Note:
The following curriculum is a consolidated version. It is legally non-binding and for informational purposes only.
The legally binding versions are found in the University of Innsbruck Bulletins (in German).

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Curriculum for the **Bachelor's Programme in Earth Sciences** at the Faculty of Geo- and Atmospheric Sciences, University of Innsbruck

§ 1 Profile

(1) The Bachelor's Programme in Earth Sciences is grouped among the natural sciences.

(2) The Bachelor's Programme in Earth Sciences is the basis to pursue career activities in this field or for a related master's programme at the University of Innsbruck and other universities. The goal of the bachelor's programme is to convey basic subject-specific expertise and skills and methods for the graduates' future career opportunities. On this basis, the bachelor's programme offers comprehensive insight into the aspects and processes of lithosphere, hydrosphere, cryosphere, atmosphere, and anthroposphere, with special reference to practice-oriented relevance and application of the skills and knowledge acquired.

(3) In combination with the two other bachelor's programmes at the Faculty of Geo- and Atmospheric Sciences, the fundamentals of geo- and atmospheric sciences are imparted in common modules.

(4) Based on the contents of the first two semesters, students acquire a broad basic knowledge in mineralogy, petrology, geology and palaeontology. Due to the location of the University of Innsbruck in the midst of the Alps, the reference to the mountain region is a major issue of the education. The programme fosters „geological thinking": Complex scientific connections in terms of space and time are to be elaborated and comprehended. With the two bachelor's theses, students are able to independently elaborate, document and interpret selected issues in the field of earth sciences, with special attention to a data set adapted to the issue of the bachelor's theses.

(5) The curriculum also imparts generic interdisciplinary competences in teamwork, conflict resolution and problem-solving.

(6) The Bachelor's Programme in Earth Sciences prepares students for a relevant master's programme as well as careers beyond the academic area. Occupational fields of graduates are in the field of applied earth sciences (geology and mineralogy) as well as in planning offices and the environmental sector.

§ 2 Scope and duration

The Bachelor's Programme in Earth Sciences covers 180 ECTS-Credits, with a duration of six semesters.

§ 3 Courses and numbers of participants

(1) The **lecture (VO ‚*Vorlesung*‘)** introduces students to the main areas of the subject matter and its applicable methods, with particular reference to essential facts and key doctrines in the field. In addition, lectures cover special research areas and incorporate the latest advances in scientific development. Maximum number of participants: 200

(2) The **study orientation course (SL ‘*Studienorientierungslehrveranstaltung*’)** conveys an overview on the main contents of the study programme, and it forms the basis for the decision to choose the study programme. Maximum number of participants: 200

(3) Courses using continuous assessment:

1. **Practical course (*UE ‚Übung*‘)**: Practical courses are evaluative and cover aspects of the subject in the form of practical work, case reviews, short presentations and homework discussions. They complement the lectures, with a deeper examination of the subject matter. Maximum number of participants: 20
2. **Lecture-practical course (VU ‚*Vorlesung/Übung*‘)**: The lecture-practical course is an integrated evaluative course, where lectures and practical courses are closely linked with one another. The practical course covers key issues and their solutions, in accordance with the scientific objectives of the bachelor's programme regarding professional practice. Maximum number of participants: 20
3. **Excursion-practical course (EU ‚*Exkursion/Übung*‘)**: The excursion-practical course is evaluative, and covers study topics in the field. In doing so, students will learn the appropriate methods to meet the demands of defined practical challenges and problems. Maximum number of participants: 20 (on difficult terrain: 12)
4. **Introductory seminar (PS ‚*Proseminar*‘)**: Introductory seminars are evaluative courses, preliminary to seminars. They convey a basic understanding of scientific criteria, introduce technical literature and methodologically analyse practical case studies in the form of presentations or project work, complemented by discussions and presentations. Maximum number of participants: 20
5. **Seminar (SE ‚*Seminar*‘)**: Seminars are evaluative courses comprised of scientific discussion. Participants must contribute in written and oral form, which will be evaluated on its technical and methodical merits, as well as the quality of presentation. Maximum number of participants: 15

§ 4 Allocation of places in courses with a limited number of participants

In courses with a limited number of participants, course places are allocated as follows:

1. Students for whom the study duration would be extended due to the postponement are to be given priority.
2. If the criteria in Z 1 do not suffice, first, students for whom this course is part of a compulsory module are to be given priority, and second, students for whom this course is part of an elective module.
3. If the criteria in Z 1 and 2 do not suffice, the available places are drawn by random.

