Masterstudiengang *Tropical Hydrogeology and Environmental Engineering (M.Sc.)*

TECHNISCHE UNIVERSITÄT DARMSTADT

Teilzeitstudien- und Prüfungsplan 8 Semester Studienbeginn Wintersemester

Legende		Prüfungsleistungen						Kurs			CP	Semester							
Bewertungs-system:	St = Standard (benotet); bnb = bestanden/nicht bestanden											Die Zuordnung der Prüfungen zu Semestern hat empfehlenden Charakter.							
Prüfungsform:	B=Bericht, H=Hausarbeit, HÜ= Hausübungen, Arbeitsblätter, K = Klausur, Kq= Kolloquium, mP= mündliche Prüfungsleistung, Pt=Präsentation, R=Referat, Th=Thesis																		
Status:	o = obligatorisch; f = fakultativ																		
Art der Lehrform:	VL=Vorlesung; Ü=Übung; VÜ=Vorlesung mit Übung; S=Seminar; EK=Exkursion; PR=Praktikum											Arbeitsaufwand pro Semester (CP)							
CP:	Leistungspunkte																		
TUCaN-Nr. und Zuordnung von CP zu Modulbausteinen haben informativen Charakter. Die Anrechnung der CPs erfolgt nach Abschluss des Moduls.		Fachprüfung	Studienleistung	Prüfungsform	Dauer (min)	Gewichtung f. Modulnote	Gewichtung f. Gesamtnote	Semesterwochenstunden (SWS)	Status	Lehrform	CP gesamt	1.	2.	3.	4.	5.	6.	7.	8
Pflichtbereich / Compulsory Modules (18 CP)									o		18								
11-02-3402	Scientific Methods		St	Pt	-	1	1	2	o		6								
11-02-3402-se	Project Seminar							2	o	S			6						
11-02-3431	Semiarid Field Hydrogeology		bnb	B	-	0	0	6	o		6								
11-02-3272-ek	Field Trip to a Semiarid Region							6	o	EK				6					
11-02-3400	Scientific Training		St	B	-	1	1	-	o		6								
-	Scientific training / internship							-	o	PR					6				
Interdisziplinärer Wahlbereich (0 - 6 CP)									f		0-6								
Modulkatalog	Bereich Interdisziplinäre Angebote (Typ §30 Abs. 6 APB *Bereich mit uneingeschränktem Modulwechsel* , 0 - 6 CP)						1	0-4	f		0-6								
-	Gesamtkatalog aller Module der TU					1		0-4	f	-		0 - 6							
Vertiefungsrichtung Hydrogeology (66 - 72 CP; Typ §30 Abs. 4 APB *Wahl mit einer Schwerpunktsetzung*)									f										
Wahlpflichtbereich Hydrogeology (Typ §30 Abs. 6 APB *Bereich mit uneingeschränk-tem Modulwechsel* , mindestens 66 - 72 CP, davon max. 24 CP aus C2)									o		66-72								
C1 Vertiefungsspezifischer Wahlpflichtbereich									o										
11-02-3401	Fundamentals of Geosciences	St		K	90	1	1	4	f		6								
11-02-3404-vu	Geological Methods							2	f	VÜ		3		x					
11-02-3405-vu	Practical Mineralogy and Petrology							2	f	VÜ		3		x					
11-02-2238	Clay Mineralogy	St		K	90	1	1	4	f		6								
11-02-2044-vu	Clay Mineralogy							2	f	VL			3		x				
11-02-2045-vu	Applied Clay Mineralogy							2	f	VL				3		x			
11-02-3462	Geoinformation Systems						1	6	f		6								
11-02-1326-vu	GIS I (Techniques)	St		H	-	1		3	f	PR			3		x				
11-02-2243-vu	GIS II (Case studies)	St		K	90	1		3	f	VÜ				3		x			
11-02-3416	Remote Sensing and Statistics						1	2	f		3								
11-02-2183-vu	Statistics	St		K	60	1		2	f	VÜ			3		x				
11-02-2244-vu	Remote Sensing in Geology		St	H	-	1		2	f	VÜ				3		x			
