

MSc Earth & Environment, Specialisation A: Hydrology and Water Resources

● Compulsory courses
 ● Compulsory Specialisation Course
 ● Choose two courses (RO 1)
 ● Free choice
 ● Re-exam period

		Period 1 8 wks	Period 2 8 wks	Period 3 4 wks	Resit A 1 wk	Period 4 4 wks	Period 5 8 wks	Resit B 1 wk	Period 6 8 wks	Resit C 2 wks	
MSc 1	MO	YWU-30306 Interdisciplinary Topics in Earth and Environment	HWM-33306 Coastal Oceanography and Delta Geology	HWM-33806 Water and Air Flow Numerical Techniques		MAQ-35306 Urban hydrometeorology OR HWM-34306 Advanced Hydrogeology	HWM-40306 Catchment and Climate Hydrology		SLM-33306 Advanced Hydrological Systems Analysis	Free choice	
	AF	YWU-30806 Environmental Data Collection and Analysis	SLM-32806 Quantitative Ecohydrology				HWM-30306 River Flow and Morphology				
		Period 1 8 wks	Period 2 8 wks	Period 3 4 wks	Resit A 1 wk	Period 4 4 wks	Period 5 8 wks	Resit B 1 wk	Period 6 8 wks	Resit C 2 wks	
MSc 2	MO	HWM-80436 Thesis Hydrology and Environmental Hydraulics OR SLM-80336 Thesis Soil Physics and Land Management					HWM-70224 Internship Hydrology and Environmental Hydraulics OR SLM-70224 Internship Soil Physics and Land Management				
	AF										

Prerequisites for starting a thesis at the chair group:

HWM Two courses in the following set: HWM-32806 Catchment Hydrology, HWM-30306 River Flow and Morphology, SLM-33306 Advanced Hydrological Systems Analysis, HWM-33806 Water and Air Flow Numerical Techniques, HWM-33306 Hydrology and Geology of Deltas, MAQ-35306 Urban Hydrometeorology, HWM-20806 Hydrogeology or HWM-23806 Geophysical Fluid Mechanics.
 At least one of these courses should be in the set: HWM-32806 Catchment Hydrology, HWM-30306 River Flow and Morphology or SLM-33306 Advanced Hydrological Systems Analysis.

SLM No formal prerequisite courses.

Academic Master Cluster (AMC):

1. Academic Consultancy Training and Modular Skills Training (MOS) - All periods
2. Design of Climate Change Mitigation and Adaptation Strategies - period 5 & 6
3. Research Master Cluster: Academic Research Proposal Writing - All periods

Interested in Data Science? Consultate with the studyadvisor on the following courses:

INF-33806	Big Data	2MO
INF-34306	Data Science Concepts	2AF
FTE-35306	Machine Learning	4WD
GRS-34806	Deep Learning	5MO
GRS-35306	Data Science for Smart Environments	3WD

Suggested learning paths Specialisation A - Hydrology and Water Resources

Ecohydrology (thesis SLM)

- Compulsory courses
- Compulsory Specialisation Course
- Specialisation courses (at least 2 required)
- Recommended free choice course

		Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
MSc 1	MO	YWU-0306 Interdisciplinary Topics in Earth and Environment	HWM-33306 Coastal Oceanography and Delta Geology OR SLM-30806 Land Degradation and Development OR INF-22306 Programming in Python OR WSG-35306 Modelling Future Water Stress	HWM-33806 Water and Air Flow Numerical Techniques	HWM-34306 Advanced Hydrogeology OR MAQ-35306 Urban Hydrometeorology OR GRS-33306 Spatial and Temporal Analysis OR WSG-34806 Climate Change Adaptation in Water Management	HWM-40306 Catchment and Climate Hydrology	YMC-60809 Academic Consultancy Training
	AF	YWU-30806 Environmental Data Collection and Analysis	SLM-32806 Ecohydrology		OR AEW-31306 Water Quality	GRS-20806 Geo-information tools OR WSG-60812 Design of Climate Change Mitigation Strategies	

Land Management (thesis SLM)

