

Exclosure to Subject Specific Regulations  
 from 25.07.2018  
 for Master-Programme  
 Environmental Engineering  
 at TUHH dual study program  
 Programme Director: Prof. Mathias Ernst  
 Total: 150 CP  
 Number of Specilisations to choose: 1



# Course Scheme Master Environmental Engineering (IMPEE) dual study program

Consolidated Version  
 for Study Cohort: WiSe23/24  
 en\_head\_sda  
 and Approval of Chair from:  
 24.05.2023  
 In Force on: 01.10.2023  
 Out of Force on: 30.09.2026

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: 72 LP Optional Courses: 18 LP												
1	Abfallbehandlungstechnologien / Waste Treatment Technologies	DE / EN	Prof. Kuchta	V-11	C	CM	6	Y	RE	Y	FFST	0
1	Nachhaltiges Wassermanagement und Mikrobiologie der Wasseraufbereitung / Sustainable Water Management and Microbiology of Water Systems	EN	Prof. Ernst	B-11	C	CM	6	Y	KL	Y	RE	20
1	Praxismodul 1 im dualen Master / Practical module 1 (dual study program, Master's degree)	DE	Dr. Haschke	0-SLS	C	CM	10	N	SA			
1	Strömungsmechanik, Hydraulik und Geoinformationssysteme im Wasserbau / Fluid Mechanics, Hydraulics and Geo-Information-Systems in Water Management	DE / EN	Prof. Fröhle	B-10	C	CM	6	Y	KL			
1	Subsurface Processes / Subsurface Processes	EN	Prof. Shokri	B-9	C	CM	6	N	FFA			
1	Umweltanalytik und wassertechnisches Praktikum / Environmental Analysis and Water Technology Practice	EN	Dr. Rechtenbach	B-2	C	CM	6	Y	KL			
2	Praxismodul 2 im dualen Master / Practical module 2 (dual study program, Master's degree)	DE	Dr. Haschke	0-SLS	C	CM	10	N	SA			
2	Advanced Vadose Zone Hydrology / Advanced Vadose Zone Hydrology	EN	Prof. Shokri	B-9	EC	CM	6	N	SA			
2	Hydrologische Systeme / Hydrological Systems	DE / EN	Prof. Fröhle	B-10	EC	CM	6	Y	KL			
2	Ingenieurgeochemie / Geochemical Engineering	EN	Dr. Ritzkowski	SD-B	EC	CM	6	Y	KL			
2	Management von Oberflächenwasser / Management of Surface Water	DE / EN	Prof. Fröhle	B-10	EC	CM	6	Y	KL			

		Module					Examination			Course Work		
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2	Nexus Engineering - Wasser, Boden, Nahrung und Energie / Nexus Engineering - Water, Soil, Food and Energy	EN	Prof. Otterpohl	B-2	EC	CM	6	Y	FFA			
2	Städtisches Umweltmanagement / Urban Environmental Management	EN	Dr. Rechtenbach	B-2	EC	CM	6	Y	SA			
2-3	Ausgewählte Themen des Umweltingenieurwesens / Selected Topics in Environmental Engineering	DE / EN	Prof. Ernst	B-11	EC	OM	6	Selection out of Catalogue below				
3	Praxismodul 3 im dualen Master / Practical module 3 (dual study program, Master's degree)	DE	Dr. Haschke	0-SLS	C	CM	10	N	SA			
1-3	Theorie-Praxis-Verzahnung im dualen Master / Linking theory and practice (dual study program, Master's degree)	DE	Dr. Haschke	0-SLS	C	CM	6	N	SA			
1-3	Betrieb & Management / Business & Management	DE / EN	Prof. Meyer	W-1	C	OM	6	Selection out of seperatly published Catalogue				
<b>Specialisation Energy and Resources</b> Compulsory Courses: 12 LP Optional Courses: 18 LP												
2	Abfall und Energie / Waste and Energy	EN	Prof. Kuchta	V-11	EC	CM	6	Y	RE	Y	SA	20
2	Angewandte Optimierung in der Energie- und Verfahrenstechnik / Applied optimization in energy and process engineering	DE / EN	Prof. Skiborowski	V-4	EC	CM	6	Y	MP			
2	Smart Monitoring / Smart Monitoring	EN	Prof. Smarsly	B-1	EC	CM	6	Y	SA			
3	Studienarbeit Energie und Ressourcen / Study work Energy and Ressources		Dozenten des Studiengangs	SD-B	C	CM	12	Y	STA			
3	Advanced Fuels / Advanced Fuels	DE / EN	Prof. Kaltschmitt	V-9	EC	CM	6	Y	KL	Y	SA	20
3	Bioressourcen und Bioraffinerien / Bioresources and Biorefineries	EN	Dr. Körner	B-2	EC	CM	6	Y	KL			
3	Spezielle Aspekte des Abfallressourcenmanagements / Special Aspects of Waste Resource Management	EN	Prof. Kuchta	V-11	EC	CM	6	Y	RE	Y	SA	20
3	Umweltschutzmanagement / Environmental protection management	EN	Dr. Pietsch-Braune	V-3	EC	CM	6	Y	KL			
<b>Specialisation Environment and Climate</b> Compulsory Courses: 12 LP Optional Courses: 18 LP												
2	Küstenwasserbau I / Coastal Hydraulic Engineering I	EN	Prof. Fröhle	B-10	EC	CM	6	Y	KL			
2	Smart Monitoring / Smart Monitoring	EN	Prof. Smarsly	B-1	EC	CM	6	Y	SA			
2	Water and Environment: Theory and Application / Water and Environment: Theory and Application	EN	Prof. Shokri	B-9	EC	CM	6	N	FFA			
3	Studienarbeit Umwelt und Klima / Study work Environment and Climate		Dozenten des Studiengangs	SD-B	C	CM	12	Y	STA			

