

These degree program and examination regulations have been worded carefully to be up to date; however, errors cannot be completely excluded. The official German text available from L1 – Legal Affairs and Academic Quality Management is the version that is legally binding.

Note: Students who started their studies before the latest amendment came into effect are requested to also comply with previous amendments and the respective transitory provisions.

Degree program and examination regulations for the Bachelor's degree program in Geosciences (BSc) and the Master's degree program in Geosciences (MSc) at the Faculty of Sciences at Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)

– FPO BAMA Geow – dated October 28, 2019

amended by statutes of
June 4, 2020
September 8, 2022

Based on Section 13 (1)(2), Section 43 (5)(2), Section 58 (1) and Section 61 (2)(1) of the Bavarian Higher Education Act (Bayerisches Hochschulgesetz, **BayHSchG**), FAU enacts the following examination regulations:

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Part I: General Provisions

Section 40 Scope

The degree program and examination regulations for the Bachelor's degree program in Geosciences (BSc) and the Master's degree program in Geosciences (MSc) supplement the current version of the General Degree Program and Examination Regulations for Bachelor's and Master's Degree Programs at the Faculty of Sciences at FAU (**ABMPO/NatFak**).

Section 41 Bachelor's Degree Program, Related Degree Programs

(1) ¹The Bachelor's degree program in Geosciences shall consist of modules worth 180 ECTS credits distributed over six semesters as detailed in **Appendix 1**. ²This includes the period for working on the Bachelor's thesis.

(2) Related degrees within the meaning of Section 28 (1)(2) **ABMPO/NatFak** are Bachelor's degrees in geology, mineralogy and paleontology.

Section 42 Master's Degree Program, Start of Degree Program, Related Degree Programs, Teaching and Examination Language

(1) ¹The Master's degree program in Geosciences (MSc) builds on the contents of the Bachelor's degree program in Geosciences (BSc). ²It consists of modules worth 120 ECTS credits including the Master's thesis, distributed over four semesters.

(2) The Master's degree program may only be started in the winter semester.

(3) Degree programs in a related subject pursuant to Section 35 (1) (2) **ABMPO/NatFak** are degrees in scientific or technical subjects which cover geosciences, including an individual specialization relating to geosciences for which at least 120 ECTS credits have been awarded.

(4) ¹The teaching and examination language for the Master's degree program in Geosciences is German for the specializations Applied geology, Applied sedimentology, Applied mineralogy and Petrology/Geodynamics/Georesources. ²The teaching and examination language is English for the specializations Paleobiology-Paleoenvironments and Climate and Earth Systems. ³ Section 4 (4) (2) **ABMPO/NatFak** applies with the proviso that the teaching and examination language for the modules named in Sentences 1 and 2 may be held in the other language; otherwise Section 4 (4) **ABMPO/NatFak** shall remain unaffected.

Section 43 Examinations Committee

¹The Examinations Committee for the Bachelor's and Master's degree program in Geosciences comprises five members. ²The chairperson, their deputy and the further members of the Examinations Committee shall be university lecturers involved in teaching Geosciences at the Faculty of Sciences and appointed by the Faculty Council of the Faculty of Sciences at the suggestion of the Geosciences teaching staff. ³The

Dean of Studies and the Head of the Department of Geosciences have an advisory role on the Examinations Committee.

Part II: Special Provisions

1. Bachelor's Examination

Section 44 Structure of the Bachelor's Degree Program

(1) ¹The Bachelor's degree program in Geosciences consists of compulsory, compulsory elective and elective modules. ²The distribution across the semesters, the type and duration of the examinations in the modules and the required number of ECTS credits are set forth in **Appendix 1**.

(2) Modules no. 1 to 21 and 30 in **Appendix 1** are compulsory.

(3) ¹Modules no. 22 to 27 in **Appendix 1** are compulsory elective modules in Geosciences. ²Further details are stipulated in Section 46.

(4) ¹For the key qualifications module (module no. 28), students may choose from all modules offered as key qualifications at FAU; Section 47 (2) shall apply accordingly. ²For the elective module (module 29), students may choose from all elective modules offered by the Department of Geosciences; Section 47 shall apply accordingly.

(5) Notwithstanding Section 33 (1) and (2) **ABMPO/NatFak**, taking additional modules pursuant to Section 33 **ABMPO/NatFak** is not permitted in the Bachelor's degree program in Geosciences.

Section 45 Grundlagen- und Orientierungsprüfung (GOP)

(1) The Grundlagen- und Orientierungsprüfung (GOP) shall consist of the following modules:

- Foundations of geosciences I (5 ECTS credits)
- Minerals and rocks (5 ECTS credits)
- Chemistry (10 ECTS credits)
- Earth Science Methods I (5 ECTS credits).