13-L1-M007	Integrated Water Management	St		mP	15	1	1	4	f		6								
			bnb	H	-	0													
13-L1-0006-vu	Integrated Water Management							4	f	VU		6		x					
11-02-3406	Hydrogeology I						1	4	f		6								
11-02-3406-vu	Hydrogeology I	St		K	90	1		3	f	VÜ		4		x					
11-02-3271-ek	Hydrogeological Field Trips		bnb	B	-	0		2	f	EK		2		x					
11-02-3464	Soil and Groundwater Physics						1	4	f		6								
11-02-3407-vl	Physical Hydrogeology	St		K	60	1		2	f	VL		3		x					
11-02-3410-vu	Unsaturated Zone Processes/Groundwater Recharge	St		K/H	90/-	1		2	f	VÜ			3		x				
11-02-3466	Hydrochemistry I						1	5	f		6								
11-02-2031-vu	Hydrochemistry	St		K	90	1		2	f	VL		3		x					
11-02-3214-vu	Water Analysis		St	B	-	1		3	f	VU		3		x					
11-02-3468	Hydrogeology II						1	4	f		6								
11-02-2032-vu	Hydrogeology II	St		K	90	1		2	f	VÜ			3		x				
11-02-3417-pr	Hydrogeological Field Course		St	B	-	1		2	f	PR			3		x				
11-02-6023	Hydrochemistry II	St		K	90	1	1	4	f		6								
11-02-2111-vu	Hydrogeochemistry							4	f	VÜ			6		x				
11-02-2219	Groundwater Modelling						1	4	f		6								
11-02-2134-vu	Introduction to Groundwater Modelling	St		K	90	1		2	f	VÜ			3		x				
11-02-2133-vu	Advanced Groundwater Modelling		St	H	-	1		2	f	VÜ				3		x			
11-02-2229	Isotope Hydrology and Dating	St		K	60	1	1	2	f		3								
11-02-3253-vl	Isotope Hydrology and Dating							2	f	VÜ				3		x			
11-02-2239	Tracer Techniques		St	H	-	1	1	2	f		3								
11-02-3254-vu	Tracer Techniques							2	f	VÜ				3		x			
11-02-2310	Geohydraulics and Well Construction	St		K	90	1	1	4	f		6								
11-02-2163-vu	Geohydraulics and Well Construction							4		VÜ				6		x			
11-02-2336	Sedimentology II						1	4	f		5								
11-02-2175-vl	Basin Analysis	St		K	90	3		2	f	VL					3		x		
11-02-2176-pr	Sequence Stratigraphy Field Course (3 days)		St	B	-	2		2	f	PR					2		x		
11-02-2337	Sedimentology III	St		K	90	1	1	3	f		5								
11-02-2177-vl	Sedimentary Petrology and Provenance Analysis							1	f	VL					2		x		
11-02-2178-ue	Microscopy of Sandstones							2	f	Ü					3		x		
11-02-2338	Sedimentology IV		St	B	-	1	1	3	f		5								
11-02-2172-pr	Sedimentological Field Course							3	f	PR					5		x		
11-02-2339	Sedimentology V	St		K	90	1	1	3	f		5								
11-02-2179-vu	Erosion: Processes and methods							3	f	VÜ				5		x			
11-02-3413	Geophysical Methods						1	5	f		6								
11-02-1232-vu	Geophysical Field Methods		St	K	90	1		3	f	PR			3		x				
11-02-2253-pr	Ground Penetrating Radar (GPR)		St	K/B	90/-	1		2	f	PR			3		x				
C2 Erweiterter Wahlpflichtbereich (0 - 24 CP)									f										
	Möglichkeit, Module aus der Vertiefungsrichtung Environmental Engineering zu wählen, die nicht in C1 enthalten sind.								f										
Vertiefungsrichtung Environmental Engineering (66 - 72 CP; Typ §30 Abs. 4 APB Wahl mit einer Schwerpunktsetzung)									f										
Wahlpflichtbereich Environmental Engineering (Typ §30 Abs. 6 APB *Bereich mit un-eingeschränktem Modulwechsel, mindestens 66 - 72 CP, davon max. 24 CP aus C2*)									o		66-72								