- Compulsory courses
- Compulsory Specialisation Course
- Specialisation courses (at least 2 required)
- Recommended free choice course

		Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	
MSc 1	MO	YWU-0306 Interdisciplinary Topics in Earth and Environment	SLM-30806 Land Degradation and Development OR MAT-20306 Advanced Statistics OR INF-33806 Big Data OR INF-22306 Programming in Python OR WSG-35306 Modelling Future Water Stress	HWM-33806 Water and Air Flow Numerical Techniques	HWM-34306 Advanced Hydrogeology OR MAQ-35306 Urban Hydrometeorology OR GRS-33306 Spatial and Temporal Analysis for Earth and Environment OR INF-34306 Data Science Concepts OR WSG-34806 Climate Change Adaptation in Water Management OR AEW-31306 Water Quality OR SLM-31806 Erosion processes and Modelling	Start thesis OR SLM-31306 Fundamentals of Land Management	SLM-33306 Advanced Hydrological System Analysis	Continue thesis and do ACT after thesis / internship
	AF	YWU-30806 Environmental Data Collection and Analysis	SLM-32806 Quantitative Ecohydrology				Start thesis	

Groundwater (thesis SLM or HWM)

● Compulsory courses
 ● Compulsory Specialisation Course
 ● Specialisation courses (at least 2 required)
 ● Recommended free choice course

		Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	
MSc 1	MO	YWU-0306 Interdisciplinary Topics in Earth and Environment	HWM-33306 Coastal Oceanography and Delta Geology OR SLM-30806 Land Degradation and Development OR INF-33806 Big Data OR INF-22306 Programming in Python	HWM-33806 Water and Air Flow Numerical Techniques	HWM-34306 Advanced Hydrogeology	HWM-40306 Catchment and Climate Hydrology OR SLM-21306 Subsurface Solute Transport	SLM-33306 Advanced Hydrological System Analysis	Continue thesis and do ACT after thesis / internship
	AF	YWU-30806 Environmental Data Collection and Analysis	SLM-32806 Quantitative Ecohydrology			HWM-30306 River Flow and Morphology OR Start thesis OR GRS-20806 Geo-information tools OR INF-32306 Software Engineering		

Catchments and land surface (thesis HWM)

- Compulsory courses
- Compulsory Specialisation Course
- Specialisation courses (at least 2 required)
- Recommended free choice course

		Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	
MSc 1	MO	YWU-0306 Interdisciplinary Topics in Earth and Environment	HWM-33306 Coastal Oceanography and Delta Geology OR INF-33806 Big Data OR INF-22306 Programming in Python OR MAQ-32306 Boundary-Layer Meteorology	HWM-33806 Water and Air Flow Numerical Techniques	MAQ-35306 Urban Hydrometeorology	HWM-40306 Catchment and Climate Hydrology	SLM-33306 Advanced Hydrological System Analysis* OR WSG-60812 Design of Climate Change Mitigation Strategies OR YMC-60809 Academic Consultancy Training	Continue thesis and do ACT after thesis / internship OR Start thesis and do ACT after thesis / internship (4-wk delay) OR YMC-60809 Academic Consultancy Training
	AF	YWU-30806 Environmental Data Collection and Analysis	SLM-32806 Quantitative Ecohydrology OR GRS-20806 Geo-information tools				HWM-30306 River Flow and Morphology OR GRS-20806 Geo-information tools OR INF-32306 Software Engineering OR INF-32306 Software Engineering	

Catchments and land surface (thesis HWM)

- Compulsory courses
- Compulsory Specialisation Course
- Specialisation courses (at least 2 required)
- Recommended free choice course

		Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	
MSc 1	MO	YWU-0306 Interdisciplinary Topics in Earth and Environment	HWM-33306 Coastal Oceanography and Delta Geology	HWM-33806 Water and Air Flow Numerical Techniques	MAQ-35306 Urban Hydrometeorology OR HWM-34306 Advanced Hydrogeology OR GRS-33306 Spatial and Temporal Analysis OR SLM-31806 Erosion Processes and Modelling OR FTE-35306 Machine learning	HWM-40306 Catchment and Climate Hydrology	SLM-33306 Advanced Hydrological System Analysis* OR YMC-60809 Academic Consultancy Training OR Start thesis	Continue thesis and do ACT after thesis / internship OR Start thesis and do ACT after thesis / internship (4-wk delay) OR YMC-60809 Academic Consultancy Training
	AF	YWU-30806 Environmental Data Collection and Analysis	HWM-23806 Geophysical Fluid Mechanics* OR SLM-32806 Quantitative Ecohydrology OR SGL-30306 Evaluating soils in the Anthropocene				HWM-30306 River Flow and Morphology	

* Having followed the BSc course Geophysical Fluid Mechanics (or similar) is highly recommended before River Flow and Morphology

Prerequisites thesis HWM: Two courses in the following set: HWM40306 Catchment and Climate Hydrology, HWM30306 River Flow and Morphology, SLM33306 Advanced Hydrological Systems Analysis, HWM33806 Water and Air Flow Numerical Techniques, HWM33306 Coastal Oceanography and Delta Geology, MAQ35306 Urban Hydrometeorology, HWM50806 Advanced Hydrogeology, HWM20806 Hydrogeology or HWM23806 Geophysical Fluid Mechanics. At least one of these courses should be in the set: HWM40306 Catchment and Climate Hydrology, HWM30306 River Flow and Morphology, SLM33306 Advanced Hydrological Systems Analysis or HWM34306 Advanced Hydrogeology.

Prerequisites thesis SLM: none (depends on topic)

Specialisation A: Water and Air Flow: Numerical Techniques + 2 other specialization courses

MSc Earth & Environment, Specialisation B: Meteorology and Air Quality

- Compulsory courses
- Compulsory Specialisation Course
- Choose one courses (RO 1)
- Choose one courses (RO 2)
- Choose one courses (RO 3)
- Free choice
- Re-exam period

		Period 1	Period 2	Period 3	Resit A	Period 4	Period 5	Resit B	Period 6	Resit C
		8 wks	8 wks	4 wks	1 wk	4 wks	8 wks	1 wk	8 wks	2 wks
MSc 1	MO	YWU-30306 Interdisciplinary Topics in Earth and Environment	MAQ-32306 Boundary-Layer Meteorology	HWM-33806 Water and Air Flow Numerical Techniques	Resit A	MAQ-35306 Urban Hydrometeorology	MAQ-31806 Atmospheric Modelling	Resit B	Free choice	SOC-40806 Field training Soil-Vegetation-Atmosphere Interactions
	AF	YWU-30806 Environmental Data Collection and Analysis	MAQ-34806 Atmospheric Composition and Air Quality OR MAQ-32806 Atmospheric Dynamics			MAQ-35806 Earth System Modelling Morphology	MAQ-36806 Remote Sensing Atmospheric Composition		Resit C	

		Period 1	Period 2	Period 3	Resit A	Period 4	Period 5	Resit B	Period 6	Resit C	
		8 wks	8 wks	4 wks	1 wk	4 wks	8 wks	1 wk	8 wks	2 wks	
MSc 2	MO	MAQ-80836 Thesis Meteorology OR MAQ-81336 Thesis Air Quality and Atmospheric Chemistry					MAQ-70724 Internship Meteorology OR MAQ-71224 Internship Air Quality and Atmospheric Chemistry				
	AF										

Prerequisites for starting a thesis at the chair group:

MAQ 12 credits from the following set of courses: MAQ courses with a minimum level of 2 (code 2 or 3), SLM33806 Water and Air Flow Numerical Techniques, SOQ35806 Field Training Soil-Vegetation-Atmosphere Interactions.

