

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 Maritime Technology		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				Ship Vibration							
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					
22	Fatigue Strength of Ships and Offshore Structures			Design optimization and probabilistic approaches in structural analysis											
23	Fatigue Strength of Ships and Offshore Structures	VL	2	Design Optimization and Probabilistic Approaches in Structural Analysis	VL	2									
24	Fatigue Strength of Ships and Offshore Structures	GÜ	2	Design Optimization and Probabilistic Approaches in Structural Analysis	HÜ	2									
25															
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.

