

Winter term:

Master-level:

Course Title	Credit Points	Type	Study Program
Machining Technology I	5,0	Lecture + Exercise	Master Manufact. Technology MMT
Plastics Processing Technology	5,0	Lecture + Exercise	Master Manufact. Technology MMT
Forming Technology I	5,0	Lecture + Exercise	Master Manufact. Technology MMT
Fundamentals of Robotics	5,0	Lecture + Exercise	Master Manufact. Technology MMT
Introduction to Finite Element Method I	5,0	Lecture + Exercise	Master Manufact. Technology MMT
Measurement Engineering	5,0	Lecture + Exercise	Master Manufact. Technology MMT
Machining Process Simulation	5,0	Lecture + Exercise	Master Manufact. Technology MMT
Basics of Materials and Technology	5,0	Lecture + Exercise	Master Manufact. Technology MMT
Advanced Simulation Techniques in Metal Forming II	5,0	Lecture + Exercise	Master Manufact Technology MMT.
Supply Chain Simulation	4,0	Lecture + Exercise	Logistics M.Sc.
Supply Chain Management	4,0	Lecture + Exercise	Logistics M.Sc.
Selected Topics in Computational Mechanics II	4,0	Lecture + Exercise	Mechanical Engineering M.Sc.
Nonlinear Finite Element Methods	4,0	Lecture + Exercise	Mechanical Engineering M.Sc.
Finite Inelasticity	4,0	Lecture + Exercise	Mechanical Engineering M.Sc.
Modern programming concepts in engineering (RUB)	5,0	Lecture + Exercise	Mechanical Engineering M.Sc.
Advanced Engineering Mathematics (AEM)	6,0	Lecture + Tutorial	Automation and Robotics M.Sc.
Control Theory and Applications (CTA)	6,0	Lecture + Tutorial	Automation and Robotics M.Sc.
Computer Systems (CS)	6,0	Lecture + Tutorial	Automation and Robotics M.Sc.
Modeling and Control of Robotic Manipulators (MCRM)	6,0	Lecture + Tutorial + Lab	Automation and Robotics M.Sc./ Electro- and Information Technology M.Sc.
Scientific Programming with Matlab in Engineering (SPM)	3,0	Lab/ 3 SWS	Automation and Robotics M.Sc.
Advanced Process Control (APC)	3,0	Lecture + Tutorial	Automation and Robotics M.Sc.
Mobile Communication Networks (MCN)	5,0	Lecture + Tutorial + Lab	Automation and Robotics M.Sc.
Computational Intelligence (CI)	5,0	Lecture + Tutorial	Automation and Robotics M.Sc.

Mathematical Simulation Techniques (MST)	5,0	Lecture + Tutorial	Automation and Robotics M.Sc.
Process Performance Optimization (PPO)	5,0	Lecture + Tutorial + Lab	Automation and Robotics M.Sc.
Online Problems	5,0	Lecture + Tutorial	Automation and Robotics M.Sc./ Electro- and Information Technology M.Sc.
Human-Centered Robotics	5,0	Lecture + Tutorial	Automation and Robotics M.Sc./ Electro- and Information Technology M.Sc.
Nonlinear Model Predictive Control – Theory and Applications	10,0	Lecture + Tutorial + Lab	Electro- and Information Technology M.Sc.