Course of Study Theoretical Mechanical Engineering (Study Cohort w23)

Legend

Core Qualification Compulsory	Specialisation Compulsory	Focus Compulsory	Thesis Compulsory
Core Qualification Elective Compulsory	Specialisation Elective Compulsory	Focus Elective Compulsory	Interdisciplinary complement

Sample course plan A Master Theoretical Mechanical Engineering (TMBMS)

Specialisation Product Development and Production

LP											
1	**Finite Elements Methods**			**Numerical Methods for Ordinary Differential Equations**			**Research Project Theoretical Mechanical Engineering**			**Master Thesis**	
2	Finite Element Methods	VL	2	Numerical Treatment of Ordinary Differential Equations	VL	2					
3	Finite Element Methods	HÜ	2	Numerical Treatment of Ordinary Differential Equations	GÜ	2					
4											
5											
6											
7	**Control Systems Theory and Design**			**Applied Dynamics: Numerical and experimental methods**							
8	Control Systems Theory and Design	VL	2	Applied Dynamics	VL	4					
9	Control Systems Theory and Design	GÜ	2	Lab Applied Dynamics	PR	1					
10				Applied Dynamics	GÜ	1					
11											
12											
13	**Continuum Mechanics**			**Computational Fluid Dynamics II**			**Fluidics**				
14	Continuum Mechanics	VL	2	Computational Fluid Dynamics II	VL	2	Fluidics	VL	2		
15	Continuum Mechanics Exercise	GÜ	2	Computational Fluid Dynamics II	HÜ	2	Fluidics	HÜ	1		
16							Fluidics	PBL	1		
17											
18											
19	**Modelling and Optimization in Dynamics**			**Design optimization and probabilistic approaches in structural analysis**							
20	Flexible Multibody Systems	VL	2	Design Optimization and Probabilistic Approaches in Structural Analysis	VL	2					
21	Optimization of dynamical systems	VL	2	Design Optimization and Probabilistic Approaches in Structural Analysis	HÜ	2					
22											
23											
24											
25	**Methods of Product Development**			**Applied Design Methodology in Mechatronics**							
26	Methods of Product Development	VL	3	Applied Design Methodology in Mechatronics	VL	2					
27	Methods of Product Development	PBL	2	Applied Design Methodology in Mechatronics	PBL	3					
28											
29											
30											
	Business & Management (from catalogue) - 6LP										
	Non-technical Courses for Master (from catalogue) - 6LP										

The choice of courses from the catalogue is flexible (depends on the semestral work load), provided the necessary number of required credits is reached.