

Plan of Studies for the Biochemistry and Molecular Biology Bachelor's Degree Program

of 10 March 2016 (as of 1 August 2018)

The Faculty of Science,

in accordance with Article 44 of the University of Bern Statutes of 7 June 2011 (University Statutes, UniSt) and the regulations governing the studies and assessments at the Faculty of Science of 24 May 2018 (Faculty of Science Study Regulations [RSL Phil nat. 18]),
[Version of 24 May, 2018]

issues the following plan of studies:

I. General information

SCOPE OF APPLICATION

Art. 1 ¹ This plan of studies applies to all students enrolled in the Faculty of Science Biochemistry and Molecular Biology bachelor's program as well as to all students of the University of Bern who complete units of credit in biochemistry and molecular biology.

² Unless otherwise specified, the provisions of the RSL Phil. Nat. 18 apply.

DEGREE PROGRAM OBJECTIVES

Art. 2 A decisive feature of the bachelor's program is the exacting and in-depth training in the fundamentals of the natural sciences and in particular of molecular sciences, from which biochemistry and molecular biology originate. Theoretical and practical skills acquired with the title of Bachelor of Science in Biochemistry and Molecular Biology (B Sc) ensure the ability to scientifically formulate and manage biochemical and molecular-biological problems. As the first level of professional qualification, the bachelor's degree forms the basis for various activities in the field of biochemistry and molecular biology, or for occupations where broad scientific knowledge is required. The bachelor's degree is the prerequisite for admission to an associated master's program in the biosciences.

ADMISSION TO DEGREE
PROGRAM, RECOGNITION OF
PREVIOUSLY EARNED CREDITS

Art. 3 ¹ The general admission requirements of the University of Bern apply for all studies.

² The RSL Phil. Nat. 18 applies for the transfer and expiry of previously earned credits.

³ Students in the chemistry and molecular sciences and biology bachelor's degree programs or the pharmacy degree program at the University of Bern may be admitted to the biochemistry and molecular biology bachelor after the first year and shall have 60 ECTS units credited to them, provided they have passed all modules and assessments of the degree program with sufficient grade. Alternately, an application for an individualized study plan must be submitted to the responsible body of the Faculty of Natural Sciences stipulated in the faculty regulations, under consultation with the biochemistry and molecular biology directorate of studies (Article 5).

⁴ Students in the pharmacy program may be admitted to the biochemistry and molecular biology bachelor after the second year and shall have 120 ECTS units credited to them, provided they have passed all modules or assessments of the pharmacy degree program with a sufficient grade. In cases of only partially sufficient study credits, an application for an individualized study plan must be submitted (Article 5).

⁵ Students with a bachelor's degree in chemistry or biotechnology or equivalent degree programs from a Swiss university of applied sciences usually enter the third semester of the biochemistry and molecular biology bachelor program. They will be credited with 60 ECTS units. In cases of further qualifications in biochemical and molecular biological basic courses, a student may request an individualized study plan (Article 5) that may permit admission into a more advanced semester. In this case, more than 60 ECTS units of credits will be transferred.

⁶ Students from other universities or disciplines who wish to transfer to the biochemistry and molecular biology bachelor's degree program may have their credits transferred by applying for an individualized study plan (Article 5). The application process also includes placement into an appropriate semester.

DEGREE PROGRAMS, TITLE

Art. 4 ¹ The following degree program is offered for the biochemistry and molecular biology mono program:

Bachelor's degree program awarded with the degree of Bachelor of Science in Biochemistry and Molecular Biology, University of Bern (B Sc).

² The bachelor's degree program is completed when the required ECTS credits (Article 8 Para 1) have been attained according to the plan of studies.

INDIVIDUALIZED DEGREE
PROGRAM PLANNING

Art. 5 In justified exceptional cases, students may submit an application to the responsible body of the Faculty of Science for approval of an individualized study plan.

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ACADEMIC STUDENT
ADVISORY SERVICE

Art. 6 The academic advisory service is offered by the study advisors or the biochemistry and molecular biology directorate of studies. They advise on all study-related matters, in particular regarding admission requirements and course selection. The student advisory service must specifically be consulted following insufficient assessments, when changing university or course of study and when considering exchange semesters or studies abroad.