(2) The GOP shall have been passed when all modules listed in (1) have been evaluated as 'bestanden' (passed) or given a grade of at least 'ausreichend' (sufficient).

Section 46 Compulsory Elective Modules in Geosciences

(1) ¹Three module packages each of which accounts for 10 ECTS credits can be chosen as compulsory elective modules in geosciences as defined in Section 44 (3).

1. Applied geology (AG)
2. Applied mineralogy (AM)
3. Applied sedimentology – Georesources (AS)
4. Petrology – Geodynamics – Georesources (PG)
5. Paleobiology-Paleoenvironments (PB).

²The compulsory elective modules in geosciences are listed in a module catalog, which is announced in accordance with local practice at the latest one week before the semester begins. ³The catalog of compulsory elective module in geosciences is divided into the following areas:

1. Geosciences – Specialization I
2. Geosciences – Specialization II.

⁴Each module is categorized in one of the areas pursuant to Sentence 3 when the catalog is published. ⁵The module catalog can be amended by the Examinations Committee with effect from the next semester. The module catalog shall be announced in accordance with local practice at the latest one week before the semester begins.

(2) ¹The learning outcome of the compulsory elective modules in geosciences mentioned above is to allow students to gain a more in-depth knowledge of selected skills. ²The second learning outcome has a research focus, with students learning subject-related methods of research and exploring their subject in more depth. ³Thirdly, the element of choice allows students to tailor their profile in view of their career plans.

(3) Each module package with 10 ECTS credits in the compulsory elective modules in geosciences have the following subject-specific learning outcomes:

1. ¹In the module package Applied Geology (AG), students acquire in-depth methodological skills. ²These skills deal with various aspects of applied geology and enable students to draw up evidence-based qualitative and quantitative evaluations for foundation engineering and mass wasting. ³At the same time, students acquire theoretical and practical skills in fundamental areas of hydrogeology such as tracer applications as well as hydrogeological surveys with quality and quantity considerations. ⁴All modules help students to practice and implement practical aspects of applied geology.
2. ¹In the Applied Mineralogy (AM) module package, students expand their skills in mineralogy and acquire methodological skills for analyzing natural and synthetic materials. ²The modules focus on the use of chemical and physical properties of minerals for their analysis. ³The main topics include processes in geoscience or material science and the characterization of the phase mixtures involved. ⁴The skills gained enable students to understand the properties of minerals in application, for the use of the symmetry properties of minerals and their identification as well as for carrying out chemical analyses of rocks.
3. In the module package Applied sedimentology – Georesources (AS), students acquire and develop fundamental methodological skills in process-oriented , structure analysis and microscopy of sedimentary rocks using laboratory courses and field exercises that provide them with a fundamental understanding of the exploration, development and sustainable utilization of georesources in the energy and raw materials sector.
4. In the Petrology – Geodynamics – Georesources (PG) module package, students acquire fundamental methodological skills in the magmatic, metamorphic, hydrothermal and tectonic processes in the lithosphere enabling them to describe the fundamental processes in the development of the lithosphere.
5. In the Paleobiology-Paleoenvironments (PB) module package, students acquire fundamental methodological skills in biodiversity research, macroevolution and microfacies analysis that enable them to understand paleobiological processes. In addition, they also acquire comprehensive knowledge of the earth system during various space time scales.

(4) ¹The type and scope of the examination and the way in which the grade is determined for compulsory elective modules in geosciences depend on the specific manner in which the respective module is taught; see module handbook for details. ²Potential examinations in the Geosciences – Specialization I pursuant to Section 1 (3) (1):

1. Written examination (60–180 min),
2. Electronic examination (e-examination 30–60 min),
3. Report (5–10 pages),
4. Oral examination (15–45 min.).

³Potential examinations in the Geosciences – Specialization II pursuant to Section 1 (3) (2):

1. Written assignment (5–10 pages),
2. Seminar achievement (SA, presentation 10–30 min or report 5–10 pages),
3. Excursion achievement (ExA, report approx. 5–15 pages or series of reports approx. 15–30 pages),
4. Practical achievement (PA, report approx. 5–15 pages or series of reports 15- 30 pages).

⁴In justified exceptional circumstances pursuant to Section 6 (2)(3) **ABMPO/NatFak**, combinations may also be possible. ⁵In particular, it is possible to combine a written or oral examination with achievements as set forth in Section 6 (4) **ABMPO/NatFak**. ⁶Further details are stipulated in the module handbook.

(5) ¹Modules generally amount to 5 ECTS credits and usually consist of lectures (2 SWS) with exercises (2 SWS) or seminars (up to 2 SWS) or tutorials (2 SWS). ²Any exceptions are detailed in the module handbook.

