Module B

Core Courses for the Specialization Earth Materials (EM)

1:21:09 Uhr Montag, 20. April 2026
(will be updated continuously)

sorted by semester and frequeny **Courses title (33 courses)**

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
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
Digging Deeper: Minerals, Metals, and the Making of Tomorrow		3	MAN	BE	annually in fall		HS	ELE, EM, ERG, GEOL, PAQS
Geochemistry Lab Course		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
Hydrothermal processes in oceanic settings		3	ES	FR	biennially in fall	even	HS	ELE, EM, ERG, GEOL
Rock Deformation: Brittle regime (prer)		1	MH/GS/JM	BE	biennially in fall	even	HS	EM, ERG, GEOL, PAQS
A habitable future? Applications of Environmental Geochemistry		3	aha	BE	biennially in fall	odd	HS	ELE, EM, ERG, GEOL
Deep Mantle Properties and Geochemistry		3	sut	BE	biennially in fall	odd	HS	ELE, EM, GEOL
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
Rock Deformation: Ductile regime		4	MH/GS/AB	BE	biennially in fall	odd	HS	EM, GEOL
Waste Materials & Circular Economy		1.5	gw/miw	BE	biennially in fall	odd	HS	EM, ERG

Courses	Spring Semester FS	ECTS	Lecturers	Uni (held in)	Frequency	Year	Sem.	Speciality
Biomineralization		2	DAT	BE	annually in spring		FS	EM, ERG, GEOL
Electron Beam Microanalysis: Theory - EMPA, SEM, CL		2	/AB//FPI	BE	annually in spring		FS	ELE, EM, ERG, GEOL, PAQS
Laser-ablation inductively-coupled-plasma mass-spectrometry - LA-ICP-MS. Two days short		1	TP	BE	annually in spring		FS	EM, ERG, GEOL
Pore scale reactive transport modelling		1.5	SCh	BE	annually in spring		FS	EM, ERG
Single Crystal X-ray Diffraction. Short course. Upon request. (prer)		1.5	GC	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
Applied geochemistry and thermodynamic modelling of cement hydration		1.5	BLo	BE	biennially in spring	even	FS	EM, ERG
Field Trip: Oceanic Lithosphere and subducted equivalents (Liguria)		2.5	TP	BE	biennially in spring	even	FS	EM, ERG, 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
Geotopes and Geoparks – The Geopark Vulkan-Eifel as an example		2	MJ/TBu	BE	biennially in spring	even	FS	ELE, EM, ERG, GEOL, 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
Accessory Minerals		2.5	DaR	BE	biennially in spring	odd	FS	EM, GEOL
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

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

67
Total ECTS