II. Standard Duration of Study and Extension Options

STANDARD DURATION OF
STUDY, EXTENSION OPTIONS,
EXCLUSION FROM STUDIES

Art. 7 Article 12 and 13 of the RSL Phil. Nat. 18 apply.

III. Study Credits

CREDITS

Art. 8 ¹ The study credits are measured according to the European Credit Transfer and Accumulation System. One credit point (ECTS point) corresponds to a student workload of 25 to 30 working hours.

² The calculation of the ECTS units of credit is detailed in Appendices 1 and 2 to this plan of studies.

RECOGNITION OF EXTERNAL
ATTAINMENTS, LEARNING
AGREEMENT

Art. 9 Article 15ff. RSL Phil. Nat. 18 applies.

IV. Assessments

FORMS OF ASSESSMENTS

Art. 10 ¹ Assessments can be administered in the form of

- a written or oral examinations,
- b seminar work or written reports,
- c presentations,
- d laboratory assignments, including lab reports.

GENERAL PROVISIONS,
INFORMATION ABOUT
ASSESSMENT RESULTS,
ACCESS TO FILES

Art. 11 ¹ The types and procedures regarding the assessments will be announced by the lecturers at the beginning of the semester.

² Article 20 ff. RSL Phil. Nat. 18 applies for the following details (student information, duration, registration, absence, access to files, archiving, fees and deception).

³ The persons empowered to carry out assessments must report the results of written exams to the dean's office within a period of one month (Article 23 Para. 2 RSL Phil. Nat. 18). The publication of assessment results is governed by Article 35 RSL Phil. Nat. 18. Students may consult their own work within one month of the announcement of the result by the responsible lecturer.

MODULE GRADES,
WEIGHTING, ATTAINMENT
OF ECTS CREDITS

Art. 12 ¹ If a module consists of several units of credit, these can be evaluated either individually, several at a time, or all together by means of corresponding assessments. Article 5 RSL Phil. Nat. 18. applies

² In order to determine the final grade of a module, the average of the grades from the individual assessments is calculated as the mean of these grades weighted according to ECTS credits. The rounding policy is set out in Article 34 Para. 6 RSL Phil. Nat. 18.

<u>Grade to be rounded in the range of</u>			<u>Rounded grade</u>
5.75	...	6	6
5.25	...	< 5.75	5.5
4.75	...	< 5.25	5
4.25	...	< 4.75	4.5
4	...	< 4.25	4
3.25	...	< 4	3.5
2.75	...	< 3.25	3
2.25	...	< 2.75	2.5
1.75	...	< 2.25	2
1.25	...	< 1.75	1.5
1	...	< 1.25	1

³ If the grade is sufficient, the ECTS credits of a module shall be awarded in full. As a rule, if the module grade is insufficient, no ECTS credits will be awarded.

RESPONSIBILITY FOR
ASSESSMENTS

Art. 13 ¹ Only authorized lecturers for the relevant course are eligible to act as examiners. (Article 21 RSL Phil. Nat.18)

² The lecturers of the respective unit of credit are responsible for the organization and execution of assessments.

³ The directorate of studies shall designate one of the lecturers as the person responsible to organize and conduct the module examinations.

⁴ The directorate of studies verifies that the admission requirements for the corresponding assessment are met. These conditions must be defined within the first three weeks of the course and communicated on the course website.

TIMING OF ASSESSMENTS

Art. 14 The directorate of studies, in consultation with the lecturers, shall determine and announce the timing and location of written or oral assessments.

REPETITION OF ASSESSMENTS

Art. 15¹ Failed or insufficient assessments may be retaken once.

² If the second assessment also receives an insufficient grade, the grade of the last retaken assessment shall count.

³ Repetition of assessments must be completed during the academic year following the first exam. An extension of this period may only be granted once due to important grounds (Article 35 Para. 1 UniV) and must be requested, at the latest, in writing to the designated body by the registration date for the exam in question.

⁴ Compensation is only possible when all insufficient assessments of a module have been repeated. The grade of the second exam shall count.

V. Bachelor Degree Program (180 ECTS credits)

SCOPE

Art. 16¹ The scope of the biochemistry and molecular biology bachelor's program consists of 180 ECTS credits which can be attained with compulsory and elective credits according to Appendix 1.