(6) ¹Students choose a compulsory elective module in geosciences by registering for and participating in a field exercise and the resulting automatic registration for the first examination in a module from the group of compulsory elective modules from the geosciences specializations to be chosen. ²Exceptions from sentence 1 are specialization modules in geosciences without field exercises.

Section 47 Elective Module

(1) ¹The first learning outcome of the elective modules is to give students the opportunity to explore the theory behind at least one specialization (raw materials and materials science, chemistry, astronomy, computer science, computers in geosciences, geography and biology). ²The second learning outcome is methodological, training students in interdisciplinary approaches, extending scientific perspectives to other fields of study and gathering experience in interdisciplinary scientific methods. ³Thirdly, the element of choice gives students the opportunity to create their own particular profile in view of their future career. ⁴Section 46 (1) sentences 2 and 3 shall apply accordingly.

(2) ¹The type and scope of the examination and the way in which the grade is determined for elective modules depend on the specific manner in which the respective module is taught; see module handbook for details. ²Potential examinations for intermediate modules in geosciences I pursuant to Section 1 (4) in conjunction with Section 46 (1) (3) (1):

1. Written examination (60–180 min),
2. Electronic examination (e-examination 30–60 min),
3. Oral examination (15–45 min.),
4. Seminar achievement (SA, presentation 10-30 min or report 5–10 pages).

³Potential examinations for intermediate modules in geosciences II pursuant to Section 1 (4) in conjunction with Section 46 (1) (3) (2):

1. Written assignment (5-10 pages),
2. Report (5-10 pages)

3. Excursion achievement (ExA, report approx. 5–15 pages or series of reports approx. 15–30 pages),
4. Practical achievement (PA, report approx. 5–15 pages or series of reports 15- 30 pages).

⁴The type and scope of teaching units and examinations from modules outside the Department of Geosciences are detailed in the respective **degree program and examination regulations**.

Section 48 Bachelor's Thesis

(1) Students are required to have achieved at least 110 ECTS credits in order to be allocated a subject for the Bachelor's thesis.

(2) ¹The Bachelor's thesis module accounts for a total of 15 ECTS credits, with 12 ECTS allocated to the written Bachelor's thesis and 3 ECTS credits to the oral examination for the Bachelor's thesis in accordance with Section 3. ²Requirements for the Bachelor's thesis module shall be such that it can be completed within 8 weeks.

(3) ¹Depending on the specific manner in which the respective module is taught in the specific semester, the oral examination for the Bachelor's thesis comprises either a 15-minute presentation in which the Bachelor's thesis and its results are presented and a subsequent discussion lasting approximately 5 minutes or a 15-minute poster presentation with a subsequent discussion lasting approximately 5 minutes. ²The date of the presentation or the poster presentation held during a geosciences seminar shall be determined by the supervising lecturer either after the student has submitted their Bachelor's thesis or during the final stage of thesis work. ³The date shall usually be between two and four weeks of the date the thesis is submitted; students shall be notified of the date at least two weeks in advance. ⁴A grade shall be awarded for the oral examination by the supervisor and at least one other authorized university lecturer pursuant to Section 10 (1) **ABMPOGeo/NatFak** and Section 22 (1) **ABMPOGeo/NatFak**.

(4) ¹All university lecturers who work at the Department of Geosciences shall be entitled to allocate subjects for Bachelor's theses; exceptions can be granted by the Examinations Committee. ²Notwithstanding Section 31 (7) (1) **ABMPO/NatFak**, the Bachelor's thesis shall generally be evaluated by the supervisor; Section 17 (3) (2) **ABMPO/NatFak** shall remain unaffected. ³If two evaluations are submitted and one examiner grades the thesis as 'nicht ausreichend' (unsatisfactory), it shall be rejected. ⁴Otherwise the thesis shall be given the grade which is the arithmetic average of the grades of both evaluations; Section 22 (1) sentences 5 and 6 **ABMPO/NatFak** shall apply.

2. Master's Examination

Section 49 Admissions Committee for the Master's Degree Program

¹The admissions committee for the Geosciences (MSc) Master's degree program shall comprise one professor for each of the five major fields of study from which one shall be appointed chairperson. ²The Faculty Council shall appoint a deputy for each of the appointed members. ³For conducting the oral admission examination pursuant to Section 50 (3), the Admissions Committee shall appoint a university lecturer from each of the major fields of study of Geozentrum Nordbayern.

Section 50 Qualification for a Master's Degree, Certificates and Admission Requirements

(1) ¹A subject-specific degree within the meaning of Section 34 (1)(1)(1) **ABMPO/NatFak** is a Bachelor's degree or a Diplom degree in Geosciences (including geology, mineralogy or paleontology). ²Qualifications in a related subject pursuant to Section 34 (1) sentence 1 **ABMPO/NatFak** are in particular qualifications from scientific or technical degree programs which cover geosciences, including an individual specialization relating to geosciences for which at least 120 ECTS credits have been awarded. ³The minimum number of ECTS credits required in the event of a student not having yet completed their Bachelor's degree pursuant to Section 34 (3) **ABMPO/NatFak** is 140 ECTS credits.