Academic Master Cluster (AMC):

1. Academic Consultancy Training and Modular Skills Training (MOS) - All periods
2. Design of Climate Change Mitigation and Adaptation Strategies - period 5 & 6
3. Research Master Cluster: Academic Research Proposal Writing - All periods

Interested in Data Science? Consultate with the studyadvisor on the following courses:

INF-33806	Big Data	2MO
INF-34306	Data Science Concepts	2AF
FTE-35306	Machine Learning	4WD
GRS-34806	Deep Learning	5MO
GRS-35306	Data Science for Smart Environments	3WD

Suggested learning paths Specialisation B - Meteorology and Air Quality

Weather and Climate Dynamics (thesis MAQ - Meteorology)

- Compulsory courses
- Specialisation courses RO 1 (at least one)
- Specialisation courses RO 2 (at least one)
- Specialisation courses RO 3 (at least one)
- Recommended free choice course

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
MO	<p>YWU-0306 Interdisciplinary Topics in Earth and Environment</p>	<p>MAT-20306 Advanced Statistics OR INF-22306 Programming in Python</p> <p>OR MAQ-32306 Boundary-Layer Meteorology</p>	<p>HWM-33806 Water and Air Flow Numerical Techniques</p> <p>OR MAQ-36306 Clouds in Present and Changing Climate</p>	<p>MAQ-30306 Atmospheric Practical OR MAQ-35806 Earth System Modelling</p>	<p>MAQ-31806 Atmospheric Modelling</p>	<p>YMC-60809 Academic Consultancy Training</p>
AF	<p>YWU-30806 Environmental Data Collection and Analysis</p>	<p>MAQ-32806 Atmospheric Dynamics</p>			<p>INF-32306 Software Engineering OR GRS-32306 Advanced Earth Observation</p>	

Urban meteorology and air quality (thesis MAQ - Meteorology or Air Quality and Atmospheric composition)

- Compulsory courses
- Specialisation courses RO 1 (at least one)
- Specialisation courses RO 2 (at least one)
- Specialisation courses RO 3 (at least one)
- Recommended free choice course

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
MO	<p>YWU-0306 Interdisciplinary Topics in Earth and Environment</p>	<p>INF-33806 Big Data OR INF-22306 Programming in Python</p> <p>OR MAQ-32306 Boundary-Layer Meteorology</p>	<p>HWM-33806 Water and Air Flow Numerical Techniques</p> <p>OR MAQ-36306 Clouds in Present and Changing Climate</p>	<p>MAQ-35306 Urban Hydrometeorology</p>	<p>MAQ-31806 Atmospheric Modelling</p>	<p>SOC-40806 Field training Soil-Vegetation-Atmosphere Interactions</p>
AF	<p>YWU-30806 Environmental Data Collection and Analysis</p>	<p>MAQ-34806 Atmospheric Composition and Air Quality OR MAQ-32806 Atmospheric Dynamics</p>	<p>ENP-36806 Governance for Sustainable Cities OR YMS-31403 Metropolitan Data</p>		<p>WSG-60812 Design of Climate Change Mitigation and Adaptation Strategies</p>	

Atmospheric chemistry and air quality (thesis MAQ - Air Quality and Atmospheric composition)

- Compulsory courses
- Specialisation courses RO 1 (at least one)
- Specialisation courses RO 2 (at least one)
- Specialisation courses RO 3 (at least one)
- Recommended free choice course

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
MO	<p>YWU-0306 Interdisciplinary Topics in Earth and Environment</p>	<p>INF-33806 Big Data OR INF-22306 Programming in Python</p> <p>OR MAQ-32306 Boundary-Layer Meteorology</p>	<p>HWM-33806 Water and Air Flow Numerical Techniques</p> <p>OR SOC-33806 Environmental Analytical Techniques</p>	<p>MAQ-35806 Earth System Modelling</p>	<p>MAQ-31806 Atmospheric Modelling</p>	<p>YMC-60809 Academic Consultancy Training</p>
AF	<p>YWU-30806 Environmental Data Collection and Analysis</p>	<p>MAQ-34806 Atmospheric Composition and Air Quality</p>			<p>OR MAQ-36806 Remote Sensing Atmospheric Composition</p>	

Urban meteorology and air quality (thesis MAQ - Meteorology or Air Quality and Atmospheric composition)

- Compulsory courses
- Specialisation courses RO 1 (at least one)
- Specialisation courses RO 2 (at least one)
- Specialisation courses RO 3 (at least one)
- Recommended free choice course

