

English translation from the German. The translation is for information only; legally binding is only the German original in its currently applicable version published in the journal of legal notices of the Friedrich Schiller University, the *Verkündungsblatt*.

**Study Regulations
of the Faculty of Biology and Pharmacy
for the Study Programme 'Biochemistry'
Seeking the Degree 'Master of Science' (M.Sc.)**

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Content

- § 1 Scope and Application
- § 2 Admission Requirements
- § 3 Duration of Study
- § 4 Beginning of Study Programme
- § 5 Objectives of the Study Programme
- § 6 Structure of the Study Programme
- § 7 Scope and Content of the Study Programme
- § 8 International Mobility of Students
- § 9 Assessed and Non-Assessed Coursework and Examinations
- § 10 Admission to Individual Modules
- § 11 Subject-Specific Academic Advisory Service
- § 12 Evaluation of Courses Offered and Quality Control
- § 13 Equal Opportunity Clause
- § 14 Coming into Effect

§ 1 Scope and Application

Based on the corresponding Examination Regulations in their applicable version, these Study Regulations establish objectives, content, and structure of the research-oriented, consecutive study programme 'Biochemistry' leading to a Master of Science degree (abbreviation: M.Sc.).

§ 2 Admission Requirements

(1) Admission to this study programme takes place for each winter semester.

(2) Prerequisite for the admission to the Masters programme 'Biochemistry' is proof of a first university degree from the Friedrich Schiller University Jena or another university or institution of higher education of equivalent status in Germany or abroad in a study programme of at least 3 years in the fields of biochemistry or biology leading to a German Bachelor of Sciences (B.Sc.) degree or another equivalent undergraduate degree qualifying the graduate to work in their profession, or particular aptitude for the programme.

(3) Admission to the study programme presumes applicants to have the necessary professional qualifications and competences. This means the applicants must have shown at least good or very good academic performance in subjects like biochemistry, genetics, and cellular biology as well as other subjects related to molecular studies. Applicants must have completed courses in these subjects earning a total of 60 credit points (ECTS) in the previous study programme and must provide proof of the examinations and assessed coursework to earn these.

(4) To be admitted to this Masters programme, students of an undergraduate programme in biochemistry leading to a first degree qualifying them to work in their profession must have an overall final grade of 1.9 or better (according to the German grading system). Applicants from a different field of study and applicants whose final overall grade is less than 1.9, but better than 2.3 (according to the German grading system) but who meet all other admission requirements may be admitted to the study programme if their application illustrates particular aptitude for the Masters programme in biochemistry. To prove particular aptitude, a letter of motivation, a curriculum vitae, proof of previous practical experiences, and the practical orientation of the training must be admitted with the application, and professional and personal commitment must be shown. Decisions on admission are taken by the Selection Committee for the Masters programme 'Biochemistry'. In cases of doubt, selection interviews may be held. In exceptional cases, provisional admission under the condition that certain qualifications must subsequently be acquired is possible.

(5) Proficiency in English is essential to the study programme.

(6) Together with the application, the candidate must submit the following documentation and proof:

- a) Pursuant to § 2 (1) above, proof of completion of a first university degree qualifying the applicant to work in his/her profession, or proof of their achievements and performance at the time of the application (including proof to have earned at least 120 credit points in the study programme qualifying the applicant for the present Masters programme or equivalent qualifications);
- b) Pursuant to § 2 (2), proof of the successful completion of courses relevant to molecular

studies (or equivalent achievements in another field of study) with a total of at least 60 credit points;

- c) Pursuant to § 2 (4), a letter of motivation explaining the reasons for applying to this specific study programme;
- d) A detailed curriculum vitae including additional achievements and performance relevant to the field of study;
- e) Secondary school leaving certificate.

§ 3 Duration of Study

- (1) The standard duration of study is two years, including the time for writing a Master thesis.
- (2) For part-time students, the standard duration of study is four years. Admission to part-time studies requires approval by the Faculty of Biology and Pharmacy.

§ 4 Beginning of Study Programme

The Masters programme 'Biochemistry' begins in the winter semester.

§ 5 Objectives of the Study Programme

(1) Building on the biochemical and molecular biological skills and knowledge acquired in the undergraduate programme, objective of the Masters programme 'Biochemistry' is to significantly broaden knowledge in the area of biochemistry. Students study and apply methodological approaches for the analysis of biomolecules and of cellular functions on a molecular level. In doing so, the integration of concepts and methodologies from bioinformatics, biophysics, chemistry, and molecular and cellular biology is of great significance. Students will thus be able to meet the various demands of their future professional life in an inter- and multidisciplinary way.

(2) The Masters programme features a large proportion of practical work and independent projects. Amongst the key skills taught are the independent conceptualization and execution of scientific studies as well as the written and oral presentation and documentation of scientific findings (notably in English).

(3) The experimental approach of the study programme is designed to be consecutive and research-oriented, and will lead to a second university degree qualifying graduates to work in their profession. In addition to subject-specific scientific techniques and skills, graduates will have acquired the communication skills necessary to publicly present the results of scientific research. The option to study abroad for one semester offers candidates the opportunity to gain international experience. The successful completion of the Masters programme qualifies graduates to continue their academic career in a doctoral programme in the natural sciences, particularly in the fields of biochemistry, biotechnologies, molecular biology, molecular genetics, chemistry of natural substances, structural biology, and cellular biology, all of which can be studied at the Friedrich Schiller University as well as other universities inside and outside of Germany. Graduates are therefore well equipped for an academic career (doctoral

programme) as well a career in the industry (particularly in the field of biotechnologies) or the public administration.

