Course of Study General Engineering Science (English program, 7 semester) (Study Cohort w18)

Sample course plan A Bachelor General Engineering Science (English program, 7 semester) (GESBS(7))
Specialisation Mechanical Engineering, Focus Theoretical Mechanical Engineering

Semester 1

Course	Form	Hrs/wk
Chemistry (GES)		
Chemistry I	VL	2
Chemistry II	VL	2
Chemistry I	HÜ	1
Chemistry II	HÜ	1
Linear Algebra		
Linear Algebra	VL	4
Linear Algebra	HÜ	2
Linear Algebra	UE	2
Electrical Engineering I		
Electrical Engineering I	VL	3
Electrical Engineering I	UE	2
Mechanics I (GES)		
Mechanics I	VL	2

Semester 2

Course	Form	Hrs/wk
Technical Thermodynamics I		
Technical Thermodynamics I	VL	2
Technical Thermodynamics I	HÜ	1
Technical Thermodynamics I	UE	1
Mathematical Analysis		
Mathematical Analysis	VL	4
Mathematical Analysis	HÜ	2
Mathematical Analysis	UE	2
Electrical Engineering II		
Electrical Engineering II	VL	3
Electrical Engineering II	UE	2
Mechanics II (GES)		
Mechanics II	VL	2

Semester 3

Course	Form	Hrs/wk
Technical Thermodynamics II		
Technical Thermodynamics II	VL	2
Technical Thermodynamics II	HÜ	1
Technical Thermodynamics II	UE	1
Mathematics III		
Analysis III	VL	2
Analysis III	UE	1
Analysis III	HÜ	1
Differential Equations 1	VL	2
Differential Equations 1	UE	1
Differential Equations 1	HÜ	1
Mechanics III (GES)		
Mechanics III	HÜ	1
Mechanics III	UE	2
Mechanics III	VL	3
Mechanical Engineering: Design (part 1)		
Embodiment Design	VL	2

Semester 4

Course	Form	Hrs/wk
Mechanical Engineering: Design (part 2)		
Team Project Design Methodology	PBL	2
Mechanical Design Project II	PBL	3
Fundamentals of Materials Science (part 2)		
Fundamentals of Materials Science II	VL	2
Advanced Mechanical Engineering Design (part 2)		
Advanced Mechanical Engineering Design II	VL	2
Advanced Mechanical Engineering Design II	HÜ	2
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	UE	2
Mechanics IV	HÜ	1
Signals and Systems		
Signals and Systems	VL	3

Semester 5

Course	Form	Hrs/wk
Computer Engineering		
Computer Engineering	VL	3
Computer Engineering	UE	1
Introduction to Control Systems		
Introduction to Control Systems	VL	3
Introduction to Control Systems	UE	2
Measurement Technology for Mechanical Engineers		
Measurement Technology for Mechanical Engineering	VL	2
Measurement Technology for Mechanical Engineering	HÜ	1
Practical Course: Measurement and Control Systems	PR	2
Advanced Mechanical Design Project		
Advanced Mechanical Design Project	PBL	4

Semester 6

Course	Form	Hrs/wk
Foundations of Management		
Introduction to Management	VL	3
Management Tutorial	UE	2
Mathematics IV		
Complex Functions	VL	2
Complex Functions	UE	1
Complex Functions	HÜ	1
Differential Equations 2	VL	2
Differential Equations 2	UE	1
Differential Equations 2	HÜ	1
Modeling, Simulation and Optimization (GES)		
Modeling, Simulation and Optimization	IV	4

Semester 7

Course	Form	Hrs/wk
Advanced Internship AIW/GES		
Bachelor Thesis		

LP (credit points scale): 1–23

	Mechanics I HÜ 3	Mechanics II HÜ 2	and 3D-CAD	Signals and Systems UE 2	
			Mechanical Design PBL3 Project I		
24			**Fundamentals of Materials Science (part 1)**		
25					
26			Fundamentals of VL 2 Materials Science I		
27	**Programming in C**	**Fundamentals of Mechanical Engineering (GES)**	Physical and Chemical VL 2 Basics of Materials Science		
	Programming in C VL 1				
	Programming in C PR 1	Fundamentals of VL 2 Mechanical Engineering	**Advanced Mechanical Engineering Design (part 1)**		
28					
29	**Physics for Engineers (GES)**	Fundamentals of UE 2 Mechanical Engineering	Advanced Mechanical VL 2 Engineering Design I		
30					
	Physics for Engineers VL 2		Advanced Mechanical HÜ 2 Engineering Design I		
	Physics for Engineers UE 1				
31					
32					

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.