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
MO	<p>YWU-0306 Interdisciplinary Topics in Earth and Environment</p>	<p>INF-33806 Big Data OR INF-22306 Programming in Python</p> <p>OR MAQ-32306 Boundary-Layer Meteorology</p>	<p>HWM-33806 Water and Air Flow Numerical Techniques</p> <p>OR MAQ-36306 Clouds in Present and Changing Climate</p>	<p>MAQ-35306 Urban Hydrometeorology</p> <p>OR FTE-35306 Machine Learning</p>	<p>MAQ-31806 Atmospheric Modelling</p>	<p>SOC-40806 Field training Soil-Vegetation-Atmosphere Interactions</p>
AF	<p>YWU-30806 Environmental Data Collection and Analysis</p>	<p>MAQ-32806 Atmospheric Dynamics</p>			<p>WSG-60812 Design of Climate Change Mitigation and Adaptation Strategies</p>	

MSc Earth & Environment, Specialisation C: Biology and Chemistry of Soil and Water

● Compulsory courses
 ● Compulsory Specialisation Course
 ● Choose two courses (RO 1)
 ● Free choice
 ● Re-exam period

		Period 1	Period 2	Period 3	Resit A	Period 4	Period 5	Resit B	Period 6	Resit C	
MSc 1	MO	YWU-30306 Interdisciplinary Topics in Earth and Environment	AEW-30306 Complexity in Ecological Systems OR SOC-36306 Biogeochemical Cycles and Climate Change Mitigation	FEM-31806 Models for Ecological Systems OR SOC-33806 Environmental Analytical Techniques		AEW-31306 Water Quality OR SOC-34806 Applications in Soil and Water Chemistry	SBL-35306 The Soil Carbon Dilemma		AEW-40306 Trending Topics in Biology and Chemistry of Soil and Water	AEW-20706 Practical Aquatic Ecology and Water Quality OR PEN-30306 Plant, Vegetation and System Ecology OR SOC-40806 Field Training Soil-Vegetation-Atmosphere Interactions	
	AF	YWU-30806 Environmental Data Collection and Analysis	SLM-32806 Quantitative Ecohydrology OR SBL-32806 Biological Interactions in Soils				SBL-40306 Nutrients in a Circular Agriculture				

		Period 1	Period 2	Period 3	Resit A	Period 4	Period 5	Resit B	Period 6	Resit C	
MSc 2	MO	SOC-81336 Thesis Soil Chemistry and Chemical Soil Quality OR SBL-81836 Thesis Soil Biology and Biological Soil Quality					SOC-70224 Internship Soil Chemistry and Chemical Soil Quality OR SBL-70224 Internship Soil Biology and Biological Soil Quality				
	AF	AEW-80436 Thesis Aquatic Ecology and Water Quality Management OR PEN-80436 Thesis Plant Ecology and Nature Conservation					AEW-70224 Internship Aquatic Ecology and Water Quality Management OR PEN-70224 Internship Plant Ecology and Nature Conservation				

Prerequisites for starting a thesis at the chair group:

AEW Two of the following courses: AEW-20706 Practical Aquatic Ecology and Water Quality; AEW-22806 Marine Systems; AEW-51806 Introduction Marine and Estuarine Ecology; AEW-30306 Complexity in Ecological Systems; AEW-30806 Chemical Stress Ecology and Risk Assessment; AEW-31306 Water Quality.

PEN Depending on the thesis subject either PEN-30306 Plant, Vegetation & Systems ecology or PEN-30806 Restoration Ecology

SBL One of out the following BSc courses is compulsory: Soil Quality [SBL21806] or Soil Pollution and Soil Protection (SOC21306) or Soil Plant Interactions (CSA20306) or Biological Interactions in Soils [SBL32806] or comparable knowledge.Plus one of the following MSc courses: Functional Agricultural Resource Management [PPS31806] or Nutrient Management [SBL31806] or Carbon Dilemma [SBL35306] or Ecological Aspects of Bio-interactions [ENT30306]).

