## Transitional measures for students in the PE 2021/2022 to PE 2022/2023

## Preamble

Replacement courses are not planned for the part A, as this part is mandatory and completed during the first year. Exceptions are very uncommon, and if a case would appear, a special solution will be found.

The best is that the students complete as much as possible the part A and B during their first year.

Courses proposed also in other Master programs or still in the new PE are not shown in this document.

One ECTS (European Credit Transfer and Accumulation System) corresponds to 25-30 hours of actual work.

The following abbreviations are used: C: course – PW: Practical work – E: Exercises – S: Seminars – F: Field – d: days (block course) – h: hours (weekly course).

Courses	Teacher in charge	Semester Modality	Evaluation	ECTS	Transitional measures
2D and 3D seismic interpretation	A. Moscariello	Fall 6d C PW and personal work	Practice	6	Any courses proposed in the module Earth resources – Adjust the evaluation to the number of ECTS or replace the ECTS for other course/module/part C
3D static and geological modelling - Petrel and Eclypse	A. Moscariello	Spring 5d C PW S	Oral or written exam	3	Any courses proposed in the module Earth resources – Adjust the evaluation to the number of ECTS or replace the ECTS for other course/module/part C
Advanced ore deposits	K. Kouzmanov	Fall 10d C PW and personal work	Practice (report, seminar) and written exam	4	Passed during the first year, no transitional measure needed
Alpine Structural Geology	JL. Epard	Fall 24h C PW	Practice	3	Construction and interpretation of cross-sections in complex deformed area – 3 ECTS - 27hC+TP – Spring
Alpine tectonics, field camp	JL. Epard	Spring 6j F	Practice (report)	3	Mountains belts in the field $-4$ ECTS $-8j$ F $-$ Spring $-$ Adjust the report to the number of ECTS or validate the extra ECTS in the part C

Applied mineralogy	T. Vennemann B. Putlitz	Spring 4d C F	Practice (report)	2	Any courses proposed in the modules Earth resources or Dynamics Earth – Adjust the evaluation to the number of ECTS or replace the ECTS for other course/module/part C
Basin research	S. Castelltort	Fall 10d C PW S	Practice (report, seminar) and oral or written exam	6	Passed during the first year, no transitional measure needed
Biostratigraphy and micropaleontology	R. Martini	Fall 7d C E, Spring 7d F	Practice (exercises and report)	6	Any courses proposed in the module Geobiosphere, Climate, and Sedimentary rock record – Adjust the evaluation to the number of ECTS or replace the ECTS for other course/module/part C
Borehole logging and rock physics	B. Quintal	Fall 6j C E and personal work	Practice	6	Passed during the first year, no transitional measure needed
Carbonate reservoirs	A. Moscariello	Spring 5d C PW S	Oral or written exam	3	Any courses proposed in the module Earth resources – Adjust the evaluation to the number of ECTS or replace the ECTS for other course/module/part C
Carbonates	E. Samankassou	Fall 2d F, 2.5 d C PW S	Practice (report, seminar) and oral or written exam	2	Passed during the first year, no transitional measure needed
Cartographic data management and landslide susceptibility assessment	M. Sartori	Spring, 5d CE	Practice (report)	3	For RGEOL, done during the first year. For SERG and GATO, any other SPACE courses available in the certificate of geomatics (UNIGE)
Clastic reservoirs	A. Moscariello	Spring 5d C PW S	Oral or written exam	3	Any courses proposed in the module Earth resources – Adjust the evaluation to the number of ECTS or replace the ECTS for other course/module/part C
Clastics	S. Castelltort	Fall 5d C PW S	Practice (report, seminar) and oral or written exam	2	Passed during the first year, no transitional measure needed
Electron probe microanalyzer	M. Robyr	Fall 2j C PW	Practice	1	Participate to two days of "Chemical analysis and imaging technics for major and trace elements" and do a short report

