

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

Please be aware that due to several upcoming retirements it can not be guaranteed that all courses will take place as stated below!

1:24:02 Uhr Dienstag, 26. September 2023

sorted by semester and frequency

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

Courses	Fall Semester	HS	ECTS	Lecturers	Uni (held in)	Frequency	Year	Sem.	Speciality
Advanced Computer Programming for Geosciences			2	PL/JHE	BE	annually in fall		HS	EM, ERG, PAQS
Basic Computer Programming for Geosciences			2	PL/JHE	BE	annually in fall		HS	EM, ERG, PAQS
Computer Modeling of 3D Geological Structures			1.5	RB	BE	annually in fall		HS	GEOL
General Micropaleontology			3	SS	FR	annually in fall		HS	ELE
General Micropaleontology (practical course)			2	SS	FR	annually in fall		HS	ELE
Geo-Information Systems. Lecture and practical			3	/MaiD	BE	annually in fall		HS	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	TN/NW	BE	annually in fall		HS	ELE, EM, ERG
Natural Zeolites			2	GC	BE	annually in fall		HS	EM, ERG
Reflected-Light Microscopy			1.5	BH	BE	annually in fall		HS	EM, ERG, GEOL
Scientific Methods in Sedimentology and Paleontology			3	WJ/AF	FR	annually in fall		HS	ELE
Technical Mineralogy			3	BG	FR	annually in fall		HS	EM
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
Diagenesis of Sediments			3	AF/NA	BE	biennially in fall	even	HS	ELE, ERG, PAQS
Fluids in the Crust			2.25	LD/MM/TP/TG	BE	biennially in fall	even	HS	ERG
Geochemical Modelling I. : Equilibrium Approach (prer)			2.5	UM/NW	BE	biennially in fall	even	HS	ERG
Groundwater Sampling and Analysis			1.5	PW/NW/CWA	BE	biennially in fall	even	HS	ERG
Marine Geology			3	AF/SS	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
Quaternary Sediments Field Week			3	NA	BE	biennially in fall	even	HS	GEOL, PAQS
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
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
Environmental Mineralogy			2.5	BG	FR	biennially in fall	odd	HS	EM
Evolutionary Palaeontology			3	WJ	FR	biennially in fall	odd	HS	ELE
Ophiolites: Production and destruction of oceanic crust			2.5	JHe	BE	biennially in fall	odd	HS	EM, GEOL
Palaeoclimatology and Palaeoecology			3	SS/AF	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	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
Contaminated Sites			2	BG/PHo/CKE/RPH	FR	annually in spring		FS	EM
Electron Beam Microanalytics: Theory - EMPA, SEM, CL			2	PL/AB/BG	BE	annually in spring		FS	EM, ERG
Electron Microbeam Techniques, Laboratory (prer)			1	BG/CN	FR	annually in spring		FS	EM
Engineering and Quaternary Geology - Advanced Lab Course			1.5	MS/FNY	BE	annually in spring		FS	PAQS
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
Laser-ablation inductively-coupled-plasma mass-spectrometry - LA-ICP-MS.			1	TP	BE	annually in spring		FS	ELE, EM, ERG, GEOL, PAQS
Palaeoceanography and Pelagic Microfacies			1.5	SS	FR	annually in spring		FS	ELE
Single Crystal X-ray Diffraction. Short course. Upon request. (prer)			1.5	GC	BE	annually in spring		FS	EM
Stratigraphical Micropalaeontology			2.5	SS	FR	annually in spring		FS	ELE
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
Cements and Silicate ceramics			2.5	BG	FR	biennially in spring	even	FS	EM
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	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
Geology, Sedimentology and Paleontology of the Swiss Jura			3	WJ	FR	biennially in spring	even	FS	ELE, GEOL
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			1.5	BH/KM	BE/FR	biennially in spring	even	FS	ELE
Stratigraphy and Chronology			2	KM/SS	BE/FR	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
Applied Sedimentology			3	AF/FS	FR	biennially in spring	odd	FS	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	PA/TG/LD	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
Geology, Sedimentology, and Paleontology of the Molasse Basin			3	WJ	FR	biennially in spring	odd	FS	ELE, GEOL
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

195.5  
 Total ECTS