SOC One of the following courses: SBL-21806 Soil Quality, SOC-21306 Soil Pollution and Soil Protection, SOC-35806 Field Training Soil-Vegetation-Atmosphere Interactions, SOC-33806 Environmental Analytical Techniques;AND one of the following courses: SBL-35306 The Carbon Dilemma, SOC-36306 Biogeochemical Cycles and Climate Change Mitigation, SOC-34806 Applications in Soil and Water Chemistry

Academic Master Cluster (AMC):

1. Academic Consultancy Training and Modular Skills Training (MOS) - All periods
2. Design of Climate Change Mitigation and Adaptation Strategies - period 5 & 6
3. Research Master Cluster: Academic Research Proposal Writing - All periods

Interested in Data Science? Consultate with the studyadvisor on the following courses:

INF-33806	Big Data	2MO
INF-34306	Data Science Concepts	2AF
FTE-35306	Machine Learning	4WD
GRS-34806	Deep Learning	5MO
GRS-35306	Data Science for Smart Environments	3WD

Suggested learning paths Specialisation C - Biology and Chemistry of Soil and Water

Aquatic Ecology and Water Quality (thesis at AEW)

● Compulsory courses
 ● Compulsory Specialisation Course
 ● Specialisation courses (at least 2 required)
 ● Recommended free choice course

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	
MO	YWU-0306 Interdisciplinary Topics in Earth and Environment	AEW-30306 Complexity in Ecological Systems OR SOC-36306 Biogeochemical Cycles and Climate Change Mitigation	FEM-31806 Models for Ecological Systems	AEW-31306 Water Quality OR (if already done in BSc) SOC-34806 Applications in Soil and Water Chemistry	TOX-30806 Environmental Toxicology OR SBL-35306 The Soil Carbon Dilemma	AEW-40306 Trending Topics in Biology and Chemistry of Soil and Water	AEW-20706 Practical Aquatic Ecology and Water Quality OR (if already done in BSc) PEN-30306 Plant, Vegetation and Systems Ecology
AF	YWU-30806 Environmental Data Collection and Analysis	SLM-32806 Quantitative Ecohydrology			AEW-30806 Chemical Stress Ecology and Ecotoxicology		

Terrestrial Ecosystems Ecology (thesis at PEN)

● Compulsory courses
 ● Compulsory Specialisation Course
 ● Specialisation courses (at least 2 required)
 ● Recommended free choice course

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	
MO	YWU-0306 Interdisciplinary Topics in Earth and Environment	AEW-30306 Complexity in Ecological Systems	FEM-31806 Models for Ecological Systems	PEN-30806 Restoration Ecology	SBL-35306 The Soil Carbon Dilemma	AEW-40306 Trending Topics in Biology and Chemistry of Soil and Water	PEN-30306 Plant, Vegetation and Systems Ecology
AF	YWU-30806 Environmental Data Collection and Analysis	SLM-32806 Quantitative Ecohydrology OR SBL-32806 Biological Interactions in Soils			Free Choice		

Soil Biology (thesis at SBL)

● Compulsory courses ● Compulsory Specialisation Course ● Specialisation courses (at least 2 required) ● Recommended free choice course

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	
MO	YWU-0306 Interdisciplinary Topics in Earth and Environment	PPS-31806 Functional Agricultural Resource Management	SOC-33806 Environmental Analytical Techniques	SBL-51306 The Living Soil	SBL-35306 The Soil Carbon Dilemma	AEW-40306 Trending Topics in Biology and Chemistry of Soil and Water	FTE-50806 Conservation Agriculture
AF	YWU-30806 Environmental Data Collection and Analysis	SBL-32806 Biological Interactions in Soils			SBL-40306 Nutrients in a Circular Agriculture		

Subpath: Soil Chemistry - Soil Fertility (thesis at SOC)

● Compulsory courses
 ● Compulsory Specialisation Course
 ● Specialisation courses (at least 2 required)
 ● Recommended free choice course

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	
MO	YWU-0306 Interdisciplinary Topics in Earth and Environment	SOC-36306 Biogeochemical Cycles and Climate Change Mitigation	Free choice	SOC-34806 Applications in Soil and Water Chemistry	SBL-35306 The Soil Carbon Dilemma	AEW-40306 Trending Topics in Biology and Chemistry of Soil and Water	Free choice
AF	YWU-30806 Environmental Data Collection and Analysis	SBL-32806 Biological Interactions in Soils			SBL-40306 Nutrients in a Circular Agriculture		

