Appendices to Teaching and Examination regulations: Bachelor's degree programme in Mathematics

2016-2017

Appendix I Learning outcomes of the degree programme (Article 1.3a)

The Bachelor's degree programme in Mathematics aims to impart knowledge, skills, understanding and an academic attitude in the field of mathematics by means of a broadly based curriculum such that Bachelor's graduates are able to work as independent professionals and are also qualified for further training to become academic researchers in the field.

This aim has been translated into a set of learning outcomes, drawn up in general terms by the Faculty of Mathematics and Natural Sciences of the University of Groningen. First, a number of generic learning outcomes are formulated, which apply to the Bachelor's degree programmes in Astronomy, Physics, Applied Physics, Chemistry, Chemical Engineering, Mathematics and Applied Mathematics, to which specific learning outcomes for each degree programme are subsequently added.

A. Generic learning outcomes – Knowledge

A1. Bachelor's graduates have general knowledge of the foundations and history of mathematics, natural sciences and technology, in particular those of their own discipline.

A2. Bachelor's graduates have mastered the basic concepts of their own discipline (see Appendix I for further specification) to a certain extent and are familiar with the interrelationships of these concepts within their own discipline as well as with other disciplines.

A3. Bachelor's graduates have in-depth knowledge of several current topics within their own discipline.

A4. Bachelor's graduates are familiar with the quantitative character of the fields of mathematics and natural sciences and have an understanding of the methods used in these fields, and particularly within their own discipline, including computer-aided methods.

A5. Bachelor's graduates have sufficient knowledge and understanding of mathematics and natural sciences to successfully complete a follow-up Master's degree programme in their own discipline.

A6. Bachelor's graduates are aware of the societal, ethical and social aspects involved in the fields of mathematics and natural sciences.

B. Generic learning outcomes – Skills

B1 (Research) Bachelor's graduates are able to draw up a research question, design, plan and conduct research and report on it independently with a certain degree of supervision. Bachelor's graduates are able to evaluate the value and limitations of their research and assess its applicability outside their own field.

B2 (Designing and Modelling) Bachelor's graduates are able to translate a problem, in particular a design problem, into a plan of approach and – taking into account the requirements of the client and/or technical preconditions – find a solution.

B3 (Gathering information) Bachelor's graduates are able to gather relevant information using modern means of communication and to critically interpret this information.

B4 (Collaborating) Bachelor's graduates are able to collaborate in teams (including multidisciplinary teams) on technical-scientific problems.

B5 (Communicating) Bachelor's graduates are able to communicate orally and in writing in academic and professional contexts, with both colleagues and others, in English. They are familiar with the relevant means of communication.

B6 (Reflecting) Bachelor's graduates are able to assess their own actions and those of others in a natural sciences context, bearing in mind the social/societal and ethical aspects.

B7 (Learning skills) Bachelor's graduates are able to apply learning skills that enable them to pursue a follow-up degree and acquire knowledge in new fields with a high level of autonomy.

B8 Additional subject-specific skills are listed in Appendix II.

Appendix I Degree programme-specific learning outcomes – Basic knowledge

1.1. Bachelor's graduates have mastered the basic concepts and techniques of mathematics, in particular single and multivariable calculus, linear algebra, analysis, ordinary differential equations, probability theory and statistics, and algebra.
1.2. Bachelor's graduates have knowledge of more advanced subjects within the fields of algebra and geometry, analysis and numerical mathematics, as well as dynamical systems and systems theory.
1.3. Bachelor's graduates have specific knowledge of one of the fields of Pure Mathematics, Physics, Logic, Philosophy, Statistics or Econometrics.
1.4. Bachelor's graduates have gained knowledge of and experience in the 'heart' of mathematics, i.e. the truth and value of exact mathematical proof.
1.5. Bachelor's graduates have knowledge of mathematical applications in various other fields of study.
1.6. Bachelor's graduates are able to use mathematical software packages in an effective way or, if necessary, develop programs themselves.
1.7. (Minor) Bachelor's graduates have a broad-based knowledge of subjects within their own or a different discipline.

Appendix I Degree programme-specific learning outcomes – Skills

Research

2.1 Bachelor's graduates have an academic attitude, which means they are curious, critical, creative and dare to show initiative.
2.2 Bachelor's graduates are able to formulate relatively simple mathematical questions and problems in an exact way, and if necessary adapt them to make them tractable. Bachelor's graduates are able to articulate assumptions, understand the importance of detailed definitions, and are able to think in an organized way, to apply exact logical arguments when solving problems, and to generalize and abstract.
2.3 Bachelor's graduates are able to analyze and abstract simple problems that are outside the scope of their own study programme and to independently acquire new knowledge to this end.