² The bachelor's degree program consists of the following modules:

- a Introductory academic year module
- b Biochemistry and Molecular Biology Module A (with Submodule A2) and Module B (with Submodule B2)
- c Chemistry Modules C and D
- d Modules E and F (optional credits)
- e Bachelor's thesis

The term "optional credits" is defined in the Appendix.

APPENDICES

Art. 17¹ The units of credit for the bachelor's degree program are listed in Appendices 1 and 2. In particular, they specify the allocation of ECTS credits for each unit of credit, as well as possible groupings into modules.

² If necessary, the appendices may be amended by the directorate of studies. These changes are subject to approval by the faculty.

PASSING OF INTRODUCTORY ACADEMIC YEAR & FURTHER STUDIES

Art. 18¹ The module of the first academic year is passed if the weighted average of ECTS-weighted individual grades is sufficient and not more than three grades are insufficient.

² All insufficient marks from the first attempt must be repeated in order to be compensated (Article 15 Para. 4). The grade of the second exam shall count for the compensation.

³ The units of credit for the third academic year may not be attended, completed or assessed until the ECTS credits of the first academic year have been fully attained.

PASSING OF MODULES

Art. 19¹ In order to earn the ECTS credits of the second and third academic year, the individual modules must be passed.

² Modules C, D, E and F are passed if the weighted mean of the grades weighted according to ECTS credits is sufficient (Article 34 Para. 6 RSL Phil. Nat. 18).

³ Modules A and B are passed if the weighted mean of the grades weighted according to ECTS credits is sufficient and the weighted average of Submodules A2 or B2 have also both been awarded sufficient grades.

⁴ All insufficient grades from the first attempt must be repeated in order to be compensated (Article 15 Para. 4). The grade of the second exam shall count for the compensation.

BACHELOR'S THESIS

Art. 20¹ A bachelor's thesis must be submitted in the sixth semester. It includes research work and is completed with a report. The work is carried out under the direction of a research group supervisor from the Department of Chemistry and Biochemistry, or from the Institute of Cell Biology, or under the direction of another person authorized to lead bachelor's theses according to Article 21 RSL Phil. Nat. 18.

² A bachelor's thesis must be successfully completed in order to acquire the bachelor degree.

³ Bachelor theses may be written in German, French or English.

⁴ The bachelor thesis must be submitted to the supervisor by the deadline set by the directorate of studies.

⁵ If, for important reasons (Article 35 Para. 1 UniV), the bachelor's thesis cannot be completed on time, the deadline may be extended once by the supervisor, in consultation with the directorate of studies (Art. 29 Para. 2 RSL Phil. Nat. 18). For each additional extension, an application must be submitted to the body responsible stipulated in the faculty regulations.

⁶ If the deadline is not met, the bachelor's thesis will be graded with a 1.

⁷ Bachelor's theses are graded within four weeks following submission and results reported to the directorate of studies by the supervisor.

⁸ At this point in time, the student will also be informed of the grade and how it was determined.

⁹ A bachelor's thesis given an insufficient grade may be repeated once. The candidate has the right to complete the second bachelor thesis under the direction of a different lecturer.

COMPULSORY COPIES, COPYRIGHT

Art. 21¹ One copy of the bachelor thesis must be submitted to both the supervisor and the directorate of studies secretariat.

² The author of a bachelor thesis is considered the originator in accordance with copyright law.

DEGREE

Art. 22 ¹ The bachelor's degree is attained when: all modules listed in Article 16 Para. 2 have been successfully completed, any insufficient assessments have been compensated according to Articles 18 and 19, and the bachelor's thesis has been awarded a grade of 4 or higher.

² The final grade for the bachelor's diploma is determined according to Article 47 RSL Phil. Nat. 18. It is the result of the weighted mean of the grades weighted according to ECTS credits of all individual assessments in the bachelor's degree program.

EXCLUSION FROM STUDIES,
WITHDRAWAL FROM STUDIES

Art. 23 ¹ Students shall be excluded from their studies when it becomes clear that successful completion of the degree is no longer possible. In particular, this applies when results of second attempts at compulsory assessments are also insufficient, or to students who exceed the standard period of study without an official extension authorization according to Article 74 Para. 2 letter d UniSt and Article 13 RSL Phil. Nat. 18.

