

**Universität für Bodenkultur Wien**  
**Curriculum for the Doctoral Programmes "Advanced Biorefineries: Chemistry and Materials", "AgriGenomics", "Biomaterials and Biointerfaces", "Bioprocess Engineering", "Build like Nature: Resilient Buildings, Materials and Society", "Hazards and Risks in Alpine Regions under Global Change", "Human River Systems in the 21<sup>st</sup> Century", "Social Ecology" and "Transitions to Sustainability"**

The following curriculum is issued at the University of Natural Resources and Life Sciences, Vienna (BOKU) pursuant to § 54 of the Universities Act 2002 for the Doctoral Programmes "Advanced Biorefineries: Chemistry and Materials", "AgriGenomics", "Biomaterials and Biointerfaces", "Bioprocess Engineering", "Build like Nature: Resilient Buildings, Materials and Society", "Hazards and Risks in Alpine Regions under Global Change", "Human River Systems in the 21<sup>st</sup> Century", "Social Ecology" and „Transitions to Sustainability“:

### **§ 1. Goal of the Doctoral Programmes**

The Doctoral Programmes "Advanced Biorefineries: Chemistry and Materials", "AgriGenomics", "Biomaterials and Biointerfaces", "Bioprocess Engineering", "Build like Nature: Resilient Buildings, Materials and Society", "Hazards and Risks in Alpine Regions under Global Change", "Human River Systems in the 21<sup>st</sup> Century", "Social Ecology" and „Transitions to Sustainability“ serve to further develop the ability to carry out independent scientific work, as well as to train and promote young scientists in the fields of competence of the University of Natural Resources and Life Sciences, Vienna.

The Doctoral Programmes offer a scientific education at an international level. The dissertation may be written entirely in English.

#### **1 a) Knowledge, skills, personal and professional competences**

Graduates of the Doctoral Programmes have acquired a systematic understanding of their research discipline in the subject area of the respective Doctoral Programme. They have the competence to independently plan and carry out research work in accordance with international standards and thus make a substantial contribution to the development of the international knowledge society.

Graduates of the Doctoral Programmes are qualified to publish their own research work in relevant journals and to independently present scientific findings as well as to analyse in detail and critically discuss their own and other people's scientific results and concepts with experts and audiences from outside the field.

Students acquire the ability to analyse scientifically and to evaluate and link complex concepts and ideas. They are trained to identify issues from research, business, industry, politics and civil society and to develop innovative solutions.

The international and interdisciplinary orientation of the Doctoral Programmes promotes the mobility of students and sharpens their view beyond the boundaries of their own field of study.

In the course of the dissertation, interdisciplinary key qualifications (project and time management,

organisational and communication skills, ability to work in a team, leadership skills, flexibility and creativity) are further developed, enabling graduates to adapt their professional competence to rapidly shifting requirements and changing professional fields.

#### 1 b) Professional fields

Graduates of the Doctoral Programmes are particularly prepared for highly qualified professional activities in industry, business, public service, NGOs and scientific organisations as well as for teaching and research activities at universities and other educational and research institutions.

### **§ 2. Admission to the Doctoral Programmes "Advanced Biorefineries: Chemistry and Materials", "AgriGenomics", "Biomaterials and Biointerfaces", "Bioprocess Engineering", "Build like Nature: Resilient Buildings, Materials and Society", "Hazards and Risks in Alpine Regions under Global Change", "Human River Systems in the 21<sup>st</sup> Century", "Social Ecology" and „Transitions to Sustainability”**

(1) Prerequisite for the admission to the Doctoral Programmes "Advanced Biorefineries: Chemistry and Materials", "AgriGenomics", "Biomaterials and Biointerfaces", "Bioprocess Engineering", "Build like Nature: Resilient Buildings, Materials and Society", "Hazards and Risks in Alpine Regions under Global Change", "Human River Systems in the 21<sup>st</sup> Century", "Social Ecology" and "Transitions to Sustainability" is:

a.1.) the completion of a diploma or Master's degree programme in natural science, engineering, or socio-economics,

or

a.2.) the completion of a study programme at a recognised domestic or foreign post-secondary educational institution that is equivalent to the diploma or Master's degree programmes mentioned in lit. a),

or

a.3.) the completion of a domestic degree programme at a "Fachhochschule" [University of Applied Sciences] determined by ordinance to be subject-relevant

or

a.4.) fulfillment of the admission requirements of the study programme PhD BOKU University

and

b) the admission to a BOKU Doctoral School

and

c) the conclusion of a supplementary programme-specific dissertation agreement.

