



*Unofficial Translation of the German Original. The German Examination Regulation represents the only legally binding version.*

# **Examination regulations**

## **Programme-specific part**

**for the Bachelor's programme**

### **Applied Biology**

**at the Rheinbach Campus**

**of the**

**Bonn-Rhein-Sieg University of Applied Sciences**

**of 23.03.23**

On the basis of § 2 paragraph (4) and § 64 of the Higher Education Act of the State of North Rhine-Westphalia (Hochschulgesetz - HG NRW) in the version published on 16 September 2014 (GV. NRW. Page 547), last amended by the Act of 30 June 2022 (GV. NRW. S. 780b), the Department of Applied Natural Sciences at the Rheinbach Campus of Bonn-Rhein-Sieg University of Applied Sciences has issued the following examination regulations:

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Please note that this document is a translation of the German "Prüfungsordnung Studiengangsspezifischer Teil für den Bachelor-Studiengang Applied Biology am Campus Rheinbach an der Hochschule Bonn-Rhein-Sieg vom 23.03.23". Only the German source text is legally binding.

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## **General**

### **§ 1 Scope of the Examination Regulations**

(1) These examination regulations shall apply in addition to the General Part of the Examination Regulations (PO-A) of the Faculty of Applied Natural Sciences of Bonn-Rhein-Sieg University of Applied Sciences for the Bachelor's degree programme in Applied Biology.

(2) The Examination Board of the Faculty of Applied Natural Sciences of Bonn-Rhein-Sieg University of Applied Sciences is responsible for matters relating to these examination regulations.

### **§ 2 Aim of the programme, purpose of the examination, academic degree**

(1) The aim of the Bachelor's degree programme in Applied Biology is to obtain a professional qualification as a "Bachelor of Science" (B.Sc. for short). The programme provides a basic education in the subject and methodological competences in the fields of modern and applied biology and biomedicine. Students are enabled to understand and formulate scientific questions themselves, to develop and implement experimental strategies and to interpret and communicate data obtained. The students acquire knowledge about the functioning of the human body on a macroscopic as well as cellular and molecular level. They also learn to cultivate and identify microorganisms and to use them for genetic and biochemical experiments. Finally, the programme imparts sound knowledge of analytical and diagnostic methods, including spectroscopic, chromatographic, and immunological procedures. With the breadth of competences and skills acquired in the study programme, it is thus possible for the students to either further qualify themselves in a Master's programme in the field of biosciences or to enter the labour market in the field of research, diagnostics or approval of drugs.

(2) After passing the final examination, the academic degree "Bachelor of Science (B.Sc.)" is awarded in the degree programme Applied Biology.

(3) The programme leading to the degree B.Sc. Applied Biology provides the student with knowledge and understanding of Applied Biology as defined in § 58 HG NRW.

(4) The final examination determines that the student has acquired the specialist knowledge necessary for independent work in the profession and is qualified to work independently on the basis of scientific knowledge and methods.

### **§ 3 Study requirements**

The admission requirements for admission to the Bachelor's degree programme specified in § 2 of the PO-A shall apply.

### **§ 4 Standard period of study, scope of study, language of instruction**

(1) The standard period of study is six semesters including the practical phase, the final thesis and the final colloquium. The duration of the practical phase is three months and that of the final thesis two months.

(2) The course of study and the module examinations shall be structured in such a way that the course of study can be completed within the standard period of study.

(3) In justified cases (e.g. illness, bringing-up children, care of persons in need of care, severe disability, stay abroad, participation in the self-administration of the university), the examination board may agree to a modified course of study.

(4) A total of 180 ECTS is acquired through the study of Applied Biology. The completion of all study achievements of a regular study semester is assessed with 30 ECTS each and is shown in the study plan.

(5) The scope of study comprises compulsory modules and compulsory elective modules - specified in the study plan.

(6) Compulsory modules are compulsory for all students of the degree programme and conclude with a graded or ungraded module examination. Compulsory elective modules are modules that are selected at the beginning of the semester from a catalogue of compulsory elective modules offered by the department and conclude with a graded or ungraded module examination. The examination results of the compulsory modules which are completed with a graded module examination are included in the overall grade of the transcript.

(7) Elective modules can be chosen with the consent of the examination board at another subject area of the H-BRS or at another higher education institution within the area of application of the Basic Law of the Federal Republic of Germany (Grundgesetz, GG), one of the partner universities or another foreign higher education institution.

(8) All compulsory courses of the Applied Biology degree programme are offered in English. A sufficient number of compulsory elective courses are taught in English; additional compulsory elective courses may also be taught in German if necessary. For the determination of the language of the courses, see also Annex 1. The language of the compulsory elective courses is determined by the dean.

