Please note that this document is a non-binding convenience translation. Only the German version of the document entitled "Prüfungsordnung der Universität Heidelberg für den Bachelorstudiengang Biologie", dated 4 August 2015, has legal validity.

HEIDELBERG UNIVERSITY EXAMINATION RULES AND REGULATIONS FOR THE BACHELOR'S DEGREE PROGRAMME IN BIOLOGY

of 4 August 2015

On the basis of § 32 of the State Law of Baden-Württemberg on Higher Education (Landeshochschulgesetz – LHG), last modified by the third Act on the Amendment of Higher Education Law (Drittes Hochschulrechtsänderungsgesetz - 3. HRÄG) of 1 April 2014 (GBI. of 8 April 2014, p. 99), the senate of Heidelberg University determined these examination rules and regulations on 5 May 2015 for the Bachelor's degree programme in Biology.

Approved by the President on 4 August 2015.

I. General provisions

II. Bachelor's examination

III. Final provisions

I. General provisions

§ 1 Purpose of the academic programme and examination

(1) The Biology degree programme provides students with fundamental, applicable, and specialised knowledge as well as scientific mindset skills. Graduates of the degree programme are able to describe interconnections between subdisciplines of biology and between different levels of organisation in biological systems, providing them with the ability to plan and implement teaching, learning and education processes in the field of biology. They are able to think analytically and critically and possess specialised and subject-specific didactical skills. The Teaching Degree option prepares students for a Master of Education degree in Biology. In addition to specialised skills, they acquire subject-specific didactical and educational knowledge and skills as well as practical teaching experience. The Interdisciplinary option allows combining the biology programme with a second degree programme in a science subject. This option qualifies students for research-oriented training as part of a Master of Science programme.

(2) The purpose of the Bachelor's examination is to assess whether students understand the interconnections within the subject and have acquired the extensive specialist knowledge required. Students enrolled in the Teaching Degree option will be assessed on their suitability for the teaching profession with respect to quality and professionalism.

(3) Admission to the academic programme is subject to separate admission regulations.

§ 2 Bachelor's degree

Heidelberg University, represented by the Faculty of Biosciences, awards the academic degree of "Bachelor of Science" (abbreviated "B.Sc.") to those who have completed their studies with biology as the first major subject and passed the Bachelor's examination.

§ 3 Standard period of study, programme structure and range of courses offered

(1) The standard period of study is six semesters, including the Bachelor's examination. Successful completion of the Bachelor's degree programme

requires a total of 180 credits (ECTS points) earned for completing examination prerequisites and examinations in compulsory and elective courses.

(2) The Bachelor's degree programme is a modular programme and consists of two major subjects with a 50% weighting each. Each subject consists of 74 CP, to which is added 20 CP of interdisciplinary skills and 12 CP for the Bachelor's thesis. The first major is the subject in which the student writes his/her Bachelor's thesis.

(2a) Students enrolled in the Teaching Degree option preparing them for a Master of Education programme must select the Teaching Degree option module from the interdisciplinary skills range of courses. The "Framework regulations for the Teaching Degree option in Bachelor's programmes at Heidelberg University" must be observed.

(2b) Students looking to later take up a Master of Science programme are recommended to choose the Interdisciplinary Option elective module from the interdisciplinary skills range of courses.

(3) The required modules and affiliated courses in biology are listed in Appendix 1.

(4) Biology may be combined with the subjects listed in Appendix 2, provided that the relevant courses are offered at Heidelberg University. Completing only one subject does not lead to a Bachelor's degree. In accordance with §§ 18 and 19, the faculty of the first major subject is responsible for issuing the diploma and the degree certificate.

(5) Examination prerequisites are graded with credits -in accordance with the European Credit Transfer System. One credit corresponds to a workload of approximately 30 hours. Credits are awarded only for successfully completed modules. Successful completion of graded modules requires the grade "sufficient" (4.0) or higher.

(6) The degree programme concludes with the Bachelor's examination in accordance with § 15 paragraph 1.

(7) Lectures and courses in the degree programme and the corresponding examinations are mainly held in German, however, some are also held in English. In general, examinations must be taken in the language of instruction.

(8) All module and sub-module examinations, as well as the corresponding credits and grades, are listed in a transcript. The transcript for biology states the credits earned and the average of all available examination grades. The average grade is calculated as the mean of the examination results or module grades, weighted according to the credits. To this end, module grades are weighted in accordance with their credits. If the final module grade is not yet available, the available sub-module grades will be weighted according to their

arithmetic share of the module credit total. The grades of the chemistry and physics modules will be weighted, in proportion to their credits, by a factor of 0.5.

§ 4 Examinations board

(1) An examinations board is formed for organising the examinations and tasks defined in these examination rules and regulations. It consists of five members of the academic staff who are primarily employed by the Faculty of Biosciences. This must include four professors, one representative from the body of research associates, and one student representative, who serves in an advisory capacity.

(2) The chairperson of the examinations board, the deputy chairperson, further members and their deputies are all appointed by the faculty council. The chairperson and the deputy chairperson must be professors. The examinations board student member is appointed by the faculty council based on a proposal from the departmental student committee.

(3) The members are appointed for two years; the student member is appointed for one year. Each term starts on 1 January. Members may be re-elected.

(4) The examinations board ensures that the examination rules and regulations are respected. On a regular basis, the board reports to the Faculty regarding changes to examination dates, study periods, and grading as well as the distribution of grades. This report must be disclosed in a suitable form.

(5) The chairperson manages the business of the examinations board, prepares and chairs its meetings and, in the event of a tie vote, has the deciding vote. The examinations board may confer further responsibility to its chairperson. Such a decision may be revoked at any time.

(6) Examinations board members have the right to attend examinations.

(7) Members of the examinations board and their deputies are obligated to maintain professional confidentiality. Members who are not civil servants must be sworn to secrecy by the chairperson.