(2) ¹The application for admission to the qualification assessment process according to (2)(2)(3) of the **Appendix to ABMPO/NatFak** shall include the following documents:

1. Proof of English language skills at CEFR (Common European Framework of Reference for Languages) level B2 – Vantage or upper intermediate and
2. A list of chosen major/minor subjects.

²Evidence pursuant to sentence 1(1) is not required if the applicant's university entrance qualification or undergraduate degree was obtained in English.

(3) ¹Applicants with a final grade pursuant to (1) (1) or an average grade of achievements to date between 2.51 and 3.5 shall be invited to an oral admission examination.

²Pursuant to (5)(5) of the **Appendix to ABMPO/NatFak**, applicants with a subject-related degree can only be accepted onto the Master's degree program after passing an oral admission examination pursuant to (5)(6) et seq. of the **Appendix to ABMPO/NatFak** in conjunction with (3). The overall grade of the degree pursuant to (1)(2) or the average grade in the case of (1)(3) must be 3.5 or better. ³The oral admission examination pursuant to (5)(6) et seq. of the **Appendix to ABMPO/NatFak** shall be conducted by two examiners from the admissions committee from the fields of study requested by the applicant pursuant to Section 49 Sentence 3. ⁴Applicants shall be assessed on the basis of their specialist and methodological skills in the fundamentals of geosciences (60%) as well as individually chosen specializations in the area of geosciences (40%). ⁵The examiners pursuant to sentence 3 shall submit a recommendation to the admissions committee stating whether the applicant should pass or fail the oral admission examination. ⁶The admissions committee shall decide on the basis of the recommendation pursuant to sentence 5 whether the applicant should pass or fail the selection interview. ⁷If the applicant passes the selection interview, the admissions committee shall decide whether admission is to be granted with conditions according to Section 34 (2) **ABMPO/NatFak**. ⁸If the applicant fails the selection interview, they shall be considered not suitable and shall not be accepted on to the Master's degree program. ⁹Records shall be kept of the first stage and of the selection interview; Section 21 (2) shall apply accordingly.

Section 51 Scope and Structure of the Master's Degree Program

(1) ¹The Master's degree program consists of compulsory elective modules from the major and minor fields of study, the geosciences key qualifications and the Master's thesis. ²Details are set forth hereinafter and in **Appendix 2**.

(2) ¹The Geosciences Master's degree program is offered in the following specializations:

- Applied geology (AG)

- Applied mineralogy (AM)
- Applied sedimentology – Georesources (AS)
- Petrology – Geodynamics – Georesources (PG)
- Palaeobiology – Palaeoenvironments (PB) and
- Climate and Earth Systems (CES)

²The Climate and Earth Systems (CES) specialization can only be chosen as a minor subject. ³Applicants state their chosen specialization in their application for admission to the Master's degree program. ⁴A change of specialization is possible on request at a later date.

(3) ¹The Master's examination shall consist of the required module examinations including the Master's thesis module pursuant to **Appendix 2**. ²To complete the Master's degree, students must pass the following module examinations including the Master's thesis module, amounting to a total of 120 ECTS credits:

1. Modules worth 45 ECTS credits in the major field of study,
2. Modules worth 30 ECTS credits in the minor field of study,
3. A geosciences elective module worth 5 ECTS credits,
4. A geosciences key qualification module worth 10 ECTS credits and,
5. 30 ECTS credits from the Master's thesis in the selected specialization.

(4) Notwithstanding Section 33 (1) and (2) **ABMPO/NatFak**, taking additional modules pursuant to Section 33 **ABMPO/NatFak** is not permitted in the Master's degree program in Geosciences.

Section 52 Compulsory Elective Modules in Specializations

(1) ¹The compulsory elective modules of the major fields of study and minor fields of study in accordance with Section 51 (1) and (2) are listed in module catalogs that are updated each semester; Section 46 (1) sentences 2 and 3 shall apply accordingly. ²In the specializations, students acquire skills in scientific methodology for applying geoscientific, research-oriented methods and for developing strategies to solve geoscientific problems and acquire the ability to carry out academic work independently. ³The learning outcome has a research focus, with students learning subject-specific methods of research and exploring their subject in more depth. ⁴The element of choice allows students to tailor their profile in view of their career plans.