Designing and modelling

2.4 Bachelor's graduates are able, under supervision and from the perspective of their field of interest, to translate a problem into a relevant mathematical problem definition and to this end formulate and evaluate a solution based on source research.
2.5 Bachelor's graduates are able to formulate concrete problems from application areas as mathematical problems.

2.6 Bachelor's graduates are able to approach mathematical problems on the basis of a certain logical system and with determination to find the right method of approach.
2.7 Bachelor's graduates are aware of the importance of researching specific cases and examples and have the attitude and skills necessary to critically evaluate the solutions found, test them for correctness and interpret them.
2.8 Bachelor's graduates are able, by abstracting and modelling, to delve into the root of a problem and determine whether existing methods can be applied or new methods must be developed.

Appendix II Majors and Minors of the degree programme (Article 2.1.4)

The Bachelor's degree programme in Mathematics has two specializations:

- General Mathematics
- Statistics and Econometrics

The General Mathematics specialization comprises

1) a Mathematics Major (150 ECTS)
2) a Minor (30 ECTS) to be chosen from
    a. University-wide broadening Minors
    b. Faculty-wide deepening Minors
    c. Deepening Minors Mathematics, specifically for
        - Mathematics & Physics
        - Mathematics, Logic & Philosophy
        - Mathematics
    d. Broadening Minor Mathematics
    e. Optional Minor, based on an individual choice of course units to be approved by the Board of Examiners.

The Statistics and Econometrics specialization comprises

1) a Statistics and Econometrics Major (150 ECTS)
2) a compulsory deepening Minor in Statistics and Econometrics (30 ECTS)

Appendix III Course units in the propaedeutic phase

- **List of course units; Article 3.1.1**
- **Course units with one or more practicals; Article 3.2**
- **Compulsory order of examinations; Article 8.2**

2013-2014 and earlier cohorts: See the appendices to the OER for the starting year of the degree programme.

2014-2015 cohort and later:
The propaedeutic phase of the Bachelor's degree programme in Mathematics with specializations in General Mathematics (including three structured tracks in the interest fields of 'Mathematics & Physics', 'Mathematics, Logic & Philosophy' and 'Mathematics') and Statistics and Econometrics comprises a compulsory joint programme as well as electives that dovetail with the students' specialization/interest field.

1-1. Compulsory programme, year 1

Period	Course unit name	ECTS	Entry requirements	Practical
Ia	Calculus 1	5		x
	Introduction to Mathematics	5		
	Elective, period 1a	5	See 1-2	
Ib	Linear Algebra 1	5		x
	Mechanics for Mathematics	5		
	Elective, period 1b	5	See 1-2	
IIa	Calculus 2	5		
	Computer-Aided Problem-Solving	5		x
	Linear Algebra 2	5		
IIb	Analysis	5		
	Probability Theory	5		
	Propaedeutic Project	5		x

1-2 Optional course units, year 1

Period	Course unit name	ECTS	Entry requirements	Practical
Ia	Physics Laboratory 1*	5	-	x
		5	-	x
	Introduction to Logic**	5	-	
1b	Operations Research 1#	5	-	x
	Physics of the Quantum Universe*	5	-	

* Programme component for the Mathematics & Physics interest field
** Programme component for the Mathematics, Logic & Philosophy interest field. Also an elective in year 2.
# Compulsory for the Statistics and Econometrics specialization

Appendix IV Course units in the post-propaedeutic phase

- **List of course units; Article 6.1.1**
- **Course units with one or more practicals; Article 6.2.1**
- **Compulsory order of examinations; Article 8.2**

The post-propaedeutic phase of the Bachelor's degree programme in Mathematics with specializations in General Mathematics and Statistics and Econometrics comprises a compulsory joint programme, an elective programme dovetailing with the student's specialization/interest field, and a Minor that also dovetails with the student's specialization/interest field or can be entirely freely chosen. During each period that includes electives, students must choose one of the available electives that dovetails with their specialization/interest field.

A new bachelor curriculum of the post-propaedeutic phase has been introduced as of 2015-2016. The new curriculum of year 2 has started in 2015-2016 and the new curriculum of year 3 starts in 2016-2017.