§ 5 Examiners and observers

(1) Following consultation with the examinations board, the chairperson appoints the examiners for all examinations. Examiners must be lecturers in the Bachelor’s degree programme in Biology.

(2) In general, university examinations which are not completed during the course of study as part of individual lectures or courses may only be conducted by

professors, associate professors, lecturers, or research associates who have been granted examination rights.

(3) Examinations held during the course of study are normally conducted by the instructor of the respective course.

(4) Observers must have sat the Bachelor's examination or at least an equivalent final examination. Observers are appointed by the examiners.

5) § 4 paragraph 7 (official secrecy) shall apply accordingly to examiners and reviewers.

§ 6 Recognition of course credits, examination results and academic degrees

(1) Course credits and examination results as well as academic degrees that were obtained through a degree programme at another state or state-recognised higher education institution or college of cooperative education (Berufsakademie) in the Federal Republic of Germany, or through degree programmes at state or state-recognised higher education institutions abroad, will be recognised as long as the skills acquired do not differ significantly from those required for the courses and examinations or the degrees that are replaced. This recognition is required in order to continue an academic programme, take examinations, enrol in a further academic programme or be admitted to a doctoral programme. The validity of § 15, paragraphs 3 and 4 LBG (State Public Service Law) remains unaffected.

(2) Preliminary and intermediate examinations taken at other German universities in the same degree programme or in a similar degree programme will be recognised. Courses completed at recognised distance-learning institutions will be considered equivalent to those in a corresponding traditional degree programme with regard to determining the duration of study.

(3) It is the applicant's responsibility to provide all information necessary for achievements to be recognised. It is the responsibility of the office which carries out the recognition procedure to prove that an application does not fulfil the requirements.

(4) If agreements existing between the Federal Republic of Germany and other states concerning the equivalence of university degree programmes (Equivalency Agreements) diverge from paragraph 1 and § 29, paragraph 2, clause 5 of the LHG (Act on Higher Education of the Land of Baden-Württemberg), and thereby favour students from other states, the rules and regulations in the Equivalency Agreement shall take precedence.

(5) Examination results are to be graded on the basis of a credit system that allows credits from equivalent or similar degree programmes to be recognised;

this also applies to universities of cooperative education, provided that equivalence is established.

(6) Knowledge and skills acquired outside of the higher education system are to be recognised for a degree programme at a higher education institution if

1. the requirements for university admission are fulfilled at the time of recognition,
2. the knowledge and skills to be recognised for the university degree programme are equivalent in both content and level to the course credits and examination results which they are to replace, and
3. the criteria for recognition have been verified in an accreditation.

Knowledge and skills gained outside of the higher education system may not replace more than 50% of the university degree programme. Universities shall specify the details in the examination rules and regulations, in particular the extent to which knowledge and skills gained outside of the higher education system can be recognised and the preconditions that must be fulfilled. The examination rules and regulations may require the completion of a placement test.

(7) Credits may be awarded for coursework and examinations completed in the context of continuing education programmes for professionals (Kontaktstudien). When recognising credits from refresher courses for a university degree programme, paragraphs 2 and 5, as well as paragraph 6, clause 1, no. 1 apply accordingly. When recognising knowledge and skills gained outside of the higher education system for continuing education programmes for professionals, paragraph 6 applies accordingly.

§ 7 Unexcused absences, withdrawal, deception and breaches of regulations

(1) An examination is graded as "failed" (5.0) if a candidate fails to appear and is unable to provide a valid reason for their absence, or if the candidate withdraws after the examination has started. A written examination that was not produced within the allocated time is also graded as "failed", unless the candidate is not responsible for the deadline being exceeded.

(2) Reasons for withdrawal or absence must be stated plausibly and immediately to the examinations board in writing. If the candidate, or a child for whom the candidate is generally the sole caregiver, is ill, a medical certificate must be provided. In the event of doubt, a medical certificate from a University-designated physician may be required. If the reasons are accepted, a new examination date will be scheduled. In this case, examination results that are already available will be taken into account.

(3) When deciding whether the candidate is responsible for exceeding a deadline for registering for or taking an examination, the examinations board must respect the provisions stated in the Maternity Protection Act and the legal regulations concerning parental leave, and allow candidates to make appropriate use of these provisions. The same applies for students with

disabilities or chronic diseases, or for students with dependent relatives, in accordance with § 7 paragraph 3 of the Pflegezeitgesetz (Home Care Leave Act).

(4) If the candidate tries to influence the examination results through deception or by using unauthorised aids, the examination component concerned will be graded as "failed" (5.0). If a candidate disrupts the proper course of the examination, the examiner or examination supervisor may exclude the candidate from continuing the examination. In this case, the examination will be graded as "failed" (5.0). In severe cases, the examinations board may exclude the candidate from all further examinations.

(5) Within a period of fourteen days, the candidate may request that the decision be validated by the examinations board in accordance with paragraph 4 clauses 1 and 2. The candidate must be informed of negative decisions immediately and in writing; the reasons for the decision must be stipulated and information on the procedure for appeal must be provided.

§ 8 Types of examinations

(1) Types of examinations are:
1. oral examinations
2. written examinations (electronically where applicable)
3. the Bachelor's thesis.

(2) If candidates provide a medical certificate that plausibly proves that they are not able to take examinations in the form prescribed, whether completely or partially, due to permanent or chronic health problems, the examinations board may allow them to take an equivalent examination. The same applies to other course requirements.

§ 9 Oral examinations

(1) In oral examinations, candidates should prove that they are able to identify connections within the examination subject matter, and relate specific problems to these interconnections.

(2) Oral examinations are generally examined by one examiner and one qualified observer.

(3) An oral examination lasts between 15 and 45 minutes.

(4) The key topics and the result of the oral examination must be recorded in the minutes. Candidates must be notified of examination results immediately following the oral examination.

