



**Subject-specific Study and Examination Regulations for the Bachelor Programme
in Biology and the English-language Master Programme in Biology
offered by Ulm University
of 23 December 2011**

At the proposal of the Faculty of Natural Sciences, the Senate of Ulm University, in its meeting of 8 December 2011, adopted the following Subject-specific Study and Examination Regulations for the bachelor programme in biology and the English-language master programme in biology pursuant to § 19 (1) sentence 2 no. 9 in conjunction with § 34 of the Law on Higher Education of the Land of Baden-Württemberg (LHG="Landeshochschulgesetz") (Law Gazette of 27 December 2005 p. 794ff), last amended by article 32 of the Law on the Reform of University Medicine and the amendment of the Law on Higher Education of the Land of Baden-Württemberg and further laws (Universitätsmedizingesetz - UniMedG) of 7 February 2011 (Law Gazette p. 47, 64). The President of Ulm University approved these on 23 December 2011 pursuant to § 34 (1) sentence 3 LHG.

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Preliminary remarks on language use

According to Article 3 (2) Basic Law men and women have equal rights; all male designations of persons and positions used in these Regulations apply equally to men and women.

I. General provisions

§ 1 Scope of Application

- (1) These Subject-Specific Study and Examination Regulations contain specific regulations for the bachelor and master programmes in biology.
- (2) The Subject-Specific Study and Examination Regulations supplement the General Provisions for Study and Examination Regulations regarding Bachelor and Master Programmes at Ulm University (General Framework). In case of doubt, the General Framework shall have priority.

§ 2 Academic degrees, study courses (General Framework, § 2)

- (1) The Faculty of Natural Sciences of Ulm University offers the bachelor programme in biology leading to the academic degree "Bachelor of Science" ("B.Sc.").
- (2) The Faculty of Natural Sciences of Ulm University offers the master programme in biology leading to the academic degree "Master of Science" ("M.Sc.").
- (3) The master programme in biology is a consecutive master programme.

§ 3 Beginning of the programme (General Framework, § 3)

The bachelor programme in biology begins in the winter semester. The master programme in biology begins both in the winter and in the summer semester.

§ 4 Standard period of study (General Framework, § 5)

The standard period of study of the bachelor programme is 3 years; for the consecutive master programme it is 2 years.

§ 5 Content, scope and volume of the orientation examination (General Framework, § 6(6))

The orientation examination in the bachelor programme consists of the written module examination "Fundamentals of Biology" (14 credit points=CP). The orientation examination shall be

deemed to have been passed if the module examination mentioned in sentence 1 has been successfully completed by the end of the examination period of the third semester.

§ 6 Deadlines (General Framework, § 6(8,9))

- (1) Bachelor students who have obtained fewer than 90 CP by the end of the examination period of the fifth semester shall lose their right to be examined in this programme unless they are not responsible for exceeding this deadline. Students who have obtained fewer than 120 CP by the end of the examination period of the sixth semester shall lose their right to be examined in this programme unless they are not responsible for exceeding this deadline. Students who have obtained fewer than 150 CP by the end of the examination period of the seventh semester shall lose their right to be examined in this programme unless they are not responsible for exceeding this deadline. Students who have obtained fewer than 180 CP by the end of the examination period of the eighth semester shall lose their right to be examined in this programme unless they are not responsible for exceeding this deadline.
- (2) Master students who have obtained fewer than 60 CP by the end of the examination period of the fourth semester shall lose their right to be examined in this programme unless they are not responsible for exceeding this deadline. Students who have obtained fewer than 120 CP by the end of the examination period of the sixth semester shall lose their right to be examined in this programme unless they are not responsible for exceeding this deadline.

§ 7 Courses and examinations in English or any other foreign language (General Framework, § 7)

- (1) In the bachelor programme, the courses of the compulsory modules and the compulsory elective modules are held, as a rule, in German. Upon announcement, they may also be held in English. In the master programme, the courses of the compulsory modules and the compulsory elective modules are held, as a rule, in English. Upon announcement, they may also be held in German.
- (2) As a rule, examinations are conducted in the language of the course.