(2) The major fields of study have the following subject-specific learning outcomes:

1. ¹In the major field of study Applied Geology (AG), students acquire in-depth methodological skills. ²These deal with various aspects of applied geology ranging from soil evaluations and mass wasting and foundation engineering to hydrogeology with tracer applications and evaluating different pumping tests as well as water quality observations. ³They enable students to produce evidence-based qualitative and quantitative evaluations in applied geology as well as plan and implement environmental projects and those in the field of foundation engineering.
2. ¹In the major field of study Applied Mineralogy (AM), students acquire in-depth methodological skills for analyzing natural and synthetic materials. ²The focus is on providing training on the understanding of the interaction of the structure and chemistry of crystals with the physical and mineral characteristics of geogenic and synthetic materials. ³The main topics include chemical construction materials, biomaterials and technical ceramics. ⁴The skills gained enable students to develop and optimize technical products with mineralogical, chemical and physical characterization methods.

3. In the major field of study Applied Sedimentology – Georesources (AS), students acquire methodological skills in basin and bore analysis, structural geology/tectonics, sedimental petrography, sedimental geochemistry, geophysics (including seismic interpretation) that enable them to carry out professional exploration in order to develop utilization concepts for geo-energy resources while also considering economic aspects.
4. ¹In the major field of study Petrology – Geodynamics – Georesources (PG), students acquire methodological skills in the magmatic, metamorphic, hydrothermal and tectonic processes in the lithosphere and in modern methods of investigation in geochemistry and structural geology. ²This enables students to independently conduct evidence-based qualitative and quantitative investigations of the magmatic, metamorphic, hydrothermal and tectonic processes during the formation and evolution of the lithosphere.
5. ¹In the major field of study Paleobiology - Paleoenvironments (PB), students acquire methodological skills in biodiversity research, macroevolution, macroecology, microfacies analysis and statistical paleobiological analysis methods that enable them to categorize and evaluate paleobiological processes on a professional level. ²In addition, they acquire interdisciplinary core skills in data science.

(3) The minor fields of study have the following subject-specific learning outcomes:

1. In the minor field of study Applied Geology (AG), students acquire methodological skills that deal with various aspects of mass wasting and foundation engineering as well as skills in fundamental areas of hydrogeology such as tracer applications and theory used for basic applications in aquifer analyses and hydrochemical analyses.
2. ¹In the minor field of study Applied Mineralogy (AM), students acquire methodological skills that provide them with advanced knowledge of the characterization of minerals and the use of technical and natural materials. ²The focus is on providing training on the influence of the structure and chemistry of crystals on their chemical and physical properties.
3. In the minor field of study Applied sedimentology – Georesources (AS), students acquire methodological skills in basin and bore analysis, structural geology/tectonics, sedimental petrography, sedimental geochemistry, geophysics (including seismic interpretation) that enable them to carry out basic explorations to examine and categorize the use of geo-energy resources.
4. In the minor field of study Petrology – Geodynamics – Georesources (PG), students acquire methodological skills in the magmatic, metamorphic, hydrothermal and tectonic processes in the lithosphere in lectures, microscope exercises and calculations as well as during a seminar about current issues in research and professional modern methods of investigation in geochemistry and structural geology. Students are able to classify evidence-based, qualitative and quantitative judgments about magmatic, metamorphic, hydrothermal, and tectonic processes in the lithosphere.
5. In the minor field of study Paleobiology - Paleoenvironments (PB), students acquire methodological skills in biodiversity research, macroevolution, macroecology, and statistical paleobiological analysis methods that enable them to categorize paleobiological processes.
6. In the minor field of study Climate and Earth Systems (CES), students acquire methodological skills in the field of climate research (climate impact research), geochemistry, project planning and development and scientific work (in particular in terms of hypothesis testing), enabling professional and modern science methodology and science communication.

(4) Section 46 (4) to (6) shall apply accordingly.

Section 53 Geosciences Elective Module and Key Qualification Modules

(1) Section 47 shall apply accordingly to the geosciences elective module.

(2) Geosciences key qualification modules are listed in **Appendix 2c**; Section 47 shall apply accordingly.

Section 54 Master's Thesis

(1) ¹30 ECTS credits shall be awarded for the Master's thesis. ²The results of the written work (25 ECTS credits) shall be presented in a presentation (5 ECTS credits).

(2) Students are required to have achieved at least 50 ECTS credits in order to be allocated a subject for the Master's thesis.

(3) ¹The Master's thesis is intended to show that the student is capable of dealing with a problem from the field of the Master's degree program in geosciences independently and according to scientific methods within a set period, presenting the results in accordance with the standards of the field and using the correct language, and putting them in relation to current specialist literature. ²It must focus on the selected specializations and be research-oriented.

(4) ¹If students select the following main fields of study,

- Applied geology (AG)
- Applied mineralogy (AM)
- Applied sedimentology – Georesources (AS)
- Petrology – Geodynamics – Georesources (PG)

the Master's thesis shall be written in German or English.