(5) Students seeking to take the same examination at a later date may be allowed to observe the examination, provided that there is enough space

available. The student observers may not be present for the assessment or announcement of the examination results. Upon the candidate's request, or for other valid reasons, observers may be prohibited from attending the examination.

§ 10 Written examinations

(1) In written examinations, candidates should prove that they are able to recognise problems relating to their subject and find solutions for them, using subject-specific methods with limited time and resources.

(2) A written examination lasts between 45 and 120 minutes. Multiple choice questions are permitted.

(3) Multiple choice questions are generally devised by the lecturer responsible for a course, as appointed by the examinations board. The questions must be tailored to examine the knowledge conveyed in the lecture or course and provide reliable results. Before assessing the examination results, the person responsible, as determined in clause 1, must ensure that the questions for the examination are in accordance with paragraph 3 clause 2. If the examiner finds that individual examination questions are incorrect, these questions must not be considered when assessing the examination results. In such a case, the total number of questions is reduced and the assessment is based on the reduced number of questions. Reducing the number of questions must not have negative consequences for the candidates.

An examination carried out as a multiple choice examination is considered to be passed if at least 50% of the questions were answered correctly, or if the number of questions correctly answered by the candidate is not more than 22% below the average examination results of all candidates. (norm-referenced grading). In case of norm-referenced grading, at least 45 % of the questions must be answered correctly.

If a candidate has correctly answered the number of questions required to pass the examination, then the multiple choice examination must be assessed as follows. In case of norm-referenced grading, the scale for assessment is moved lineally by the difference between the absolute and relative threshold for passing.

%	corresponds to	grade
≥ 50 – 55		4.0
> 55 – 60		3.7
> 60 – 65		3.3
> 65 – 70		3.0
> 70 – 75		2.7

> 75 – 80	2.3
> 80 – 85	2.0
> 85 – 90	1.7
> 90 – 95	1.3
> 95 – 100	1.0

(4) If a written examination component takes the form of a term paper, candidates must assure that they are the author of their own work and have used no sources or aids other than those indicated.

§ 11 Assessment of examinations

(1) Grades for the individual examinations are determined by the respective examiners. The following grades must be used for assessment of examinations:

1 = very good	=	an outstanding performance;
2 = good	=	a performance which lies substantially above average requirements;
3 = satisfactory	=	a performance which fulfils average requirements;
4 = sufficient	=	a performance which, despite deficiencies, still meets the requirements;
5 = failed	=	a performance which, due to considerable deficiencies, does not meet the requirements.

For more detailed assessment of examination results, interim grades may be given by increasing or decreasing the individual grades by 0.3; the grades 0.7, 4.3, 4.7 and 5.3 may not be used.

(2) In general, the evaluation period for examination components should not exceed two weeks following completion of the module.

(3) Students receive a passing grade in an examination component if it has been graded as "sufficient" (4.0) or higher. A module is successfully completed when all individual sub-module examinations have been passed.

(4) The overall grade for the Bachelor's examination is calculated using the grades of the module examinations. The overall grade is determined as follows:

for an average up to and including 1.5 very good

for an average between 1.6 and up to / including 2.5	good
for an average of between 2.6 and up to/including 3.5	satisfactory
for an average of between 3.6 and up to/including 4.0	sufficient

(5) When calculating final module grades, the average grade and overall examination grade, only the first digit after the decimal point is taken into account. The other digits are dropped without rounding.

(6) If grades are awarded in accordance with the European Credit Transfer System ECTS, the international assessment standard specified in Appendix 5 is applied.

§ 12 Retaking an examination component integrated in the course of study

(1) If examination components are not passed, or are considered not to have been passed, they may be retaken once.

(2) A second retake is only possible on request, providing severe reasons, and only for one single module examination in the overall range of subjects pertaining to chemistry and physics, and for one single module examination in the field of biology. Such a request must be made to the examinations board.

(3) Retaking an examination that has been graded as passed is not permitted.

(4) If an examination component has been failed, it must be retaken at the next examination date, at the latest. If candidates miss this deadline, they may not retake the examination component, unless they are not responsible for exceeding the deadline.

(5) If a module is ultimately failed, candidates lose their entitlement to take examinations.

§ 13 Participation in lectures or courses

Participation in a lecture or course may require previous successful participation in another lecture or course. Such regulations result from the individual module descriptions.

II. Bachelor’s examination

§ 14 Admission requirements and procedure

(1) Admission to the individual examination components for the Bachelor's examination in biology may only be granted to those who:
1. are enrolled in the Bachelor’s degree programme in Biology at Heidelberg University;

2. have not lost their entitlement to take the examination.

(2) The application for admission to the Bachelor's examination must be made in writing before taking the first examination component, addressed to the chairperson of the examinations board. Such an application must include the following documents:

1. proof that all admission requirements, in accordance with paragraph 1, have been met;
2. candidates' declaration stating whether they have already lost their entitlement to take examinations at Heidelberg University in the Bachelor's degree programmes in biology, biosciences,biochemistry, molecular biotechnology, or in the teaching degree programme in biology, or in the Diplom degree programme in biology; or whether they are currently undergoing an examination procedure in one of these programmes.

(3) The decision on admission of the candidate is made by the chairperson of the examinations board.

(4) The application for admission may only be rejected if

1. the conditions stated in paragraph 1 are not fulfilled, or
2. the documents are incomplete, or
3. the candidate has already lost their entitlement to take examinations at Heidelberg University in the Bachelor's degree programmes in biosciences, biology, biochemistry or molecular biotechnology, or in the teaching degree programme in biology or in the *Diplom* degree programme in biology, or
4. the candidate has lost their entitlement to take examinations due to other reasons.

(5) Such a declaration, in accordance with paragraph 2 no. 2, must be submitted to the examiner for each examination component.

(6) Candidates applying for admission to the Bachelor’s examination must provide the documents listed in paragraphs 1 and 2, and certificates documenting their successful participation in the course modules 1 to 12 included, which are specified in Appendix 1.