## **§ 5 Scope and structure of the module examinations**

(1) The Bachelor's degree programme Applied Biology is divided into modules assessed with credit points, in which graded and ungraded module examinations are to be taken (Annex 1). The practical phase is assessed with 18 ECTS and concludes with an ungraded module examination. The student must prove successful participation in the practical phase in accordance with §17 paragraph 4 of the PO-A. The final paper (thesis) with the subsequent final colloquium is assessed with 12 ECTS.

(2) In the case of modules that include a practical course, proof of successful completion of the practical course within the framework of a test is generally a prerequisite for the final passing of a module.

(3) The catalogue of compulsory elective subjects is divided into areas with biological, forensic, chemical, material science and other subjects. Only one choice may be made from the area with other subjects. The range of subjects in the compulsory elective catalogue depends on the possibilities of the Department of Applied Natural Sciences. The contents of the compulsory elective catalogue are subject to change. The current compulsory elective catalogue is announced at the beginning of the semester by announcement and/or in electronic form.

## **Regulations on the course of study**

### **§ 6 Examinations in the course of studies, study plan and study schedule**

(1) The examination board shall draw up a general examination schedule which informs students at the beginning of their studies in which examination period a module is to be examined for the first time and when the repeat examination is to take place.

(2) The study plan, Annex 2, shows the timing of the modules during the regular study period.

(3) The study plan, Annex 3, provides information on the course forms of the modules (lecture, seminar-based teaching, tutorial, practical course) and the respective temporal scope in semester hours per week as well as the student workload in the form of ECTS.

(4) All modules of the degree programme shall be included in a lecture schedule each semester. The lecture times and the lecture schedule shall be announced at the beginning of each lecture period by means of a notice and/or in electronic form.

## **§ 7 Compulsory attendance**

To acquire practical skills, attendance is compulsory in the practical laboratory exercises of the lectures and in language courses.

## **§ 8 Weighting of Module Examinations and Average Grade**

To determine the overall grade of the final examination according to §26 Paragraph 2 of the PO-A, the average grade of the graded module examinations weighted with the credit points must be calculated. The weighting factors for the graded module examinations are listed in Annex 4.

## **Final provisions**

### **§ 9 Entry into Force and Publication, Transitional Provisions**

(1) These regulations shall enter into force with effect from the winter semester 2023/24. They shall be published in the Official Announcements of Bonn-Rhein-Sieg University of Applied Sciences - Announcement Gazette.

(2) These examination regulations replace all course-specific regulations of the previous examination regulations of the Bachelor's degree programme Applied Biology of the faculty. For the remaining regulations of the previous examination regulations, § 29 of the Examination Regulations General Section (PO-A) shall apply accordingly. For enrolled students who began their studies under a previous examination regulation of the respective degree programme, the examinations are offered according to the respective previous examination regulation at least until the fourth semester after the semester in which the course assigned to the examination was offered for the last time. The semester in which the course was last offered counts towards this. Examinations according to old examination regulations will be offered until the summer semester 2027 at the latest. Further details shall be regulated in separate regulations.

(3) Paragraph 2, sentences 1 to 3 and 5 shall apply accordingly in the event that these examination regulations are replaced by subsequent ones or the degree programme is discontinued.

Issued on the basis of the resolution of the Faculty Council of the Faculty of Applied Natural Sciences in Rheinbach of 23.03.2023.

Rheinbach, 23.03.2023

Prof. Dr. Richard Jäger  
Dean of the Faculty of Applied Natural Sciences  
of the Bonn-Rhein-Sieg University of Applied Sciences

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## Annexes

### Appendix 1 - List of graded and ungraded modules with details of the language of instruction, the semester hours (SWS) and ECTS

Subject (module)	Language of Instruction	Semester hours per week (SWS)	Credit points (ECTS)	Module examination
Biochemistry	English	7	7	graded
Bioinformatics/Data Analytics	English	6	7	graded
Cell Biology	English	6	7	graded
Cell Culture	English	3	3	graded
Computing Sciences + Laboratory Skills	English	6	7	not graded
Developmental Biology	English	6	7	graded
Elective Course A-1	English/German	3	3	not graded
Elective Course A-2	English/German	3	3	not graded
Elective Course B-1	English/German	3	3	not graded
Elective Course B-2	English/German	3	3	not graded
Elective Course C	English/German	3	3	not graded
General Chemistry	English	6	7	graded
Genetic Engineering	English	6	7	graded
Human Biology/Histology	English	6	7	graded
Immunology	English	6	7	graded
Instrumental Analysis	English	6	7	graded
Languages 1+2	-	6	6	graded
Mathematics	English	6	6	graded
Measuring Techniques	English	3	3	graded
Microbiology	English	6	7	graded
Medical Microbiology	English	6	6	graded
Molecular Genetics	English	6	7	graded
Organic Chemistry	English	6	7	graded
Physics/Statistics	English	6	6	graded
Structural Biology	English	6	7	graded
Physiology	English	6	7	graded
Practical training (Praxisphase)	-		18	not graded
Thesis/Thesis Defense	English/German	-	12	graded

