#### 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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### Complete version from 1 October 2016

Curriculum for the

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

#### § 1 Profile

- (1) The Bachelor's Programme Earth Sciences is grouped among the natural sciences.
- (2) The Bachelor's Programme 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 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 Types of courses and maximum number of participants

- (1) **Lectures** (VO) are courses held in lecture format. They introduce the research areas, methods and schools of thought for a given subject. Maximum number of participants: 200
- (2) The **study orientation course (SL)** conveys an overview on the main contents of the study programme, and it forms the basis for the decision to pursue the chosen the study programme. Maximum number of participants: 200
- (3) Courses with continuous assessment:
  - 1. **Practical courses** (UE) focus on the practical treatment of concrete scientific tasks within an area. Maximum number of participants: 20
  - Lectures with practical elements (VU) focus on the practical treatment of concrete scientific tasks that are discussed during the lecture parts of the course. Maximum number of participants: 20
  - 3. Excursions with practical elements (EU), conducted outside the premises of the university, serve to demonstrate and deepen course contents through practical experience with concrete scientific tasks. Maximum number of participants: 20 (on difficult terrain: 12)
  - 4. **Introductory seminars** (PS) introduce students interactively to scientific literature through the treatment of selected issues. They convey knowledge and methods of academic work. Maximum number of participants: 20
  - 5. **Seminars** (SE) provide in-depth treatment of scientific topics through students' presentations and discussion thereof. 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.

# $\S 5$ 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	
	Learning Outcomes: Students are oriented over the basics of the endogenous processes of the lithosphere and dynamic changes in the earth's surface on the geological time scale and they possess a baknowledge 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
	Learning Outcomes: 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
	Learning Outcomes: 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
	Learning Outcomes: Students understand spatial structures, conflicts and processes and evaluate policies until they are regulated.	ate strate	egies and
	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
	Learning Outcomes: 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.	<b>UE General and Inorganic Chemistry</b> 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
	Learning Outcomes: Students have an overview of the basics of general and inorganic chemistry as well as physics 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.	<b>UE Sedimentology and Stratigraphy</b> Specialisation of the basic principles of sedimentology and stratigraphy presented in the lecture.	1	1.5
	Total	4	7.5
	Learning Outcomes: Students possess basic knowledge in working with questions of structural ment-geological and quarter-geological methods.	-geologi	cal, sedi-
	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
	Learning Outcomes: Students master the basics of projection theory, can read maps and for spec choose appropriate descriptive statistical methods of evaluation and interpretedly.	•	
	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	
	Learning Outcomes: Students possess knowledge of the processes of magmatic and metamorphous stone ger 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.	<b>UE Systematic Mineralogy</b> Specialisation of the basic principles of systematic mineralogy presented in the lecture.	1	1
	Total	4	7.5
	Learning Outcomes: 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.		
	<b>Prerequisites:</b> 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
	Learning Outcomes: 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
	Learning Outcomes: Students know how meteorology works; they know the main phenomena and processes learn how to interpret the events of the weather and of climate. They also have overviknowledge of the main content of the study of atmospheric sciences and their development		overview
	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
	Learning Outcomes: Students know how to read geological maps and to draw up profiles and they know the basis of tectonics as well as of Quaternary geology.		he basics
	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.	<b>UE Microscopy</b> Specialisation of the basic principles of microscopy of minerals presented in the lecture.	1	1.5

d.	<b>EU Excursion</b> Specialisation of the theoretical principles, which were covered in the lecture, in the field.	1	0.5
	Total	5	7.5
	<b>Learning Outcomes:</b> Students are enabled to determine stone building minerals and rocks by microscope (hand rock sample and in the field).		
<b>Prerequisites:</b> successful completion of compulsory modules 2, 3, 9 and 10			

15.	Compulsory Module: The Alps and Europe	h	ECTS- Credits
а.	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
	Learning Outcomes: Students learn the natural-spatial spheres that are typical of Europe: lithosphere, hydrosp kryosphere, atmosphere, biosphere) and the societal spatial structures.  Prerequisites: successful completion of compulsory modules 1 and 5		rosphere,

16.	Compulsory Module: Field Course 1	h	ECTS- Credits
	<b>EU Field Course</b> Students are introduced to mapping and structural description of crystalline rocks.	4	7.5
	Total	4	7.5
	Learning Outcomes: Students acquire competences with geological maps and can present these in written and of form as well as enter into scientific discussions.		and oral
	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
	Learning Outcomes: Students should be enabled to identify the most important stones by microsco	ope.	
	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>b.</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 The course provides basic knowledge on applied Quaternary geology.	1	2
	Total	4	7.5
	Learning Outcomes: Students have basic knowledge of the practical use of geological methods neer-geological, hydrogeological and Quaternary geological questions.	for solv	ing engi-
	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 metallogenetic 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 lecture, in the field.	1	0.5
	Total	5	7.5