(7) Admission to the Bachelor’s thesis may only be granted to those who study one of the subjects specified in Appendix 3 as their second subject.

§ 15 Scope, nature and organisation of the Bachelor's examination

(1) The Bachelor’s examination in biology consists of:

1. the examination components completed during the course of study pursuant to Appendix 1
2. the Bachelor's thesis

(2) The cross-disciplinary skills courses set forth in Appendix 4 must have been passed.

(3) The second subject is subject to the rules and regulations applicable to the second subject.

(4) The examinations referred to in paragraph 1 no. 1 and paragraph 2 are taken as an integrated part of the relevant lecture or course. They can be in written or oral form. The lecturer responsible for a lecture or course determines the nature and duration of the examination components in accordance with paragraph 1 no. 1 and paragraph 2 and announces this information by the beginning of the lecture or course at the latest.

(5) Module examinations may consist of several sub-module examinations.

§ 16 Bachelor's thesis

(1) The Bachelor's thesis is a graded paper that completes the academic programme. The purpose of the thesis is for candidates to show that they are able to work independently on a problem from the field of biology within a given period of time, using academic methods.

(2) The Bachelor's thesis may be assigned and supervised by any authorised examiner as defined by § 5 paragraph 2.

(3) The candidate must apply for allocation of a Bachelor's thesis topic (registration) no later than one year after passing the last examination component completed during the course of study. This application must be addressed to the chairperson of the examinations board. The thesis may only be started after registration. Permission to begin writing the thesis at a later date will only be granted upon submission of a substantiated request to the chairperson of the examinations board.

(4) If the candidate misses this deadline, the thesis is graded as "failed" (5.0), unless the candidate is not responsible for the deadline being exceeded.

(5) The Bachelor's thesis topic will be determined by the thesis supervisor, having consulted with the candidate. If such an application is made, the chair of the examinations board will ensure that the candidate receives a topic for their Bachelor's thesis in due time. The candidate shall be given the opportunity to propose topics. However, this does not constitute a legal entitlement to a particular topic. The chairperson of the examinations board assigns the thesis topic; the date of assignment must be recorded.

(6) The deadline for submission of the thesis is 8 weeks after the topic was assigned. In exceptional cases, the examinations board may extend this deadline by up to two weeks. If the deadline is exceeded, the Bachelor's thesis

will be graded as "failed" (5.0), unless the candidate is not responsible for the deadline being exceeded.

(7) The topic, task and scope of the Bachelor's thesis must be limited in such a way that the candidate is able to complete the thesis within the given period.

(8) The thesis must contain a summary. The thesis may be written in German or English.

§ 17 Submission and assessment of the Bachelor's thesis

(1) Two copies of the Bachelor's thesis must be submitted to the examinations board by the deadline; the submission date must be recorded.

(2) On submission of the Bachelor’s thesis, the candidate must assure, in writing, that they are the author of their own work and that no sources or aids other than those indicated have been used.

(3) The Bachelor's thesis is assessed by one examiner. § 5 paragraphs 1 and 2 apply accordingly. The examiner should be the supervisor of the thesis. The candidate has the right to propose a topic, this does not, however, constitute a legal entitlement. The evaluation period should not exceed two weeks. If the Bachelor's thesis is graded as failed, a second examiner must be consulted. If both examiners’ assessments differ, the examinations board will decide on the basis of the examiners' reviews.

(4) If the Bachelor's thesis is graded as "failed" (5.0), it may be retaken with a new topic; retaking the thesis with the previous topic is not possible. The retake must be started within four weeks after the candidate was notified of failing the first attempt.

§ 18 Passing the examination and overall grade

(1) The Bachelor's examination is passed when all examination components completed during the course of study and the Bachelor's thesis have been graded as "sufficient" (4.0) or higher and all ungraded examination components completed during the course of study have been passed.

(2) § 11 applies for assessment of all examination components and the overall grade.

(3) The overall grade of the Bachelor’s examination is calculated using both subject grades and the grade of the Bachelor’s thesis. Cross-disciplinary skills do not form part of the overall grade. To calculate the overall grade, both subject grades are taken into account by a weighting of 74/160 respectively, and the Bachelor’s thesis by a weighting of 12/160.

(4) The biology subject grade is calculated using the graded modules specified in the Appendix 1. The module grades are weighted according to the number of module credits. Module grades for the natural science modules chemistry and physics are weighted according to the number of module credits and by a factor of 0.5.

§ 19 Diploma

(1) After the Bachelor's examination is passed, a diploma will be issued within four weeks. It states all individual modules, including the Bachelor's thesis, with their respective grades and credits, and the overall grade. The diploma is dated with the day of the last examination component. It must be signed by the chairperson of the examinations board.

(2) A “Diploma Supplement” in German and English is also provided, containing additional information about the course content and period of study. The content complies with the “European Diploma Supplement Model”.

§ 20 Bachelor's certificate

(1) A bilingual (German/English) Bachelor’s certificate is issued with the diploma, bearing the same date. It certifies the conferment of the academic degree.

(2) The Bachelor’s certificate is signed by the dean and the chairperson of the examinations board. It bears the faculty seal.

(3) If the candidate has failed the Bachelor’s examination, a certificate will be issued on request and on presentation of relevant proof, listing passed examination components and the corresponding grades as well as the missing examination components. It is signed by the chairperson of the examinations board and includes a note about the Bachelor’s examination not being passed. The same applies to the Bachelor's examination if failed on the final attempt.

III. Final provisions

§ 21 Invalidity of examinations

(1) If a candidate has deceived in an examination and this is only discovered after the diploma has been issued, the examinations board may accordingly change the examination results affected by the deception, and may declare the examination partially or completely failed.

(2) If the candidate fails to fulfil the requirements for admission to the examination, but concealment of this failure was unintentional on the part of the candidate, and this failure is only discovered after the diploma has been issued, the passed examination is considered to compensate for this shortcoming. If the

candidate intentionally deceived in order to gain admission to the examination, the examinations board will make a decision on the matter.