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## Annex 2 – Study Schedule

Se- mester	ECTS	Course					
1.	30	Mathematics 6 ECTS	Laboratory Skills Computing Sciences 7 ECTS	Cell Biology 7 ECTS	General Chemistry 7 ECTS		Languages 1 3 ECTS
2.	30	Physics/Statistics 6 ECTS	Microbiology 7 ECTS	Human Biology, Histology 7 ECTS	Organic Chemistry 7 ECTS		Languages 2 3 ECTS
3.	30	Instrumental Analysis 7 ECTS	Medical Microbiology 6 ECTS	Physiology 7 ECTS	Molecular Genetics 7 ECTS		Measuring Techniques 3 ECTS
4.	30	Biochemistry 7 ECTS	Bioinformatics / Data Analytics 7 ECTS	Immunology 7 ECTS	Elective Course A-1 3 ECTS	Elective Course A-2 3 ECTS	Cell Culture 3 ECTS
5.	30	Genetic Engineer- ing 7 ECTS	Structural Biology 7 ECTS	Developmental Biology 7 ECTS	Elective Course B-1 3 ECTS	Elective Course B-2 3 ECTS	Elective Course C 3 ECTS
6.	30	3 months practical training 18 ECTS			Thesis including colloquium 12 ECTS		
		Recommended study period abroad					

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### Annex 3 - Study plan

Sem.	Module name	Comp/ Elect	Lect	Exerc./ Sem Teach	Lab	Total h per week	ECTS
1	Computing Sciences / Laboratory Skills	Comp	3	1	2	6	7
	Mathematics	Comp	4	2	0	6	6
	Cell Biology	Comp	3	2	1	6	7
	General Chemistry	Comp	2	2	2	6	7
	Languages 1	Elect	0	3	0	3	3
2	Physics / Statistics	Comp					6
	Physics		2	1	1	4	
	Statistics		1	1	0	2	
	Organic Chemistry	Comp	3	2	1	6	7
	Human Biology, Histology	Comp	3	1	2	6	7
	Microbiology	Comp	2	2	2	6	7
	Languages 2	Elect	0	3	0	3	3
3	Measuring Techniques	Comp	1	1	1	3	3
	Instrumental Analysis	Comp	2	3	1	6	7
	Physiology	Comp	3	1	2	6	7
	Medical Microbiology	Comp	2	2	2	6	6
	Molecular Genetics	Comp	4	0	2	6	7
4	Bioinformatics/Data Analytics	Comp	3	3	0	6	7
	Biochemistry	Comp	4	1	2	7	7
	Cell Culture	Comp	1	0	2	3	3
	Immunology	Comp	2	2	2	6	7
	Elective Course A-1 *	Elect	0	3	0	3	3
	Elective Course A-2 *	Elect	0	3	0	3	3
5	Structural Biology	Comp	2	2	2	6	7
	Genetic Engineering	Comp	2	2	2	6	7
	Developmental Biology	Comp	2	2	2	6	7
	Elective Course B-1 *	Elect	0	3	0	3	3
	Elective Course B-2 *	Elect	0	3	0	3	3
	Elective Course C *	Elect	0	3	0	3	3
6	3 months of practical training	Comp	0	0	0	0	18
	Thesis	Comp	0	0	0	0	12
	SWS		51	54	31	136	
	Total ECTS						180

\* Allocation of the 3 hours per week in lecture, seminar teaching and practical training may vary

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#### **Annex 4 - Weighting of the graded module examinations according to ECTS for the calculation of the overall grade**

<b>Module</b>	<b>Workload in working hours per week (SWS)</b>	<b>Credits (ECTS)</b>	<b>Weighting factor for the Bachelor overall grade</b>
Biochemistry	7	7	7/128
Bioinformatics/Data Analytics	6	7	7/128
Cell Biology	6	7	7/128
Cell Culture	3	3	3/128
Developmental Biology	6	7	7/128
General Chemistry	6	7	7/128
Genetic Engineering	6	7	7/128
Human Biology/Histology	6	7	7/128
Immunology	6	7	7/128
Instrumental Analysis	6	7	7/128
Languages 1+2	6	6	6/128
Mathematics	6	6	6/128
Measuring Techniques	3	3	3/128
Structural Biology	6	7	7/128
Microbiology	6	7	7/128
Medical Microbiology	6	6	6/128
Molecular Genetics	6	7	7/128
Organic Chemistry	6	7	7/128
Physics/Statistics	6	6	6/128
Physiology	6	7	7/128

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