§ 6

Structure of the Study Programme

(1) The study programme is composed of modules. Each module may be comprised of various combinations of lectures, seminars, practical courses, internships, projects, tutorials, labs, colloquia, independent study times, and examinations. Each module is a learning and examination unit. One single module normally takes one semester or one full year of study.

(2) To successfully complete the study programme, students must acquire a total of 120 credit points according to the European Credit Transfer and Accumulation System (ECTS). Per year of study, a total of 60 ECTS has to be earned.

(4) The study programme concludes with submitting a Master thesis. By independently writing this scientific paper, the candidate proves that he/she is able to independently work on a problem or question from a subfield of biochemistry using scientific methods and within a given time frame.

§ 7

Scope and Content of the Study Programme

(1) The modules of the first year of study bring together previously acquired skills and knowledge, prepare students for independent work on projects, and teach them to present scientific findings. In the first year of study, students therefore take three basic modules (compulsory) and three advanced modules (required elective modules) earning 10 ECTS each. Additional modules may be accepted and credited after review by the Examinations Committee.

- Basic Module 'Biophysical chemistry'
- Basic Module 'Biochemistry I'
- Basic Module 'Biochemistry II'

For the required advanced modules, any combination of the following areas may be selected:

- Biological chemistry
- Biochemistry
- Biophysics and theoretical biology
- Molecular biology
- Cellular biology

(2) In the second year of study, students broaden their knowledge in a chosen area of specialization (participation in a specialization module including a practical course on methodologies, 10 ECTS), work under supervision in a practical research project (20 ECTS), and write a Master thesis (30 ECTS).

(3) Information on the division of the subject matters into modules as well as the credit points (ECTS) for each module can be found in the module descriptions and the overview of modules in the module catalogue. Module descriptions also include information on the person responsible for the respective module, the requirements for participation, the

workload to be expected, information about content and methods for teaching, learning and working, as well as the type of examination and examination requirements.

§ 8

International Mobility of Students

(1) To complement studies at the Friedrich Schiller University, a study-related stay abroad may make sense. Academic achievements produced during a study-related stay abroad are recognized and credited if equivalence can be ascertained. This also applies if leave of absence was granted to the student concerned for the stay abroad. The recommended time frame for the study-related stay abroad (mobility window) are notably the modules of the third semester or the entire second year of study. By signing an agreement on the courses to be taken (*Learning Agreement*), binding agreements may be concluded in advance regarding the subsequent recognition of achievements. Professors and/or academic staff of the Faculty of Biology and Pharmacy responsible for the respective study programme and the Office for Student Affairs and Examinations can advise on the possibilities for a stay abroad.

(2) Different starting and ending dates of semesters at universities abroad may lead to overlaps with examination dates at the home university. Upon formal request, the Examinations Committee in these cases facilitates individual arrangements for taking affected module examinations at an appropriate time.

§ 9

Assessed and Non-Assessed Coursework and Examinations

(1) The type and scope of assessed and non-assessed coursework and examinations as well as the respective requirements are defined in the module descriptions and are announced by the respective teaching staff at the beginning of the module at the latest.

(2) Basic and advanced modules are graded pursuant to § 9 (11) of the Examination Regulations, and, pursuant to § 14 (5) of the Examination Regulations and through the earned credit points, become part of the weighted final grade.

§ 10

Admission to Individual Modules

(1) Prerequisites for admission to individual modules are specified in the module descriptions. Admission to the specialization module and practical project normally requires the successful completion of three basic modules and one advanced module. Admission to register the Master thesis normally requires the completion of all basic and advanced modules. Exceptions are decided upon by the Examinations Committee.

(2) For individual required elective modules, the number of participants may be limited if this is justified by factual reasons, particularly for reasons of available space or equipment.

§ 11

Subject-Specific Academic Advisory Service

(1) Subject-Specific Academic Advisory Services are offered by members of the academic staff of the respective study programme or by representatives appointed by them, and provide individual assistance in the planning of the studies. The Examinations Committee decides on the appointment the representatives.

(2) Non subject-specific questions and concerns should be addressed to the Study and Examinations Office at the Faculty of Biology and Pharmacy or the Central Academic Advisory Service of the Friedrich Schiller University Jena.

§ 12

Evaluation of Courses Offered and Quality Control

(1) The Faculty of Biology and Pharmacy is committed to constantly modernizing and improving the courses offered. The Examinations Committee regularly evaluates the recommended study plan and the range of modules offered in due consideration of the developments in the specific field, of professional requirements, of the performance of students in examinations and actual durations of study. The study plan and the module catalogue are updated and published electronically in sufficient time before the beginning of every academic year. Amendments to the module catalogue or the Study and Examination Regulations require a decision by the Faculty Council and approval by the Rector.

(2) In addition, course evaluations are conducted in cooperation with the Biochemistry student representative committee (*Fachschaft*). The results are discussed with concerned academic staff and analyzed by the Examinations Committee. The goal of these evaluations is to optimize courses and to improve the study conditions in the Masters programme, particularly regarding acceptance from the students, the content of the study programme and the shortening of study times.

§ 13

Equal Opportunity Clause

All titles and functions in (the German version of) these Regulations equally refer to men and women.

§ 14

Coming into Effect

These Study Regulations come into effect on the first day of the month following their announcement in the journal of legal notices of the Friedrich Schiller University (*Verkündungsblatt der Friedrich Schiller Universität*).

Jena, 18 February 2016

Prof. Dr Walter Rosenthal
President of the Friedrich Schiller University