		Module					Examination			Course Work		
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3	Emerging Trends in Environmental Engineering / Emerging Trends in Environmental Engineering	EN	Prof. Shokri	B-9	EC	CM	6	N	FFA			
3	Küstenwasserbau II / Coastal Hydraulic Engineering II	EN	Prof. Fröhle	B-10	EC	CM	6	Y	KL			
3	Ländliche Entwicklung und Ressourcen Orientierte Sanitärsysteme für verschiedene Klimate / Rural Development and Resources Oriented Sanitation for different Climate Zones	EN	Prof. Otterpohl	B-2	EC	CM	6	Y	FFA			
3	Nachhaltiger naturbasierter Küstenschutz im Klimawandel (SeaPiaC) / Sustainable Nature-based Coastal Protection in a Changing Climate (SeaPiaC)	EN	Prof. Fröhle	B-10	EC	CM	6	Y	SA			
<b>Specialisation Water Quality and Water Engineering</b> Compulsory Courses: 12 LP Optional Courses: 18 LP												
2	Abwassersysteme / Wastewater Systems	DE / EN	Prof. Otterpohl	B-2	EC	CM	6	Y	KL			
2	Küstenwasserbau I / Coastal Hydraulic Engineering I	EN	Prof. Fröhle	B-10	EC	CM	6	Y	KL			
2	Smart Monitoring / Smart Monitoring	EN	Prof. Smarsly	B-1	EC	CM	6	Y	SA			
3	Studienarbeit Wasserqualität und Wasseringenieurwesen / Study Work Water Quality and Water Engineering		Dozenten des Studiengangs	SD-B	C	CM	12	Y	STA			
3	Gewässerschutz / Water Protection	EN	Prof. Otterpohl	B-2	EC	CM	6	Y	RE			
3	Kanalbau und Simulation / Construction and Simulation of Sewerage Systems	EN	Prof. Otterpohl	B-2	EC	CM	6	Y	SA	N	RE	20
3	Küstenwasserbau II / Coastal Hydraulic Engineering II	EN	Prof. Fröhle	B-10	EC	CM	6	Y	KL			
3	Ländliche Entwicklung und Ressourcen Orientierte Sanitärsysteme für verschiedene Klimate / Rural Development and Resources Oriented Sanitation for different Climate Zones	EN	Prof. Otterpohl	B-2	EC	CM	6	Y	FFA			
3	Membran Technologie / Membrane Technology	EN	Prof. Ernst	B-11	EC	CM	6	Y	KL			
3	Modellierung von Prozessen in der Wassertechnologie / Process Modeling in Water Technology	DE / EN	Dr. Johannsen	B-11	EC	CM	6	Y	MP			
<b>Thesis</b> Compulsory Courses: 30 LP Optional Courses: 0 LP												
4	Masterarbeit im dualen Studium / Master thesis (dual study program)		Professoren der TUHH	0-TUHH	C	CM	30	Y	AB			

## Selected Topics in Environmental Engineering

Course					Examination			
Course Name (German / English)	Course Form LV(5)	Language (6)	SWS (7)	Sem. LV	CP (4)	Grade	Examination Form(3)	Additional information
Aquatische Umweltchemie / Environmental Aquatic Chemistry	VL	EN	2	SoSe	3	Y	KL	
Schlammbehandlung / Sludge Treatment	VL	EN	2	SoSe	3	Y	KL	
Thermische Biomassenutzung / Thermal Biomass Utilization	VL	DE	2	WiSe	2	Y	KL	
Thermische Biomassenutzung / Thermal Biomass Utilization	PR	DE	1	WiSe	1	Y	SA	

#### 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, SA=Written elaboration, FFA=Subject theoretical and practical work, FFST=Subject theoretical and practical work, MP=Oral exam, RE=Presentation, STA=Study work, AB=Thesis, SA It. FPrO=Written elaboration (accord. to Internship Regulations)

<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, PS=Project Seminar, 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