

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 'Microbiology'
Seeking the Degree 'Master of Science'**

English translation from the German. The translation is for information only; legally binding is only the German original published in *Verkündungsblatt* No. 09/2010, pp. 576;
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§ 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, and international study programme 'Microbiology' leading to a Master of Science degree (abbreviation: M.Sc.).

§ 2 Admission Requirements

(1) Requirement for the admission to the research-oriented Masters of Science study programme in Microbiology is a first university degree in biology qualifying the graduate to work in his/her profession (Bachelor, *Diplom*, *Magister*, *Staatsexamen* or an equivalent degree) from the Friedrich Schiller University Jena or another university or institution of higher education with equivalent status in Germany or abroad, with an overall final grade of at least 'good' or better (according to the German grading system). If the applicant earned his/her university degree in a different field of study (particularly biotechnology), basic knowledge in microbiology must be proven by having earned at least a total of 10 ECTS in courses of microbiology.

(2) Admission to the study programme presumes applicants to have the necessary professional qualifications and competences pursuant to (3) below as well as the necessary professional interest. Motivation for and professional interest in the research-oriented, scientific Masters programme Microbiology at the Friedrich Schiller University Jena is to be substantiated in a letter of motivation which clearly describes the applicant's interest and motivation (in view of the specifics of the study programme according to the module descriptions as well as the implicit focus on research) to choose this study programme.

(3) Professional qualifications and competences is to be confirmed if the applicant reaches at least a total of 6 of the possible points according to the following criteria (a-e)):

- a) studies in microbiology
 - 5 to 10 ECTS 1 point
 - 11 or more ECTS 2 points
- b) practical training in research methods
 - 5 to 10 ECTS 1 point
 - 11 or more ECTS 2 points
- c) Grade (according to the German grading system) of the first degree qualifying the applicant to work in his/her profession
 - 2.1 to 2.5 1 point
 - 1.6 to 2.0 2 points
 - 1.0 to 1.5 3 points
- d) One additional point is awarded for academic or university-related work experience (employment as student assistant in microbiology, participation in a university body, continuing education or further training in scientific research methods or other relevant fields, or research internships).

(4) Professional qualification and motivation is decided upon by a Selection Committee, composed of teaching staff of the study programme.

(5) For degrees earned outside the area of application of the German Basic Law, the Selection Committee will assess its equivalence taking into account equivalence agreements (*Äquivalenzvereinbarungen*) and cooperation agreements.

(6) Decisive for the evaluation of professional competences is the overall grade of the applicant's first degree. If at the time of application, a first university degree qualifying the graduate to work in his/her profession has not yet been completed, provisional admission may be granted if the applicant proves to have an average grade of at least 2.3 (according to the German grading system) at the time the application is sent. The average grade is to be the average of all module grades weighted according to the number of ECTS possible.

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

- a) first university degree qualifying the applicant to work in his/her profession pursuant to (1) above, as well as proof of professional qualifications according to (3) above;
- b) a curriculum vitae outlining the candidate's personal and academic development (curriculum vitae in tabular format);
- c) where applicable proof of previous internships, professional activities as well as completed courses of continuing education and further training and participation in university bodies;
- d) letter of motivation

These documents have to be provided within the time frame set by the university and announced in the online portal of the Master Service Centre. If documents and proof is provided after the set deadline, the applicant will be excluded from the application process.

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

§ 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 study programme begins in the winter semester.

§ 5 Objectives of the Study Programme

(1) The objective of the Masters programme in microbiology is to broaden knowledge in the area of microbiology significantly, building on the knowledge about biological systems acquired in the Bachelors programme, and to learn about and apply methodological approaches for the analysis of prokaryotic and eukaryotic micro-organisms on a molecular level. Students will thus be able to inter- and multidisciplinary study the interaction within and between micro-organisms and their environment as a whole, and to work independently in the areas of academic and applied microbiology/biotechnology.

(2) The Masters programme features a large proportion of practical work and independent projects. All microbiological systems are studied through systematic, physiological, genetic and molecular biological analyses, and a particular focus will be the communication of micro-organisms among themselves, with other plants or higher organisms, and the environment as a whole. Amongst the key skills taught are the independent conceptualization and execution of scientific studies as well as the documentation and written as well as oral presentation of scientific findings (notably in English).

(3) The study programme is designed to be consecutive, to qualify graduates to work in their profession, and to be research-oriented. It is a prerequisite for possible subsequent doctoral programmes. Graduates are therefore particularly qualified for an academic career. The priorities set in Jena qualify graduates particularly for working with bacterial and eukaryotic micro-organisms in connection with microbial communication and the conversion of signals in cells. The training thus qualifies graduates for microbiological and generally molecular genetic work in all professions of classical, molecular, and applied microbiology.

§ 6

Structure of the Study Programme

(1) The study programme is composed of modules. Individual modules may comprise various combinations of lectures, seminars, practical courses, internships, field work, excursions, project work, tutorials, labs, colloquia, independent study times, and examinations. Each module is a learning and examination unit with 50% practical work. 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.

(3) It is possible and desired to credit ECTS earned during a stay at a university abroad. The second and third semester are particularly recommended for such a stay abroad (mobility window). The Examinations Committee in cooperation with the staff person responsible for a module decides on the equivalence of assessed and non-assessed coursework and examinations. Students must provide the necessary documentation and proof.

§ 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, four basic modules are offered of which students have to choose three, and three advanced modules of 10 ECTS each. Additional modules may be accepted and credited after review by the Examinations Committee.

- Basic Module 'Energy Metabolism of Bacteria'
- Basic Module 'Molecular Genetics and Physiology of Communication in Fungi'
- Basic Module 'Microbial Interactions'
- Basic Module 'Microbiology and Molecular Biology'

The advanced modules are offered in the areas of bacterial physiology, fungi, interactions of plants and microbes, biotechnology, human pathogens, and microbial genetics.

(2) In the second year of study, students undertake scientific work independently in a specialization and a project module (15 ECTS each), and write a Master thesis (30 ECTS).

(3) Information on the structure of the individual modules and the ECTS for each module can be found in the module descriptions and the study plan 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 teaching, learning and working methods, as well as the type of examination and examination requirements.

§ 8

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) Compulsory and required elective 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.

§ 9

Admission to the Stages of Study and to Individual Modules

(1) Prerequisites for admission to individual modules are specified in the module descriptions. Admission to an advanced module normally requires the successful completion of one basic module; admission to the specialization module or the project module normally requires the successful completion of two basic and one advanced module. Admission to write the Master thesis is possible once 60 ECTS have been earned. Exceptions in special cases of hardship are decided upon by the Examinations Committee.

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

§ 10

Subject-Specific Academic Advisory Service

(1) Subject-Specific Academic Advisory Services are to be offered by mentors from among the academic staff of the respective study programme and provide individual assistance in the planning of the studies. The Examinations Committee decides on the appointment of mentors.

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

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§ 11
Equal Opportunity Clause

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

Article 2
Coming into Effect

Modifications to the Study Regulations pursuant to Article 1 of these Modification Regulations come into effect the day after their announcement in the journal of legal notices of the Friedrich Schiller University (*Verkündungsblatt der Friedrich-Schiller-Universität*).

Jena, ... October 2015

Prof. Dr Walter Rosenthal
President of the Friedrich Schiller University