§ 8 Work experience (General Framework, § 8)

It is recommended that students do eight weeks of work experience during their bachelor or master programme. The work experience may be performed in any private or public organisation in Germany or abroad suited to give the student an impression of what practical work in their selected subject is like. Practical work as tutors / research assistants taking up 12 or more hours per week may also be recognised as work experience. At the student's request, the subject-specific board of examiners may also recognise any related vocational training or activities performed before beginning the study programme as work experience. At the student's request, the work experience may be taken up in the degree certificate/diploma supplement.

§ 9 Subject-specific board of examiners (General Framework, § 10)

- (1) A joint subject-specific board of examiners shall be formed for the bachelor and master programmes in biology.
- (2) The subject-specific board of examiners shall consist of six members. It shall be composed

of three full-time lecturers and full-time professors of Ulm University, one scientific staff member and one student each from the programmes named in paragraph 1 above in an advisory capacity. The term of office of the student members shall be one year; that of all other members shall be three years.

- (3) The subject-specific board of examiners decides in cases of doubt not covered by these Subject-Specific Study and Examination Regulations or the General Framework.

§ 10 Types of courses, examination achievements

Study objectives and contents are conveyed, in particular, by the following types of courses:

lectures

exercises

seminars

laboratory courses

field work

- (1) Exercises, seminars, laboratory courses and field work offered in the field of biology require attendance. Students attending less than 85% of such courses are not entitled to take the respective module examination. Attendance monitoring lies within the responsibility of the respective lecturer.
- (2) The bachelor examination consists of the bachelor thesis as well as oral or written module examinations.
- (3) The master examination consists of the master thesis as well as oral or written module examinations.
- (4) Within one module, ungraded achievements certificates ("Scheine") of previous courses within the same module may be requested or admission to certain module examinations may be made subject to ungraded achievements certificates. Course achievements are described in the module handbook. Form and scope of the required course achievements shall be published in good time before the beginning of the course.
- (5) Admission to a module examination may be subject to the successful completion of one or several other specific module examinations or course achievements necessary for creating a sound knowledge base. Particularly in cases of limited availability of places in the compulsory elective modules, admission may be subject to further, additional criteria. Admission requirements for modules are published in the module handbook.

§ 11 Organisation of module examinations (General Framework, § 13)

As a rule, written module examinations in the bachelor or master programmes follow the recommendations made in § 13(1) of the General Framework.

§ 12 Related study courses (General Framework, § 14)

Study courses related to biology under § 14(2) of the General Framework are all biological study courses. The subject-specific board of examiners shall decide in cases of doubt.

§ 13 Written module examinations (General Framework, § 16 a)

The duration of written module examinations or coursework done in the form of written tests shall be between 45 and 180 minutes.

§ 14 Provisions regarding the modules bachelor and master thesis (General Framework, § 16c)

- (1) The period from the admission to the bachelor thesis to its submission shall be three months.
Possible extensions are provided for in the General Framework.
- (2) The period from the admission to the master thesis to its submission shall be six months.
Possible extensions are provided for in the General Framework.
- (3) The bachelor thesis comprises a total of 15 CP. It is complemented by a presentation on the topic of the bachelor thesis. This presentation is given before the examiner of the bachelor thesis. Within the framework of the bachelor thesis, the presentation counts 3 CP.
- (4) The master thesis corresponds to 30 CP.
- (5) With the consent of the advisor, the bachelor thesis may be written in English. The bachelor thesis may be done in group work. § 16 c (4) of the General Framework shall apply accordingly.
- (6) As a rule, the master thesis is written in English; however, with the consent of the advisor it may be written in German.
- (7) The bachelor thesis is assessed by one examiner. The master thesis is assessed by two examiners.
- (8) The bachelor thesis must be submitted to the Student Administration Office ("Studiensekretariat") in one bound copy and as an electronic copy; the master thesis must be submitted to the Student Administration Office in two bound copies and as an electronic copy.
- (9) Subject to prior authorisation by the subject-specific board of examiners in biology, the bachelor and master thesis may be completed outside the institutes participating in the bachelor and master programmes in biology. The examiner of the bachelor thesis and at least the first examiner of the master thesis must belong to one of the institutes participating in the bachelor/master programmes in biology.

