Course of Study General Engineering Science (German program, 7 semester) (Study Cohort w22)

Sample course plan B Bachelor General Engineering Science (German program, 7 semester) (AIWBS(7))
Specialisation Mechanical Engineering, Focus Mechatronics

Semester 1

Course	Form	Hrs/wk
Chemistry		
Chemistry I+II	VL	4
Chemistry I+II	HÜ	2
Electrical Engineering I: Direct Current Networks and Electromagnetic Fields		
Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	VL	3
Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	GÜ	2
Mathematics I		
Mathematics I	VL	4
Mathematics I	HÜ	2
Mathematics I	GÜ	2
Computer Science for Engineers - Introduction and Overview		
Computer Science for Engineers - Introduction and Overview	VL	3
Computer Science for Engineers - Introduction and Overview	GÜ	2
Engineering Mechanics I (Stereostatics)		
Engineering Mechanics I	VL	2
Engineering Mechanics I	GÜ	2
Engineering Mechanics I	HÜ	1

Semester 2

Course	Form	Hrs/wk
Electrical Engineering II: Alternating Current Networks and Basic Devices		
Electrical Engineering II: Alternating Current Networks and Basic Devices	VL	3
Electrical Engineering II: Alternating Current Networks and Basic Devices	GÜ	2
Fundamentals of Mechanical Engineering Design		
Fundamentals of Mechanical Engineering Design	VL	
Fundamentals of Mechanical Engineering Design	HÜ	
Technical Thermodynamics I		
Technical Thermodynamics I	VL	2
Technical Thermodynamics I	HÜ	1
Technical Thermodynamics I	GÜ	1
Mathematics II		
Mathematics II	VL	4
Mathematics II	HÜ	2
Mathematics II	GÜ	2
Engineering Mechanics II (Elastostatics)		
Engineering Mechanics II	VL	2
Engineering Mechanics II	GÜ	2
Engineering Mechanics II	HÜ	2

Semester 3

Course	Form	Hrs/wk
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
Engineering Mechanics III (Dynamics)		
Engineering Mechanics III	VL	3
Engineering Mechanics III	GÜ	2
Engineering Mechanics III	HÜ	1
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 Introduction and Practical Training	VL	2
Mechanical Design Project I	PBL	3
Fundamentals of Materials Science (part 1)		
Fundamentals of Materials Science I	VL	2
Physical and Chemical Basics of Materials Science	VL	2

Semester 4

Course	Form	Hrs/wk
Signals and Systems		
Signals and Systems	VL	3
Signals and Systems	GÜ	2
Fluid Dynamics		
Fluid Mechanics	VL	3
Fluid Mechanics	HÜ	2
Computational Mechanics		
Computational Multibody Dynamics	IV	2
Computational Mechanics	GÜ	2
Computational Stuctural Mechanics	IV	2
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
Fundamentals of Materials Science (part 2)		
Fundamentals of Materials Science II	VL	2

Semester 5

Course	Form	Hrs/wk
Introduction to Control Systems		
Introduction to Control Systems	VL	2
Introduction to Control Systems	GÜ	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
Electrical Engineering III: Circuit Theory and Transients		
Circuit Theory	VL	3
Circuit Theory	GÜ	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

Semester 6

Course	Form	Hrs/wk
Foundations of Management		
Introduction to Management	VL	3
Management Tutorial	GÜ	2
Electrical Machines and Actuators		
Electrical Machines and Actuators	VL	3
Electrical Machines and Actuators	HÜ	2
Semiconductor Circuit Design		
Semiconductor Circuit Design	VL	3
Semiconductor Circuit Design	GÜ	1
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
Computer Science for Engineers - Programming Concepts, Data Handling & Communication		
Computer Science for Engineers - Programming Concepts, Data Handling & Communication	VL	3
Computer Science for Engineers - Programming Concepts, Data Handling & Communication	GÜ	2

Semester 7

Course	Form	Hrs/wk
Advanced Internship AIW/ ES		
Advanced Internship AIW/ ES: Preparation	SE	1
Advanced Intenship AIW/ ES: Internship-accompanying Seminar	SE	1
Bachelor Thesis		

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.