

Systems Engineering Curriculum (full-time)

Valid from Autumn Semester 2025/2026 / 21.02.2025

Semester 6	Elective Module Context 2		Bachelor Thesis: Systems Engineering DE/EN 12	Specialisation module 2 4	Specialisation Module 4 4	Elective Module 2 4	Elective Module 4 4				
Semester 5	Elective Module Context 2	Elective Module Context 2	Project Thesis: Systems Engineering DE/EN 6	Specialisation Module 1 4	Specialisation module 3 4	Elective Module 1 4	Elective Module 3 4	Elective Module Cross-Curricular 4			
Semester 4	Elective Module Communication 2		Product Development for Systems Engineering 4 EN 4	Mechanical Systems 3 DE 4	Electrical and Drive Engineering for ST DE 4	Computer Engineering 2 DE 4	Control Engineering Fundamentals DE 4		Numerics DE 4		Physics 3 DE 4
Semester 3	Elective Module Communication 2		Product Development for Systems Engineering 3 EN 4	Mechanical Systems 2 DE 4	Electronics and Digital Technology for ST DE 4	Computer Engineering 1 DE/EN 4	Signals and Systems 1 DE/EN 4		Stochastics and Statistics DE 4	Analysis 3 DE 4	
Semester 2	Communication Compet. Basic 2		Product Development for Systems Engineering 2 DE 4	Mechanical Systems 1 DE 4	Electricity 2 DE 4	Computer Science 2 DE 4			Linear Algebra 2 DE 4	Analysis 2 DE 4	Physics 2 DE 4
Semester 1	Business Administration DE 2		Product Development for Systems Engineering 1 DE 4	Materials Technology DE 4	Electricity 1 DE 4	Computer Science 1 DE 4			Linear Algebra 1 DE 4	Analysis 1 DE 4	Physics 1 DE 4
	Context Modules		Project Modules	Subject-Specific Modules					Mathematics and Natural Science Modules		

Module Name

Language of Instruction

Credits

Overview of Systems Engineering specialisations and elective modules

During your third year of study, you will choose one of the following two specialisations:

Robotics and Mechatronics			Medical Technology		
Semester	Semester 6	Robotics and Mechatronics 2 DE	Control Theory 2 DE	Semester	Semester 6
	Semester 5	Robotics and Mechatronics 1 DE	Control Theory 1 DE		Semester 5

During your third year of study, you will also choose four of the following elective modules:

Semester	Semester 6	Automation 2 EN	Biomechanical Engineering 2 DE	Biomedical Systems 2 DE		Control Theory 2 DE	Robotics and Mechatronics 2 DE	Power Electronics and Electrical Drives 2 DE	Biomedical Engineering 2 DE	Microcomputer Systems 2 DE	Introduction to Rotary Wing Aircraft EN
	Semester 5	Thermal Devices in Medicine EN	Optoelectronics DE	Sensors DE							
Semester	Semester 6	Automation 1 EN	Biomechanical Engineering 1 DE	Biomedical Systems 1 DE	Digital Image Processing 1 EN	Control Theory 1 DE	Robotics and Mechatronics 1 DE	Power Electronics and Electrical Drives 1 DE	Biomedical Engineering 1 DE	Microcomputer Systems 1 DE	Additive Manufacturing (3D printing) EN
	Semester 5	Applied Optics / Photonics DE	Computational Fluid Engineering 1 DE	Embedded Software Engineering DE	Industrial Design: Basic Principles EN	System on Chip Design EN					