§ 5 Compulsory and elective modules

(1) The following compulsory modules, amounting to 172.5 ECTS-Credits are to be taken:

1.	Compulsory module: Solid Earth 1	h	ECTS-Credits
a.	**VO System Earth 1** The lecture gives an overview over the most important contents of the study: building blocks of the solid Earth, plate tectonics, cycle of rock formation, processes that modify the surface of the Earth on different time scales, formation of the Earth, evolution of life.	2	4
b.	**VO System Earth 2** The lecture gives an overview of the processes that modify the surface of the Earth on different time scales and the evolution of the organisms.	2	3.5
	Total	**4**	**7.5**
	Objective: Students are oriented over the basics of the endogenous processes of the lithosphere and the dynamic changes in the earth's surface on the geological time scale and they possess a basic knowledge of the development of the history of life.		
	Prerequisites: none		

2.	Compulsory module: Introduction to Mathematics	h	ECTS-Credits
	VO Introduction to Mathematics The lecture conveys propositional logic, set theory, exponential and trigonometric functions, vector analysis, matrices, linear systems of equations and basics of differential and integral calculus.	4	7.5
	Total	**4**	**7.5**
	Objective: Students know the basic tools of higher mathematics.		
	Prerequisites: none		

3.	Compulsory module: Introduction to Physics	h	ECTS-Credits
	VO Introduction to Physics The lecture conveys the basic principles of force and moment, kinematics, work, energy, dynamics of particle and of system of particles, rigid-body dynamics, mechanics of elastic media, mechanical oscillations and waves, hydrostatics, hydrodynamics, thermal physics, electric currents, electric fields, magnetic fields, electromagnetic radiation, optics.	4	7.5
	Total	**4**	**7.5**
	Objective: Students have an overview of the basic concepts of physics.		
	Prerequisites: none		

4.	Compulsory module: Geography: Man and Environment	h	ECTS-Credits
a.	**VO Geography: Man and Environment 1** The lecture introduces modern geography as a human-environment discipline on different scale levels by integrative consideration of physical-geographic and human-geographic approaches.	2	4
b.	**VO Geography: Man and Environment 2** The lecture presents different solution strategies of spatial relevant issues.	2	3.5
	Total	**4**	**7.5**
	Objective: Students understand spatial structures, conflicts and processes and evaluate strategies and policies until they are regulated.		
	Prerequisites: none		

5.	Compulsory module: Solid Earth 2	h	ECTS-Credits
	SL Introduction to Fieldwork The course introduces basic concepts of geological field work, collecting of field data, rock and structural description. It gives an overview of the contents of the study programme and its course sequence.	4	7.5
	Total	**4**	**7.5**
	Objective: Students are able to carry out simple practical earth science tasks in the field.		
	Prerequisites: none		

6.	Compulsory module: Introduction to Chemistry and Geophysics	h	ECTS-Credits
a.	**VO General and Inorganic Chemistry** The lecture conveys the principles of general chemistry (e.g. chemical reactions) and special inorganic chemistry focusing on earth- and environment-relevant compounds.	2	3.5
b.	**UE General and Inorganic Chemistry** The lecture conveys the principles of general chemistry (e.g. chemical reactions) and special inorganic chemistry focusing on earth- and environment-relevant compounds.	1	**1.5**

c.	**VO Geophysics** The lecture conveys the principles of geophysics.	2	**2.5**
	Total	**5**	**7.5**
	Objective: Students have an overview of the basics of general and inorganic chemistry as well as of geophysics and they know how to handle chemical analytical methods.		
	Prerequisites: none		