²If students select Paleobiology – Paleoenvironments (PB) as their major field of study, the Master's thesis shall be written in English.

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(5) ¹Full-time university lecturers employed at the Faculty of Sciences and involved in teaching geosciences full time at GeoZentrum Nordbayern shall be authorized to assign Master's theses. ²The Examinations Committee shall have the right to grant exceptions.

(6) Notwithstanding Section 37 (4) (2) **ABMPO/NatFak**, the Examinations Committee can extend the period for the Master's thesis by a maximum of three months in exceptional cases.

(7) ¹The oral examination (defense of the Master's thesis) in the Master's degree program comprises a presentation of approximately 20 minutes, in which the Master's thesis and its findings are presented in a public seminar, followed by a discussion lasting approximately 10 minutes. ²The date of the presentation shall be determined by the supervising lecturer either after the student has submitted their Master's thesis or during the final stage of thesis work. ³The date shall usually be within four weeks of the date on which the thesis was submitted; students shall be notified of the date at least two weeks in advance. ⁴Section 48 (4) shall apply accordingly.

III. Concluding Provisions

Section 55 Legal Validity

(1) ¹These examination regulations shall come into effect on the day after their publication. ²They shall apply to all students who start the Bachelor's or Master's degree program Geosciences in the winter semester 2019/2020 or later. ³In deviation from sentence 2, in the case of the Master's degree program in Geosciences, the provisions in Section 50 in conjunction with Section 34 and the **Appendix to ABMPO/NatFak** shall apply for the first time to students applying to start studies in the winter semester 2020/2021; until then, the provisions stipulated in the latest version of the degree program and examination regulations for the Bachelor's degree program in Geosciences and the Master's degree program in Geosciences at the Faculty of Sciences at FAU – **FPOGeo** – dated March 2, 2017 shall apply, in conjunction with the latest version of the general examination regulations for the Bachelor's degree program in Geosciences (BSc) and the Master's degree programs in Geosciences (MSc) and GeoThermics/GeoEnergy (Msc) at the Faculty of Sciences at FAU – **ABMPOGeo/NatFak** – dated February 29, 2016.

(2) ¹Students who are already studying under the previous examination regulations for the Bachelor's and Master's degree programs in Geosciences at the Faculty of Sciences at FAU – **FPOGeo** – in the version dated March 2, 2017 shall sit their examinations according to the previously valid examination regulations. ²The degree program and examination regulations mentioned in sentence 1 shall become invalid as of 30 September 2024. ³Examinations pursuant to the degree program and examination regulations stated in sentence 1 will be offered for the last time for the Bachelor's degree program in summer semester 2024 and for the Master's degree program in winter semester 2022/2023.

(3) ¹The first amendment statute shall come into effect on the day after its publication. ²It shall apply to all students starting a degree program from winter semester 2020/2021 onwards.

(4) ¹The second amendment statute shall come into effect on the day after its publication. ²It applies to all students who are already studying in accordance with the valid version of the degree program and examination regulations FPO BAMA Geow. ³Notwithstanding sentence 2, the amendments in the key qualifications modules and the Bachelor's thesis module shall apply to all students starting a degree program from winter semester 2022/2023 onwards. ⁴Notwithstanding sentence 2 and 3, the amendments in Section 50 shall apply to all students starting a Master's degree program from summer semester 2023 onwards. ⁵Notwithstanding sentences 2 to 4, the changes to the foundation and intermediate modules shall apply to all students who have not yet started examinations in these modules (initial attempt). ⁶Notwithstanding sentences 2 to 5, the amendments regarding the Master's thesis module in **Appendix 2c** shall apply to all students who have not completed the Master's thesis module (passed/failed at the final attempt). ⁷Examinations according to the previously valid FPO BAMA Geow shall be offered for the last time in summer semester 2027. ⁸From the date stated in sentence 7, those students who are affected by the examination regulations becoming invalid shall take their examinations in accordance with the currently valid version of FPO BAMA Geow.

Appendix 1: Bachelor's degree program in Geosciences

Appendix 1a: Overview of Curriculum

Bachelor's thesis 15 ECTS credits
Key qualifications modules 10 ECTS credits
Compulsory elective modules in geosciences 30 ECTS credits
Advanced modules 65 ECTS credits
Foundation modules 60 ECTS credits

The regulations for the colored blocks are explained in detail in the example degree program structure below (see **Appendix 1b**)

Appendix 1b: Structure of the Bachelor's Degree Program in Geosciences (BSc)