Subpath: Soil Chemistry - Environmental geochemistry (thesis at SOC)

● Compulsory courses
 ● Compulsory Specialisation Course
 ● Specialisation courses (at least 2 required)
 ● Recommended free choice course

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	
MO	YWU-0306 Interdisciplinary Topics in Earth and Environment	SOC-36306 Biogeochemical Cycles and Climate Change Mitigation	SOC-33806 Environmental Analytical Techniques	SOC-34806 Applications in Soil and Water Chemistry	SBL-35306 The Soil Carbon Dilemma	AEW-40306 Trending Topics in Biology and Chemistry of Soil and Water	Free choice
AF	YWU-30806 Environmental Data Collection and Analysis	Free choice			Free choice		

Subpath: Soil Chemistry - Soil carbon (thesis at SOC)

● Compulsory courses
 ● Compulsory Specialisation Course
 ● Specialisation courses (at least 2 required)
 ● Recommended free choice course

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	
MO	YWU-0306 Interdisciplinary Topics in Earth and Environment	SOC-36306 Biogeochemical Cycles and Climate Change Mitigation	Free choice	SOC-34806 Applications in Soil and Water Chemistry	SBL-35306 The Soil Carbon Dilemma	AEW-40306 Trending Topics in Biology and Chemistry of Soil and Water	SOC-40806 Field Training Soil-Vegetation- Atmosphere Interactions
AF	YWU-30806 Environmental Data Collection and Analysis	Free choice			Free choice		

Soil Chemistry

● Compulsory courses

● Compulsory Specialisation Course

● Specialisation courses (at least 2 required)

● Recommended free choice course

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	
MO	YWU-0306 Interdisciplinary Topics in Earth and Environment	SOC-36306 Biogeochemical Cycles and Climate Change Mitigation	SOC-33806 Environmental Analytical Techniques	SOC-34806 Applications in Soil and Water Chemistry	SBL-35306 The Soil Carbon Dilemma	AEW-40306 Trending Topics in Biology and Chemistry of Soil and Water	SOC-40806 Field Training Soil-Vegetation- Atmosphere Interactions
AF	YWU-30806 Environmental Data Collection and Analysis	SBL-32806 Biological Interactions in Soils			SBL-40306 Nutrients in a Circular Agriculture		

MSc Earth & Environment, Specialisation D: Soil Geography and Earth Surface Dynamics

● Compulsory courses
 ● Compulsory Specialisation Course
 ● Choose two courses (RO 1)
 ● Free choice
 ● Re-exam period

		Period 1	Period 2	Period 3	Resit A	Period 4	Period 5	Resit B	Period 6	Resit C	
		8 wks	8 wks	4 wks	1 wk	4 wks	8 wks	1 wk	8 wks	2 wks	
MSc 1	MO	YWU-30306 Interdisciplinary Topics in Earth and Environment	HWM-33306 Coastal Oceanography and Delta Geology	SGL-33806 The 4 th Dimension in Earth Sciences OR SLM-33806 Integrated Fire Management		GRS-33306 Spatial and Temporal Analysis OR SLM-31806 Erosion Processes and Modelling	Free choice		Free choice	SGL-31806 Field Training Geo-sciences	
	AF	YWU-30806 Environmental Data Collection and Analysis	SGL-30306 Evaluating soils in the Anthropocene	SGL-30306 Evaluating soils in the Anthropocene		SGL-30306 Evaluating soils in the Anthropocene	SBL-40306 Nutrients in a Circular Agriculture				

		Period 1	Period 2	Period 3	Resit A	Period 4	Period 5	Resit B	Period 6	Resit C	
		8 wks	8 wks	4 wks	1 wk	4 wks	8 wks	1 wk	8 wks	2 wks	
MSc 2	MO	SGL-80436 Thesis Soil Geography and Landscape					SGL-70224 Internship Soil Geography and Landscape				
	AF	SGL-80436 Thesis Soil Geography and Landscape					SGL-70224 Internship Soil Geography and Landscape				

Prerequisites for starting a thesis at the chair group:

SGL No formal prerequisite courses.