§ 15 Assessment of module examinations

- (1) On technical grounds, the written examination or parts thereof may, in the bachelor programme, take the form of multiple choice tests. In such case, the module examination shall be deemed to have been passed if a student achieved 60% or more of total points, or the points achieved by the students does not fall more than 20% below the average performance of all examinees in this written examination and below 50% of total points.
- (2) The result of the bachelor thesis (15 CP) and the best examination results corresponding to at least 105 CP (together 120 CP) shall be considered in the calculation of the aggregate mark of the bachelor programme. Examinations with the same grade are counted towards the aggregate mark depending on their corresponding credit points in an ascend-

ing order. The examination exceeding the overall volume of 120 CP is fully weighted.

- (3) All graded (partial) module examinations of all compulsory and compulsory elective modules named in § 22(3) and the master thesis count towards the aggregate mark of the master programme.

§ 16 Retake of module examinations (General Framework, § 20)

In both the bachelor and the master programme, module examinations in compulsory and compulsory elective modules may be retaken twice. As a rule, examination dates are published at the beginning of the lecture period of each semester.

II. Bachelor and master programmes in biology

§ 17 Study objectives

- (1) Bachelor: The objective of this programme is to provide a broad education in biology and its natural science basis. In the modules offered in the first three semesters, the fundamentals of biology and its related natural sciences chemistry, physics and mathematics are taught. At the beginning of the fourth semester, students specialise on one out of three fields, i.e. Molecular Biosciences, Physiology or Ecology/Biodiversity. Additionally, supplementary modules from one of the other two fields or from medicine are selected. Furthermore, key skills are taught.
- (2) Master: The objective of this programme is to provide qualified education in one field of biology together with in-depth training in one medical and one non-biological subsidiary subject. After a deepening and expansion of biological knowledge in the first semester, students select one of the specialty areas mentioned in § 21(4). They additionally select modules from a field of medicine (Biochemistry, Pharmacology/Toxicology, Virology, Human Genetics, Medical Neuroscience) or, respectively, Biophysics. Specific knowledge in one non-biological subject, i.e. computer science, economics, mathematics, chemistry or philosophy, is acquired.

§ 18 Study contents, specialisation and modules in the bachelor programme

- (1) All modules end with one or several module or partial module examination or one or several achievement certificates.
- (2) Changes regarding the type of examination are possible and must be published in the module handbook.
- (3) At the end of the lecture period of the third subject-specific semester of the bachelor programme, students select one of three specialty areas, i.e. "Molecular Biosciences", "Physiology" or "Ecology/Biodiversity". Acceptance in these modules depends on the availability of places and student performance in the modules "Fundamentals of Biology", "Physiology I", "Developmental Biology and Genetics", and "Systematics and Evolution" or "Ecology". The decision thereon must be communicated to the students in good time. At the end of the lecture period of the fourth subject-specific semester, students may change their specialty area subject to the availability of places in the respective modules.

- (4) The following compulsory and compulsory elective modules must be completed as part of the bachelor programme:

Modules	CP	Status	Type of examination	Requirements for examination besides attendance pursuant to § 10(1)	Sem.
Fundamentals of Biology	14	C	ME w	none	1
Systematics and Evolution	8	C	ME w	AC	1 and 2
Ecology	8	C	ME w	none	2
Physiology I	12	C	3 PME w	none	2
Microbiology BSc	8	C	ME w	AC	3
Developmental Biology and Genetics BSc	8	C	2 PME w, AC	none	3
Introduction to Chemistry	6	C	ME w	none	1
Mathematics	5	C	ME w	AC	1
Organic and Bioanalytical Chemistry	7	C	2 PME w	none	2
Chemistry Laboratory Course	6	C	AC	none	3
Physics	8	C	ME w	AC	3
Specialty area Molecular Biosciences					
Environmental Biology or Methods in Neurobiology	12	CES	ME w/o, AC		4
Molecular Biology I (Microbiology or Endocrinology or Molecular Plant Physiology)	9	CS	ME w, AC	Exams pursuant to § 19(2)	4
Molecular Biology II and III	21	CS	ME o	AC: - Molecular Biology II - Molecular Biology III and exams pursuant to § 19(2)	5
Specialty area Physiology					
Environmental Biology or Environmental Microbiology	12	CES	ME w/o, AC		4
Physiology II	9	CS	ME w, AC	Exams pursuant to § 19(3)	4
Plant and Metabolic Physiology, Neurobiology	21	CS	ME o	AC: - Plant Physiology - Metabolic Physiology - Neurobiology and exams pursuant to § 19(3)	5
Specialty area Biodiversity and Ecology					
Methods in Neurobiology or Environmental Biology or Molecular Biology/Physiology	12	CES	ME w/o, AC		4
Environmental Biology for Ecology/Biodiversity	9	CS	ME w, AC	Exams pursuant to § 19(4)	4

Modules	CP	Status	Type of examination	Requirements for examination besides attendance pursuant to § 10(1)	Sem.
Soil Ecology and Functional Morphology	21	CS	ME o	AC: - Soil Ecology - Functional Morphology and exams pursuant to § 19(4)	5
Methods in Biology	12	CS	ME w/o	None	6
Medical subsidiary subject I	6	C	ME w	none	4
Medical subsidiary subject II	6	C	ME w	none	5
Medical subsidiary subject III	3	C	ME w	none	6
Additional key skill I	3	C	ME w/o	none	1 - 6
Additional key skill II	3	C	ME w/o	none	1 - 6
Bachelor thesis	15	C	ME w	none	6

C=compulsory; CS=compulsory in the selected specialty area; CES=compulsory elective in the selected specialty area; ME=module examination; PME=partial module examination; AC=ungraded achievement certificate; o=oral; w=written

- (5) Courses offered only once or irregularly at Ulm University may, on request to the subject-specific board of examiners, be recognised as compulsory, compulsory elective or additional modules or parts thereof.
- (6) Additional key skills may be selected from the module handbooks of the Humboldt-Studienzentrum (Humboldt study centre) or the Sprachenzentrum (language centre).

§ 19 Admission to module examinations in the bachelor programme

- (1) Admission to the module "Chemistry Laboratory Course" is restricted to students who have successfully completed the module examinations of "Introduction to Chemistry".
- (2) In the specialty area Molecular Biosciences, only those students may be admitted to the module "Molecular Biology I" who have successfully completed the examinations in "Fundamentals of Biology", "Physiology I", "Microbiology", "Developmental Biology", "Genetics", "Mathematics" and "Introduction to Chemistry" or "Organic Chemistry" or "Bioanalytical Chemistry". Only those students may be admitted to the module "Molecular Biology II and III" who have successfully completed the examination in "Molecular Biology I", as well as the module "Chemistry Laboratory Course" and the examination in "Organic Chemistry" or "Bioanalytical Chemistry".
- (3) In the specialty area Physiology, only those students may be admitted to the module "Physiology II" who have successfully completed the examinations in "Fundamentals of Biology", "Physiology I", "Microbiology", "Developmental Biology", "Genetics", "Mathematics" and "Introduction to Chemistry" or "Organic Chemistry" or "Bioanalytical Chemistry". Only

those students may be admitted to the module “Plant and Metabolic Physiology, Neurobiology” who have successfully completed the examinations in “Physiology II” and the module “Chemistry Laboratory Course” and the examination in “Organic Chemistry” or “Bioanalytical Chemistry”.

- (4) In the specialty area Biodiversity and Ecology, only those students may be admitted to the module “Biodiversity” who have successfully completed the examinations in “Fundamentals of Biology”, “Ecology”, “Systematics and Evolution”, “Physiology I”, “Mathematics” and “Introduction to Chemistry” or “Organic Chemistry” or “Bioanalytical Chemistry”. Admission to the modules “Soil Ecology” and “Functional Morphology” is restricted to students who have successfully completed the examination in “Biodiversity” and the module “Chemistry Laboratory Course” and the exam in “Organic Chemistry” or “Bioanalytical Chemistry”.