Experimental petrology and hydrothermal fluids	Z. Zajacz	Spring 3d C TP	Validation without grade	1.5	Any courses proposed in the modules Earth resources or Dynamics Earth – Adjust the evaluation to the number of ECTS or replace the ECTS for other course/module/part C
Field trips UNIGE	L. Caricchi	Spring 8d T	Practice	6	Passed during the first year, no transitional measure needed
Field trips UNIL	L. Baumgartner	Spring 8d T	Practice	6	Passed during the first year, no transitional measure needed
Fluid inclusions	R. Moritz	Fall 3j C PW	Validation without grade	1.5	Any courses proposed in the modules Earth resources or Dynamics Earth – Adjust the evaluation to the number of ECTS or replace the ECTS for other course/module/part C
Fluids in the Earth crust	L. Baumgartner	Spring 28h C PW	Validation without grade	2	Any courses proposed in the modules Earth resources or Dynamics Earth – Adjust the evaluation to the number of ECTS or replace the ECTS for other course/module/part C
From play evaluation to field development	A. Moscariello	Spring 5d C PWP S	Oral or written exam	3	Any courses proposed in the module Earth resources – Adjust the evaluation to the number of ECTS or replace the ECTS for other course/module/part C
Geology of clays	T. Adatte	Spring 3d CE	Practice	1.5	No solution proposed, any other courses
Geophysics across scales for geologists	G. Hetényi	Fall, 4d C PW	Practice	3	Passed during the first year, no transitional measure needed
Inductively-coupled plasma mass- spectrometry	A. Ulianov	Fall 2d C E	Validation without grade	1	Participate to two days of "Chemical analysis and imaging technics for major and trace elements" and do a short report
Initiation to the ion probe	AS Bouvier A. Meibom	Spring 1d C PW	Validation without grade	0.5	Passed during the first year, no transitional measure needed

Integrated basin analysis	A. Moscariello	Spring 10dj FS	Practice (exercises, report)	6	Any course proposed in the module Earth resources – Adjust the evaluation to the number of ECTS or replace the ECTS for other course/module/part C
Introduction to data analysis with MATLAB	G. Simpson	Fall 3d C	Practice (report)	1	See MATLAB as a language of scientific computing or Physics as a basis for modeling
Laboratory techniques in geochemistry	M. Ovtcharova	Fall 1d C PW	Validation without grade	0.5	Participate to one day of "Chemical analysis and imaging technics for major and trace elements" and do a short report
Life evolving with Earth	A. Daley E. Samankassou,	Fall 10d C PW S	Practice (report, seminar) and oral or written exam	6	Passed during the first year, no transitional measure needed
Marine seismic acquisition, interpretation and data integration	D. Ariztegui	Spring 8d F S	Practice	3	No solution proposed, any other courses
MATLAB as a language of scientific computing	Y. Podladchikov	Fall 42h CE	Practice (report)	3	Data science – 4 ECTS – 36h C+TP – Fall and Spring - Adjust the report to the number of ECTS or validate also "Introduction to data analysis with MATLAB"
Methods of exploration (biannual)	G. Beaudoin	Every odd semesters, Fall 10d CE	Practice (report)	4	Any courses proposed in the modules Earth resources or Dynamics Earth – Adjust the evaluation to the number of ECTS or replace the ECTS for other course/module/part C
Microtectonics	M. Robyr S. Schmalholz	Spring 27h C PW	Practice	2	Passed during the first year, no transitional measure needed
Mining geophysics	J. Irving	Spring 4d C PW	Practice	2	Any courses proposed in the modules Earth resources or Dynamics Earth – Adjust the evaluation to the number of ECTS or replace the ECTS for other course/module/part C

