Systems Engineering Curriculum (part-time)

Valid from Autumn Semester 2020/2021 / 04.05.2022

Semester 8			Bachelor Thesis: Systems Engineering DE/EN 12	Specialisation Module 4 4	Elective Module 2 4	Elective Module 4 4						
Semester 7	Elective Module Context 2		Project Thesis: Systems Engineering DE/EN 6	Specialisation module 3 4	Elective Module 1 4	Elective Module 3 4	Elective Module Cross-Curricural 4					
Semester 6	Elective Module Context 2		Product Development for Systems Engineering 4 EN 4	Mechanical Systems 3 DE 4	Specialisation module 2 4		Control Engineering Fundamentals DE 4					Physics 3 DE 4
Semester 5	Elective Module Context 2		Product Development for Systems Engineering 3 EN 4	Mechanical Systems 2 DE 4	Specialisation Module 1 4		Signals and Systems 1 DE 4		Stochastics and Statistics DE 4			
Semester 4	Business Administration DE 2			Mechanical Systems 1 DE 4	Electrical and Drive Engineeringfor ST DE 4	Computer Engineering 2 DE 4			Numerics DE 4			Physics 2 DE 4
Semester 3	Communication Competence 3 DE/EN 2			Materials Technology DE 4	Electronics and Digital Technology for ST DE 4	Computer Engineering 1 DE 4				Analysis 3 DE 4		Physics 1 DE 4
Semester 2	Communication Competence 2 DE/EN 2		Product Development for Systems Engineering 2 DE 4		Electricity 2 DE 4	Computer Science 2 DE 4			Linear Algebra 2 DE 4	Analysis 2 DE 4		
Semester 1	Communication Competence 1 DE/EN 2		Product Development for Systems Engineering 1 DE 4		Electricity 1 DE 4	Computer Science 1 DE 4			Linear Algebra 1 DE 4	Analysis 1 DE 4		
	Context Modules		Project Modules	Subject-Specific Modules					Mathematics and Natural Science Modules			

Module Name

Language of Instruction

Credits

School of Engineering

Overview of Systems Engineering specialisations and elective modules

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

Robotics and Mechatronics

Semester 6/8	Robotics and Mechatronics 2 DE	Control Theory 2 DE
Semester 5/7	Robotics and Mechatronics 1 DE	Control Theory 1 DE

Medical Technology

Semester 6/8	Biomedical Engineering 2 DE	Biomedical Systems 2 DE
Semester 5/7	Biomedical Engineering 1 DE	Biomedical Systems 1 DE

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

Semester 8	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
	Thermal Devices in Medicine EN	Optoelectronics DE	Sensors DE						
Semester 7	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
	Applied Optics / Photonics DE	Computational Fluid Engineering 1 DE	Embedded Software Engineering DE	Industrial Design: Basic Principles EN	System on Chip Design EN					