(3) Before the decision is made, candidates will be given the opportunity to provide an explanation.

(4) Fraudulent examination diplomas will be confiscated and, if necessary, a new diploma will be issued. The Bachelor's certificate will be confiscated along with the fraudulent examination diploma if the examination was graded as "failed" due to deception. In accordance with paragraph 1 and paragraph 2, clause 2, a decision may not be made more than five years after the date indicated on the examination diploma.

§ 22 Access to examination documents

The candidate may request access to written examination documents, examiners' reviews and the examination minutes within a period of one year after completing an examination. The examiner responsible determines when and where access will be given.

§ 23 Coming into force

These examination rules and regulations come into force on 1 October 2015.

Heidelberg, 4 August 2015

Professor Dr. rer. nat.
Bernhard Eitel
President

APPENDIX 1: Modules for the biology degree programme
Compulsory (elective) modules[1] including certification of successful participation and grades

		CP
1.	Basic lecture: Biology 1	5
2.	Basic lecture: Biology 2	9
3.	Basic lecture: Biology 3	9
4.	Basic lecture: Biology 4	4
5.	Basic course: Basics of Biosciences	4
6.	Basic course: Biodiversity of native flowering plants	4
7.	Basic course: Biodiversity of native animals	4
8.	Basic course: Methods of Molecular Biosciences	6
9.	Basic course: Experimental Physiology	3
10.	Basic course: Experimental developmental biology	4
11.	Module: Chemistry	4*
12.	Module: Physics	4**
13.	Biodiversity field trips	2
14.	Module: Advanced lectures	8
15.	Module course	4(8***)
16.	Advanced seminar	2

*Unless chemistry is the second subject

**Unless physics is the second subject

***If chemistry or physics is studied as the second subject.

APPENDIX 2: The 50% degree programme in biology may be combined with the following subjects:

- Chemistry

1 Based on the European Credit Transfer System (ECTS), the modules correspond to a certain number of credits (CP).

- Computer Science
- Economics
- English
- Fine Arts
- French
- Geography
- German
- German as a Second Language
- Greek
- History
- Italian
- Jewish religious education
- Latin
- Mandarin
- Mathematics
- Music (in cooperation with Mannheim)
- Philosophy/Ethics
- Physics
- Political science
- Protestant Theology
- Russian
- Spanish
- Sports

APPENDIX 3

The Bachelor's thesis may only be written in biology if the second subject is one of the following subjects:

- Computer Science
- Physics
- Chemistry
- Mathematics
- Geography

APPENDIX 4 Interdisciplinary skills (key skills):

Two modules are offered as interdisciplinary skills modules:

Module Teaching Degree option:

Students who choose the Teaching Degree option in order to orient the Bachelor's degree programme towards a later completion of a Master of Education leading to a teaching qualification for German secondary schools (Gymnasium) must begin developing teaching skills during the Bachelor's degree programme. This entails gaining a total of 20 CP within the cross-disciplinary skills, which can be recognised across subjects/separately (cf. Framework regulations for the Teaching Degree option).

The 20 CP consist of the following:

- Specialised didactics in subject 1 (2 CP)
- Specialised didactics in subject 2 (2 CP)
- Introduction to School Pedagogy/Pedagogical Psychology (6 CP)
- Basics of Education Studies (4 CP)
- Vocational placement I (3 weeks) in a school (3 CP)
- Vocational placement II (3 weeks) in an educational institution or school (3 CP)

6.1 Interdisciplinary option module (20 CP)
This module may only be selected if the second subject is among the subjects listed in Appendix 3. The module should be selected by students looking to later take up a Master of Science programme:
10 CP must be earned from the integrated range of courses of the Bachelor's degree programme in Biosciences.
The following courses are recommended:

Course	Skill	CP
Work placement	Ability to work in a team, time management, personal and interpersonal skills, practice-oriented problem solving skills, ability to think and act in an interdisciplinary manner	10
Advanced lectures	Frustration tolerance, time management	4
Courses	Ability to work in a team; personal and interpersonal skills	4
Seminars	Dialogue competence, presentation skills	4
Research practicum	Ability to work in a team, time management, practice-oriented problem solving skills; personal and interpersonal skills; ability to think and act in an	10

	interdisciplinary manner	

APPENDIX 5: Grading in accordance with ECTS

In addition to the German-system grades, students who have passed the examinations will also be awarded a letter grade according to the following scale:

A	top 10 %
B	the following 25%
C	the following 30%
D	the following 25%
E	the following 10%

The grades achieved by at least two previously graduating year groups may also be taken into account when calculating the relative grades for the current graduating year group, depending on the size of the graduating cohort. For degree grades, the ECTS grade must be included. For individual modules, the ECTS grade may be listed when possible and necessary.

APPENDIX 6: Modules

6.1 Module: Basic lecture Biology 1

a) *Module content and learning objectives*
The module forms part of the basic education in general biology. The module provides an overview of the basic principles of light and electron microscopy, cell biology, genetics, microbiology, evolution, and an overview of animal and plant organisms.

It provides an understanding of biological principles and mechanisms. Students will learn how to effectively manage their work process, identify and fill knowledge gaps, and effectively work towards a goal.

b) *Teaching methods*
Lecture

c) *Requirements for participation*
None

d) *Applicability of module*

Biosciences, biology (Bachelor)
Basic education in biology for science majors with a biology minor

e) *Credit requirements*
The basic lecture Biology 1 is completed by a written examination. The grade of the written examination is used as module grade.

f) *Credits and grades*
5 ECTS points are awarded.

g) *Course offered*
annually, winter semester

h) *Workload*
The workload is 150 hours.
Attendance times: approx. 50 teaching hours

i) *Duration*
The module lasts one semester (lecture period).

6.2 Module: Basic lecture Biology 2

a) *Module content and learning objectives*

The module forms part of the basic education in general biology.

