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 Energy Systems

Columns legend: Form | Hrs/wk

Semester 1

Chemistry (GES)
Course	Form	Hrs/wk
Chemistry I	VL	2
Chemistry II	VL	2
Chemistry I	HÜ	1
Chemistry II	HÜ	1

Linear Algebra
Course	Form	Hrs/wk
Linear Algebra	VL	4
Linear Algebra	HÜ	2
Linear Algebra	UE	2

Electrical Engineering I
Course	Form	Hrs/wk
Electrical Engineering I	VL	3
Electrical Engineering I	UE	2

Mechanics I (GES)
Course	Form	Hrs/wk
Mechanics I	VL	2
Mechanics I	HÜ	3

Semester 2

Technical Thermodynamics I
Course	Form	Hrs/wk
Technical Thermodynamics I	VL	2
Technical Thermodynamics I	HÜ	1
Technical Thermodynamics I	UE	1

Mathematical Analysis
Course	Form	Hrs/wk
Mathematical Analysis	VL	4
Mathematical Analysis	HÜ	2
Mathematical Analysis	UE	2

Electrical Engineering II
Course	Form	Hrs/wk
Electrical Engineering II	VL	3
Electrical Engineering II	UE	2

Mechanics II (GES)
Course	Form	Hrs/wk
Mechanics II	VL	2
Mechanics II	HÜ	2

Semester 3

Technical Thermodynamics II
Course	Form	Hrs/wk
Technical Thermodynamics II	VL	2
Technical Thermodynamics II	HÜ	1
Technical Thermodynamics II	UE	1

Mathematics III
Course	Form	Hrs/wk
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)
Course	Form	Hrs/wk
Mechanics III	HÜ	1
Mechanics III	UE	2
Mechanics III	VL	3

Computer Engineering
Course	Form	Hrs/wk
Computer Engineering	VL	3
Computer Engineering	UE	1

Semester 4

Mechanical Engineering: Design (part 2)
Course	Form	Hrs/wk
Team Project Design Methodology	PBL	2
Mechanical Design Project II	PBL	3

Fundamentals of Materials Science (part 2)
Course	Form	Hrs/wk
Fundamentals of Materials Science II	VL	2

Fluid Dynamics
Course	Form	Hrs/wk
Fluid Mechanics	VL	3
Fluid Mechanics	HÜ	2

Mechanics IV (Kinetics II, Oscillations, Analytical Mechanics, Multibody Systems)
Course	Form	Hrs/wk
Mechanics IV	VL	3
Mechanics IV	UE	2
Mechanics IV	HÜ	1

Signals and Systems
Course	Form	Hrs/wk
Signals and Systems	VL	3
Signals and Systems	UE	2

Semester 5

Introduction to Control Systems
Course	Form	Hrs/wk
Introduction to Control Systems	VL	2
Introduction to Control Systems	UE	2

Measurement Technology for Mechanical Engineers
Course	Form	Hrs/wk
Measurement Technology for Mechanical Engineering	VL	2
Measurement Technology for Mechanical Engineering	HÜ	1
Practical Course: Measurement and Control Systems	PR	2

Advanced Mechanical Engineering Design (part 1)
Course	Form	Hrs/wk
Advanced Mechanical Engineering Design I	VL	2
Advanced Mechanical Engineering Design I	HÜ	2

Heat Transfer
Course	Form	Hrs/wk
Heat Transfer	VL	3
Heat Transfer	HÜ	2

Reciprocating Machinery (part 1)

Semester 6

Foundations of Management
Course	Form	Hrs/wk
Introduction to Management	VL	3
Management Tutorial	UE	2

Advanced Mechanical Engineering Design (part 2)
Course	Form	Hrs/wk
Advanced Mechanical Engineering Design II	VL	2
Advanced Mechanical Engineering Design II	HÜ	2

Reciprocating Machinery (part 2)
Course	Form	Hrs/wk
Internal Combustion Engines I	VL	2
Internal Combustion Engines I	HÜ	1

Renewables and Energy Systems
Course	Form	Hrs/wk
Renewable Energy	VL	2
Energy Systems and Energy Industry	VL	2
Power Industry	VL	1
Renewable Energy	UE	1

Semester 7

Advanced Internship AIW/GES

Bachelor Thesis

					Fundamentals of Reciprocating Engines and Turbomachinery - Part Reciprocating Engines	VL	1	
					Fundamentals of Reciprocating Engines and Turbomachinery - Part Reciprocating Engines	HÜ	1	
24								
25					**Computational Fluid Dynamics I**			
26								
27	**Programming in C**	**Fundamentals of Mechanical Engineering (GES)**	**Mechanical Engineering: Design (part 1)**		Computational Fluid Dynamics I	VL	2	
28	Programming in C VL 1		Embodiment Design and 3D-CAD VL 2		Computational Fluid Dynamics I	HÜ	2	
	Programming in C PR 1	Fundamentals of Mechanical Engineering VL 2						
29	**Physics for Engineers (GES)**		Mechanical Design Project I PBL3					
30	Physics for Engineers VL 2	Fundamentals of Mechanical Engineering UE 2	**Fundamentals of Materials Science (part 1)**					
31	Physics for Engineers UE 1		Fundamentals of Materials Science I VL 2					
32								
33			Physical and Chemical Basics of Materials Science VL 2					

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.