Modelling volcanic processes	C. Bonadonna	Fall 28h C	Practice (seminar)	2	The "physical volcanology" part of "Physical volcanology and volcanic risk" $-4$ ECTS (2 if the half) $-36h$ (18h if half)
Optical cathodoluminescence	R. Martini	Spring 1d C PW	Validation without grade	0.5	Participate to one day of "Chemical analysis and imaging technics for major and trace elements" and do a short report
Ore deposit field camp	R. Moritz K. Kouzmanov Z. Zajacz	Spring 8d T	Practice (report)	6	Passed during the first year, no transitional measure needed
Ore microscopy	K. Kouzmanov	Fall 6d C PW	Written exam	2	Passed during the first year, no transitional measure needed
Petrological processes in geodynamic environments	U. Schaltegger O. Müntener	Fall 70h C PW E S	Practice (report, seminar)	9	Passed during the first year, no transitional measure needed
Physics and structure of minerals	O. Müntener	Spring 14d C	Practice	1	9hours (on the 36hours) of "Minerals rocks and magma" – Adjust the evaluation to the number of ECTS .
Physics as a basis for modeling	Y. Podladchikov	Fall 28h CE	Practice (report)	2	Simulating geological processes on computers and in the labs – 3 ECTS – 27hC + TP – Fall - Adjust the report to the number of ECTS or validate also "Introduction to data analysis with MATLAB"
PoroPerm and QemScan	A. Moscariello	Fall 1d C PW	Validation without grade	0.5	Participate to one day of "Chemical analysis and imaging technics for major and trace elements" and do a short report
Quantitative tectonics	S. Schmalholz	Fall 42h C PW	Practice	4	Passed during the first year, no transitional measure needed
Reading rocks – Rock textures and fluids	K. Kouzmanov	Spring 2j C PW	Validation without grade	1	Passed during the first year, no transitional measure needed

Risk management	S. Menoni	Spring , 84 h C	Written exam	6	Proposed in the CERG-C program
Scanning Electron Microscopy	R. Martini for UNIGE and P. Vonlanthen for UNIL	Fall 2d C PW	Validation without grade	1	Participate to two days of "Chemical analysis and imaging technics for major and trace elements" and do a short report
Sedimentary rocks in the field	S. Castelltort	Spring 8d F	Practice (report, seminar) and oral or written exam	4	Passed during the first year, no transitional measure needed
Seismic risk	D. Fäh B. Duvernay	Spring 6d CE	Written exam	3	Proposed in the CERG-C program
SPACE-GEOENERGY: Geomatics and geo- energy	A. Moscariello	Spring 5d C	Practice	3	Will take place as proposed in other program? → to be checked
Spatial risk assessment	C. Frischknecht	Spring, 5d CE	Practice (report)	3	Course available in the certificate of geomatics UNIGE entitled SPACE-Risks
Stable and radiogenic isotope geochemistry (bisannual )	M. Chiaradia	Every odd semester, Spring 84h C PW S	Written exam	6	Geochemical cycles and rates of geological processes – 4 ECTS – 36h – Spring - Adjust the evaluation to the number of ECTS, do also a short report for example
Syn-tectonic granite emplacement and vein formation – Cevennes, France (bisannual)		Every odd semester, Spring 6j F	Practice	3	No solution proposed, any other courses
Volcanic risk	C. Bonadonna	Spring 6d C F	Practice (report) and written exam	3	Proposed in the CERG-C program
Volcano fieldtrip	L. Caricchi	Spring 5j F	Practice (report)	2	Together with « volcano petrology » Mineral, rocks and magma – 4 ECTS – 36h – Spring
Volcano petrology	L. Caricchi S. Pilet	Spring 28h C	Practice (seminar)	2	Together with « volcano field trip » Mineral, rocks and magma – 4 ECTS – 36h – Spring

Transitional measures - Master in Earth sciences – 2022/2023

Weathering processes	E. Verrecchia	Fall 2d C PW	Practice	1	Passed during the first year, no transitional measure needed
and soils formation	L. VEITECCIIIA	Fall Zu C PVV	riactice	1	rasseu during the first year, no transitional measure needed