

Course of Study Theoretical Mechanical Engineering (Study Cohort w21)

Sample course plan A Master Theoretical Mechanical Engineering (TMBMS)

		Core qualification Compulsory		Specialisation Compulsory		Focus Compulsory		Thesis Compulsory							
		Core qualification Elective Compulsory		Specialisation Elective Compulsory		Focus Elective Compulsory		Interdisciplinary complement							
Specialisation Energy Systems		Form	Hrs/wk	Semester 2		Form	Hrs/wk	Semester 3		Form	Hrs/wk	Semester 4		Form	Hrs/wk
1	Finite Elements Methods			Numerical Treatment of 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	2									
9	Control Systems Theory and Design	GÜ	2	Lab Applied Dynamics	PR	3									
10															
11															
12															
13	Modelling and Optimization in Dynamics			Computational Fluid Dynamics II				Fluid Mechanics and Ocean Energy							
14	Flexible Multibody Systems	VL	2	Computational Fluid Dynamics II	VL	2		Fluid Mechanics II	VL	2					
15	Optimization of dynamical systems	VL	2	Computational Fluid Dynamics II	HÜ	2		Energy from the Ocean	VL	2					
16															
17															
18															
19	Control Lab C			Linear and Nonlinear System Identification				Energy Information Systems and Electromobility							
20	Control Lab VII	PR	1	Linear and Nonlinear System Identification	VL	2		Electrical Power Systems II: Operation and Information Systems of	VL	3					
21	Control Lab VIII	PR	1					Electrical Power Grids							
22	Control Lab IX	PR	1					Electro mobility	VL	2					
23	Thermal Energy Systems			Design optimization and probabilistic approaches in structural analysis											
24	Thermal Energy Systems	VL	3	Design Optimization and Probabilistic Approaches in Structural Analysis	VL	2									
25	Thermal Energy Systems	HÜ	1	Design Optimization and Probabilistic Approaches in Structural Analysis	HÜ	2									
26															
27															
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.