Over the course of three sub-modules, students will gain a fundamental understanding of biochemistry, molecular biology and cell biology.

It provides an understanding of biological principles and mechanisms. Students will learn how to effectively manage their work process, identify and fill knowledge gaps, and effectively work towards a goal.

b) *Teaching methods*

Lecture, seminar

c) *Requirements for participation*

Skills conveyed in the module "Chemistry" are required.

d) *Applicability of module*

Biosciences, biology (Bachelor)
Basic education in biology for science majors with a biology minor

e) *Credit requirements*

The basic lecture Biology 2 is completed by a written examination. The grade of the written examination is used as module grade.

f) *Credits and grades*

9 credits are awarded.

g) *Course offered*

annually, summer semester

h) *Workload*
The workload is 270 hours.
Attendance times: approx. 75 teaching hours

i) *Duration*

one semester

6.3 Basic lecture module: Biology 3

a) *Module content and learning objectives*

The module forms part of the basic education in general biology.

This module teaches the theoretical basis of physiology and developmental biology.

It provides an understanding of biological principles and mechanisms. Students will learn how to effectively manage their work process, identify and fill knowledge gaps, and effectively work towards a goal.

b) *Teaching methods*

Lecture

c) *Requirements for participation*

None

d) *Applicability of module*

Biosciences, biology (Bachelor)

Basic education in biology for science majors with a biology minor

e) *Credit requirements*

The basic lecture Biology 3 is completed by a written examination. The grade of the written examination is used as module grade.

f) *Credits and grades*

9 credits are awarded.

g) *Course offered*

annually, winter semester

h) *Workload*

The workload is 270 hours.

Attendance times: 75 teaching hours

i) *Duration*

one semester

6.4 Module: Basic lecture Biology 4

a) *Module content and learning objectives*

The module forms part of the basic education in general biology.

This module conveys the theoretical basis of immunology, bacteriology, virology, parasitology, plant-pathogen interaction, sociobiology, behaviour, and ecology.

It provides an understanding of biological principles and mechanisms. Students will learn how to effectively manage their work process, identify and fill knowledge gaps, and effectively work towards a goal.

b) *Teaching methods*

Lecture

c) *Requirements for participation*

None

d) *Applicability of module*

Biosciences, biology (Bachelor)

Basic education in biology for science majors with a biology minor

e) *Credit requirements*

The basic lecture Biology 4 is completed by a written examination The grade of the written examination is used as module grade.

f) *Credits and grades*

4 credits are awarded.

g) *Course offered*

annually, summer semester

h) *Workload*

The workload is 120 hours.
Attendance times: approx. 30 teaching hours

i) *Duration*

The module lasts half a semester (lecture period).

6.5 Basic course module: Basics of Biosciences

a) *Module content and learning objectives*

This module conveys a concise overview of the biosphere. This includes organisation of bacteria and fungi cells, structure of plant cells and variability of animal cells. Examples are used from molecular cell biology. Symbiosis and parasitism will be studied as examples of contact among organisms and cell behaviour. This basic module for microscopy/anatomy gives an introduction to microscopy and basic practical techniques.

The module forms part of the basic education in biology. Students will acquire the ability to identify discrepancies between theory and practice and train their observation skills.

b) *Teaching methods*
Course: Lecture, laboratory course

c) *Requirements for participation*
None

d) *Applicability of module*
Biosciences, biology (Bachelor), basic education in biology for science majors with a biology minor

e) *Credit requirements*
Written records of each day of classes must be prepared. The module grade is made up of the assessments of these records (28 credits max.) and the written examinations (72 credits max.).

Students must achieve at least 50% of the credit maximum.

f) *Credits and grades*

4 credits are awarded.

g) *Course offered*
annually, winter semester

h) *Workload*
The workload is 120 hours.
Attendance times: approx. 28 teaching hours lecture/preliminary discussion; 56 hours of practical exercises

i) *Duration*
one semester

6.6 Basic course module: Biodiversity of native flowering plants:

a) *Module content and qualification objectives*

The module introduces students to the biodiversity of plants and the basic principles of systematics and taxonomy, and includes identification exercises.
Students will attempt to systematically sort the native flowering plants studied in the module and associate them with their corresponding ecosystems. Key topics from the fields of evolutionary biology (“Flowers as the cradle of evolution”) and reproductive biology (economical production of pollen and seeds, pollen tube competition and pollination syndromes) are covered by the accompanying lecture. The practical component focuses on identification of native flowering plants by means of an identification guide and on elaborating “field characteristics” that allow for quick identification of the major native flowering plant families.

The module forms part of the basic education in biology. Students will acquire the ability to identify discrepancies between theory and practice. They train their observation skills and their ability to integrate knowledge and manage complexity.

b) *Teaching methods*
Course: Lecture, laboratory course

c) *Requirements for participation*
The contents of the module are based on knowledge acquired through “Module: Basic course Basics of Biosciences” and on “Module: Basic lecture Biology 1”.

d) *Applicability of module*
Biology (Bachelor); Basic education in biology for science degree majors with a biology minor

e) *Credit requirements*
Assessment occurs through written examinations and one practical identification exercise.
The grades of the examination components are used as module grade.

f) *Credits and grades*
4 credits are awarded.

g) *Course offered*
annually, summer semester

h) *Workload*
The workload is 120 hours.

i) *Duration*
One semester

6.7 Module: Basic course Biodiversity of Native Animals

a) *Module content and qualification objectives*
The module introduces students to the biodiversity of animals and the basic principles of systematics and taxonomy, and includes identification exercises.

The course teaches morphology and systematics of native animals. Students will acquire diagnostic methods, thereby gaining a first impression of fauna biodiversity. They will learn about different species such as insects and vertebrates by studying examples of different subtypes.

