

Course of Study Theoretical Mechanical Engineering (Study Cohort w18)

Sample course plan A Master Theoretical Mechanical Engineering (TMBMS)
Specialisation Energy Systems

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

LP	Semester 1	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						
3	Finite Element Methods	HÜ 2	Numerical Treatment of Ordinary Differential Equations	VL 2				
4			Numerical Treatment of Ordinary Differential Equations	UE 2				
5								
6								
7	Control Systems Theory and Design		Applied Dynamics: Numerical and experimental methods					
8	Control Systems Theory and Design	VL 2						
9	Control Systems Theory and Design	UE 2	Applied Dynamics	VL 2				
10			Lab Applied Dynamics	PR 3				
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 Identifikation		Innovative CFD Approaches			
20	Control Lab VII	PR 1	Linear and Nonlinear System Identifikation	VL 2	Application of Innovative CFD Methods in Research and Development	VL 2		
21	Control Lab VIII	PR 1			Application of Innovative CFD Methods in Research and Development	UE 2		
22								
23	Thermal Engineering		Design optimization and probabilistic approaches in structural analysis					
24	Thermal Engineering	VL 3	Design Optimization and Probabilistic Approaches in Structural Analysis	VL 2				
25	Thermal Engineering	HÜ 1	Design Optimization and Probabilistic Approaches in Structural Analysis	HÜ 2				
26								
27								
28								
29								
30								
Business & Management (from catalogue) - 6LP								
Nontechnical Elective Complementary 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.

