

Exclosure to Subject Specific Regulations
 from 10.03.2021
 for Bachelor-Programme
 Green Technologies: Energie, Wasser, Klima
 at TUHH dual study program
 Programme Director: Prof. Martin Kaltschmitt
 Total: 210 CP
 Number of Specilisations to choose: 1

Course Scheme Bachelor Green Technologies: Energy, Water, Climate (GTBS) dual study program

Consolidated Version
 for Study Cohort: WiSe22/23
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 and Approval of Chair from:
 06.07.2022
 In Force on: 01.10.2022
 Out of Force on: 30.09.2023

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 %)
Core Qualification Compulsory Courses: 168 LP Optional Courses: 0 LP												
1	Allgemeine und Anorganische Chemie / General and Inorganic Chemistry	DE	Prof. Luinstra	0-UNIHH	C	CM	6	Y	KL	Y	FFST	0
1	Green Technologies I / Green Technologies I	DE	Prof. Kaltschmitt	V-9	C	CM	6	Y	KL	Y	RE	0
1	Informatik für Ingenieure - 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	Technische Mechanik I (Stereostatik) / Engineering Mechanics I (Stereostatics)	DE	Prof. Kriegesmann	M-24	C	CM	6	Y	KL			
2	Mathematik II / Mathematics II	DE	Prof. Taraz	E-10	C	CM	8	Y	KL	Y	ÜA	10
2	Organische Chemie / Organic Chemistry	DE	Prof. Holl	0-UNIHH	C	CM	6	Y	KL	Y	FFST	0
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. Dr. 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	KL			
3	Mathematik III / Mathematics III	DE	Prof. Taraz	0-UNIHH-M	C	CM	8	Y	KL			

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3	Messtechnik für Chemie- und Bioingenieurwesen / Measurement Technology for Chemical and Bioprocess Engineering	DE	Prof. Penn	V-10	C	CM	6	Y	KL	N	ÜA	20
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 Thermodynamik II / Technical Thermodynamics II	DE	Prof. Dr. Speerforck	M-21	C	CM	6	Y	KL			
3-4	Green Technologies II / Green Technologies II	DE	Dr. Scherzinger	V-9	C	CM	6	Y	KL			
4	Grundlagen der Strömungsmechanik / Fundamentals of Fluid Mechanics	DE	Prof. Schlüter	V-5	C	CM	6	Y	KL	N	MT	5
4	Konventionelle Energiesysteme und Energiewirtschaft / Conventional Energy Systems and Energy Industry	DE	Prof. Kaltschmitt	V-9	C	CM	6	Y	KL			
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	Regenerative Energien / Renewable Energies	DE	Prof. Kaltschmitt	V-9	C	CM	6	Y	KL			
4	Siedlungswasserwirtschaft I / Sanitary Engineering I	DE	Prof. Otterpohl	B-2	C	CM	6	Y	KL			
5	Grundlagen der Regelungstechnik / Introduction to Control Systems	DE	Prof. Werner	E-14	C	CM	6	Y	KL			
5	Ökonomische und ökologische Projektbewertung / Economic and environmental project assessment	DE / EN	Prof. Kaltschmitt	V-9	C	CM	6	Y	KL			
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			
5	Wärme- und Stoffübertragung / Heat and Mass Transfer	DE	Prof. Smirnova	V-8	C	CM	6	Y	KL			
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 Bioresource Technology Compulsory Courses: 0 LP Optional Courses: 30 LP												
4	Biochemie und Mikrobiologie / Biochemistry and Microbiology	DE	Prof. Gescher	V-7	EC	CM	6	Y	KL			
5	Bioverfahrenstechnik - Vertiefung / Bioprocess Engineering - Advanced	EN	Prof. Pörtner	V-1	EC	CM	6	Y	KL			
5	Green Technologies III / Green Technologies III	DE	Dozenten des Studiengangs	SD-V	EC	CM	6	Y	STA			
5	Thermische Grundoperationen / Thermal Separation Processes	DE / EN	Prof. Smirnova	V-8	EC	CM	6	Y	KL			
5-6	Chemische Reaktionstechnik / Chemical Reaction Engineering	DE / EN	Prof. Horn	V-2	EC	CM	6	Y	KL	Y	FFST	0
6	Bioverfahrenstechnik - Grundlagen / Bioprocess Engineering - Fundamentals	DE	Prof. Liese	V-6	EC	CM	6	Y	KL	Y	FFST	5

		Module					Examination			Course Work		
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6	Phasengleichgewichtsthermodynamik / Phase Equilibria Thermodynamics	DE	Prof. Smirnova	V-8	EC	CM	6	Y	KL			
6	Prozess- und Anlagentechnik I / Process and Plant Engineering I	DE	Prof. Skiborowski	V-4	EC	CM	6	Y	KL	Y	FFST	10