The module forms part of the basic education in biology. Students will acquire the ability to identify discrepancies between theory and practice and train their observation skills. They will learn to assess the theoretical and practical impact of the subject on nature and the environment by studying examples.

b) *Teaching methods*
Course: Lecture, laboratory course

c) *Requirements for participation*
The contents of the module are based on knowledge acquired through “Module: Basic course Basics of Biosciences” and “Basic lecture Biology 1”.

d) *Applicability of module*
Biology (Bachelor)
Basic education in biology for science majors with a biology minor

e) *Credit requirements*
The course contents will be tested by means of attestations and practical examinations. The grades of the examination components are used as module grade.

f) *Credits and grades*
4 credits are awarded.

g) *Course offered*
annually, summer semester

h) *Workload*
The workload is 120 hours.

i) *Duration*
One semester

6.8 Basic course module: Experimental Physiology

a) *Module content and learning objectives*

Theoretical and practical introduction to animal and plant physiology. Fundamental methods and hypotheses of experimental physiology will be covered, ranging from molecular processes to the entire organism.
The module forms part of the basic education in biology. Students will acquire the ability to identify discrepancies between theory and practice and train their observation skills. Students will learn skills that help them identify and reduce gender-specific discrimination. They will become aware of the different potentials and resources of women and men and the achievements that can be obtained through equal opportunities.

b) *Teaching methods*

Course: Lecture, laboratory course, seminar

c) *Requirements for participation*

None

d) *Applicability of module*

Biosciences (Bachelor)

e) *Credit requirements*

The lecturer defines the scope and nature of the assessment and announces this information at the beginning of the lecture. The grade of the written examination is used as module grade.

f) *Credits and grades*

3 credits are awarded.

g) *Course offered*
annually, winter semester

h) *Workload*
The workload is 90 hours.
Attendance times: approx. 25 hours of practical exercises with preliminary discussion

i) *Duration*
one semester; course can be offered as block course

6.9 Module: Basic course Developmental Biology

a) *Module content and learning objectives*

Theoretical and practical introduction to developmental biology for plants and animals.

The module forms part of the basic education in biology. Students will acquire the ability to identify discrepancies between theory and practice and train their observation skills.

b) *Teaching methods*

Course: Lecture, laboratory course, seminar

c) *Requirements for participation*

None

d) *Applicability of module*

Biosciences (Bachelor)

e) *Credit requirements*

The lecturer defines the scope and nature of the assessment and announces this information at the beginning of the lecture. The grade of the written examination is used as module grade.

f) *Credits and grades*

4 credits are awarded.

g) *Course offered*

annually, winter semester

h) *Workload*

The workload is 120 hours.

Attendance times: approx. 40 hours of classes

i) *Duration*

one semester; course can be offered as block course

6.10 Module: Basic course Methods of Molecular Biosciences

a) *Module content and learning objectives*

This module covers the basic methods and techniques of biochemistry, molecular and microbiology, and provides an introduction to scientific experimentation and practical laboratory work.

The module forms part of the basic education in biology. Students will acquire the ability to identify discrepancies between theory and practice and train their observation skills.

b) *Teaching methods*

Course: Lecture, laboratory course, seminar

c)*Requirements for participation*
Chemistry module should be completed

d) *Applicability of module*

Biosciences, biology (Bachelor), basic education in biology for science majors with a biology minor

e) *Credit requirements*
The lecturer defines the scope and nature of the assessment and announces this information at the beginning of the lecture. Records of each individual course must be prepared. The module grade will be calculated using the grades of the written examinations in biochemistry, molecular biology, and microbiology.

f) *Credits and grades*

6 credits are awarded.

g) *Course offered*
Summer semester (biochemistry component), winter semester (microbiology and molecular biology component)

h) Workload
The workload is 180 hours. Attendance times:

- Biochemistry approx. 5 lecture teaching hours, approx 40 course hours
- Molecular biology: approx. 30 course hours
- Microbiology: approx. 25 course hours

i) Duration
Two semesters; course can be offered as block course.

6.11 Courses module (compulsory elective):

a) *Module content and learning objectives*

Students choose a course on a specific topic that suits their interest and is part of the course offer on botany, zoology, microbiology, molecular biology, cell biology and genetics, biochemistry, or the life science related course offer in physics, chemistry and mathematics. The courses in this module may be taught in English.

Students will learn how to effectively work towards a goal. They will learn how to identify, deliberate on and discuss problems and put their theoretical knowledge and acquired skills into practice.

b) *Teaching methods*

Course: Lecture, laboratory course, seminar

c) *Requirements for participation*

The lecturer may define specific requirements for participation. Prior successful completion of the module "Basic course: Methods of Molecular Biosciences" may be required for some courses.

d) *Applicability of module*

Biosciences, biology (Bachelor)

e) *Credit requirements*
Students are required to complete one course from the range of compulsory electives. Students with chemistry or physics as their second subject must complete two courses.
The lecturer defines the scope and nature of the assessment and announces this information at the beginning of the lecture. The grades of the examination components are used as module grade.

f) *Credits and grades*
4 or 8 credits, respectively, are awarded.

g) *Course offered*

Lectures and courses for this module are offered each semester, however it cannot be guaranteed that a specific course will be offered.

h) *Workload*
The workload is 120 hours or 240 hours, respectively.

Attendance times: 40 or 80 hours, respectively, half of which for theoretical and practical study units

i) *Duration*
The module may extend over several semesters; seminars may be offered as block seminars.

6.12 Module: Chemistry

a) *Module content and learning objectives*
This module conveys basic knowledge and skills in general and inorganic chemistry, using experimental and theoretical methods.