(2) If equivalence is basically given and only individual supplements (up to a maximum of 60 ECTS credits) to the full equivalence are missing, the Rectorate is entitled to combine the determination of equivalence with the specification of examinations to be taken during the respective doctoral programme in addition to the oral part of the doctoral examination.

- (3) The admission according to para. 1 lit. a.2.) of graduates of foreign post-secondary educational institutions shall require the proof of direct admission to a doctoral programme in the country of issue of the certificate by which the general university entrance qualification is proven.
- (4) The admission is granted by the Rector of the University of Natural Resources and Life Sciences, Vienna.

### **§ 3. Duration and Organisation**

- (1) The Doctoral Programmes "Advanced Biorefineries: Chemistry and Materials", "AgriGenomics", "Biomaterials and Biointerfaces", "Bioprocess Engineering", "Build like Nature: Resilient Buildings, Materials and Society", "Hazards and Risks in Alpine Regions under Global Change", "Human River Systems in the 21<sup>st</sup> Century", "Social Ecology" and „Transitions to Sustainability” comprise at least 180 ECTS credits, of which at least 20 ECTS credits are doctoral courses. The exact specification of the required records of achievement (stating the minimum amount of ECTS credits and a list of compulsory courses) is recorded in the supplementary programme-specific dissertation agreement.
- (2) If admission is granted pursuant to § 2 para. 1 lit. a. 3., the scope of the Doctoral Programmes shall be increased in accordance with the relevant statutory provisions.
- (3) After admission to these Doctoral Programmes, the applicant shall register the studies with the dean of studies within one year. The registration of the doctoral project includes:
  - Dissertation topic
  - Based on the subject focus, the determination of the academic degree to be awarded after successful defensio.
  - Naming a supervisor with a relevant major authorisation to teach or who is a faculty member of the BOKU Doctoral School. Doctoral Programmes must be supervised by persons with a major teaching authorisation. The supervisor must be a faculty member of the BOKU Doctoral School.
  - Submission of an exposé approved by the supervisor that contains the following points:
    - Supervisory team (must consist of at least 3 persons including a supervisor, at least one of whom must be a faculty member of the BOKU Doctoral School with a major teaching authorisation or equivalent qualification)
    - Time and work plan
    - Resource plan
    - Proposal of doctoral courses
- (4) If the treatment of a topic requires the use of financial or material resources of BOKU institutions, it is only permissible if the head of the institution has been informed about the intended allocation and has not prohibited it within one month due to a significant impairment of teaching and research operations or due to burden on resources.

- (5) The doctoral project is considered accepted after approval by the dean of studies.
- (6) The change of the supervisor or the topic is possible until the submission of the dissertation. The new supervisor must be a faculty member of the BOKU Doctoral School. The project must be registered anew and a statement must be gotten from the previous supervisor. This statement must be made within 6 weeks. In the event of changes to the courses, the partial list must be changed.

#### **§ 4. Doctoral Examination**

The doctoral examination is a comprehensive examination that has to be taken in two parts. The first part must be taken in the form of course examinations, the second part in the form of a dissertation defence (defensio).

#### **§ 5. First Part of the Doctoral Examination**

- (1) As part of the first part of the Doctoral Programmes, all students have to pass examinations on courses amounting to the ECTS credits specified in the supplementary programme-specific dissertation agreement. These courses must be related to the dissertation topic, with completion of the course "Principles and challenges of research in socio-economics, natural resources and life sciences" being mandatory.
- (2) Students who have been admitted according to § 2 para. 1 lit. a.3. have to take additional examinations (course examinations); these are not part of the doctoral examination. The scope and/or the subject areas to which these courses must be assigned are regulated in the Ordinance on Doctoral Programmes for graduates of Universities of Applied Sciences applicable to the respective University of Applied Sciences degree programme.
- (3) The courses must be determined by decree by the dean of studies based on a proposal by the supervisory team. The student is entitled to make proposals in this regard. A stepwise application (= partial determination) of the courses is possible. The selection of more ECTS credits than specified in the supplementary dissertation agreement
- (4) The student is entitled to attend further courses and take examinations in addition to the examinations prescribed in accordance with § 5 para. 1 to 3.
- (5) Recognition of non-university research achievements, including scientific publications, shall be granted in accordance with § 78 para. 3 of the University Act 2002.

