Course of Study Mechanical Engineering (Study Cohort w21)

Sample course plan B Bachelor Mechanical Engineering (MBBS)
Specialisation Materials in Engineering Sciences

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	Semester 5	Form	Hrs/wk	Semester 6	Form	Hrs/wk
1	**Production Engineering (part 1)**			**Production Engineering (part 2)**			**Advanced Mechanical Engineering Design (part 1)**			**Advanced Mechanical Engineering Design (part 2)**			**Advanced Mechanical Design Project**			**Foundations of Management**		
2	Production Engineering I	VL	2	Production Engineering II	VL	2	Advanced Mechanical Engineering Design I	VL	2	Advanced Mechanical Engineering Design II	VL	2	Advanced Mechanical Design Project	PBL	4	Introduction to Management	VL	3
3	Production Engineering I	HÜ	1	Production Engineering II	HÜ	1	Advanced Mechanical Engineering Design I	HÜ	2	Advanced Mechanical Engineering Design II	HÜ	2				Management Tutorial	GÜ	2
4	**Mathematics I**			**Fundamentals of Materials Science (part 2)**			**Mechanical Engineering: Design (part 1)**			**Mechanical Engineering: Design (part 2)**								
5	Linear Algebra I	VL	2	Fundamentals of Materials Science II	VL	2	Embodiment Design and 3D-CAD	VL	2	Team Project Design Methodology	PBL	2						
6	Linear Algebra I	GÜ	1	**Fundamentals of Mechanical Engineering Design**			Mechanical Design Project I	PBL	3	Mechanical Design Project II	PBL	3						
7	Linear Algebra I	HÜ	1	Fundamentals of Mechanical Engineering Design	VL	2	**Basics of Electrical Engineering**			**Fluid Dynamics**			**Introduction to Control Systems**			**Materials Engineering: Materials Selection, Processing and Modelling (part 2)**		
8	Analysis I	VL	2	Fundamentals of Mechanical Engineering Design	HÜ	2	Basics of Electrical Engineering	VL	3	Fluid Mechanics	VL	3	Introduction to Control Systems	VL	2	Materials Selection and Processing	VL	3
9	Analysis I	GÜ	1				Basics of Electrical Engineering	GÜ	2	Fluid Mechanics	HÜ	2	Introduction to Control Systems	GÜ	2	Materials and Process Modeling	VL	3
10	Analysis I	HÜ	1															
11																		
12	**Mechanics I (Statics)**			**Technical Thermodynamics I**			**Technical Thermodynamics II**			**Mechanics IV (Oscillations, Analytical Mechanics, Multibody Systems, Numerical Mechanics)**			**Measurement Technology for Mechanical Engineers**			**Enhanced Fundamentals of Materials Science**		
13	Mechanics I	VL	2	Technical Thermodynamics I	VL	2	Technical Thermodynamics II	VL	2	Mechanics IV	VL	3	Measurement Technology for Mechanical Engineering	VL	2	Enhanced Fundamentals: Metals	VL	2
14	Mechanics I	GÜ	2	Technical Thermodynamics I	HÜ	1	Technical Thermodynamics II	HÜ	1	Mechanics IV	GÜ	2	Measurement Technology for Mechanical Engineering	HÜ	1	Enhanced Fundamentals: Ceramics and Polymers	VL	2
15	Mechanics I	HÜ	1	Technical Thermodynamics I	GÜ	1	Technical Thermodynamics II	GÜ	1	Mechanics IV	HÜ	1	Practical Course: Measurement and Control Systems	PR	2	Enhanced Fundamentals: Ceramics and Polymers	HÜ	1
16																		
17																		
18	**Fundamentals of Materials Science (part 1)**			**Mechanics II: Mechanics of Materials**			**Mathematics III**			**Fundamentals of Production and Quality Management**			**Material Science Laboratory**			**Bachelor Thesis**		
19	Fundamentals of Materials Science I	VL	2	Mechanics II	VL	2	Analysis III	VL	2	Production Process Organization	VL	2	Companion Lecture for Materials Science Laboratory	VL	2			
20	Physical and Chemical Basics of Materials Science	VL	2	Mechanics II	GÜ	2	Analysis III	GÜ	1	Quality Management	VL	2	Material Science Laboratory	PR	4			
21				Mechanics II	HÜ	2	Analysis III	HÜ	1									
22	**Team Project MB**						Differential Equations 1	VL	2				**Materials Engineering: Materials Selection, Processing and Modelling**					
23	Team Project MB	PBL	6				Differential Equations 1	GÜ	1				Materials Selection and Processing	VL	3			
24							Differential Equations 1	HÜ	1				Materials and Process Modeling	VL	3			
25				**Mathematics II**														
26				Linear Algebra II	VL	2												
27				Linear Algebra II	GÜ	1												
28	**Computer Science for Engineers - Introduction and Overview**			Linear Algebra II	HÜ	1	**Mechanics III (Dynamics)**											
29	Computer Science for Engineers - Introduction and Overview	VL	3	Analysis II	VL	2	Mechanics III	VL	3									
30				Analysis II	HÜ	1	Mechanics III	GÜ	2									
31	Computer Science for Engineers - Introduction and Overview	GÜ	2	Analysis II	GÜ	1	Mechanics III	HÜ	1									
32																		
33																		

Non-technical Courses for Bachelors (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.