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

Sample course plan - Bachelor General Engineering Science (German program, 7 semester) (AIWBS(7))

Specialisation: Energy and Enviromental Engineering

Semester 1 — Form / Hrs/wk

Chemistry
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
Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	VL	3
Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	GÜ	2

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

Programming in C
Programming in C	VL	1
Programming in C	PR	1

Physics for Engineers (AIW)
Physics for Engineers	VL	2
Physics for Engineers	GÜ	1

Semester 2 — 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	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 — 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

Mechanics III (Hydrostatics, Kinematics, Kinetics I)
Mechanics III	VL	3
Mechanics III	GÜ	2
Mechanics III	HÜ	1

Computer Engineering
Computer Engineering	VL	3
Computer Engineering	GÜ	1

Mechanical Engineering: Design (part 1)
Embodiment Design and 3D-CAD	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 — 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

Fundamentals of Fluid Mechanics
Fundamentals of Fluid Mechanics	VL	2
Fluid Mechanics for Process Engineering	HÜ	2

Electrical Machines
Electrical Machines	VL	3
Electrical Machines	HÜ	2

Renewables and Energy Systems
Renewable Energy	VL	2
Energy Systems and Energy Industry	VL	2
Power Industry	VL	1
Renewable Energy	GÜ	1

Semester 5 — Form / Hrs/wk

Introduction to Control Systems
Introduction to Control Systems	VL	2
Introduction to Control Systems	GÜ	2

Heat and Mass Transfer
Heat and Mass Transfer	VL	2
Heat and Mass Transfer	GÜ	1
Heat and Mass Transfer	HÜ	1

Thermal Separation Processes
Thermal Separation Processes	VL	2
Thermal Separation Processes	GÜ	2
Thermal Separation Processes	HÜ	1
Separation Processes	PR	1

Gas and Steam Power Plants
Gas and Steam Power Plants	VL	3
Gas and Steam Power Plants	HÜ	1

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

Environmental Technology (part 1)
Environmental Technologie	VL	2

Semester 6 — Form / Hrs/wk

Foundations of Management
Introduction to Management	VL	3
Management Tutorial	HÜ	2

Environmental Technology (part 2)
Practical Exercise Environmental Technology	PR	1

Particle Technology and Solids Process Engineering
Particle Technology I	VL	2
Particle Technology I	GÜ	1
Particle Technology I	PR	2

Environmental Technology
Environmental Assessment	VL	2
Environmental Assessment	GÜ	1

Semester 7 — Form / Hrs/wk

Advanced Internship AIW/ GES

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.