7.	**Compulsory module: Geology 1**	**h**	**ECTS-Credits**
a.	**VO Structural Geology 1** The lecture gives a general introduction into structural geology, description and analysis of folds, brittle structures of local to global scale.	1	2.5
b.	**UE Structural Geology 1** Specialisation of the basic principles of structural geology presented in the lecture.	1	1.5
c.	**VO Sedimentology and Stratigraphy** The lecture conveys the fundamentals of material transport and deposition, most important processes of sediment transport and sedimentation, depositional settings from shelf to deep sea, principles of stratigraphy.	1	2
d.	**UE Sedimentology and Stratigraphy** Specialisation of the basic principles of sedimentology and stratigraphy presented in the lecture.	1	1.5
	Total	**4**	**7.5**
	Objective: Students possess basic knowledge in working with questions of structural-geological, sediment-geological and quarter-geological methods.		
	Prerequisites: none		

8.	**Compulsory module: Cartography, Statistics**	**h**	**ECTS-Credits**
a.	**VO Fundamentals of Cartography** The lecture conveys the geodetic fundamentals of projections, and the fundamentals of topographic and thematic cartography.	2	3.5
b.	**VO Fundamentals of Statistics** The lecture introduces descriptive, scrutinizing and concluding statistics by illustrating concrete examples from the field of geo- and atmospheric sciences.	2	4
	Total	**4**	**7.5**

	Objective: Students master the basics of projection theory, can read maps and for specific questions can choose appropriate descriptive statistical methods of evaluation and interpret the results correctly.
	Prerequisites: none

9.	**Compulsory module: Petrology and Geochemistry**	**h**	**ECTS-Credits**
a.	**VO Petrology** The lecture gives an overview of the basic knowledge on the petrology of magmatic and metamorphic rocks.	2	4
b.	**VO Geochemistry** The lecture treats the basic understanding of equilibrium thermodynamics applied to geochemical reactions.	1	2.5
c.	**VU Lab Methods** The lecture gives an overview of the most important analytical methods in earth sciences.	1	1
	Total	**4**	**7.5**
	Objective: Students possess knowledge of the processes of magmatic and metamorphous stone geneses and geochemical reactions in the lower temperature area.		
	Prerequisites: successful completion of compulsory modules 1, 5 and 6		

10.	**Compulsory module: Mineralogy 1**	**h**	**ECTS-Credits**
a.	**VO General Mineralogy and Crystallography** The lecture treats the general principles of the crystalline state, physical-chemical characteristics, systematics of minerals and their properties.	2	4
b.	**VO Systematic Mineralogy** The lecture illustrates optical and mechanical properties of minerals, simple characterisation method, classification of minerals according to chemical and structural aspects.	1	2.5
c.	**UE Systematic Mineralogy** Specialisation of the basic principles of systematic mineralogy presented in the lecture.	1	1
	Total	**4**	**7.5**
	Objective: Students know about the legal limits of the crystalline materials the physical-chemical qualities, the genesis and the occurrence of the minerals and can determine them with microscopical signs.		
	Prerequisites: successful completion of compulsory modules 1, 5 and 6		

11.	Compulsory module: Earth History	h	ECTS-Credits
a.	**VO Palaeontology** The lecture treats the principles of general and special palaeontology.	1	1.5
b.	**UE Palaeontology** Specialisation of the basic principles of palaeontology presented in the lecture.	1	1
c.	**VO Historical Geology** The course gives an overview on the history of earth and life on earth.	2	3
d.	**PS Earth Science Proseminar** Students individually elaborate the basics in scientific working and presentation skills, oral presentation plus abstract and written assignments.	1	2
	Total	**5**	**7.5**
	Objective: Students know the main groups of fossil organisms and know about geological changes during the history of the Earth.		
	Prerequisites: successful completion of compulsory modules 1 and 5		

12.	Compulsory module: Introduction to Atmospheric Sciences	h	ECTS-Credits
a.	**VO Introduction to Atmospheric Science** The lecture gives an overview of the main topics in atmospheric science.	2	4
b.	**VO Introduction to Climatology** The lecture gives an overview of the main topics in climatology.	2	3.5
	Total	**4**	**7.5**
	Objective: Students know how meteorology works; they know the main phenomena and processes ad learn how to interpret the events of the weather and of climate. They also have overview knowledge of the main content of the study of atmospheric sciences and their development.		
	Prerequisites: none		

