

Course of Study Theoretical Mechanical Engineering (Study Cohort w20)

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 Maritime Technology									
1	Finite Elements Methods								
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					
14	Flexible Multibody Systems	VL	2	Computational Fluid Dynamics II	VL	2	Ship Vibration	VL	2
15	Optimization of dynamical systems	VL	2	Computational Fluid Dynamics II	HÜ	2	Ship Vibration	GÜ	2
16									
17									
18									
19	Control Lab C			Linear and Nonlinear System Identification			Arctic Technology		
20	Control Lab VII	PR	1	Linear and Nonlinear System Identification	VL	2	Ship structural design for arctic conditions	PBL	2
21	Control Lab VIII	PR	1				Ice Engineering	VL	2
22	Control Lab IX	PR	1				Ice Engineering	GÜ	1
23	Fatigue Strength of Ships and Offshore Structures			Design optimization and probabilistic approaches in structural analysis					
24	Fatigue Strength of Ships and Offshore Structures	VL	2	Design Optimization and Probabilistic Approaches in Structural Analysis	VL	2			
25	Fatigue Strength of Ships and Offshore Structures	GÜ	2	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.