Students learn how to apply methods from neighbouring disciplines for problem solving. The module promotes interdisciplinary thinking and acting.

b) *Teaching methods*
Lecture, laboratory course, seminar, colloquium

c) *Requirements for participation*
not applicable if chemistry is the second subject

d) *Applicability of module*

Biology (Bachelor), can be taken as a basic scientific education module in modular science programmes

e) *Credit requirements*
The lab courses are accompanied by a seminar. In order to take the final examination, which takes place at the end of the laboratory course, the laboratory course must have been successfully completed. The grade of the written examination is used as module grade.

f) *Credits and grades*
4 credits are awarded.

g) *Course offered*
annually, summer semester

h) *Workload*
The workload is 120 hours. Attendance times:

- 30 hours of lectures
- 10 hours of tutorial classes
- Course includes 9 afternoon lab classes (4 h)

i) *Duration*
one semester

6.13 Module: Physics

a) *Module content and learning objectives*
The module aims at conveying the physical principles of biological systems. It introduces students to the basic principles of mechanics, extended bodies, thermodynamics, hydrodynamics, electricity, magnetism, waves, oscillations, optics, atomic physics, line spectra, and X-radiation.

Students learn how to apply methods from neighbouring disciplines for problem solving. The module promotes interdisciplinary thinking and acting.

b) *Teaching methods*

Lecture, practice class

c) *Requirements for participation*

Module not required if physics is second subject

d) *Applicability of module*

Biology (Bachelor)

Can be taken as basic scientific education module in modular science programmes

e) *Credit requirements*

The lecturer defines the scope and nature of the assessment and announces this information at the beginning of the lecture. The grade of the examination component is used as module grade.

f) *Credits and grades*

4 credits are awarded.

g) *Course offered*

annually, winter semester (March)

h) *Workload*

The workload is 120 hours.

Attendance times: approx. 45 lecture teaching hours, approx. 30 practice class hours, approx. 20 hours preliminary course in mathematics

i) *Duration*

one semester

6.14 Advanced lecture module (compulsory elective)

a) *Module content and learning objectives*

This module provides advanced theoretical training in the fields of biodiversity, ecology, evolution, microbiology, parasitology, virology, molecular biology, molecular cell biology, genetics, histology, morphology of cells, biochemistry, biophysics, structural biology, biomathematics, neurobiology, physiology, developmental biology, and immunology. The courses in this module may be taught in English.

The module aims at conveying a more profound understanding of biological principles and mechanisms. Students will learn how to actively manage their workflow and further learning processes and efficiently research relevant literature.

b) *Teaching methods*
Lecture

c) *Requirements for participation*
Knowledge conveyed in modules "Basic lectures 1 - 4" is required. Lectures may build on each other.

d) *Applicability of module*
Biology (Bachelor)

e) *Credit requirements*
Two lectures assigned to the module must be completed. The lecturer defines the scope and nature of the assessment and announces this information at the beginning of the lecture. The module grade is calculated as the mean of the examination components of both completed lectures.

f) *Credits and grades*
8 credits are awarded.

g) *Course offered*
every semester

h) *Workload*
The workload is 240 hours.
Attendance times: approx. 60 teaching hours

i) *Duration*
The module may extend over several semesters; seminars may be offered as block seminars.

6.15 Advanced seminar module (compulsory elective):

a) *Module content and learning objectives*

Gaining, deepening and building on specialised biological knowledge is combined with the acquisition of various presentation techniques and media literacy skills. Students improve their language and communication skills by independently preparing and giving presentations and subsequently discussing their findings. The courses in this module may be taught in English.

b) *Teaching methods*

Seminar

c) *Requirements for participation*

The lecturer may define special entry requirements such as successful completion of certain modules or lectures and courses.

d) *Applicability of module*

Biology (Bachelor)

e) *Credit requirements*

The courses assigned to the module must be completed.

The lecturer defines the scope and nature of the course assessment and announces this information at the beginning of the course.

f) *Credits and grades*

2 credits are awarded.

g) *Course offered*

Lectures and courses for this module are offered each semester, however it cannot be guaranteed that a specific course will be offered.

h) *Workload*

The workload is 60 hours.
Attendance times: 30 teaching hours

i) *Duration*

one semester

6.16 Module: Bachelor's Thesis

a) *Module content and learning objectives*

The thesis should cover a topic from the field of study, using academic methods and working independently. The results will be presented in written form in the Bachelor's thesis, which includes a summary.

Students learn how to independently work on a specific topic taken from a biosciences discipline, using academic methods. The module helps students deepen their knowledge of the biological principles specific to the relevant discipline, develop a coherent understanding of the theoretical and experimental concepts and methods of biosciences, and forge their professional and expert identity.

b) *Teaching methods*

Instructions on doing scientific work

c) *Requirements for participation*
All examination components of the compulsory biology modules taken during the course of study (Appendix 1 of the examination rules and regulations: 1-12) must be completed successfully.

The second subject must be chemistry, physics, mathematics, computer science or geography.

d) *Applicability of module*

Biology (Bachelor)

e) *Credit requirements*

The thesis will be assessed by an examiner, who should be the thesis supervisor. The module must be started no later than one year following completion of the last examination component completed during the course of study.

f) *Credits and grades*

12 credits are awarded.

g) *Course offered*

every semester

h) *Workload*
The workload is 360 hours.
Attendance times: approx. 6 weeks.

i) *Duration*

8 weeks; upon request, a two-week extension may be granted in exceptional cases

6.17 Module: Biodiversity field trips

a) *Module content and learning objectives*
Introduction to and practical analysis of scientific principles in situ, introduction to and systematic classification of species in native ecosystems.

Promoting cross-disciplinary skills such as personal responsibility, communication and organisational skills.

b) *Teaching methods*

Excursion

c) *Requirements for participation*

The lecturer may define special entry requirements.

d) *Applicability of module*

Biology (Bachelor)

e) *Credit requirements*

This module will not be graded; students must provide confirmation of participation in five excursions in order to pass the module. A record of each excursion must be prepared.

f) *Credits and grades*

2 credits are awarded. The module is ungraded.

g) *Course offered*

every semester, with a focus on the summer semester

h) *Workload*

The workload is 60 hours.
Attendance times: will vary

i) *Duration*

Excursions may be attended over the entire course of study.