

Exclosure to Subject Specific Regulations  
 from 21.07.2021  
 for Bachelor-Programme Maschinenbau  
 at TUHH dual study program  
 Programme Director: Prof. Thorsten  
 Schüppstuhl  
 Total: 210 CP  
 Number of Specilisations to choose: 1



# Course Scheme Bachelor Mechanical Engineering (MBBS) dual study program

Consolidated Version  
 for Study Cohort: WiSe23/24  
 en\_head\_sda  
 and Approval of Chair from:  
 13.12.2023  
 Replaces Version from: 29.03.2023  
 In Force on: 01.10.2023  
 Out of Force on: 31.03.2028

Information regarding the lectures are available in the TUHH modul manuals as well as in the course catalogue.

Re-com. Term	Module						Examination			Course Work		
	Module Name (German / English)	Language	ModuleResponsability	Institute	C/EC (1)	CM/OM (2)	CP (4)	Grade	Examination Form(3)	Compulsory	Course Work Type	Bonus (in %)
<b>Core Qualification</b> Compulsory Courses: 174 LP Optional Courses: 6 LP												
1	Grundlagen der Werkstoffwissenschaften / Fundamentals of Materials Science	DE	Prof. Weißmüller	M-22	C	CM	6	Y	KL			
1	Informatik für Ingenieur*innen - Einführung & Überblick / Computer Science for Engineers - Introduction and Overview	DE / EN	Prof. Fey	E-13	C	CM	6	Y	KL	N	TE	10
1	Mathematik I / Mathematics I	DE	Prof. Taraz	E-10	C	CM	8	Y	KL	Y	ÜA	10
1	Praxismodul 1 im dualen Bachelor / Practical module 1 (dual study program, Bachelor's degree)	DE	Dr. Haschke	0-SLS	C	CM	6	N	SA			
1	Teamprojekt MB / Team Project MB	DE	Prof. Fiedler	M-11	C	CM	6	N	SA			
1	Technische Mechanik I (Stereostatik) / Engineering Mechanics I (Stereostatics)	DE	Prof. Kriegesmann	M-24	C	CM	6	Y	KL			
2	Fertigungstechnik / Production Engineering	DE	Prof. Dege	M-18	C	CM	6	Y	KL			
2	Grundlagen der Konstruktionslehre / Fundamentals of Mechanical Engineering Design	DE	Prof. Krause	M-17	C	CM	6	Y	KL			
2	Mathematik II / Mathematics II	DE	Prof. Taraz	E-10	C	CM	8	Y	KL	Y	ÜA	10
2	Praxismodul 2 im dualen Bachelor / Practical module 2 (dual study program, Bachelor's degree)	DE	Dr. Haschke	0-SLS	C	CM	6	N	SA			
2	Technische Mechanik II (Elastostatik) / Engineering Mechanics II (Elastostatics)	DE	Prof. Cyron	M-15	C	CM	6	Y	KL			
2	Technische Thermodynamik I / Technical Thermodynamics I	DE	Prof. Speerforck	M-21	C	CM	6	Y	KL			
3	Grundlagen der Elektrotechnik / Basics of Electrical Engineering	DE	Prof. Kern	M-4	C	CM	6	Y	FFA	N	FFST	20

