

Study plan MSc "Geoscience" with focus "Earthquake processes - Seismology"					
Nachforderungen aus dem BSc				Comment	recommended semester
Mechanik für Geowissenschaftler		WS	3	for German speaking degree-seeking students	1st semester
Mathematische Methoden der Physik I		WS	5	for German speaking degree-seeking students	1st semester
Mathematische Methoden der Physik II		SS	5	for German speaking degree-seeking students	2nd semester
Mandatory modules	CP	Semester	Weekly hours	Comment	recommended semester
Earthquake processes	6			Co-requisite: Physics of solid Earth at least one course completed	2nd
Earthquake seismology and the seismic cycle		SS	4		
Seismotectonics and seismic hazard	6				
Seismotectonics and seismic hazard		WS	4		1st
Geophysical Seminar	6	WS/SS			
Deformation mechanisms and tectonics of subduction zones		WS	2		1st
Induced and triggered seismicity		SS	2		2nd
Geophysical field practical	5				
Field exercise			6 days		
Data analyses			4 days		
Physics of the solid Earth	10			Courses alternate!	1st and 3rd semester
Continuum mechanics		WS	3	WS 25/26	
Physics of Earth materials		WS	3	WS 26/27	
Highly recommended modules/courses	CP	Semester	Weekly hours	Comment	recommended semester
Python programming for geosciences	10				
Introduction to Python programming	5	WS	3	each course can be selected individually for the Complementary module I	1st
Advanced programming in Python	5	SS	3		2nd
Gravity and Magnetics/Potential fields	6				
Gravity and Magnetics/Potential fields		SS		Start date anticipated in SS 26	2nd semester
Optimization methods for Geophysics	6	SS			2nd semester; either Python or Matlab required
Lecture			2	Start date in SS 26	
Exercise			2	Start date in SS 26	
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
Introduction to Matlab	6	SS	4	Complementary module I	2nd semester
Structural Geology	10				
Lectures, seminars and exercises in structural geology		WS	2		3rd semester
Special methods in structural geology		WS	2		1st semester
Structural Geology field camp		SS	8 days	Field camp costs of around 500 €	after 2nd semester
Groundwater hydraulics	12				first semester
Introduction to Groundwater hydraulics		WS	4		
Hydraulic groundwater modeling		WS	4		
Applied geophysics	10				2nd semester
Reservoir Geophysics		SS	3		
Rock Physics		SS	3		
Geophysical practical	5				recommended in 2nd or 3rd
Geophysical practical		SS,WS			
Complementary module (recommended)					
Stress field and rock mass behaviour	3	WS	2		3rd semester
Masters thesis (Mandatory)	30				