

Master's degree in Earth System Science

with 30 ECTS credits Master's thesis

ECTS	7. Semester (HS)	8. Semester (FS)	9. Semester (HS)	ECTS
1	ESS 401	ESS 416	ESS 511	1
2	Current Themes in Earth System Science	Earth System Modelling	Master's Thesis	2
3				3
4	ESS 417			4
5	Earth System Observations and Analyses			5
6				6
7				7
8				8
9	Core elective modules			9
10	At least two Systems with a minimum of 12 ECTS in each System			10
11				11
12				12
13				13
14				14
15				15
16				16
17				17
18				18
19				19
20				20
21				21
22				22
23				23
24				24
25	Skills			25
26				26
27				27
28	Elective modules			28
29				29
30				30
31			ESS 512	31
32			Master's Exam	2 ECTS

with 60 ECTS credits Master's thesis

ECTS	7. Semester (HS)	8. Semester (FS)	9. Semester (HS)	ECTS
1	ESS 401	ESS 416		1
2	Current Themes in Earth System Science	Earth System Modelling		2
3				3
4	ESS 417			4
5	Earth System Observations and Analyses		ESS 510	5
6			Master's Thesis	6
7				7
8				8
9	Core elective modules			9
10	Two Systems with 8 ECTS in each System			10
11				11
12				12
13				13
14				14
15				15
16				16
17				17
18				18
19				19
20				20
21				21
22				22
23				23
24				24
25				25
26				26
27				27
28				28
29				29
30				30
31				31
32				32
33			ESS 512	33
34			Master's Exam	2 ECTS

Mandatory	
Green	Earth System Science
Blue	Core elective modules
Red	Skills
Yellow	Elective section
Yellow	Elective modules from UZH or ETH

ECTS	ECTS credits
HS	fall semester
FS	spring semester
ir	irregular course
b	block course
2	Course over two semesters
UZH	Lecture codes starting with: ESS, GEO, BIO, STA, UWW
ETH	Lecture codes starting with: 102, 651, 701, 751, 851

Contact:
<https://www.geo.uzh.ch/de/studium.html>
student-advice@geo.uzh.ch
 +41 44 635 51 18

Core elective and Skills module list

Geo-Biosphere System (Core elective)

Code	ECTS	Sem.	Module title
ESS 841	3	HS	Analyzing the plant-soil system: Theory
ESS 842	6	FS,b	Analyzing the plant-soil system: Practice
GEO 417	6	HS,2	Environmental archives and age determination
GEO 463	6	HS	Soil science I: current challenges in plant-soil systems
GEO 818	6	HS,2	Dendro-Ecology
GEO 820	3	FS	Stable isotopes in ecology and soil science
BIO 148	3	FS	Introduction to Paleontology (if not available: BIO 274 (1CP) as alternative)
EEE 311	6	FS	Remotely Sensing the Basis of Biodiversity
EEE 321	6	FS	Ecological Networks
EEE 330	6	HS,b	Population Ecology
EEE 334	2	HS,b	Biodiversity from Species to Landscape Scale (Remote Sensing)
651-4004	3	FS	The global carbon cycle - reduced
651-4041	3	HS	Sedimentology I: physical processes and sedimentary systems
651-4044	3	FS	Micropalaeontology and Molecular Palaeontology
651-4070	5	FS,ir	Landslide analysis
751-5118	2	FS	Global Change Biology

Hydro-Atmosphere System (Core elective)

Code	ECTS	Sem.	Module title
GEO 411	6	FS,ir	Field studies on high mountain processes
GEO 471	6	FS	Hydrological field measurements and calculations
GEO 475	6	HS	Hydrological Modeling and Programming
GEO 815	3	HS	Quantification and modelling of the cryosphere
GEO 851	3	HS	Glacier Mass Balance Measurements and Analysis
GEO 856	3	FS	The high-mountain cryosphere: processes and risks
EEE 362	3	HS	Freshwater Environmental and Ecosystem Modelling
102-0468	3	HS	Watershed Modelling
651-4023	4	HS	Groundwater
651-4057	3	HS	Climate history and paleoclimatology
701-0412	3	FS	Klimasysteme (German)
701-1228	4	FS	Cloud Dynamics
701-1232	3	FS	Radiation and climate change
701-1252	3	FS	Climate Change Uncertainty and Risk

Human-Environment System (Core elective)

Code	ECTS	Sem.	Module title
GEO 423	6	HS	Political Geography
GEO 425	6	FS	Political Ecology: from critique to transformation
GEO 433	6	FS	Global Economic Geographies of Agriculture and Food System
GEO 805	3	HS,b	Natural hazards and risk assessment in mountain regions
GEO 835	3	FS	Geography of Sustainability Transitions
GEO 837	3	HS	Regional Environmental Governance
GEO 856	3	FS	The high-mountain cryosphere: processes and risks
GEO 857	3	FS	Snow and avalanches: processes and risk management
EEE 330	6	HS,b	Population Ecology
EEE 333	6	FS	Conservation Science and Practice of Swiss Amphibians
EEE 351	3	FS	Conservation Biology
701-1317	3	FS	Global Biogeochemical Cycles and Climate
701-1651	3	HS	Environmental Governance
860-0023	3	HS	International environmental politics

Skills

Code	ECTS	Sem.	Module title
GEO 803	2	HS,b	Solving Geospatial Problems using Matlab
GEO 812	1	HS,b	Getting started with R for spatial analysis
GEO 877	3	FS	Spatial algorithms
STA 120	5	FS	Introduction to Statistics
STA 433	2	FS	R programming (if not available: BIO 369 (3CP) as alternative)
EEE 352	4	HS	Contemporary analysis for ecology (R)

Explanation

30 ECTS credits Master's thesis:	36 ECTS credits for Core elective modules (at least two systems with a minimum of 12 ECTS credits in each chosen system) and 6 ECTS credits for Skills
60 ECTS credits Master's thesis:	16 ECTS credits for Core elective modules (two systems with a minimum of 8 ECTS credits in each chosen system)