2-1 Compulsory programme, year 2

Period	Course unit name	ECTS	Entry requirements	Practical
Ia	Ordinary Differential Equations	5	-	
	Statistics	5	-	
	Specialization course unit, period Ia	5	See 2-2	
Ib	Complex Analysis	5	-	
	Group Theory	5	-	
	Project Systems Theory	5	-	x
IIa	History of Mathematics#	5	-	x
	C.S.: Ethical and Professional Issues#	5	-	
	Metric Spaces	5	-	
	Specialization course unit, period IIa	5	See 2-2	
IIb	Numerical Mathematics 1	5	-	x
	Project Dynamical Systems	5	-	
	Specialization course unit, period IIb	5	See 2-2	

Choose one of these two

2-2 Specialization programme, year 2

Specialization General Mathematics, year 2

- Mathematics & Physics interest field, year 2

Period	Course unit name	ECTS	Entry requirements	Practical
Ia	Project Mathematical Physics	5	-	x
IIa	Partial Differential Equations	5	-	
IIb	Physics Laboratory II	5	-	x

- Mathematics, Logic & Philosophy interest field, year 2

Period	Course unit name	ECTS	Entry requirements	Practical
Ia	Project Mathematical Physics #	5	-	x
	Statistical Reasoning #	5	-	
	Introduction to Logic#	5	-	
IIa	Partial Differential Equations	5	-	
IIb	Advanced Logic	5	Introduction to Logic	x

Choose one of these three. Introduction to Logic is obligatory in year 2 if it was not chosen in year 1.

- Mathematics interest field, year 2

Period	Course unit name	ECTS	Entry requirements	Practical
Ia	Project Mathematical Physics#	5	-	x
	Statistical Reasoning#	5	-	
IIa	Partial Differential Equations	5	-	
IIb	Algebraic Structures	5	-	

Choose one of these two

- General Mathematics without specific field of interest and free minor, year 2

Period	Course unit name	ECTS	Entry requirements	Practical
Ia	Project Mathematical Physics#	5	-	x
	Statistical Reasoning#	5	-	
IIa	Partial Differential Equations	5	-	
IIb	Algebraic Structures##	5	-	
	Advanced Logic##	5	Introduction to Logic	x
	Physics Laboratory II##	5	-	x
	Fluid Dynamics##	5	-	

Choose one of these two
Choose one of these four

Specialization Statistics and Econometrics, year 2

Period	Course unit name	ECTS	Entry requirements	Practical
Ia	Statistical Reasoning	5	-	
IIa	Introduction to Actuarial Sciences#	5	-	x
	Introduction to Econometrics#	5	-	x
IIb	Risk Insurance##	5	-	x
	Dynamic Econometrics##	5	-	
	Game theory##	5	-	

Choose one of these two
Choose one of these three

Year 3
Applicable to students who started in the academic year 2014-2015 or later

A3-1 Compulsory programme, year 3
(This curriculum of year 3 starts in 2016-2017)

Period	Course unit name	ECTS	Entry requirements	Practical
Ia	Minor	15	-	
Ib	Minor	15	-	
IIa	Analysis on Manifolds	5	-	
	Functional Analysis	5	-	
	Elective, period IIa	5	See A3-2	
IIb	Bachelor's Project	15	Passed 150 ECTS of the Bachelor's programme in Mathematics	x

A3-2 Elective programme, year 3
(This curriculum of year 3 starts in 2016-2017)

Period	Course unit name	ECTS	Entry requirements	Practical
IIa	Statistical Modelling#	5	-	
	Electronics and Signal Processing*	5	-	x
	Structure of Matter I*			
	Philosophy of Science, Technology & Society**	5	-	

Compulsory for the Statistics and Econometrics specialization
Programme component for the General Mathematics specialization with Mathematics interest field
Programme component for General Mathematics without specific field of interest and free minor
* Programme component for the General Mathematics specialization with Physics interest field, choose one out of two.
* Programme component for General Mathematics without specific field of interest and free minor
** Programme component for the General Mathematics specialization with Logic & Philosophy interest field
** Programme component for General Mathematics without specific field of interest and free minor

A3-3 Deepening Minor, Mathematics & Physics interest field

(This curriculum of year 3 starts in 2016-2017)