13.	Compulsory module: Geology 2	h	ECTS-Credits
a.	**UE Geological Maps and Cross Sections** Reading and understanding of geological maps. Construction of profiles based on geological maps.	2	3.5

b.	**VO Structural Geology 2** The lecture focuses on physical principles of deformation and the structures of ductile deformation.	1	2
c.	**VO Quaternary Geology** The lecture gives an overview of Quaternary for landscape history and issues of climate change.	1	2
	Total	**4**	**7.5**
	Objective: Students know how to read geological maps and to draw up profiles and they know the basics of tectonics as well as of Quaternary geology .		
	Prerequisites: successful completion of compulsory modules 1 to 3, 5 and 7		

14.	**Compulsory module: Petrography 1**	**h**	**ECTS-Credits**
a.	**UE Rock Identification** Identification of magmatic, metamorphic and sedimentary rocks.	2	3
b.	**VO Microscopy** Theory of transmission microscopy and qualitative determination of petrologically important minerals according to optical characteristics in transmitted light.	1	2.5
c.	**UE Microscopy** Specialisation of the basic principles of microscopy of minerals presented in the lecture.	1	1.5
d.	**EU Excursion** Specialisation of the theoretical principles, which were covered in the lecture, in the field.	1	0.5
	Total	**5**	**7.5**
	Objective: Students are enabled to determine stone building minerals and rocks by microscope (hand rock sample and in the field).		
	Prerequisites: successful completion of compulsory modules 2, 3, 9 and 10		

15.	**Compulsory module: The Alps and Europe**	**h**	**ECTS-Credits**
a.	**VO Tirol, Alps, Europe** The lecture presents and discusses the basic conditions of natural spaces as well as socio-economic structures and their interactions in different dimensions and time scales.	2	4
b.	**EU Field Excursion** Processes and principles explained in diverse lectures shall be illustrated in the field, and first experience with field work is made.	2	3.5
	Total	**4**	**7.5**
	Objective:		

	Students learn the natural-spatial spheres that are typical of Europe: lithosphere, hydrosphere, kryosphere, atmosphere, biosphere) and the societal spatial structures.
	Prerequisites: successful completion of compulsory modules 1 and 5

16.	**Compulsory module: Field Course 1**	**h**	**ECTS-Credits**
	EU Field Course Students are introduced to mapping and structural description of crystalline rocks.	4	7.5
	Total	**4**	**7.5**
	Objective: Students acquire competences with geological maps and can present these in written and oral form as well as enter into scientific discussions.		
	Prerequisites: successful completion of compulsory modules 7, 8, 9 and 10		

17.	**Compulsory module: Petrography 2**	**h**	**ECTS-Credits**
a.	**VO Magmatic, Metamorphic and Sedimentary Rocks** Students learn petrography of magmatic, metamorphic and sedimentary rocks.	2	4
b.	**UE Magmatic, Metamorphic and Sedimentary Rocks** Specialisation of the basic principles of magmatic, metamorphic and sedimentary rocks presented in the lecture.	1	1.5
c.	**VU Ore Microscopy** Identification of ore minerals with the reflected light microscope; theory of absorption, reflection and refraction of light.	1	2
	Total	**4**	**7.5**
	Objective: Students should be enabled to identify the most important stones by microscope.		
	Prerequisites: successful completion of compulsory module 14		

18.	**Compulsory module: Applied Geology**	**h**	**ECTS-Credits**
a.	**VU Introduction to Engineering Geology** The course gives an overview of activities, methods and case-studies of applied engineering geology.	1	2
b.	**VO Introduction to Hydrogeology** The lecture introduces the theory of groundwater flow and storage in various types of aquifers.	1	2
c.	**EU Introduction to Hydrogeology** Specialisation of the basic principles of hydrogeology presented in the lecture.	1	1.5
d.	**VU Applied Quaternary Geology**	1	2

	The course provides basic knowledge on applied Quaternary geology.		
	Total	**4**	**7.5**
	Objective: Students have basic knowledge of the practical use of geological methods for solving engineer-geological, hydrogeological and Quaternary geological questions.		
	Prerequisites: successful completion of compulsory modules 1 and 5		

