Module C **Elective Courses (list includes all selectable master courses)** (will be updated continuously)

sorted by semester and frequeny

1:23:51 Uhr Samstag, 17. Mai 2025

Courses **all semesters or unassigned**	ECTS	Lecturers	Uni (held in)	Frequency	Year	Sem.	Speciality
Electron Microprobe Analysis - EMPA: Practical course (prer)	1	FPI	BE	anually in fall and spring			ELE, EM, ERG, GEOL, PAQS
Internship in industry	5		BE	anually in fall and spring			
Internship in Paleontology or Sedimentology	3	WJ/AF	FR	anually in fall and spring			ELE
Seminar in Paleontology	1	WJ	FR	anually in fall and spring			ELE
Electron microbeam techniques (laboratory)	1	ES/CN	FR	on request			ELE, EM, ERG, GEOL, PAQS
Scanning Electron Microscopy -SEM: Practical course. (Fribourg) (prer)	1	ES/CN	FR	on request			EM, ERG
Scanning Electron Microscopy (SEM): Practical course. (Bern) on request (prer)	1	AB	BE	on request			ELE, EM, ERG, GEOL, PAQS

Courses **Fall Semester HS**	ECTS	Lecturers	Uni (held in)	Frequency	Year	Sem.	Speciality
Alpine Cryosphere	3	FRHöl	FR	annually in fall		HS	GEOL, PAQS
Basic Computer Programming for Geosciences	2	PL/JHE	BE	annually in fall		HS	EM, ERG, GEOL, PAQS
General Micropaleontology	3	tba	FR	annually in fall		HS	ELE
General Micropaleontology (practical course)	2	BK	FR	annually in fall		HS	ELE
Geo-Information Systems. Lecture and practical	3	/MaiD	BE	annually in fall		HS	GEOL, PAQS
Hazards, risks and vulnerability	3	FRDel	FR	annually in fall		HS	GEOL, PAQS
Introduction to 3D Geological Modelling	1.5	FM/EKU	BE	annually in fall		HS	GEOL
Introduction to Object -Oriented Programminng (OOP): Python	2	MW	BE	annually in fall		HS	ELE, EM, ERG, GEOL, PAQS
Laboratory Introduction to Basic Fluid - Rock Analyses	2	/EGAU/gw/la/miw	BE	annually in fall		HS	EM, ERG
Low Temperature Isotope Geochemistry	3	MHW/VASM	BE	annually in fall		HS	ELE, EM, ERG
Natural Zeolites	2	GC	BE	annually in fall		HS	EM, ERG
Reflected-Light Microscopy	1.5	MJ	BE	annually in fall		HS	EM, ERG, GEOL
Scientific Methods in Sedimentology and Paleontology	3	WJ/AF	FR	annually in fall		HS	ELE
Aqueous Environmental Geochemistry	2.5	UM	BE	biennially in fall	even	HS	ERG
Basement evolution in orogens	2	AB	BE	biennially in fall	even	HS	GEOL
Basin Evolution	3	FS/JM/GS	BE/FR	biennially in fall	even	HS	GEOL
Fluids in the Crust	2.25	MM//TG/DVH	BE	biennially in fall	even	HS	ERG
Geochemical Modelling I. : Equilibrium Approach (prer)	2.5	CWA	BE	biennially in fall	even	HS	ERG
Glacial Geology Field Course	3	NA	BE	biennially in fall	even	HS	GEOL, PAQS
Groundwater Sampling and Analysis	1.5	PW/NW/CWA	BE	biennially in fall	even	HS	ERG
Hydrothermal processes in oceanic settings	3	ES	FR	biennially in fall	even	HS	ELE, EM, ERG, GEOL
Marine Geology	3	AF/ES/AR	FR	biennially in fall	even	HS	ELE, GEOL, PAQS
Natural Hazards: Process & Methods	3	MKe/FA	BE	biennially in fall	even	HS	GEOL, PAQS
Quantifying Palaeobiology	3	WJ	FR	biennially in fall	even	HS	ELE
Rock Deformation: Brittle regime (prer)	2.5	MH/GS/JM	BE	biennially in fall	even	HS	EM, ERG, GEOL, PAQS
Vertebrate Paleontology and Evolution	3	WJ	FR	biennially in fall	even	HS	ELE
	3	MAN	BE	biennially in fall	odd	HS	ELE, EM, ERG, GEOL, PAQS
A habitable future? Applications of Environmental Geochemistry	3	aha	BE	biennially in fall	odd	HS	ELE, EM, ERG, GEOL
Atomistic simulations of fluids and solids	2.5	SCh	BE	biennially in fall	odd	HS	EM, ERG
Deep Mantle Properties and Geochemistry	3	sut	BE	biennially in fall	odd	HS	ELE, EM, GEOL
Evolutionary Palaeontology	3	WJ	FR	biennially in fall	odd	HS	ELE
Fluid-solid interactions and diagenesis: processes and sustainable applications	5	AF/ES/ML	FR	biennially in fall	odd	HS	ELE, EM, ERG, GEOL
Ophiolites: Production and destruction of oceanic crust	2.5	JHe	BE	biennially in fall	odd	HS	EM, ERG, GEOL
Palaeoclimatology and Palaeoecology	3	AF/AR	FR	biennially in fall	odd	HS	ELE
Paleontology of Mammals	3	WJ/OMa	FR	biennially in fall	odd	HS	ELE, PAQS
Quaternary Paleoclimate and Paleoenvironment	2	HV	BE	biennially in fall	odd	HS	PAQS
Rock Deformation: Ductile regime	4	MH/GS/AB	BE	biennially in fall	odd	HS	EM, GEOL
Sedimentology of Glaciofluvial Deposits	1.5	NA	BE	biennially in fall	odd	HS	GEOL, PAQS
Waste Materials & Circular Economy	1.5	gw/miw	BE	biennially in fall	odd	HS	EM, ERG