	No.	Module name	Teaching unit	SWS (semester hours)					Total ECTS credits	Distribution of workload per semester in in ECTS credits ¹						Type and scope of examination	Grade factor
				L	T	P	S	T		1st sem.	2nd sem.	3rd sem.	4th sem.	5th sem.	6th sem.		
Foundation modules	1	Foundations of Geosciences I	Earth system science I	4					5	5						EA: Written examination 60 mins	1
	2	Minerals and rocks	Minerals and rocks	3					5	2						EA: Written examination 90 mins	1
			V Minerals and rocks – tutorial		2					3							
	3	Mathematics for scientists (MNat)	Mathematics for natural scientists	3					5	3						EA: Written examination 90 mins	1
			V Mathematics for natural scientists – tutorial		1					2							
	4	General biology I: Biology for minor subject students (Bio-NF)	Biology for minor subject students	5					5	5						EA: Written examination 90 mins	1
	5	General and inorganic chemistry with laboratory course (NW-1-AC)	General and inorganic chemistry	4					10	4						EA: written examination 45 mins and CA: PA (ungraded)	1
			Laboratory: Inorganic chemistry for minor subject students		8						6						
	6	Geoscientific methods I	Geoscientific methods I		2				5	3						EA: written examination 90 mins and CA: ExA report max. 10 pages (ungraded)	1
Field exercise I						3		2									
7	Foundations of geosciences II	Earth system science II	4					5		5					EA: Written examination 60 mins	1	
	Earth system dynamics	Earth system science III	2	1				5		5					EA: Written examination 60 mins	1	
8	Mineralogy I	Special minerals	1	1				5		2					EA: Written examination 90 mins	1	
		Symmetry and properties of minerals	2	1						3							
9	Physics for minor subject students (PhNF)	Experimental physics for minor subject students	4					5		3					EA: Written examination 90 mins	1	
		Physics for geosciences students - tutorial		2						2							

	No.	Module name	Teaching unit	SWS (semester hours)					Total ECTS credits	Distribution of workload per semester in ECTS credits ¹						Type and scope of examination	Grade factor
				L	T	P	S	T		1st sem.	2nd sem.	3rd sem.	4th sem.	5th sem.	6th sem.		
	10	Paleobiology I	General Paleontology				2		5		2					EA: Written examination 60 mins	1
			Evolution of life				2				3						
Total foundation modules				32	18	0	7	0	60	29	31	0	0	0	0		
Advanced modules	11	Paleobiology II	Paleobiodiversity	1					5			2				EA: Written examination 60 mins	1
			Paleobiodiversity – tutorial		3						3						
	12	Laboratory: Physics (PhysPrakt)	Laboratory: Physics for geoscientists				5		5			5				EA: PA, (series of reports 15-30 pages)	1
		Applied geology I	Hydrogeology		2		2			5			5				
	13	Structural geology and economic geology	Economic geology	1	1				5			2				EA: Written examination 60 mins	1
			Structural geology	1	1						3						
	14	Geological methods II	Geological methods II		2				5			2				EA: written examination 90 mins and CA: ExA report max. 10 pages	1
			Field exercise II				2				3						
	15	Mineralogy II	Pol microscopy		2				5			3				EA: Written examination 90 mins	1
			Applied mineralogy	2							2						
	16	Regional geology	Regional geology				2		5				2			EA: SA 20 mins and CA: SA (report max. 10 pages)	1
			Mapping tutorial		3							3					
	17	Sedimentology	Earth system science IV	3	1				5				5			EA: Written examination 60 mins	1
		Geochemistry	Geochemistry	2									3				
	Biogeochemical cycles		1									2					
18	Petrology	Microscopy of rocks and minerals		2				5				3			EA: Written examination 90 mins	1	
		Petrological systems	2									2					
19	Applied geology II	Engineering geology	2	2				5				5			EA: Written examination 60 mins	1	
20	Academic writing and presentation in the geosci-	Academic writing and presentation in the geosciences				4							5				EA: SA 10-15 mins
21	Geophysics	Geophysics	3					5					5		EA: Written examination 60 mins	1	