19.	**Compulsory module: Mineralogy 2**	**h**	**ECTS-Credits**
a.	**VO Economic Geology** The lecture deals with the most popular and scientifically approved metallo-genetic processes with reference to eastern alpine mineral deposits.	1	2
b.	**UE Economic Geology** Specialisation of the basic principles of economic geology presented in the lecture.	1	1.5
c.	**VO Applied Inorganic Materials** The lecture gives an overview of the most important classes of materials of technical mineralogy.	1	2
d.	**UE Applied Inorganic Materials** Specialisation of the basic principles of applied inorganic materials presented in the lecture.	1	1.5
e.	**EU Material Processing (Field Trip)** Specialisation of the theoretical principles, which were covered in the lec-ture, in the field.	1	0.5
	Total	**5**	**7.5**
	Objective: Students possess knowledge of natural and synthetic raw materials.		
	Prerequisites: successful completion of compulsory modules 10 and 14		

20.	**Compulsory module: Seminar with Bachelor Thesis 1**	**h**	**ECTS-Credits**
	SE Seminar with Bachelor Thesis 1 Writing and presenting the first bachelor thesis in a seminar talk.	1	2.5 +5.0
	Total	**1**	**7.5**
	Objective: Students are able on their own to do a Bachelor Thesis on a topic of the earth sciences that meets the requirements of good scientific practice; the students can also defend the results of their work in the form of a lecture.		
	Prerequisites: successful completion of compulsory modules 11, 13, 14 and 16		

21.	**Compulsory module: Geology 3**	**h**	**ECTS-Credits**

a.	**VO Regional Geology** The lecture provides an outline on the regional geology of Austria.	2	5
b.	**EU Geological Field Trip** Specialisation of the theoretical principles, which were covered in the lecture, in the field.	3	2.5
	Total	**5**	**7.5**
	Objective: Students have thorough knowledge in the area of the regional geology of the Alps.		
	Prerequisites: successful completion of compulsory module 15		

22.	**Compulsory module: Field Course 2**	**h**	**ECTS-Credits**
	EU Field Course Students specialize in geological mapping and present a written report.	4	7.5
	Total	**4**	**7.5**
	Objective: Students have enhanced competencies in geological mapping and can present these both orally and in writing in a scientific discussion.		
	Prerequisites: successful completion of compulsory modules 13 and 16		

23.	**Compulsory module: Seminar with Bachelor Thesis 2**	**h**	**ECTS-Credits**
	SE Seminar with Bachelor Thesis 2 Writing and presenting the second bachelor thesis in a seminar talk.	1	2.5 +5.0
	Total	**1**	**7.5**
	Objective: Students are able to produce independently a written piece of work from a topic of the earth sciences which meets the requirements of good scientific practice. The students should also be able to defend the results in the form of a lecture.		
	Prerequisites: successful completion of compulsory module 20		

(2) Elective modules, amounting to 7.5 ECTS-Credits, are to be chosen and taken:

1.	Elective module: Geoinformatics 1	h	ECTS-Credits
	VU Introduction to Geographical Information Systems (GIS) The course conveys the basic principles of geographical information systems, with special attention to different data models, administration, analysis, and presentation possibilities in theory and practice.	4	7.5
	Total	**4**	**7.5**
	Objective: Students have mastered the fundamentals of geoinformatics and know basics functional parts of a geographical information system.		
	Prerequisites: successful completion of compulsory modules 1 to 3, 5 and 8		

2.	Elective module: Global Change	h	ECTS-Credits
a.	**VO Fundamentals of Global Change** The lecture conveys the basic principles of geosystemic and socioeconomic processes of global change and demonstrates action strategies corresponding to the objectives of economic and social sustainability, without affecting the ecological fundamental principles.	2	4
b.	**VO Regional Aspects of Global Change** The lecture introduces human-environment-systems in selected ecological zones of the earth where the processes of global change and resulting effects can be demonstrated.	2	3.5
	Total	**4**	**7.5**
	Objective: Students understand the basic processes and consequences of global climate change and can analytically assess the complex connections between society and environment.		
	Prerequisites: successful completion of compulsory modules 1 and 5		

