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

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

Specialisation Biomedical Engineering

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1–6	**Chemistry** Chemistry I+II — VL 4 Chemistry I+II — HÜ 2	**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	**Technical Thermodynamics II** Technical Thermodynamics II — VL 2 Technical Thermodynamics II — HÜ 1 Technical Thermodynamics II — GÜ 1	**Signals and Systems** Signals and Systems — VL 3 Signals and Systems — GÜ 2	**Introduction to Control Systems** Introduction to Control Systems — VL 2 Introduction to Control Systems — GÜ 2	**Foundations of Management** Introduction to Management — VL 3 Management Tutorial — GÜ 2	**Advanced Internship AIW/ ES**
7–12	**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	**Fundamentals of Mechanical Engineering Design** Fundamentals of Mechanical Engineering Design — VL 2 Fundamentals of Mechanical Engineering Design — HÜ 2	**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	**Practical module 4 (dual study program, Bachelor's degree)** Practical term 4 — 0	**Practical module 5 (dual study program, Bachelor's degree)** Practical term 5 — 0	**Introduction into Medical Technology and Systems** Introduction into Medical Technology and Systems — VL 2 Introduction into Medical Technology and Systems — PS 2 Introduction into Medical Technology and Systems — HÜ 1	
13–18	**Mathematics I** Mathematics I — VL 4 Mathematics I — HÜ 2 Mathematics I — GÜ 2	**Technical Thermodynamics I** Technical Thermodynamics I — VL 2 Technical Thermodynamics I — HÜ 1 Technical Thermodynamics I — GÜ 1 **Practical module 3 (dual study program, Bachelor's degree)** Practical term 3 — 0		**Fluid Dynamics** Fluid Mechanics — VL 3 Fluid Mechanics — HÜ 2	**Numerical Mathematics I** Numerical Mathematics I — VL 2 Numerical Mathematics I — GÜ 2	**MED II: Introduction to Physiology** Introduction to Physiology — VL 2 **BIO I: Experimental Methods in Biomechanics** Experimental Methods in Biomechanics — VL 2	
19–26	**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	**Mathematics II** Mathematics II — VL 4 Mathematics II — HÜ 2 Mathematics II — GÜ 2 **Engineering Mechanics III (Dynamics)** Engineering Mechanics III — VL 3 Engineering Mechanics III — GÜ 2 Engineering Mechanics III — HÜ 1		**MED I: Introduction to Anatomy** Introduction to Anatomy — VL 2 **MED I: Introduction to Radiology and Radiation Therapy** Introduction to Radiology and Radiation Therapy — VL 2 **Computational Mechanics** Computational Multibody Dynamics — IV 2 Computational Mechanics — GÜ 2 Computational Stuctural Mechanics — IV 2	**Heat Transfer** Heat Transfer — VL 3 Heat Transfer — HÜ 2 **Measurement Technology for Mechanical Engineers** Measurement Technology for Mechanical Engineering — VL 2 Measurement Technology for Mechanical Engineering — PR 2 Practical Course: Measurement and Control Systems — PR 2	**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	**Bachelor thesis (dual study program)**
27–32	**Practical module 1 (dual study program, Bachelor's degree)** Practical term 1 — 0	**Practical module 2 (dual study program, Bachelor's degree)** Practical term 2 — 0	**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** Fundamentals of Materials Science II — VL 2 Fundamentals of Materials Science I — VL 2 Physical and Chemical Basics of Materials Science — VL 2	**Mechanical Engineering: Design (part 2)** Team Project Design Methodology — PBL 2 Mechanical Design Project II — PBL 3	**MED II: Introduction to Biochemistry and Molecular Biology** Introduction to Biochemistry and Molecular Biology — VL 2		
33–38	**Engineering Mechanics I (Stereostatics)** Engineering Mechanics I — VL 2 Engineering Mechanics I — GÜ 2 Engineering Mechanics I — HÜ 1	**Engineering Mechanics II (Elastostatics)** Engineering Mechanics II — VL 2 Engineering Mechanics II — GÜ 2 Engineering Mechanics II — HÜ 2			**BIO I: Implants and Fracture Healing** Implants and Fracture Healing — VL 2		

Linking theory and practice (dual study program, Bachelor's degree) (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.