² In the case of withdrawal or exclusion from studies, the dean's office will provide the student with a transcript of their attainments to date.

VI. Minor Programs

SCOPE

Art. 24 ¹ The following minor programs are on offer:

- a Biochemistry and Molecular Biology (60 ECTS credits)
- b Biochemistry and Molecular Biology (30 ECTS credits)
- c Biochemistry and Molecular Biology (15 ECTS credits)

STRUCTURE AND PASSING OF
A MINOR IN BIOCHEMISTRY
AND MOLECULAR BIOLOGY
(60 ECTS CREDITS)

Art. 25 ¹ The minor consists of the following modules:

- a General Chemistry Module (Minor)
- b Biochemistry and Molecular Biology Module A (Minor) together with Submodule A2
- c Biochemistry and Molecular Biology Module B (Minor) together with Submodule B2
- d Organic Chemistry module A (Minor)
- e Module with electives

² The General Chemistry and Organic Chemistry A Modules (Minor) are passed if the weighted mean of the grades weighted according to ECTS credits is sufficient (Article 34 Para. 6 RSL Phil. Nat. 18).

³ Modules A (Minor) and B (Minor) are passed if the weighted mean of the grades weighted according to ECTS credits is sufficient, and the weighted mean of Submodules A2 or B2 are also sufficient.

⁴ All insufficient grades from the first attempt must be repeated in order to be compensated (Article 15 Para. 4). The grade of the second exam shall count for the compensation.

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STRUCTURE AND PASSING OF
A MINOR IN BIOCHEMISTRY
AND MOLECULAR BIOLOGY
(30 ECTS CREDITS)

Art. 26 ¹ The minor consists of the following modules:

- a General Chemistry Module (Minor)
- b Biochemistry and Molecular Biology Module A (Minor) together with Submodule A2

² The General Chemistry (Minor) Module is passed if the weighted mean of the grades weighted according to ECTS credits is sufficient (Article 34 Para. 6 RSL Phil. Nat. 18).

³ Module A (Minor) is passed if the weighted mean of the grades weighted according to ECTS credits is and the weighted mean of the Submodule A2 is also sufficient.

⁴ All insufficient grades from the first attempt must be repeated in order to be compensated (Article 15 Para. 4). The grade of the second exam shall count for the compensation.

STRUCTURE AND PASSING OF
A MINOR IN BIOCHEMISTRY
AND MOLECULAR BIOLOGY
(30 ECTS CREDITS)

Art. 27 ¹ The Minor consists of the Biochemistry and Molecular Biology Module A (Minor) together with Submodule A2.

² Module A (Minor) is passed if the weighted mean of the grades weighted according to ECTS credits is and the weighted mean of Submodule A2 is also sufficient.

³ All insufficient grades from the first attempt must be repeated in order to be compensated (Article 15 Para. 4). The grade of the second exam shall count for the compensation.

APPENDIX 2

Art. 28 Appendix 2 details the units of credit and the associated ECTS credits.

PASSING & GRADES

Art. 29 ¹ The biochemistry and molecular biology minor programs are completed when the designated number of ECTS credits (15, 30 or 60) have been attained.

² The final grade of the minor program is calculated from the weighted mean of the individual assessment grades weighted according to ECTS credits

VII. Final Provisions

CHANGES TO THE PLAN
OF STUDIES

Art. 30 Any revision of the plan of studies is subject to the approval of the Executive Board of the University of Bern. Excluded are amendments to the Appendices, which are the responsibility of the Faculty.

TRANSITIONAL PROVISIONS

Art. 31 ¹ Students starting their studies in biochemistry and molecular biology from the fall semester of 2019 are subject to the present plan of studies.

² Students who started their studies according to the Plan of Studies for Biochemistry and Molecular Biology of 1 September 2008, will complete their studies according to the plan of studies of 1 September 2008.

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ENTRY INTO FORCE

Art. 32 This plan of studies replaces the Plan of Studies for the Biochemistry and Molecular Biology Bachelor's Degree Program of 1 September 2008, and enters into force on 1 August 2019.

Bern,

On behalf of the Faculty of Science

The Dean:

Approved by the university administration:

Bern,

The Rector:

Amendments

Entry into force

Amendment of 24 May 2018, in force as of 1 August 2018