

# 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 Product Development and Production			
1	<b>Finite Elements Methods</b>		<b>Numerical Treatment of Ordinary Differential Equations</b>
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			
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6			
7	<b>Control Systems Theory and Design</b>		<b>Applied Dynamics: Numerical and experimental methods</b>
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			
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12			
13	<b>Modelling and Optimization in Dynamics</b>		<b>Computational Fluid Dynamics II</b>
14	Flexible Multibody Systems VL 2		Computational Fluid Dynamics II VL 2
15	Optimization of dynamical systems VL 2		Computational Fluid Dynamics II HÜ 2
16			
17			
18			
19	<b>Control Lab C</b>		<b>Linear and Nonlinear System Identification</b>
20	Control Lab VII PR 1		Linear and Nonlinear System Identification VL 2
21	Control Lab VIII PR 1		
22	Control Lab IX PR 1		
22	<b>Methods of Integrated Product Development</b>		<b>Design optimization and probabilistic approaches in structural analysis</b>
23	Integrated Product Development II VL 3		Design Optimization and Probabilistic Approaches in Structural Analysis VL 2
24	Integrated Product Development II PBL 2		Design Optimization and Probabilistic Approaches in Structural Analysis HÜ 2
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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.