#### **§ 6. Dissertation**

- (1) The dissertation is the scientific work that serves to demonstrate the ability to independently deal with scientific issues. Several scientific publications that all relate to the same topic(s) and a framework paper are also considered to be a dissertation.
- (2) The topic of the dissertation to be proposed by the student shall be selected from a science subject which is represented in a BOKU Doctoral School by a university lecturer with a major authorisation to teach. The student is also entitled to select the topic from a number of suggestions made by the available supervisors of the BOKU Doctoral School.

- (3) The joint treatment of a topic by several students is permissible if the performances of the individual students remain separately assessable.
- (4) The completed dissertation must be submitted to the dean of studies for assessment.
- (5) The dean of studies shall submit the dissertation to two university professors pursuant to § 31 paras. 5 and 6 of the Statutes, Part on Study Law, who must, as a rule, review the dissertation within a maximum of two months. The assessors must neither be supervisors nor co-authors of publications relevant to the dissertation, but may be part of the supervisory team. At least one assessor must not be a member of BOKU. Both assessors must be chosen from the dissertation subject or at least a subject related to it.
- (6) In addition to evaluating the work, the assessors must also state in their report whether they rate the dissertation positively or negatively. They are also entitled to make a proposal on a grade in accordance with § 73 para. 1 of the University Act 2002.
- (7) If one of the two assessors gives a negative evaluation of the dissertation, the dean of studies must call in a third assessor, who must at least belong to a closely related subject. This person must independently assess the dissertation within two months.

## **§ 7. Second Part of the Doctoral Examination**

- (1) The registration for the second part of the doctoral examination requires the fulfilment of the admission requirements, the positive completion of the examinations of the first part of the doctoral examination (of the courses prescribed according to § 5), as well as the overall positive evaluation of the dissertation. If three assessments have to be carried out (§ 6 para. 8), at least two of the assessments must show a positive evaluation.
- (2) The second part of the doctoral examination is a dissertation defence (defensio), which must be taken in front of the entire defensio committee under special public attention. The supervisor may not be a member of the defensio commission.
- (3) The evaluation of the defensio is carried out by the defensio commission and refers to an evaluation sheet which is detailed in the guidelines.
- (4) The dissertation is graded by an absolute majority of the members of the defensio committee based on the assessments.
- (5) The defensio commission is also responsible for the overall assessment of the completion of the Doctoral Programme. The overall assessment consists of the grading of the defensio, the grading of the dissertation as well as the first part of the doctoral examination, with all parts having to be completed positively. The first and second parts of the doctoral examination are each weighted with 0.25 and the dissertation assessment with 0.5.

The candidate only receives an honourable mention if the two doctoral examination grades and the dissertation assessment are a maximum of 2.0 and the overall grade point average is a maximum of 1.5.

The overall assessment of the doctoral examination must state "passed" if each part (1st and 2nd doctoral examination, dissertation) has been positively assessed, otherwise it must state "not passed".

## **§ 8. Academic Degree**

Graduates of the Doctoral Programmes "Advanced Biorefineries: Chemistry and Materials", "AgriGenomics", "Biomaterials and Biointerfaces", "Bioprocess Engineering", "Build like Nature: Resilient Buildings, Materials and Society", "Hazards and Risks in Alpine Regions under Global Change", "Human River Systems in the 21<sup>st</sup> Century", "Social Ecology" and "Transitions to Sustainability" are awarded the academic degree of "Doctor of Natural Resources and Applied Life Sciences", Latin "Doctor rerum naturalium technicarum" abbreviated "Dr. nat. nat.techn." or "Doctor of Social and Economic Sciences", Latin "Doctor rerum socialium oeconomicarumque" abbreviated "Dr.rer.soc.oec." or "Doctor of Philosophy" abbreviated "PhD".

This curriculum takes effect on 1 October 2024.