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Courses **Spring Semester FS**	ECTS	Lecturers	Uni (held in)	Frequency	Year	Sem.	Speciality
Taxonomy, Nomenclature, and Morphological Systematics	3	WJ	FR	on request		FS	ELE
Applied Geophysical Methods	3	FRHau	FR	annually in spring		FS	GEOL, PAQS
Electron Beam Microanalytics: Theory - EMPA, SEM, CL	2	PL/AB//BG	BE	annually in spring		FS	ELE, EM, ERG, GEOL, PAQS
Engineering and Quaternary Geology - Advanced Lab Course	1.5	FA/FNY	BE	annually in spring		FS	PAQS
European Mars Rover Challenge - geological support team	3	aza/jhe	BE	annually in spring		FS	ELE, GEOL
Glacial Geology	3	NA	BE	annually in spring		FS	GEOL, PAQS
Interpretation of Seismic Profiles around the world	1.5	ASO	FR	annually in spring		FS	GEOL, PAQS
Interpretation of Seismic Profiles in the Alpine foreland	1.5	ASO	FR	annually in spring		FS	GEOL, PAQS
Laser-ablation inductively-coupled-plasma mass-spectrometry - LA-ICP-MS. Two days short	1	TP	BE	annually in spring		FS	ELE, EM, ERG, GEOL, PAQS
Modelling of glaciers and permafrost	3	FRHöl	FR	annually in spring		FS	GEOL, PAQS
Mountain Geomorphology	3	FRDel	FR	annually in spring		FS	GEOL, PAQS
Single Crystal X-ray Diffraction. Short course. Upon request. (prer)	1.5	GC	BE	annually in spring		FS	EM
Thermodynamic modelling of metamorphic rocks	2	jfo, pl	BE	annually in spring		FS	EM
Using small drones for geoscientific applications	1	MaiD	BE	annually in spring		FS	ELE, EM, ERG, GEOL, PAQS
X-Ray Powder Diffraction. Three-day short course.	1.5	UE/miw/frg	BE	annually in spring		FS	EM, ERG
Advanced Carbonate Sedimentology	2.5	AF	FR	biennially in spring	even	FS	ELE, GEOL
Applied geochemistry and thermodynamic modelling of cement hydration	1.5	BLo	BE	biennially in spring	even	FS	EM, ERG
Environmental- and Limnogeology (incl. field course)	3	FA, HV	BE	biennially in spring	even	FS	PAQS
Field Logging of Tunnels and Boreholes	2.5	UM/MM/MH	BE	biennially in spring	even	FS	ERG, GEOL, PAQS
Field Trip: Oceanic Lithosphere and subducted equivalents (Liguria)	2.5	TP	BE	biennially in spring	even	FS	EM, ERG, GEOL
Fossil Lagerstaetten of Southern Germany	2.5	WJ	FR	biennially in spring	even	FS	ELE, GEOL
From Waste to Resources - and the Challenges in between (Excursion)	1	GW/DVH/miw	BE/FR	biennially in spring	even	FS	EM, ERG, PAQS
Methods of Mass Spectrometry. Short Courses. Upon request (prer)	2.5	mhw/TP/dar/sut	BE	biennially in spring	even	FS	ELE, EM, ERG
Noerdlinger Ries Excursion	2.5	BH/TBu	BE	biennially in spring	even	FS	ELE, GEOL
Stratigraphy and Chronology	2	KM	BE	biennially in spring	even	FS	ELE
Surface Processes, Geomorphology (prer)	3	FS	BE	biennially in spring	even	FS	GEOL, PAQS
Accessory Minerals	2.5	DaR	BE	biennially in spring	odd	FS	EM, GEOL
Applied Sedimentology	3	AF/AFa/FS	FR	biennially in spring	odd	FS	GEOL, PAQS
(Climate-)Stratigraphy and Natural Hazards Field Course in the Italian Apennine	2.5	/HV	BE	biennially in spring	odd	FS	ELE, GEOL, PAQS
Excursion: From basins to mountain belts (prer)	2	FS/MH/JM/GS/AB	BE	biennially in spring	odd	FS	GEOL
Field Course Rock Deformation: Brittle Regime	1.5	MH/JM/GS	BE	biennially in spring	odd	FS	GEOL
Geochemical Modelling II: Reactive-Transport Modelling (prer)	2.25	PAE/TG	BE	biennially in spring	odd	FS	ERG
Geological Disposal of Radioactive Waste	2.5	MM/pw/dgr	BE	biennially in spring	odd	FS	EM, ERG
Geostatistics	2	GK	BE	biennially in spring	odd	FS	ELE, EM, ERG, GEOL, PAQS
Mineral Surface Characterization by Atomic Force Microscopy (AFM)	1.5	SCh	BE	biennially in spring	odd	FS	EM, ERG
Mountain building processes	3	MH/JM/GS	BE	biennially in spring	odd	FS	GEOL
Pore scale reactive transport modelling	1.5	SCh	BE	biennially in spring	odd	FS	EM, ERG
Soil Mechanics	3	MS	BE/B'do	biennially in spring	odd	FS	PAQS
Unconsolidated Quaternary Sediments in Drillholes and Outcrops (incl. 1d field c.)	3	FA	BE	biennially in spring	odd	FS	PAQS

red courses: new or changed courses
„prer“: Prerequisite courses necessary

202.5
Total ECTS