Course of Study General Engineering Science (German program, 7 semester) (Study Cohort w17)

Sample course plan A Bachelor General Engineering Science (German program, 7 semester) (AIWBS(7))
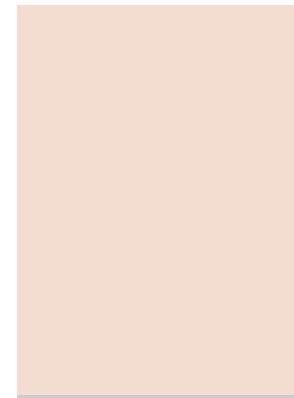Specialisation Energy and Enviromental Engineering

LP (1–24)

Semester 1

Chemistry
	Form	Hrs/wk
Chemistry I	VL	2
Chemistry II	VL	2
Chemistry I	HÜ	1
Chemistry II	HÜ	1

Electrical Engineering I: Direct Current Networks and Electromagnetic Fields
	Form	Hrs/wk
Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	VL	3
Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	UE	2

Mathematics I
	Form	Hrs/wk
Linear Algebra I	VL	2
Linear Algebra I	UE	1
Linear Algebra I	HÜ	1
Analysis I	VL	2
Analysis I	UE	1
Analysis I	HÜ	1

Mechanics I (Statics)
	Form	Hrs/wk
Mechanics I	VL	2
Mechanics I	UE	2
Mechanics I	HÜ	1

Semester 2

Electrical Engineering II: Alternating Current Networks and Basic Devices
	Form	Hrs/wk
Electrical Engineering II: Alternating Current Networks and Basic Devices	VL	3
Electrical Engineering II: Alternating Current Networks and Basic Devices	UE	2

Fundamentals of Mechanical Engineering Design
	Form	Hrs/wk
Fundamentals of Mechanical Engineering Design	VL	2
Fundamentals of Mechanical Engineering Design	HÜ	2

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

Mechanics II: Mechanics of Materials
	Form	Hrs/wk
Mechanics II	VL	2
Mechanics II	UE	2
Mechanics II	HÜ	2

Semester 3

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

Mathematics III
	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 (Hydrostatics, Kinematics, Kinetics I)
	Form	Hrs/wk
Mechanics III	VL	3
Mechanics III	UE	2
Mechanics III	HÜ	1

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

Semester 4

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

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

Fundamentals of Fluid Mechanics
	Form	Hrs/wk
Fundamentals of Fluid Mechanics	VL	2
Fluid Mechanics for Process Engineering	HÜ	2

Electrical Machines
	Form	Hrs/wk
Electrical Machines	VL	3
Electrical Machines	HÜ	2

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

Semester 5

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

Heat and Mass Transfer
	Form	Hrs/wk
Heat and Mass Transfer	VL	2
Heat and Mass Transfer	UE	1
Heat and Mass Transfer	HÜ	1

Thermal Separation Processes
	Form	Hrs/wk
Thermal Separation Processes	VL	2
Thermal Separation Processes	UE	2
Thermal Separation Processes	HÜ	1
Separation Processes	PR	1

Gas and Steam Power Plants
	Form	Hrs/wk
Gas and Steam Power Plants	VL	3
Gas and Steam Power Plants	HÜ	1

Semester 6

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

Environmental Technology (part 2)
	Form	Hrs/wk
Practical Exercise Environmental Technology	PR	1

Particle Technology and Solids Process Engineering
	Form	Hrs/wk
Particle Technology I	VL	2
Particle Technology I	UE	1
Particle Technology I	PR	2

Environmental Technology
	Form	Hrs/wk
Environmental Assessment	VL	2
Environmental Assessment	UE	1

Informatics for Process Engineers
	Form	Hrs/wk
Numeric and Matlab	PR	2
Informatics for Process Engineers	VL	2
Informatics for Process Engineers	UE	2

Semester 7

Advanced Internship AIW/GES

Bachelor Thesis

25		**Mathematics II**			
26		Linear Algebra II	VL 2		**Measurement Technology for Mechanical and Process Engineers**
27	**Programming in C**	Linear Algebra II	UE 1	**Mechanical Engineering: Design (part 1)**	
28	Programming in C VL 1	Linear Algebra II	HÜ 1	Embodiment Design VL 2 and 3D-CAD	Measurement VL 2 Technology for Mechanical and Process Engineers
	Programming in C PR 1	Analysis II	VL 2	Mechanical Design PBL3 Project I	
29	**Physics for Engineers (AIW)**	Analysis II	HÜ 1		Measurement HÜ 1 Technology for Mechanical and Process Engineers
		Analysis II	UE 1	**Fundamentals of Materials Science (part 1)**	
30	Physics for Engineers VL 2			Fundamentals of VL 2 Materials Science I	Practical Course: PR 2 Measurement and Control Systems
	Physics for Engineers UE 1			Physical and Chemical VL 2 Basics of Materials Science	
31					**Environmental Technology (part 1)**
32					Environmental VL 2 Technologie
33					

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.