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3	Mathematik III / Mathematics III	DE	Prof. Lindner	0-UNIHH-M	C	CM	8	Y	KL			
3	Praxismodul 3 im dualen Bachelor / Practical module 3 (dual study program, Bachelor's degree)	DE	Dr. Haschke	0-SLS	C	CM	6	N	SA			
3	Technische Mechanik III (Dynamik) / Engineering Mechanics III (Dynamics)	DE	Prof. Seifried	M-13	C	CM	6	Y	KL	N	MT	20
3	Technische Thermodynamik II / Technical Thermodynamics II	DE	Prof. Speerforck	M-21	C	CM	6	Y	KL			
3-4	Konstruktionslehre Gestalten / Mechanical Engineering: Design	DE	Prof. Krause	M-17	C	CM	6	Y	KL	Y	SA	0
										Y	SA	0
										Y	SA	0
										Y	SA	0
3-4	Vertiefte Konstruktionslehre / Advanced Mechanical Engineering Design	DE	Prof. Krause	M-17	C	CM	6	Y	KL			
4	Numerische Mechanik / Computational Mechanics	DE	Prof. Seifried	M-13	C	CM	6	Y	KL	N	MT	15
										N	ÜA	5
4	Praxismodul 4 im dualen Bachelor / Practical module 4 (dual study program, Bachelor's degree)	DE	Dr. Haschke	0-SLS	C	CM	6	N	SA			
4	Strömungsmechanik / Fluid Dynamics	DE / EN	Prof. Rung	M-8	C	CM	6	Y	KL			
4	Elektrische Maschinen und Antriebe / Electrical Machines and Actuators	DE	Prof. Kern	M-4	EC	CM	6	Y	FFA			
4	Grundlagen des Produktions- und Qualitätsmanagements / Fundamentals of Production and Quality Management	EN	Prof. Lödding	M-18	EC	CM	6	Y	KL			
4	Moderne Werkstoffe für die Nachhaltigkeit / Advanced Materials for Sustainability	DE / EN	Prof. Huber	M-22	EC	CM	6	Y	KL			
5	Großes Konstruktionsprojekt / Advanced Mechanical Design Project	DE	Dr. Schmidt	M-17	C	CM	6	Y	KL	Y	TE	0
5	Grundlagen der Regelungstechnik / Introduction to Control Systems	DE	NN	E-14	C	CM	6	Y	KL			
5	Messtechnik für Maschinenbau / Measurement Technology for Mechanical Engineers	DE / EN	Prof. Kern	M-4	C	CM	6	N	FFA	Y	FFST	0
5	Praxismodul 5 im dualen Bachelor / Practical module 5 (dual study program, Bachelor's degree)	DE	Dr. Haschke	0-SLS	C	CM	6	N	SA			
6	Grundlagen der Betriebswirtschaftslehre / Foundations of Management	DE	Prof. Lühje	W-3	C	CM	6	Y	FFA			

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1-6	Theorie-Praxis-Verzahnung im dualen Bachelor / Linking theory and practice (dual study program, Bachelor's degree)	DE	Dr. Haschke	0-SLS	C	CM	6	N	SA			

**Specialisation Biomechanics** Compulsory Courses: 18 LP Optional Courses: 0 LP

4	MED I: Einführung in die Anatomie / MED I: Introduction to Anatomy	DE	Prof. Schumacher	M-3	C	CM	3	Y	KL			
4	MED I: Einführung in die Radiologie und Strahlentherapie / MED I: Introduction to Radiology and Radiation Therapy	DE	Prof. Carl	M-3	C	CM	3	Y	KL			
5	BIO I: Implantate und Frakturheilung / BIO I: Implants and Fracture Healing	DE	Prof. Morlock	M-3	C	CM	3	Y	KL			
5	MED II: Einführung in die Biochemie und Molekularbiologie / MED II: Introduction to Biochemistry and Molecular Biology	DE	Prof. Kreienkamp	M-3	C	CM	3	Y	KL			
6	BIO I: Experimentelle Methoden der Biomechanik / BIO I: Experimental Methods in Biomechanics	DE	Prof. Morlock	M-3	C	CM	3	Y	KL			
6	MED II: Einführung in die Physiologie / MED II: Introduction to Physiology	DE	Dr. Zimmermann	M-3	C	CM	3	Y	KL			

**Specialisation Energy Systems** Compulsory Courses: 12 LP Optional Courses: 6 LP

5	Wärmeübertragung / Heat Transfer	DE	Dr. Moschallski	M-21	C	CM	6	Y	KL			
5	Numerische Mathematik I / Numerical Mathematics I	EN	Prof. Le Borne	E-10	EC	CM	6	Y	KL			
5	Numerische Methoden der Thermofluidodynamik I / Computational Fluid Dynamics I	DE	Prof. Rung	M-8	EC	CM	6	Y	KL			
5	Wärme Kraftwerke / Gas and Steam Power Plants	DE	NN	M-5	EC	CM	6	Y	KL	N	GD	5
										N	SA	5
										N	RE	5
										N	ÜA	5
5-6	Kolbenmaschinen / Reciprocating Machinery	DE	Prof. Wirz	M-12	C	CM	6	Y	KL			

**Specialisation Aircraft Systems Engineering** Compulsory Courses: 18 LP Optional Courses: 0 LP

4	Modeling, Simulation and Optimization (EN) / Modeling, Simulation and Optimization (EN)	EN	Prof. Kriegesmann	M-24	C	CM	6	Y	MP			
6	Digitale Produktentwicklung und Leichtbau / Digital Product Development and Lightweight Design	DE	Prof. Krause	M-17	C	CM	6	Y	KL	Y	FFST	20
6	Luftfahrtsysteme / Aeronautical Systems	DE	Prof. Thielecke	M-7	C	CM	6	Y	KL			