3.	Elective module: Gender Studies and People Skills	h	ECTS-Credits
a.	**VO Gender Research** Basic knowledge of gender studies including: history of the research field; key terms, ideas and research topics; awareness about gender relations in everyday life; understand the integrative function of the interdisciplinary field of gender studies especially between natural and social sciences; insights into chosen topics of gender studies in particular within geography; history of gender studies and related research fields; key fields of research and applications.	2	4

b.	**VO Social Skills** The lecture gives insights into areas of social skills, including communication techniques, conflict management, cross-cultural skills, cooperative and self-organized interventions, solidarity skills, ethical skills, mediation skills.	2	3.5
	Total	**4**	**7.5**
	Objective: Students know about the ongoing gender aspects and in their professional practice they can work towards a more human and gender equal society.		
	Prerequisites: none		

4.	**Elective module: Introduction to Philosophy**	**h**	**ECTS-Credits**
a.	**SL Introduction to Philosophy** The course introduces written and oral philosophizing and conveys methods of scientific work. Students independently elaborate study materials of scientific working methods.	2	4
b.	**VO Philosophical Logic and Argumentation** The lecture introduces philosophical logic and argumentation theory, whereas formal methods are only used to a small extent.	2	3.5
	Total	**4**	**7.5**
	Objective: Knowledge of the uniqueness and the role of philosophy in the context of science; acquisition of the necessary knowledge and skills to complete successfully the proseminars and seminars together with knowledge of the basics of scientific work, knowledge of terms from philosophical logic (existence, identity, necessity, prediction, judgment, truth, contradiction, practical command of philosophical argumentative pattern.		
	Prerequisites: none		

5.	**Elective module: Interdisciplinary Skills**	**h**	**ECTS-Credits**
	Courses with a total of 7.5 ECTS-Credits can be chosen from other bachelor's programmes at the University of Innsbruck.		7.5
	Total		**7.5**
	Objective: Students possess additional competencies and skills from other scientific disciplines.		
	Prerequisites: The prerequisites of the respective curricula do apply.		

§ 6 Studies Induction and Orientation Stage

(1) The Studies Induction and Orientation Stage covers one semester (30 ECTS-Credits) and offers students an overview of the main contents of the degree programme and its structure in order to provide a factual basis to assess the decision to pursue the chosen field.

(2) The Studies Induction and Orientation Stage requires the following course examinations, which may be repeated twice, to be completed successfully:

1. VO System Earth 1 (compulsory module 1 lit. a / 2 h / 4 ECTS-Credits)
2. VO System Earth 2 (compulsory module 1 lit. b / 2 h / 3.5 ECTS- Credits)

(3) Passing the examinations specified in paragraph 2 permits students to attend all further courses and take all examinations following the Studies Induction and Orientation Stage and to write a bachelor's thesis as described in the curriculum. Registration requirements specified by the curriculum are to be followed.

§ 7 Bachelor's Theses

(1) Bachelor's theses, amounting to 5 ECTS-Credits, are to be completed. One bachelor's thesis is to be completed in the field of geology/palaeontology, and one bachelor's thesis in the field of mineralogy/petrology.

(2) The bachelor's thesis is to be submitted in paper form and in digital version as determined by the Director of Studies.

§ 8 Examination Regulations

(1) A module is completed when all of its courses have been successfully completed.

(2) Course examinations are:

1. Examinations which assess the knowledge and skills acquired in an individual course and which comprise a single examination held at the end of the course. The method of testing is to be defined and announced by the instructor before the start of the course.
2. Evaluation in continuous assessment courses (‚immanent examination') is based on written, oral and/or practical contributions within the context of the course. The methods of evaluation are to be defined by the instructor before the start of the course.

§ 9 Academic Degree

Graduates of the Bachelor's Programme in Earth Sciences are awarded the academic degree „Bachelor of Science", abbreviated „BSc".

§ 10 Validity and Effect

(1) The curriculum is effective as of 1 October 2010.

(2) §§ 5 and 11 in the version published in the University of Innsbruck Bulletin of 8 June 2011, Issue 26, No 462 is effective as of 1 October 2011 and applies to all students.

(3) § 6 in the version published in the University of Innsbruck Bulletin of June 8 2011, Issue 26, No 462 is effective as of 1 October 2011 and applies to all students beginning their degree programme as of winter semester 2011/2012.

(4) § 6 in the version published in the University of Innsbruck Bulletin of 8 June 2011, Issue 26, No 462 ceases to be effective at the end of 30 September 2014.

