

# Course of Study Theoretical Mechanical Engineering (Study Cohort w17)

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

Legend:

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	<b>Finite Elements Methods</b>			<b>Numerical Treatment of Ordinary Differential Equations</b>			<b>Research Project Theoretical Mechanical Engineering</b>			<b>Master Thesis</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	UE	2						
4												
5												
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	UE	2	Lab Applied Dynamics	FL	3						
10												
11												
12												
13	<b>Modelling and Optimization in Dynamics</b>			<b>High-Order FEM</b>			<b>Aircraft Cabin Systems</b>					
14	Flexible Multibody Systems	VL	2	High-Order FEM	VL	3	Aircraft Cabin Systems	VL	3			
15	Optimization of dynamical systems	VL	2	High-Order FEM	HÜ	1	Aircraft Cabin Systems	HÜ	1			
16												
17												
18												
19	<b>Control Lab C</b>			<b>Computational Fluid Dynamics II</b>								
20	Control Lab VII	PR	1	Computational Fluid Dynamics II	VL	2						
21	Control Lab VIII	PR	1	Computational Fluid Dynamics II	HÜ	2						
22	Control Lab IX	PR	1									
23	<b>Aircraft Systems I</b>											
24	Aircraft Systems I	VL	3									
25	Aircraft Systems I	HÜ	2	<b>Linear and Nonlinear System Identification</b>								
26				Linear and Nonlinear System Identification	VL	2						
27												
28				<b>Systems Engineering</b>								
29				Systems Engineering	VL	3						
30				Systems Engineering	HÜ	1						
31												
32												
33												
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.