

## Environmental Sciences: Specialisation in Environmental Conservation and Restoration Management (M.Sc., Master Degree Programme)

Study plan | Start in winter term

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*Note:* The following overview offers a non-binding overview of the structure and composition of the modules. The legally binding criteria is available in the examination regulations.

Module code	Module title (Compulsory/Elective)	Sem.	CP	Type	hours	Course title	Assessment	Module Convenor	Comment/ Language
<b>1. Semester (Wi)</b>									
■ MA6ES001	Environmental Systems Analysis (P)	Wi	5	V+S	2	Environmental Systems Analysis	Exam (120 min.)	Bierl, Schütz	English
				Ü	2	Environmental Systems Modelling			
■ MA6ES002	Multivariate Statistics (P)	Wi	5	V	2	Multivariate Statistics	Exam (120 min.)	Udelhoven	English
				S	2	Multivariate Statistics			
■	Optional Modules I (WP)	Wi	20	A total of 20 CP from the <i>Optional Modules I</i> are to be chosen.					
<b>2. Semester (Su)</b>									
■ MA6ES026	Environmental Management and Resource Economics – Part 1 (P)	Su	5	V	2	Environmental Economics		Müller-Fürstenberger	English
■ MA6ES024	Nature Conservation, Restoration and Protection (P)	Su	5	S	2	Soil Protection Concepts	Term paper	Thiele-Bruhn, Schneider	English
				S	2	Nature Conservation			

■ MA6ES025	Polluted Site Remediation (WP)	Su	5	V	2	Lecture		Wagner	English
				S	1	Seminar			
				GK	1	Field course			
				Exam (90 min.) or portfolio examination					
■	Optional Modules II (WP)	Su	15	A total of 15 CP points from the <i>Optional Modules II</i> are to be chosen.					
<b>3. Semester (Wi)</b>									
■ MA6ES026	Environmental Management and Resource Economics – Part 2 (P)	Wi	5	S	2	Resource Economics		Müller-Fürstenberger	English
				Exam (60 min.) and term paper and presentation					
■ MA6ES027	Soil Use and Sustainable Management (WP)	Wi	5	V	2	Soil Use in Agriculture		Emmerling, Schüler	English
				S	1	Forest Site Assessment			
				S	1	Waste Management			
				Exam (90 min.)					
■ MA6ES003	Research Project (P)	Wi	10	S	1	Advanced Aspects in Environmental Sciences		Thiele-Bruhn	English
				Ü	3	Research methods in Environmental Sciences			
				Term paper					
■	Optional Modules III (WP)	Wi	10	A total of 10 CP from the <i>Optional Modules III</i> are to be chosen.					
<b>4. Semester (Su)</b>									
■ MA6ES004	Master's Thesis (P)	Su	30	KOL	2	Master's colloquium			
						Master's Thesis			
				Master's Thesis					

Optional Modules I (20 CP to be chosen)									
■ MA6ES006	Fundamentals of Environmental Remote Sensing (WP)	Wi	5	V	2	Fundamentals of Environmental Remote Sensing		Udelhoven, Röder	English
				Ü	2	Fundamentals of Environmental Remote Sensing			
				Exam (60 min)					
■ MA6ES007	Atmospheric Boundary Layer (WP)	Wi	5	V	2	Atmospheric Boundary Layer		Heinemann, Drüe	English
				Ü	2	Atmospheric Boundary Layer			
				Exam (120 min.)					
■ MA6ES008	Geological Hazards, Risk Assessment and Management (WP)	Wi	5	V	2	Lecture		Wagner	English
				S	1	Seminar			
				Ü	1	Exercise			
				Exam (90 min.) or portfolio examination					
■ MA6ES009	Advanced Aspects of Environmental Soil Science (WP)	Wi	5	V	2	Environmental Soil Science		Thiele-Bruhn, Schneider	English
				Ü	2	Advanced Methods in Soil Science			
				Oral exam (30 min.)					
■ MA6ES013	Introduction to Geoinformatics (WP)	Wi	5	Ü	2	Introduction to Geoinformatics		Udelhoven, Röder	English
				Ü	1	E-Learning Introduction to Geoinformatics			
				Exam (60 min.)					