	Learning Outcomes: 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
	Learning Outcomes: 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.		2.5				
	Total	5	7.5				
	Learning Outcomes: 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			
	Learning Outcomes: 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		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

### **Learning Outcomes:**

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.					
	Total					
	Learning Outcomes: Students have mastered the fundamentals of geoinformatics and know basics functional par of a geographical information system.					
	<b>Prerequisites:</b> 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			
	Learning Outcomes: Students understand the basic processes and consequences of global climate change and car 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.		3.5			
	Total	4	7.5			
	Learning Outcomes: 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				
	Learning Outcomes:  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			
	Learning Outcomes: 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) Within the scope of the studies induction and orientation stage, which takes place in the first semester, the following course examinations must be passed:
  - 1. VO System Earth 1 (CM 1 lit. a/2 hrs. /4 ECTS-Credits),
  - 2. VO System Earth 2 (CM 1 lit. b/2 hrs./3.5 ECT-Credits),
  - 3. VO Introduction to Physics (CM 3/4 hrs. /7.5 ECTS-Credits).

- (2) Successful passing of all exams of the Studies Induction and Orientation Stage entitles to passing all further courses and examinations as well as to writing the Bachelor's Theses.
- (3) Before successful completion of the Studies Induction and Orientation Stage courses amounting to 15 ECTS-Credits may be passed. The requirements specified in the curriculum must be met.

#### § 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 that assess the knowledge and skills covered in the lectures in which course assessment is based on a single examination at the end of the course. The course instructor has to define and communicate the method of examination (written or oral) before the course begins.
  - 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 Coming into force

- (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) invalidated acc. to par. 5
- (5) § 10 para. 4 ceases to be effective after 30 September 2014.
- (6) § 6, as announced in the University of Innsbruck Bulletin of 8 June 2011, Issue 26, No. 462, ceases to be effective after 31 December 2015.
- (7) § 6 in the version of the University of Innsbruck Bulletin of 2 June 2016, Issue 37, No. 442 comes into force on 1 October 2016 and is to be applied to all students commencing their study programme as of the 2016/2017 winter semester and to all students, who have

- not yet passed the courses of the studies induction and orientation stage according to the previous regulations.
- (8) § 8 par. 2 no. 1 in the version of the University of Innsbruck Bulletin of 2 June 2016, Issue 37, No. 442 comes into effect on 1 October 2016 and is to be applied to all students.

### § 11 Transitional provisions

For students, who have started their study programme before the 2016/2017 winter semester, the limitation of ECTS-Credits that may be passed before completion of the studies induction and orientation stage according to §6 par. 3 in the version of the University of Innsbruck Bulletin of 2 June 2016, Issue 37, No. 442 is not to be applied before 30 November 2017. After that point in time more courses and examinations may only be taken after successful completion of the whole studies induction and orientation stage.

# **Appendix 1:**

### **Recognition of examinations**

The course examinations successfully completed and required by the curriculum for the Bachelor's Programme 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 Earth Sciences at the University of Innsbruck as follows:

Successfully completed examina-			Recognition as:		
tion			-		
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	VO 4	Geography: Man and Environment	7.5	VO 4
Module 2: Introduction to Mathematics			Compulsory module 2: Introduction to Mathematics		
Introduction to Mathematics	7.5	VO 4	Introduction to Mathematics	7.5	VO 4
M 11 2 I 4 1 2 4 P					
Module 3: Introduction to Physics			Compulsory module 3: Introduction to Physics		
Introduction to Physics	7.5	VO 5	Introduction to Physics	7.5	VO 5
Module 4: Solid Earth			Compulsory module 1: Solid Earth 1		
System Earth	7.5	VO 4	System Earth	7.5	VO 4
Module 5: Atmosphere (1)			Compulsory module 12: Introduction to Atmospheric Sciences		
Introduction to Meteorology 1	4.0	VO 2	Introduction to Atmospheric Science	7.5	VO 4
Climatolo- gy/Hydrology/Glaciology	3.5	VO 2			
Module 6: Cartography, Statistics			Compulsory module 8: Cartography, Statistics		
Fundamentals of Cartography	3.5	VO 2	Fundamentals of Cartography	3.5	VO 2
Fundamentals of Statistics	4.0	VO 2	Fundamentals of Statistics	4.0	VO 2