	No.	Module name	Teaching unit	SWS (semester hours)					Total ECTS credits	Distribution of workload per semester in ECTS credits ¹						Type and scope of examination	Grade factor	
				L	T	P	S	T		1st sem.	2nd sem.	3rd sem.	4th sem.	5th sem.	6th sem.			
Total intermediate modules (AM)				18	19	5	10	0	65	0	0	30	30	5	0			
Compulsory elective modules in geosciences	22	Compulsory elective module 1a in geosciences ¹	see Section 46 (4)						5					5		see Section 46 (3)	1	
	23	Compulsory elective module 1b in geosciences ¹	see Section 46 (4)						5					5		see Section 46 (3)		
	24	Compulsory elective module 1c in geosciences ¹	see Section 46 (4)						5					5		see Section 46 (3)		
	25	Compulsory elective module 2a in geosciences ¹	see Section 46 (4)						5						5	see Section 46 (3)	1	
	26	Compulsory elective module 2b in geosciences ¹	see Section 46 (4)						5						5	see Section 46 (3)		
	27	Compulsory elective module 2c in geosciences ¹	see Section 46 (4)						5						5	see Section 46 (3)		
Total compulsory elective modules in geosciences				31	10	5	6	0	30	0	0	0	0	15	15			
SQ modules	28	Key qualifications Course offered by FAU	see Section 47 (2)						5					5		see Section 47 (2)	0	
	29	Elective module ²	see Section 47 (2)						5					5		see Section 47 (2)	0	
Total SQ modules:									10	0	0	0	0	10	0			
Bachelor's thesis	30	Bachelor's thesis	Written Bachelor's thesis						15						12	Bachelor's thesis (approx. 20–40 pages) and oral examination (20 mins) (80 % + 20 %)	1	
			Oral examination										3					
Total Bachelor's thesis									15	0	0	0	0	0	15			
Total semester hours (at least) and ECTS credits				68³	28	5	9		180	29	31	30	30	30	30			
				110³														

¹⁾ see Section 46.

²⁾ see Section 47.

³⁾ The number of semester hours increases depending on which elective compulsory modules, key qualification modules and elective modules are taken.

Key:

EA = Examination achievement

CA = Course achievement

PA = Practical achievement

ExA = Excursion achievement

SA: Seminar achievement

Appendix 2: Master's degree program in Geosciences

Appendix 2a: Overview of Curriculum

Master's thesis 30 ECTS credits		
Major field of study 45 ECTS credits	Minor fields of study 30 ECTS credits	Geosci. Elective module 5 ECTS credits and Key qualifications modules 10 ECTS credits

The major and minor fields of study can be selected from the following specializations:

- Applied geology (AG)
- Applied mineralogy (AM)
- Applied sedimentology – Georesources (AS)
- Petrology – Geodynamics – Georesources (PG)
- Palaeobiology – Paleoenvironments (PB)
- Climate and Earth Systems (CES) (this can only be chosen as a minor subject).

Appendix 3: Structure of the Master's Degree Program in Geosciences (MSc)

		<i>Major field of study (H)</i>			<i>Minor field of study (V)</i>			
1st semester	30 ECTS	Specialization phase	<i>H-V1</i> 5 ECTS	<i>H-V2</i> 5 ECTS	<i>H-E1</i> 5 ECTS	<i>N-V1</i> 5 ECTS	<i>N-V2</i> 5 ECTS	Geosci. Elective module 5 ECTS
2nd semester	30 ECTS		<i>H-V3</i> 5 ECTS	<i>H-V4</i> 5 ECTS	<i>H-E2</i> 5 ECTS	<i>N-V3</i> 5 ECTS	<i>N-V4</i> 5 ECTS	Geosci. Key qualifications module 5 ECTS
3rd semester	30 ECTS		Forschungsphase	<i>H-F1</i> 5 ECTS	<i>H-F2</i> 5 ECTS	<i>H-F3</i> 5 ECTS	<i>N-F1</i> 5 ECTS	<i>N-F2</i> 5 ECTS
4th semester	30 ECTS	Master's thesis for major field of study and Master's oral examination 25 ECTS & 5 ECTS						

Appendix 4 Structure of the Master's Degree Program in Geosciences (MSc)

	Module name	Teaching unit	SWS (semester hours)				Total ECTS credits	Workload per semester in ECTS credits				Type and scope of examination	Grade factor
			L	T	P	S		1st sem.	2nd sem.	3rd sem.	4th sem.		
Major field of study	Compulsory elective modules from catalog for major fields of study pursuant to Section 52 (1) and (2)	see Section 52 (4)					15	15	15		see Section 52 (4)	1	
	Total for major field of study pursuant to Section 52 (1) and (2)					45	15	15	15	0			
Minor field of study	Compulsory elective modules from catalog for minor fields of study pursuant to Section 52 (1) and (3)	see Section 52 (4)					10	10	10		see Section 52 (4)	1	
	Total for minor field of study pursuant to Section 52 (1) and (3)					30	10	10	10	0			
Geosci. elective module and geosci. key qualification	Geosciences elective module pursuant to Section 53	see Section 53				5	5				see Section 53	1	
	Geosciences key qualifications module pursuant to Section 53	see Section 53				10		5	5		see Section 53	1	
	Total geosciences elective module and key qualifications module pursuant to Section 53					15	5	5	5	0			
Master's thesis	Master's thesis pursuant to Section 54	Written Master's thesis				30				25	Master's thesis (40–60 pages) and Presentation with discussion (30 min) (5/6 + 1/6 of overall achievement)	1	
		Defense of the Master's thesis								5			
	Total: Master's thesis pursuant to Section 54					30	0	0	0	30			
	Total SWS and ECTS credits					120	30	30	30	30			