Optional Modules II (15 CP to be chosen)									
■ MA6ES031	Vegetation Ecology (WP)	Su	5	S	1	Research concept and data analysis		Werner	English
				GK +LA B	3	Field and Laboratory Course			
				Term paper					
■ MA6ES032	Sustainable Chemistry (WP)	Su	5	V	2	Principles of Sustainable Chemistry		Fischer	English
				Ü	1	Chemical Exploitation of Renewable Resources			
				LAB	2	Laboratory Exercises			
				Term paper					
■ MA6ES016	Advanced Remote Sensing Data Processing and Analysis (WP)	Su	5	Ü	3	Practical course		Udelhoven, Röder	English
				GK	1	Field course			
				Term paper					
■ MA6ES030	Physical Monitoring of Litho- and Hydrosphere (WP)	Su	5	V	1	Lectures on basics and introductions		Urrea	English
				Ü	2	Geophysical systems, data processing and presentation			
				S	2	Tutorial-based seminar on selected topics			
				Exam (90 min.)					
■ MA6ES036	Global Climate Change and Energy Resources (WP)	Su	5	V	2	Global Climate Change		Bruns	English
				V	2	Energy Resources and renewable Energy			
				Term paper					
■ MA6ES028	Soil Biology and Soil Functioning (WP)	Su	5	V	2	Biology & Ecology of Soil Organisms		Emmerling	English
				Ü	2	Practical course in Soil Biology			
				Term paper					
■ MA6ES029	Interdisciplinary Excursion or Field Project (WP)	Su	5	S	2	Seminar		Werner	English
				EX	5,5	10-day-Field-Trip			
				Term paper					

■ MA6ES010	Environmental Chemistry and Risk Assessment (WP)	Su	5	V	2	Environmental Fate and Reactions of Pollutants		Fischer	English
				S	2	Environmental Risk Assessment			
				LAB	2	Laboratory research course			
				Exam (90 min.)					
■ MA6ES012	Aquatic Pollution Assessment (WP)	Su	5	V+S	2	Aquatic ecology and impact of pollution		Bierl, Schütz	English
				LAB +G K	2	Case studies in river catchments			
				Term paper					
■ MA6ES011	Environmental Analytical Chemistry (WP)	Su	5	V+ Ü	2	Environmental Monitoring and Trace Analysis		Bierl, Thiele-Bruhn	English
				LAB	4	Instrumental Analytical Techniques			
				Oral exam (30 min.)					
■ MA6ES018	Ecosystem Remote Sensing and Modelling Concepts – Part 1 (WP)	Su	5	S	2	Ecosystem Inventory Strategies		Udelhoven, Röder	English
				GK	2	Field course			

Optional Modules III (10 CP to be chosen)									
■ MA6ES014	Ecotoxicological Effects of Environmental Pollutants (WP)	Wi	5	V	2	Principles of Molecular Environmental Toxicology		Thiele-Bruhn, Blömeke	English
				V	1	Toxicant Effects in the Environment			
				LAB	1	Experiments on selected Endpoints			
				Presentation (15 min.)					
■ MA6ES033	Geostatistics (WP)	Wi	5	V	2	Geostatistics		Udelhoven	English
				Ü	2	Geostatistics			
				Portfolio examination					
■ MA6ES005	Environmental Monitoring Strategies (WP)	Wi	5	V+S	2	Monitoring in ecological research		Bierl, Werner	English
				S	2	Advanced environmental monitoring			
				Oral exam (20 min.)					
■ MA6ES018	Ecosystem Remote Sensing & Modelling Concepts –Part 2 (WP)	Wi	5	Ü	3	Practical course		Udelhoven, Röder	English
				Term paper					
■ MA6ES042	European Environmental Law (WP)	Wi	5	V	2	Lecture		N.N.	German
				Ü	1	Tutorial			
				Exam (120 min.)					
■ MA6ES040	Bodenerosion unter Globalem Wandel (WP)	Wi	5	V	2	Soil erosion under global change		Ries	German
				HS	2	Soil erosion under global change			
				Term paper					
■ MA6ES041	Socio Hydrology (WP)	Wi	5	V+S	2	Socio Hydrology		Bruns	English
				S	2	Socio Hydrology			
				Term paper					

## List of abbreviations

### *Compulsory attendance courses*

EX	Field trip/Day Field trip	LAB	Lab/lab course	PRS	Practice-oriented seminar
GÜ	Field exercise	PRA	Internship	PRÜ	Practical course
KOS	Colloquium seminar	PRO	Project seminar	SPÜ	Language course

### *Non-compulsory attendance courses*

EL	E-Learning-Course	LK	Reading course	TUT	Tutorium
FK	Specialized Course	OS	Advanced seminar	Ü	Practical course
HS	Master's-level seminar	PRP	Preparatory course	V	Lecture
KOL	Colloquium	PS	Bachelor's-level seminar	V+Ü	Lecture with practical course
K	Course	S	Seminar		

### *Other abbreviations*

LP	Credit Points	SWS	Hours	WP	Elective module or course
P	Compulsory module	So	Summer term		
Sem	Semester	Wi	Winter term		