

Study plan MSc "Geoscience" with focus "Geomorphology and Geohazards"

Mandatory modules	CP	Sem.	Weekly hours	Comment	recommended semester
Geomorphology and Geohazards	10				
Earth surface processes and environmental change		SS	2		2nd and 3rd semester
Geohazards: types, causes and strategies		WS	2	Pre-requisite: passed SS course	
Field course on geomorphology and geohazards		WS		2 days field + 2 day block course	
Computational analyses in tectonic geomorphology	5				
Lecture		SS	1	offered as a 4-day block course in August; mandatory attendance	after 2nd semester
Exercises		SS	1		
Quaternary geochronology	5				
Lecture		SS	1		2nd semester
Exercises		SS	1		
Introduction to Matlab	6	SS	4		2nd semester
Recommended modules	CP	Sem.	Weekly hours	Comment	recommended semester
Python programming for geosciences	10				
Introduction to programming in Python	5	WS	3	Courses can be individually selected and assigned to the Complementary module I	1st and 2nd semester
Advanced programming in Python	5	SS	3		
Measuring Earth surface motions with InSAR and GNSS	6				
Lecture and exercises		WS	4		1st semester
Structural Geology	10				
Lectures, seminars, exercises in structural geology	4	WS	2	Course has mandatory attendance	Each course can be selected individually for the complementary module I; 1st and 2nd semester
Special methods in structural geology	3	WS	2	Course has mandatory attendance	
Structural Geology field camp	3	SS	8 days	Costs of around 500 €	
Electron Beam Microanalyses	6				
Electron beam microanalyses (lecture)		SS	2		2nd or 4th semester
Electron beam microanalyses (practical)		SS	2	one-week block course in September	
Basics in Petrology	6				
Mineralogy		WS	2		1st semester
Optical mineralogy		WS	2		
Earthquake processes	6				
Earthquake seismology and the seismic cycle		SS	4	Co-requisite: Physics of solid Earth at least one course completed	2nd or 4th semester
Geology and geohazards in an active subduction zone	5				
Geology and geohazards in an active subduction zone		SS	3	Pre-requisite: completion of Earthquake processes and/or Seismotectonics; 7 day field exercise in Crete: cost of around 700€	Seminar and field exercise, between WS and SS; recommended after 3rd semester
Groundwater hydraulics	12				
Introduction to Groundwater hydraulics		WS	4		1st semester
Hydraulic groundwater modeling		WS	4		
Environmental Sciences	6				
Toxic trace elements in groundwater	3	WS	2		3rd semester; Courses can be selected individually for the complementary module
Climate change and water resources	3	WS	2	3-day block course in February or March	
Sedimentary geochemistry	10				
Isotope geochemistry (lecture)		WS	4		1st or 3rd semester
Laboratory course: Isotope geochemistry		WS	4	2-week lab course in February/March	

