Course of Study Mechanical Engineering (Study Cohort w17)

Sample course plan A Bachelor Mechanical Engineering (MBBS)

Specialisation Theoretical Mechanical Engineering

Semester 1

Course	Form	Hrs/wk
Production Engineering (part 1)		
Production Engineering I	VL	2
Production Engineering I	HÜ	1
Computer Science for Mechanical Engineers		
Computer Science for Mechanical Engineers	VL	2
Computer Science for Mechanical Engineers	GÜ	2
Computer Science for Mechanical Engineers	HÜ	1
Mathematics I		
Linear Algebra I	VL	2
Linear Algebra I	GÜ	1
Linear Algebra I	HÜ	1
Analysis I	VL	2
Analysis I	GÜ	1
Analysis I	HÜ	1
Mechanics I (Statics)		
Mechanics I	VL	2
Mechanics I	GÜ	2
Mechanics I	HÜ	1
Fundamentals of Materials Science (part 1)		
Fundamentals of Materials Science I	VL	2
Physical and Chemical Basics of Materials Science	VL	2
Team Project MB		
Team Project MB	TT	6

Semester 2

Course	Form	Hrs/wk
Production Engineering (part 2)		
Production Engineering II	VL	2
Production Engineering II	HÜ	1
Fundamentals of Materials Science (part 2)		
Fundamentals of Materials Science II	VL	2
Fundamentals of Mechanical Engineering Design		
Fundamentals of Mechanical Engineering Design	VL	2
Fundamentals of Mechanical Engineering Design	HÜ	2
Technical Thermodynamics I		
Technical Thermodynamics I	VL	2
Technical Thermodynamics I	HÜ	1
Technical Thermodynamics I	GÜ	1
Mechanics II: Mechanics of Materials		
Mechanics II	VL	2
Mechanics II	GÜ	2
Mechanics II	HÜ	2
Mathematics II		
Linear Algebra II	VL	2
Linear Algebra II	GÜ	1
Linear Algebra II	HÜ	1
Analysis II	VL	2
Analysis II	HÜ	1
Analysis II	GÜ	1

Semester 3

Course	Form	Hrs/wk
Advanced Mechanical Engineering Design (part 1)		
Advanced Mechanical Engineering Design I	VL	2
Advanced Mechanical Engineering Design I	HÜ	2
Mechanical Engineering: Design (part 1)		
Embodiment Design and 3D-CAD	VL	2
Mechanical Design Project I	PBL	3
Basics of Electrical Engineering		
Basics of Electrical Engineering	VL	3
Basics of Electrical Engineering	GÜ	2
Technical Thermodynamics II		
Technical Thermodynamics II	VL	2
Technical Thermodynamics II	HÜ	1
Technical Thermodynamics II	GÜ	1
Mathematics III		
Analysis III	VL	2
Analysis III	GÜ	1
Analysis III	HÜ	1
Differential Equations 1	VL	2
Differential Equations 1	GÜ	1
Differential Equations 1	HÜ	1
Mechanics III (Hydrostatics, Kinematics, Kinetics I)		
Mechanics III	VL	3
Mechanics III	GÜ	2
Mechanics III	HÜ	1

Semester 4

Course	Form	Hrs/wk
Advanced Mechanical Engineering Design (part 2)		
Advanced Mechanical Engineering Design II	VL	2
Advanced Mechanical Engineering Design II	HÜ	2
Mechanical Engineering: Design (part 2)		
Team Project Design Methodology	PBL	2
Mechanical Design Project II	PBL	3
Fluid Dynamics		
Fluid Mechanics	VL	3
Fluid Mechanics	HÜ	2
Mechanics IV (Kinetics II, Oscillations, Analytical Mechanics, Multibody Systems)		
Mechanics IV	VL	3
Mechanics IV	GÜ	2
Mechanics IV	HÜ	1
Electrical Machines		
Electrical Machines	VL	3
Electrical Machines	HÜ	2

Semester 5

Course	Form	Hrs/wk
Advanced Mechanical Design Project		
Advanced Mechanical Design Project	PBL	4
Introduction to Control Systems		
Introduction to Control Systems	VL	2
Introduction to Control Systems	GÜ	2
Measurement Technology for Mechanical and Process Engineers		
Measurement Technology for Mechanical and Process Engineers	VL	2
Measurement Technology for Mechanical and Process Engineers	HÜ	1
Practical Course: Measurement and Control Systems	PR	2
Simulation and Design of Mechatronic Systems		
Simulation and Design of Mechatronic Systems	VL	2
Simulation and Design of Mechatronic Systems	HÜ	1
Simulation and Design of Mechatronic Systems	PR	1
Heat Transfer		
Heat Transfer	VL	3
Heat Transfer	HÜ	2

Semester 6

Course	Form	Hrs/wk
Foundations of Management		
Introduction to Management	VL	3
Management Tutorial	HÜ	2
Mathematics IV		
Complex Functions	VL	2
Complex Functions	GÜ	1
Complex Functions	HÜ	1
Differential Equations 2	VL	2
Differential Equations 2	GÜ	1
Differential Equations 2	HÜ	1
Bachelor Thesis		

Nontechnical Complementary 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.