Module 7: The Alps and Europe			Compulsory module 15: The Alps and Europe		
Tirol, Alps, Europe	4.0	VO 2	Tirol, Alps, Europe	4.0	VO 2
Field Excursion	3.5	EU2	Field Excursion	3.5	EU 2
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	VO 1	Structural Geology 1	2.5	VO 1
			Structural Geology 1	1.5	UE 1
Sedimentology and Stratigraphy	4.0	VU 2	Sedimentology and Stratig- raphy	2.0	VO 1
Geology Field Course	1.5	UE1	Sedimentology and Stratig- raphy	1.5	UE 1
Module 26: Mineralogy & Crystallog- raphy			Compulsory module 10: Mineralogy 1		
General Mineralogy, Crystallography	4.0	VO 2	General Mineralogy and Crystallography	4.0	VO 2
Systematic Mineralogy	3.5	VU 2	Systematic Mineralogy	2.5	VO 1
			Systematic Mineralogy	1.0	UE 1
Module 27: Earth History			Compulsory module 11: Earth History		
Palaeontology	3.0	VU 2	Palaeontology	1.5	VO 1
			Palaeontology	1.0	UE 1
Historical Geology	3.0	VO 2	Historical Geology	3.0	VO 2
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	VO 2	General and Inorganic Chemistry	3.5	VO 2
General and Inorganic Chemistry	1.5	UE1	General and Inorganic Chemistry	1.5	UE 1
Geophysics	2.5	VO 2	Geophysics	2.5	VO 2

Module 29: Geology (2)			Compulsory module 13: Geology 2		
Geological Maps and Cross Sections	3.5	UE2	Geological Maps and Cross Sections	3.5	UE 2
Structural Geology (2)	2.0	VO 1	Structural Geology 2	2.0	VO 1
Quaternary Geology	2.0	VO 1	Quaternary Geology	2.0	VO 1
Module 30: Petrography			Compulsory module 14: Petrography 1		
Rock Identification	3.0	VU 2	Rock Identification	3.0	UE 2
Microscopy	4.0	VU 2	Microscopy	2.5	VO 1
			Microscopy	1.5	UE 1
Excursion	0.5	EU1	Excursion	0.5	EU 1
Module 31: Petrology and Geochemistry			Compulsory module 9: Petrology and Geochemistry		
Petrology	4.5	VO 2	Petrology	4.0	VO 2
Geochemistry	2.0	VO 1	Geochemistry	2.5	VO 1
Lab Methods	1.0	VU 1	Lab Methods	1.0	VU 1
Module 32: Field Course (1)			Compulsory module 16: Field Course 1		
Field Course (1)	7.5	UE4	Field Course 1	7.5	EU 4
Module 33: Petrography			Compulsory module 17: Petrography 2		
Magmatic, Metamorphic and Sedimentary Rocks	5.5	VU 3	Magmatic, Metamorphic and Sedimentary Rocks	4.0	VO 2
			Magmatic, Metamorphic and Sedimentary Rocks	1.5	UE 1
Ore Microscopy	2,0	VU 1	Ore Microscopy	2.0	VU 1
Module 34: Geology (3)			Compulsory module 21: Geology 3		
Regional Geology	5.5	VO 2	Regional Geology	5.0	VO 2
Geological Field Trip	2.0	EU2	Geological Field Trip	2.5	EU 3

Module 35: Applied Mineralogy			Compulsory module 19: Mineralogy 2		
Economic Geology	3.5	VU 2	Economic Geology	2.0	VO 1
			Economic Geology	1.5	UE 1
Applied Inorganic Materials	3.0	VU 2	Applied Inorganic Materials	2.0	VO 1
			Applied Inorganic Materials	1.5	UE 1
Material Processing (Field Trip)	1.0	EU1	Material Processing (Field Trip)	0.5	EU 1
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	VU 1	Introduction to Engineering Geology	2.0	VU 1
Hydrogeology (1)	3.5	VU 2	Introduction to Hydrogeology	2.0	VO 1
			Introduction to Hydrogeology	1.5	EU 1
Applied Quaternary Geology	2.0	VU 1	Applied Quaternary Geology	2.0	VU 1
Module 38: Field Course (2)			Compulsory module 22: Field Course 2		
Field Course (2)	7.5	UE4	Field Course 2	7.5	EU 4
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 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 Environ- ment (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)	