Appendix 1:

Recognition of examinations

The course examinations successfully completed and required by the curriculum for the Bachelor's Programme in Geo- and Atmospheric Sciences at the University of Innsbruck (in the version published in the University of Innsbruck Bulletin of 27 April 2007) are considered equivalent according to § 78 Para 1 UniStG 2002 to the Bachelor's Programme in Earth Sciences at the University of Innsbruck as follows:

Successfully completed examination			**Recognition as:**		
Bachelor's Programme in Geo- and Atmospheric Sciences	ECTS-Credits	h	**Bachelor's Programme in Earth Sciences**	ECTS-Credits	h
Module 1: Space and Society			**Compulsory module 4: Geography: Man and Environment**		
Space and Society	7.5	VO4	Geography: Man and Environment	7.5	VO4
Module 2: Introduction to Mathematics			**Compulsory module 2: Introduction to Mathematics**		
Introduction to Mathematics	7.5	VO4	Introduction to Mathematics	7.5	VO4
Module 3: Introduction to Physics			**Compulsory module 3: Introduction to Physics**		
Introduction to Physics	7.5	VO5	Introduction to Physics	7.5	VO5
Module 4: Solid Earth			**Compulsory module 1: Solid Earth 1**		
System Earth	7.5	VO4	System Earth	7.5	VO4
Module 5: Atmosphere (1)			**Compulsory module 12: Introduction to Atmospheric Sciences**		
Introduction to Meteorology 1	4.0	VO2	Introduction to Atmospheric Science	7.5	VO4
Climatology/Hydrology/Glaciology	3.5	VO2			
Module 6: Cartography, Statistics			**Compulsory module 8: Cartography, Statistics**		
Fundamentals of Cartography	3.5	VO2	Fundamentals of Cartography	3.5	VO2
Fundamentals of Statistics	4.0	VO2	Fundamentals of Statistics	4.0	VO2

Module 7: The Alps and Europe			**Compulsory module 15: The Alps and Europe**		
Tirol, Alps, Europe	4.0	VO2	Tirol, Alps, Europe	4.0	VO2
Field Excursion	3.5	EU2	Field Excursion	3.5	EU2
Elective module according to § 5 (1b)			**Compulsory module 5: Solid Earth 2**		
(Module 8 or 24)	7.5		Introduction to Fieldwork	7.5	SL4
Module 25: Geology (1)			**Compulsory module 7: Geology 1**		
Structural Geology (1)	2.0	VO1	Structural Geology 1	2.5	VO1
			Structural Geology 1	1.5	UE1
Sedimentology and Stratigraphy	4.0	VU2	Sedimentology and Stratigraphy	2.0	VO1
Geology Field Course	1.5	UE1	Sedimentology and Stratigraphy	1.5	UE1
Module 26: Mineralogy & Crystallography			**Compulsory module 10: Mineralogy 1**		
General Mineralogy, Crystallography	4.0	VO2	General Mineralogy and Crystallog-raphy	4.0	VO2
Systematic Mineralogy	3.5	VU2	Systematic Mineralogy	2.5	VO1
			Systematic Mineralogy	1.0	UE1
Module 27: Earth History			**Compulsory module 11: Earth Histo-ry**		
Palaeontology	3.0	VU 2	Palaeontology	1.5	VO 1
			Palaeontology	1.0	UE1
Historical Geology	3.0	VO2	Historical Geology	3.0	VO2
Proseminar	1.5	PS1	Earth Science Proseminar	2.0	PS1
Module 28: Chemistry and Geophysics			**Compulsory module 6: Introduction to Chemistry and Geophysics**		
General and Inorganic Chemistry	3.5	VO2	General and Inorganic Chemistry	3.5	VO2
General and Inorganic Chemistry	1.5	UE1	General and Inorganic Chemistry	1.5	UE1
Geophysics	2.5	VO2	Geophysics	2.5	VO2
Module 29: Geology (2)			**Compulsory module 13: Geology 2**		
Geological Maps and Cross Sections	3.5	UE2	Geological Maps and Cross Sections	3.5	UE2
Structural Geology (2)	2.0	VO1	Structural Geology 2	2.0	VO1
Quaternary Geology	2.0	VO1	Quaternary Geology	2.0	VO1