§ 20 Change of specialisation in the bachelor programme

A change of specialisation is possible only once. The subject-specific board of examiners decides on recognition of previous study and examination achievements in the new specialty area.

§ 21 Study contents, specialisation and modules in the master programme

- (1) All modules end with one or several module or partial module examination(s) or with one or several achievement certificate(s).
- (2) On successful completion of the modules “Molecular Biosciences”, “Neurobiology” and “Biodiversity and Ecology” in the first subject-specific semester of the master programme, students select one of the specialty areas mentioned in paragraph 4 below. Acceptance in these specialty areas depends on available places and previous student performance in the master programme. The decision thereon must be communicated to the students in good time.
- (3) The following compulsory and compulsory elective modules must be completed as part of the master programme:

Module	CP	Status	Type	Requirements for examination besides attendance pursuant to § 10(1)	Sem.
Molecular Biosciences	5	C	ME w	none	1
Neurobiology	3	C	ME w	none	1
Biodiversity / Ecology	3	C	ME w	none	1
Specialty area from paragraph 4	42	CE	cf. module handbook	cf. module handbook	1-3
Module(s) from the biological-medical subsidiary subjects Biochemistry Biophysics Human Genetics Medical Neurosciences Pharmacology and Toxicology Virology	15	CE	cf. module handbook	cf. module handbook	1 - 3

Module	CP	Status	Type	Requirements for examination besides attendance pursuant to § 10(1)	Sem.
Module(s) from the subsidiary subjects Economics Chemistry Computer Science Mathematics Philosophy Psychology	12	CE	cf. module handbook	cf. module handbook	1 - 3
Advanced Methods	10	C	AC	none	3/4
Master thesis	30	C	ME w		3/4

(4) One of the following speciality areas must be completed:

- molecular biosciences
- molecular bioscience with neurobiology
- molecular biosciences with biodiversity and ecology
- neurobiology
- neurobiology with molecular biosciences
- neurobiology with biodiversity and ecology
- biodiversity and ecology
- biodiversity and ecology with molecular biosciences
- biodiversity and ecology with neurobiology

The module handbook and the curriculum indicate which modules must be completed as compulsory and compulsory elective modules in the respective speciality area.

(5) § 18(5) shall apply accordingly.

(6) Students must complete one compulsory elective module from the biological-medical subsidiary subject corresponding to 15 CP and one from the non-biological subsidiary subject corresponding to 12 CP. The modules from the biological-medical subsidiary subject may also be substituted by modules from another biological specialty area than the selected one, but only between a minimum of 15 CP and a maximum of 21 CP.

(7) With the approval of the subject-specific board of examiners, a different subsidiary subject from the ones mentioned in § 21(3) may be selected.

§ 22 Subject-specific requirements for the bachelor and master thesis

- (1) Students may only be submitted to the bachelor thesis after having gained 120 CP from the modules mentioned in § 18(4).
- (2) Students may only be admitted to the master thesis after having gained a minimum of 60

CP from compulsory and compulsory elective modules within the master programme and after having successfully completed the module "Advanced Methods".

- (3) Registration for the master thesis must occur within three months of enrolment in the module "Advanced Methods".

III. Final provisions

§ 23 Effective date

These Study and Examination Regulations shall take effect on the day of their publication in the Official Bulletin ("Amtlichen Bekanntmachungen"). The subject-specific study and examination regulations for the bachelor and master programmes in biology offered by Ulm University, dated 9 March 2010, published in the Official Bulletin on 24 March 2010, no. 6, p. 128-140, and the amendment to the subject-specific study and examination regulations for the bachelor and master programmes in biology, offered by Ulm University, dated 20 July 2010, published in the Official Bulletin on 2 August 2010, no. 18, p. 296, shall cease to have effect.

The above regulations have been agreed upon. They are hereby executed and shall be published.

Ulm, 23 December 2011

sgd.

Prof. Dr. Karl-Joachim Ebeling
- President -