C1 Vertiefungsspezifischer Wahlpflichtbereich									**o**											
13-L1-M007	Integrated Water Management	St		mP	15	1	1	4	f	X	6									
			bnb	H	-	0	X													
13-L1-0006-vu	Integrated Water Management						X	4	f	VU		6		x						
11-02-3406	Hydrogeology I						1	4	f	X	6									
11-02-3406-vu	Hydrogeology I	St		K	90	1	X	3	f	VÜ		4		x						
11-02-3271-ek	Hydrogeological Field Trips		bnb	B	-	0	X	2	f	EK		2		x						
11-02-3466	Hydrochemistry I						1	5	f	X	6									
11-02-2031-vu	Hydrochemistry	St		K	90	1	X	2	f	VL		3		x						
11-02-3215-pr	Water Analysis		St	B	-	1	X	3	f	PR		3		x						
13-K0-M008	Water Treatment Processes	St		mP/K	15/90	1	1	4	f	X	6									
			bnb	HÜ	-	0	X													
13-K0-0008-vl	Water Treatment Processes						X	2	f	VL		6		x						
13-K0-0008-ue	Water Treatment Processes - Exercise							2	f	Ü										
13-K6-M006	Drinking Water	St		mP/K	15/60	1	1	4	f	X	6									
			bnb	HÜ	-	0	X													
13-K6-0006-vl	Drinking Water						X	2	f	VL		6		x						
13-K6-0006-ue	Drinking Water - Exercise						X	2	f	Ü										
13-K5-M009	Water Supply Systems	St		mP	15	1	1	2	f	X	3									
			bnb	H+Pt	-	0	X													
13-K5-0002-vl	Water Supply Systems						X	2	f	VL		3		x						
13-K8-M002	Oxidative Processes in Water Treatment	St		K	90	3	1	4	f	X	6									
			St	B+Pt	-	2														
13-K8-0002-vu	Oxidative Processes in Water Treatment						X	4	f	VU			6		x		x			
13-K6-M001	Applied (Environmental) Microbiology for Engineers	St		mp/K	15/60	3	1	4	f	X	6									
			St	H/B+ Pt	-	2														
13-K6-0001-se	Applied (Environmental) Microbiology for Engineers						X	4	f	S			6		x		x			
13-K6-M002	Mathematical Simulation in Wastewater Treatment	St		mP/K	15/90	3	1	4	f	X	6									
			St	HÜ/B/ Pt	-	2														
13-K6-0002-se	Mathematical Simulation in Wastewater Treatment						X	4	f	S			6		x		x			
13-K8-M001	Pollutants in the Water Cycle	St		K	90	1	1	4	f	X	6									
			bnb	B+Pt	-	0	X													
13-K8-0001-vu	Pollutants in the Water Cycle: Sources and Fate in the Aquatic Environment						X	4	f	VU				x		6				
11-02-2219	Groundwater Modelling						1	4	f	X	6									
11-02-2134-vu	Introduction to Groundwater Modelling	St		K	90	1	X	2	f	VÜ			x		3					
11-02-2133-vu	Advanced Groundwater Modelling		St	H	-	1	X	2	f	VÜ				x		3				
11-02-2229	Isotopes Hydrology and Dating	St		K	60	1	1	2	f	X	3									
11-02-3253-vl	Isotopes Hydrology and Dating						X	2	f	VÜ				x		3				
11-02-2239	Tracer Techniques	St		H	-	1	1	2	f	X	3									
11-02-3254-vu	Tracer Techniques						X	2	f	VÜ				x		3				
11-02-2310	Geohydraulics and Well Construction	St		K	90	1	1	4	f	X	6									
11-02-2163-vu	Geohydraulics and Well Construction						X	4		VÜ				x		6				
11-02-3460	Geothermal Engineering	St		K	90	1	1	4	f	X	6									
11-02-3460-vu	Geothermal Engineering						X	4	f	VÜ		6		x						
11-02-3408	Geoinformation Systems						1	6	f	X	6									
11-02-1326-vu	GIS I (Techniques)	St		H	-	1	X	3	f	PR			3		x		x			
11-02-2243-vu	GIS II (Case studies)	St		K	90	1	X	3	f	VÜ				x		3				
11-02-3416	Remote Sensing and Statistics						1	4	f	X	6									
11-02-2244-vu	Remote Sensing in Geology		St	H	-	1	X	2	f	VÜ				x		3				
11-02-2183-vu	Statistics	St		K	60	1	X	2	f	VÜ				x		3				
13-K3-J021	Sustainable Waste Management and Life Cycle Assessment Application	St		K	90	1	1	4	f	X	6									
			bnb	Pt	-	0	X													
13-K3-0021-vl	Sustainable Waste Management and LCA Application						X	2	f	VL			6		x		x			
13-K3-0021-ue	Sustainable Waste Management and LCA Application - Exercise						X	2	f	Ü										
C2 Erweiterter Wahlpflichtbereich (0 - 24 CP)									**f**											
	Möglichkeit, Module aus der Vertiefungsrichtung Hydrogeology zu wählen, die nicht in C1 enthalten sind.								f											
Master-Thesis									**o**	X	**30**									
11-02-5001	Master Thesis	St		Th		1	1	-	o	X	30									
-	Master Thesis						X	-	o	-										30
						Summe					**120**	15	15	15	15	15	15	15	15	

Stand: SB 2021IV