Period	Course unit name	ECTS	Entry requirements	Practical
Ia	Measure Theory and Integration	5	-	
	Computational Methods of Science	5	-	
	Quantum Physics 1	5	-	
Ib	Chaos Theory	5	-	
	Waves and Optics	5	-	x
	Calculus of Variations and Optimal Control#	5	-	
	Geometry#	5	-	
	Advanced Systems Theory#	5	-	

Choose one of these three

A3-4 Deepening Minor, Mathematics, Logic & Philosophy interest field

(This curriculum of year 3 starts in 2016-2017)

Period	Course unit name	ECTS	Entry requirements	Practical
Ia	Measure Theory and Integration	5	-	
	Mathematical Modelling	5	-	
	Security and Coding#	5	-	
	Quantum Physics 1#	5	-	
Ib	Philosophy of Natural Sciences	5	-	
	Chaos Theory ##	5	-	
	Advanced Systems Theory ##	5	-	
	Numerical Mathematics 2##	5	-	x
	Calculus of Variations and Optimal Control##	5	-	

Choose one of these two
Choose two of these four

A3-5 Deepening Minor, Mathematics interest field

(This curriculum of year 3 starts in 2016-2017)

Period	Course unit name	ECTS	Entry requirements	Practical
Ia	Measure Theory and Integration	5	-	
	Mathematical Modelling	5	-	
	Security and Coding	5	-	
Ib	Geometry	5	-	
	Advanced Systems Theory#	5	-	
	Advanced Algebraic Structures#	5	-	
	Chaos Theory ##	5	-	
	Calculus of Variations and Optimal Control##	5	-	

Choose one of these two
Choose one of these two

A3-6 Deepening Minor, Statistics and Econometrics specialization

(This curriculum of year 3 starts in 2016-2017)

Period	Course unit name	ECTS	Entry requirements	Practical
Ia	Measure Theory and Integration	5	-	
	Mathematical Modelling	5	-	
	Asymptotic Statistics	5	-	
Ib	Calculus of Variations and Optimal Control	5	-	
	Stochastic Models	5	-	x
	Advanced Systems Theory#	5	-	
	Numerical Mathematics 2#	5	-	x
	Empirical Econometrics#	5	-	

Choose one of these three course units

A3-7 Broadening Minor Mathematics

A combination of six courses which are part of the list of courses composed of the courses in the deepening minors Mathematics stated above in A3.3, A3.4, A3.5 and A3.6, and the courses of semester 1 of year 3 of the bachelor's degree programme in Applied Mathematics (see the teaching and examination regulations of the bachelor's degree programme in Applied Mathematics), and the course Onderwijs en Communicatie (see the teaching and examination regulations of the master's degree programme in Educatie en Communicatie in de Wiskunde en Natuurwetenschappen)

Appendix V Entry Requirements (Article 10.2.1)

A. HBO (university of applied science) propaedeutic certificate

1. The following requirements apply to the entrance examination as defined in Article 7.28.3 of the Act:

Degree programme	**Subjects at VWO (pre-university) level**	Requirement: Dutch as a Second Language (programme II) for non-native speakers of Dutch
B Biology	wia or wib + na+sk+bio	Yes
B Pharmacy	wia or wib + na+sk	Yes
B Life Science and Technology	wib+na+sk	Yes
B Computing Science	wib	
B Artificial Intelligence	wia or wib	
B Physics	wib+na	
B Chemistry	wib+na+sk	
B Astronomy	wib+na	
B Mathematics	wib	
B Chemical Engineering	wib+na+sk	
B Industrial Engineering and Management Science	wib	
B Applied Physics	wib+na	
B Applied Mathematics	wib	

wia = Mathematics A; wib = Mathematics B; na = Physics; sk = Chemistry; bio = Biology

2. Non-native speakers of Dutch who wish to be admitted to the Bachelor's degree programmes in Biology, Life Science and Technology, or Pharmacy must also have passed the State Examination in Dutch as a Second Language, Programme II (NT2-II).

3. The Faculty Committee for Special Admissions will determine whether deficiencies have been compensated satisfactorily.

B. Foreign qualifications (EEA)

1. Any certificate that grants access to a university in a European country will also grant access to Dutch universities.

2. The same requirements that also apply to candidates with an HBO (university of applied science) propaedeutic certificate will apply to these candidates in the entrance examination as defined in Article 7.28.3 of the Act (see A).

