

Mechanical Engineering Curriculum (part-time)

Valid from Autumn Semester 2019/2020 / 12.02.2021

Semester	Module Name	Language of Instruction	Credits
Semester 8	Bachelor Thesis: Mechanical Engineering	DE/EN	12
	Specialisation Module a2		4
	Specialisation Module b2		4
	Elective Module		4
Semester 7	Project Thesis: Mechanical Engineering	DE/EN	6
	Specialisation Module a1		4
	Specialisation Module b1		4
	Elective Module		4
	Elective Module Cross-Curricular		4
Semester 6	Elective Module Context		2
	Business Administration	DE	2
	Project Module 4	DE/EN	4
	Machine Elements 4	DE	2
	Applied Heat Transfer	DE	4
	Measurement and Control Systems 2	DE/EN	4
	Electrical Engineering	DE	4
Semester 5	Elective Module Context		2
	Elective Module Context		2
	Communication Competence 3	DE/EN	2
	Project Module 3	DE	4
	Machine Elements 3	DE	4
	Thermodynamics	DE	4
	Measurement and Control Systems 1	DE/EN	2
	Mechanical Dynamics	DE/EN	4
Semester 4	Communication Competence 2	DE/EN	2
	Project Module 2	DE	4
	Machine Elements 2	DE	2
	Materials Engineering 2	DE/EN	4
	Strength of Materials 2	DE	2
	Finite Element Method	DE/EN	4
	Numerics	DE	4
Semester 3	Communication Competence 1	DE/EN	2
	Project Module 1	DE	4
	Machine Elements 1	DE	2
	Materials Engineering 1	DE	4
	Strength of Materials 1	DE	2
	Analysis 3	DE	4
	Physics 3: Kinematics and Kinetics	DE	4
Semester 2	Fluidynamics	DE	4
	Statics	DE	4
	Computer Science Tools	DE	2
	Analysis 2	DE	4
	Algebra and Statistics 2	DE	4
	Physics 2	DE	4
Semester 1	Materials and Chemistry	DE	4
	CAD for MT	DE	2
	Computer Science Programming 1	DE	4
	Analysis 1	DE	4
	Algebra and Statistics 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 Mechanical Engineering specialisations and elective modules

During your fourth year of study, you will choose two of the following eight specialisations:

Specialisation	Semester 8	Semester 7
Biomechanical Engineering	Biomechanical Engineering 2 DE	Biomechanical Engineering 1 DE
Computational Fluid Engineering	Computational Fluid Engineering 2 DE	Computational Fluid Engineering 1 DE
Computational Light Weight Design	Computational Light Weight Design 2 DE	Computational Light Weight Design 1 DE
Innovative Materials and Surfaces	Innovative Materials and Surfaces 2 DE	Innovative Materials and Surfaces 1 DE
Smart Products and Production	Smart Products and Production 2 DE/EN	Smart Products and Production 1 DE/EN
Systems and Automation Technology	Systems and Automation Technology 2 EN	Systems and Automation Technology 1 EN
Thermal Energy Technology	Wind and Water Power and Thermal Solar Energy DE	Refrigeration and Heat Pumps DE
Process Engineering	Process Engineering 2 DE	Process Engineering 1 DE

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

Semester	Module 1	Module 2	Module 3	Module 4	Module 5	Module 6	Module 7	Module 8
Semester 8	Advanced Digital Engineering DE	Advanced Digital Production DE	Sensors DE	Robotics and Mechatronics 2 DE	Biomedical Engineering 2 DE	Introduction to Rotary Wing Aircraft EN	Materials Selection DE	
Semester 7	Additive Manufacturing (3D printing) EN	Industrial Design: Basic Principles EN	Modelling and Simulation DE	Robotics and Mechatronics 1 DE	Biomedical Engineering 1 DE	Numerical and Experimental Aerodynamics EN	Rail Vehicle Technology DE	Conventional Power Plant Technology DE