Module 30: Petrography			**Compulsory module 14: Petrography 1**		
Rock Identification	3.0	VU2	Rock Identification	3.0	UE2
Microscopy	4.0	VU2	Microscopy	2.5	VO1
			Microscopy	1.5	UE1
Excursion	0.5	EU1	Excursion	0.5	EU1
Module 31: Petrology and Geochemistry			**Compulsory module 9: Petrology and Geochemistry**		
Petrology	4.5	VO2	Petrology	4.0	VO2
Geochemistry	2.0	VO1	Geochemistry	2.5	VO1
Lab Methods	1.0	VU1	Lab Methods	1.0	VU1
Module 32: Field Course (1)			**Compulsory module 16: Field Course 1**		
Field Course (1)	7.5	UE4	Field Course 1	7.5	EU4
Module 33: Petrography			**Compulsory module 17: Petrography 2**		
Magmatic, Metamorphic and Sedimentary Rocks	5.5	VU3	Magmatic, Metamorphic and Sedimentary Rocks	4.0	VO2
			Magmatic, Metamorphic and Sedimentary Rocks	1.5	UE1
Ore Microscopy	2,0	VU1	Ore Microscopy	2.0	VU1
Module 34: Geology (3)			**Compulsory module 21: Geology 3**		
Regional Geology	5.5	VO2	Regional Geology	5.0	VO2
Geological Field Trip	2.0	EU2	Geological Field Trip	2.5	EU3
Module 35: Applied Mineralogy			**Compulsory module 19: Mineralogy 2**		
Economic Geology	3.5	VU2	Economic Geology	2.0	VO1
			Economic Geology	1.5	UE1
Applied Inorganic Materials	3.0	VU2	Applied Inorganic Materials	2.0	VO1
			Applied Inorganic Materials	1.5	UE1
Material Processing (Field Trip)	1.0	EU1	Material Processing (Field Trip)	0.5	EU1
Module 36: Seminar with Bachelor Thesis (1)			**Compulsory module 20: Seminar with Bachelor Thesis 1**		
Seminar	7.5	SE1	Seminar	7.5	SE1

Module 37: Applied Geology (1)			**Compulsory module 18: Applied Geology**		
Engineering Geology (1)	2.0	VU1	Introduction to Engineering Geology	2.0	VU1
Hydrogeology (1)	3.5	VU2	Introduction to Hydrogeology	2.0	VO1
			Introduction to Hydrogeology	1.5	EU1
Applied Quaternary Geology	2.0	VU1	Applied Quaternary Geology	2.0	VU1
Module 38: Field Course (2)			**Compulsory module 22: Field Course 2**		
Field Course (2)	7.5	UE4	Field Course 2	7.5	EU4
Module 39: Seminar with Bachelor Thesis (2)			**Compulsory module 23: Seminar with Bachelor Thesis 2**		
Seminar	7.5	SE1	Seminar	7.5	SE1
Module 40: Elective module according to § 5 Z 2			**Elective module according to § 5 (2)**		
(Modules 21, 46 or 52)	7.5			7.5	

Appendix 2:

The course examinations by the curriculum for the Bachelor's Programme in Earth Sciences (in the version published in the University of Innsbruck Bulletin of 21 June 2010, Issue 32, No 317) are considered equivalent to the course examinations by the curriculum (in the version published in the University of Innsbruck Bulletin of 8 June 2011, Issue 26, No 462) as follows:

Course examination	**equivalent to**	**course examination**
VO System Earth (4 h / 7.5 ECTS-Credits)		VO System Earth 1 (2 h / 4 ECTS-Credits) und VO System Earth 2 (h / 3.5 ECTS-Credits)
VO Introduction to Physics (5 h / 7.5 ECTS- Credits)		VO Introduction to Physics (4 h / 7.5 ECTS- Credits)
VO Introduction to Atmospheric Science and Climatology (4 h / 7.5 ECTS- Credits)		VO Introduction to Atmospheric Science (2 h / 4 ECTS- Credits) and VO Introduction to Climatology (2 h / 3.5 ECTS- Credits)
VO Geography: Men and Environment (4 h / 7.5 ECTS- Credits)		VO Men and Environment 1 (2 h / 4 ECTS- Credits) and VO Men and Environment 2 (2 h / 3.5 ECTS- Credits)