3. Non-native speakers of Dutch who wish to be admitted to the Bachelor's degree programmes in Biology, Life Science and Technology, or Pharmacy must also have passed the State Examination in Dutch as a Second Language, Programme II (NT2-II).

4. In addition, candidates are required to be competent in English: an IELTS score of 6.5, a TOEFL score of 580 (paper-based), of 237 (computer-based) or of 92 (internet-based) or equivalent.

5. The Faculty Committee for Special Admissions will determine whether deficiencies have been compensated satisfactorily.

C. Foreign qualifications (German)

1. German candidates must have a Zeugnis der Allgemeinen Hochschulreife ('Abitur').

2. The following requirements apply to the entrance examination as defined in Article 7.28.3 of the Act:

Degree programme	
B Biology	wi (LK or GK) na (LK or GK) sk (LK or GK) bio (LK or GK) (at least one subject at Leistungskurs level)
B Pharmacy B Life Science and Technology B Chemistry B Chemical Engineering	wi (LK or GK) na (LK or GK) sk (LK or GK) (at least one subject at Leistungskurs level)
B Computing Science B Mathematics B Applied Mathematics B Artificial Intelligence	wi (LK)
B Physics B Astronomy B Applied Physics	wi (LK) na (LK or GK)
B Industrial Engineering and Management Science	wi (LK or GK) na (LK or GK) (at least one subject at Leistungskurs level)

wi= Mathematics; na = Physics; sk = Chemistry; bio = Biology
LK = Leistungskurs level; GK = Grundkurs level followed until end of Class 13 or Class 12 (if Gymnasium education lasts 12 years).

3. Non-native speakers of Dutch who wish to be admitted to the Bachelor's degree programmes in Biology, Life Science and Technology, or Pharmacy must also have passed the State Examination in Dutch as a Second Language, Programme II (NT2-II).

4. The Faculty Committee for Special Admissions will determine whether deficiencies have been compensated satisfactorily.

D. Foreign qualifications (International Baccalaureate)

1. The following requirements apply to the entrance examination as defined in Article 7.28.3 of the Act:

Degree programme	**from 2010/2011**
B Biology	Biology (SL or HL) Maths (SL or HL) Physics (SL or HL) Chemistry (SL or HL) two of these subjects at HL
B Pharmacy B Life Science and Technology B Chemistry B Chemical Engineering	Maths (SL or HL) Physics (SL or HL) Chemistry (SL or HL) two of these subjects at HL
B Computing Science B Mathematics B Applied Mathematics	Maths HL
B Artificial Intelligence	Maths SL **or** Maths HL
B Physics B Astronomy B Applied Physics B Industrial Engineering and Management Science	Maths HL Physics HL

SL = Standard Level, HL = Higher Level

2. Non-native speakers of Dutch who wish to be admitted to the Bachelor's degree programmes in Biology, Life Science and Technology, or Pharmacy must also have passed the State Examination in Dutch as a Second Language, Programme II (NT2-II).

3. The Faculty Committee for Special Admissions will determine whether deficiencies have been compensated satisfactorily.

E. Foreign qualifications (non-EEA)

1. A non-European certificate that according to NUFFIC and/or NARIC standards is equivalent to a Dutch VWO certificate will grant access to university in the Netherlands.

2. The same requirements that also apply to candidates with an HBO (university of applied science) propaedeutic certificate will apply to these candidates in the entrance examination as defined in Article 7.28.3 of the Act (see A).

3. Non-native speakers of Dutch who wish to be admitted to the Bachelor's degree programmes in Biology, Life Science and Technology, or Pharmacy must also have passed the State Examination in Dutch as a Second Language, Programme II (NT2-II).

4. In addition, candidates are required to be competent in English: an IELTS score of 6.5, a TOEFL score of 580 (paper-based), of 237 (computer-based) or of 92 (internet-based) or equivalent.

5. The Faculty Committee for Special Admissions will determine whether deficiencies have been compensated satisfactorily.

