of work preparation for the processes of parts production. They are able to apply methods and systems for NC planning and NC simulation in conjunction with automated technology planning and to evaluate CAD/NC process chains.
Content	The contents of the module are the practical application of selected manufacturing processes in primary forming, forming, machining, removal and joining technology. The module includes planning steps and methodical hes procedure for NC planning of technological operations on automated production equipment, structure and content of NC programming systems, techniques and functionalities for NC planning, simulation and organization as well as automated technology planning, feature technology and production data organization.
Teaching and learning methods	The module comprises lectures of 1 SWS, exercises of 1 SWS, practicals of 3 SWS and self-study. The language of instruction for the lectures, exercises and practicals is German.
Prerequisites for participation	In the Diploma degree course in Computer Science and in the Master's degree course in Computer Science, the competences to be acquired in the module INF-25-Ma-NGR-PROD Production Engineering Fundamentals - Production Engineering and Production Planning are a prerequisite. etences.
Applicability	The module is a compulsory module of the Non-Computer Science Supplement Production Engineering in the Diploma program in Computer Science. The module is a compulsory elective module of the open track supplement in the Master's degree program in Computer Science, which must be selected in accordance with Annex 2 to the examination regulations. In the Master's degree program in Computer Science, the module can only be selected in combination with the module INF-25- Ma-NGR-PROD Production Engineering Fundamentals - Production Engineering and Production Planning. 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 m the admission requirements according to § 3 of the study regulations

	have already been completed. The module creates 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 written examination lasting 90 minutes and a portfolio of 55 hours. Both examinations are relevant for passing the module. The examination language for the written examination and the portfolio is German.
Credit points and grades	6 credit points can be earned through the module. The module grade is calculated from the un weighted average of the grades of the individual examinations.
Module frequency	The module is offered every summer semester.
Workload	The total workload is 180 hours.
Module duration	The module comprises one semester.