Academic Master Cluster (AMC):

1. Academic Consultancy Training and Modular Skills Training (MOS) - All periods
2. Design of Climate Change Mitigation and Adaptation Strategies - period 5 & 6
3. Research Master Cluster: Academic Research Proposal Writing - All periods

Interested in Data Science? Consultate with the studyadvisor on the following courses:

INF-33806	Big Data	2MO
INF-34306	Data Science Concepts	2AF
FTE-35306	Machine Learning	4WD
GRS-34806	Deep Learning	5MO
GRS-35306	Data Science for Smart Environments	3WD

Suggested learning paths Specialization D - Soil Geography and Earth Surface Dynamics

Soil Geography Data Science (thesis SGL)

- Compulsory courses ● Compulsory Specialisation Course ● Specialisation courses (at least 2 required) ● Recommended free choice course

		Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
MSc 1	MO	YWU-0306 Interdisciplinary Topics in Earth and Environment	INF-33806 Big Data	SGL-33806 The 4 th dimension in Earth Sciences	GRS-33306 Spatial and Temporal Analysis	GRS-34806 Deep Learning OR GRS-30306 Spatial Modelling and Statistics	SGL-31806 Field Training Geo-sciences
	AF	YWU-30806 Environmental Data Collection and Analysis	SGL-30306 Evaluating soils in the Anthropocene			WSG-60812 Design of Climate Change Mitigation and Adaptation Strategies	

Earth Surface Dynamics (thesis SGL)

● Compulsory courses
 ● Compulsory Specialisation Course
 ● Specialisation courses (at least 2 required)
 ● Recommended free choice course

		Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
MSC 1	MO	YWU-0306 Interdisciplinary Topics in Earth and Environment	HWM-33306 Coastal Oceanography and Delta Geology	SGL-33806 The 4 th dimension in Earth Sciences	GRS-33306 Spatial and Temporal Analysis OR SLM-31806 Erosion Processes and Modelling		
	AF	YWU-30806 Environmental Data Collection and Analysis	SGL-30306 Evaluating soils in the Anthropocene			WSG-60812 Design of Climate Change Mitigation and Adaptation Strategies	SGL-31806 Field Training Geo-sciences

Sustainable Land Use (thesis SGL)

● Compulsory courses
 ● Compulsory Specialisation Course
 ● Specialisation courses (at least 2 required)
 ● Recommended free choice course

		Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	
MSc 1	MO	YWU-0306 Interdisciplinary Topics in Earth and Environment	HWM-33306 Coastal Oceanography and Delta Geology	SLM-33806 Integrated Fire Management OR PPS-30306 Quantitative Analysis of Land Use Systems	GRS-33306 Spatial and Temporal Analysis	YMC-60809 Academic Consultancy Training	AEW-40306 Trending topics in biology and chemistry of soil and water	SGL-31806 Field Training Geo-sciences
	AF	YWU-30806 Environmental Data Collection and Analysis	SGL-30306 Evaluating soils in the Anthropocene					

Relevant courses if you did not do the BSc Soil Water Atmosphere

- Compulsory courses
 ● Compulsory Specialisation Course
 ● Specialisation courses (at least 2 required)
 ● Recommended free choice course

		Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	
MSc 1	MO	YWU-0306 Interdisciplinary Topics in Earth and Environment	INF-22306 Programming in Python OR HWM-33306 Coastal Oceanography and Delta Geology	SGL-33806 The 4 th dimension in Earth Sciences OR SLM-33806 Integrated Fire Management	GRS-33306 Spatial and Temporal Analysis	YMC-60809 Academic Consultancy Training	SGL-33306 Geology and Landscapes of the World	SGL-31806 Field Training Geo-sciences
	AF	YWU-30806 Environmental Data Collection and Analysis	SGL-30306 Evaluating soils in the Anthropocene	OR PPS-30306 Quantitative Analysis of Land Use Systems	OR SGL-24306 Fundamentals of Landscapes			