**Specialisation Materials in Engineering Sciences** Compulsory Courses: 18 LP Optional Courses: 0 LP

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5	Materialwissenschaftliches Praktikum / Materials Science Laboratory	DE / EN	Prof. Pagnan Furlan	M-EXK3	C	CM	6	Y	FFA			
6	Vertiefende Grundlagen der Werkstoffwissenschaften / Enhanced Fundamentals of Materials Science	DE / EN	Prof. Schneider	M-9	C	CM	6	Y	KL			
6	Werkstofftechnik: Werkstoffauswahl, Verarbeitung und Modellierung / Materials Engineering: Materials Selection, Processing and Modelling	EN	Prof. Huber	M-22	C	CM	6	Y	KL	N	ÜA	20
<b>Specialisation Mechatronics</b> Compulsory Courses: 12 LP Optional Courses: 6 LP												
4	Mathematik IV / Mathematics IV	DE	Prof. Lindner	0-UNIHH-M	C	CM	6	Y	KL			
5	Numerische Mathematik I / Numerical Mathematics I	EN	Prof. Le Borne	E-10	EC	CM	6	Y	KL			
5	Simulation und Entwurf mechatronischer Systeme / Simulation and Design of Mechatronic Systems	DE	Prof. Seifried	M-13	EC	CM	6	Y	KL			
6	Halbleiterschaltungstechnik / Semiconductor Circuit Design	DE	NN	E-9	C	CM	6	Y	KL			
6	Modeling, Simulation and Optimization (EN) / Modeling, Simulation and Optimization (EN)	EN	Prof. Kriegesmann	M-24	EC	CM	6	Y	MP			
6	Signale und Systeme / Signals and Systems	DE / EN	Prof. Bauch	E-8	EC	CM	6	Y	KL			
<b>Specialisation Product Development and Production</b> Compulsory Courses: 18 LP Optional Courses: 0 LP												
5	Materialwissenschaftliches Praktikum / Materials Science Laboratory	DE / EN	Prof. Pagnan Furlan	M-EXK3	C	CM	6	Y	FFA			
5	Produktionstechnologie / Production Technology	DE	Prof. Dege	M-18	C	CM	6	Y	KL			
6	Digitale Produktentwicklung und Leichtbau / Digital Product Development and Lightweight Design	DE	Prof. Krause	M-17	C	CM	6	Y	KL	Y	FFST	20
<b>Specialisation Theoretical Mechanical Engineering</b> Compulsory Courses: 12 LP Optional Courses: 6 LP												
5	Numerische Mathematik I / Numerical Mathematics I	EN	Prof. Le Borne	E-10	C	CM	6	Y	KL			
5	Wärmeübertragung / Heat Transfer	DE	Dr. Moschallski	M-21	EC	CM	6	Y	KL			
6	Modeling, Simulation and Optimization (EN) / Modeling, Simulation and Optimization (EN)	EN	Prof. Kriegesmann	M-24	C	CM	6	Y	MP			
6	Maschinelles Lernen I / Machine Learning I	DE / EN	Prof. Ay	E-21	EC	CM	6	Y	KL	N	ÜA	20
6	Mathematik IV / Mathematics IV	DE	Prof. Lindner	0-UNIHH-M	EC	CM	6	Y	KL			

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<b>Thesis</b> Compulsory Courses: 12 LP Optional Courses: 0 LP												
6	Bachelorarbeit im dualen Studium / Bachelor thesis (dual study program)		Professoren der TUHH	0-TUHH	C	CM	12	Y	AB			

#### Explanation:

<sup>1</sup>C=Compulsory, EC=Elective Compulsory

<sup>2</sup>CM=Compulsory Defined Module, OM=Optional Defined Module

<sup>3</sup>KL=Written exam, MT=Midterm, SA=Written elaboration, FFA=Subject theoretical and practical work, FFST=Subject theoretical and practical work, MP=Oral exam, RE=Presentation, GD=Group discussion, AB=Thesis, UA=Exercices, TE=Attestation

<sup>4</sup>CP=Credit Points

<sup>5</sup>VL=Lecture, SE=Seminar, GÜ=Recitation Section (small), PBL=Project-/problem-based Learning, PR=Practical Course, HÜ=Recitation Section (large), IV=Integrated Lecture

<sup>6</sup>DE=German, EN=English, DE/EN=German and English

<sup>7</sup>SWS=Contact hours