Specialisation Energy Systems Compulsory Courses: 0 LP Optional Courses: 30 LP

4	Informatik für Ingenieure - Programmierkonzepte, Data Handling & Kommunikation / Computer Science for Engineers - Programming Concepts, Data Handling & Communication	DE	Prof. Fröschle	E-15	EC	CM	6	Y	KL	N	TE	10
5	Elektrische Energiesysteme I: Einführung in elektrische Energiesysteme / Electrical Power Systems I: Introduction to Electrical Power Systems	DE	Prof. Becker	E-6	EC	CM	6	Y	KL			
5	Green Technologies III / Green Technologies III	DE	Dozenten des Studiengangs	SD-V	EC	CM	6	Y	STA			
5	Klimaphysik / Climate physics	DE / EN	Prof. Dr. Bühler	0-UNIHH	EC	CM	6	Y	KL			
5	Thermische Grundoperationen / Thermal Separation Processes	DE / EN	Prof. Smirnova	V-8	EC	CM	6	Y	KL			
5	Wärme Kraftwerke / Gas and Steam Power Plants	DE	Dr. Abel-Günther	M-5	EC	CM	6	Y	KL	N	SA	5
										N	RE	5
										N	ÜA	5
										N	GD	5
5-6	Systemintegration Erneuerbare Energien / System Integration Renewable Energies	DE	Prof. Kaltschmitt	V-9	EC	CM	6	Y	KL			
6	Auswirkung & Minderung des Klimawandels / Climate change impact & mitigation	DE	Prof. Kaltschmitt	V-9	EC	CM	6	Y	KL			
6	Phasengleichgewichtsthermodynamik / Phase Equilibria Thermodynamics	DE	Prof. Smirnova	V-8	EC	CM	6	Y	KL			

Specialisation Energy Technology Compulsory Courses: 0 LP Optional Courses: 30 LP

4	Grundlagen der Konstruktionslehre / Fundamentals of Mechanical Engineering Design	DE	Prof. Krause	M-17	EC	CM	6	Y	KL			
4-5	Grundlagen der Werkstoffwissenschaften / Fundamentals of Materials Science	DE	Prof. Weißmüller	M-22	EC	CM	6	Y	KL			
5	Green Technologies III / Green Technologies III	DE	Dozenten des Studiengangs	SD-V	EC	CM	6	Y	STA			
5	Technische Mechanik III (Dynamik) / Engineering Mechanics III (Dynamics)	DE	Prof. Seifried	M-13	EC	CM	6	Y	KL			

		Module					Examination				Course Work		
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5	Wärme kraftwerke / Gas and Steam Power Plants	DE	Dr. Abel-Günther	M-5	EC	CM	6	Y	KL	N	SA	5	
										N	RE	5	
										N	ÜA	5	
										N	GD	5	
5-6	Kolbenmaschinen / Reciprocating Machinery	DE	Prof. Wirz	M-12	EC	CM	6	Y	KL				
5-6	Konstruktionslehre Gestalten / Mechanical Engineering: Design	DE	Prof. Krause	M-17	EC	CM	6	Y	KL	Y	SA	0	
										Y	SA	0	
										Y	SA	0	
										Y	SA	0	
6	Elektrische Maschinen und Antriebe / Electrical Machines and Actuators	DE	Prof. Kern	M-4	EC	CM	6	Y	FFA				
6	Fertigungstechnik / Production Engineering	DE	Prof. Hintze	M-18	EC	CM	6	Y	KL				
Specialisation Water Compulsory Courses: 0 LP Optional Courses: 30 LP													
4	Wasser und Umwelt / Water and Environment	DE	Prof. Ernst	B-11	EC	CM	6	Y	KL	Y	RE	0	
4-5	Hydrologie und Geoinformationssysteme / Hydrology and Geoinformation Systems	DE	Prof. Fröhle	B-10	EC	CM	6	Y	FFA				
5	Green Technologies III / Green Technologies III	DE	Dozenten des Studiengangs	SD-V	EC	CM	6	Y	STA				
5	New Trends in Water and Environmental Research / New Trends in Water and Environmental Research	EN	Prof. Shokri	B-9	EC	CM	6	N	SA				
5	Wasserbau / Hydraulic Engineering	DE	Prof. Fröhle	B-10	EC	CM	6	Y	KL	Y	FFST	0	
6	Angewandte Wasserwirtschaft / Applied Water Management	DE / EN	Prof. Fröhle	B-10	EC	CM	6	Y	FFA				
6	Partikeltechnologie und Feststoffverfahrenstechnik I / Particle Technology and Solids Process Engineering	DE / EN	Prof. Heinrich	V-3	EC	CM	6	Y	KL	Y	SA	0	
6	Siedlungswasserwirtschaft II / Sanitary Engineering II	DE	Prof. Ernst	B-11	EC	CM	6	Y	FFA				
Thesis 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:

¹C=Compulsory, EC=Elective Compulsory

²CM=Compulsory Defined Module, OM=Optional Defined Module

³KL=Written exam, MT=Midterm, SA=Written elaboration, FFST=Subject theoretical and practical work, FFA=Subject theoretical and practical work, RE=Presentation, GD=Group discussion, STA=Study work, ÜA=Exercises, AB=Thesis, TE=Attestation

⁴CP=Credit Points

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

⁶DE=German, EN=English, DE/EN=German and English

⁷SWS=Contact hours