F. Entrance examination

1. The following requirements apply to the entrance examination as defined in Article 7.29 of the Act:

Degree programme	**Nature and Health VWO level**	**or**	**Nature and Technology VWO level**
B Biology	en, wia or b, sk, bio, na		en, wib, na, sk, bio
B Pharmacy	en, wia or b, sk, bio, na		en, wib, na, sk
B Life Science and Technology	en, wib, sk, bio, na		en, wib, na, sk
B Computing Science	en, wib, sk, bio		en, wib, na, sk
B Artificial Intelligence	en, wia of b, sk, bio		en, wib, na, sk
B Physics	en, wib, sk, bio, na		en, wib, na, sk
B Chemistry	en, wib, sk, bio, na		en, wib, na, sk
B Astronomy	en, wib, sk, bio, na		en, wib, na, sk
B Mathematics	en, wib, sk, bio		en, wib, na, sk
B Chemical Engineering	en, wib, sk, bio, na		en, wib, na, sk
B Industrial Engineering and Management Science	en, wib, sk, bio		en, wib, na, sk
B Applied Physics	en, wib, sk, bio, na		en, wib, na, sk
B Applied Mathematics	en, wib, sk, bio		en, wib, na, sk

en = English; wia = Mathematics A; wib = Mathematics B; na = Physics; sk = Chemistry; bio = Biology

2. Non-native speakers of Dutch who wish to be admitted to the Bachelor's degree programmes in Biology, Life Science and Technology, or Pharmacy must also have passed the State Examination in Dutch as a Second Language, Programme II (NT2-II).

1. The Faculty Committee for Special Admissions will determine whether deficiencies have been compensated satisfactorily.

Appendix VI Clustering of Bachelor's degree programmes Article 4.3.4, Article 4.6.1

Degree programme CROHO code	Name of degree programme	Clustered with CROHO code	Name of degree programme
56286	B Life Science and Technology	56860 56157	B Biology B Pharmacy
56860	B Biology	56286 56157	B Life Science and Technology B Pharmacy
56157	B Pharmacy	56860 56286	B Biology B Life Science and Technology
56980	B Mathematics	56965	B Applied Mathematics
56965	B Applied Mathematics	56980	B Mathematics
50206	B Physics	56962 50205	B Applied Physics B Astronomy
56962	B Applied Physics	50206 50205	B Physics B Astronomy
50205	B Astronomy	56962 50206	B Applied Physics B Physics
56857	B Chemistry	56960	B Chemical Engineering
56960	B Chemical Engineering	56857	B Chemistry

Appendix VII Admission to the post-propaedeutic phase (Article 5.1.1)

The following candidates will be admitted to the post-propaedeutic phase:

- Holders of a propaedeutic certificate of the bachelor's degree programme in Mathematics or Applied Mathematics

Appendix VIII Contact Hours in the propaedeutic phase (Article 2.4)

Bachelor year 1	
Type of contact	**Number of contact hours per year**
Lectures	335
Tutorials	290
Practical	25
Computer practical	40
Study support/Mentor groups	8
Internship support and guidance	-
Exams	80
Misc. contact hours (symposia)	10

Appendix IX University minors of the Faculty of Mathematics and Natural Sciences (Article 7.5.1)

1. Neurosciences Minor:
   - Neuroscience (15 ECTS)
   - Behavioural Neuroscience (15 ECTS)

   People, Planet, Profit Minor:
   - Overview and Coherence People Planet Profit (10 ECTS)
   - Paper People Planet Profit (5 ECTS)
   - Project People, Planet, Profit (15 ECTS)

   Astronomy through Space and Time Minor:
   - The Evolving Universe (5 ECTS)
   - Cosmic Origins (5 ECTS)
   - Astrobiology (5 ECTS)

2. The Programme Committee for the Bachelor's degree programmes in Biology and Life Science & Technology also has authority in the field of the Neurosciences Minor and/or its course units.

   The Programme Committee for the Master's degree programme in Energy & Environmental Sciences also has authority in the field of the People, Planet, Profit Minor and/or its course units.

   The Programme Committee for the Bachelor's degree programme in Astronomy also has authority in the field of the Astronomy through Space and Time Minor and/or its course units.

3. The Board of Examiners for the Bachelor's degree programmes in Biology and Life Science & Technology and the Master's degree programmes in Biology, Ecology & Evolution, Marine Biology and Molecular Biology & Biotechnology also has authority in the field of the Neurosciences Minor and/or its course units.

   The Board of Examiners for the Master's degree programme in Energy & Environmental Sciences also has authority in the field of the People, Planet, Profit Minor and/or its course units.

   The Board of Examiners for the Bachelor's degree programme in Astronomy also has authority in the field of the Astronomy through Space and Time Minor and/or its course units.

4. These Teaching and Examination Regulations also apply in their entirety to the Minors in Neurosciences, People, Planet, Profit and Astronomy through Space and Time and/or their course units.