

## **Study regulations for the consecutive Master's degree programme Ecosystem Services**

Dated

The Technische Universität Dresden issues the following examination regulations based upon Sec. 36 (1) of the Higher Education Freedom Act of Saxony as published on 15 January 2013 (SächsGVBl, P. 3).

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## **§ 1**

### **Scope**

These study regulations are based upon the Higher Education Autonomy Act in Saxony and regulate the objectives, content, structure and organisation of the degree programme for the consecutive Master's degree programme Ecosystem Services at TU Dresden.

## **§ 2**

### **Objectives of the degree programme**

(1) The Ecosystem Services Master's degree programme gives students the ability to understand and assess the principles and importance of ecosystem services for human wellbeing on that basis of natural and social sciences. In addition to this, students gain an overview of concepts, theories and empirical methods within social sciences and economics. Students further acquire an understanding of biodiversity within selected organism groups (animals, plants and microorganisms) and their classification using special collections and techniques. Students are able to name and identify key species groups for ecosystem functions as well as assess biocoenoses from an ecological and nature conservation perspective. The degree programme aims to enable students to take an interdisciplinary approach to recognising, analysing, linking, tackling and finding solutions to fundamental issues, processes and problems in the fields of economics and ecology. They will acquire specialist knowledge and strongly differentiated cognitive and practical competencies that are particularly relevant for the conservation and regeneration of natural resources in the air, water and soil, biomass/bioenergy as well as genetic resources and biodiversity. Students will possess practical experience and methodical skills that will enable them to develop technical and complex problem-solving and innovation strategies. They will be able to identify, comprehend, analyse and evaluate ecosystem services using various types of media in light of environmental damage and risk analysis. They will further be able to give consideration to biodiversity and ecosystem services in private and public decision-making contexts and make effective use of relevant instruments of environmental politics. Students will become familiar with the fundamental demands of working in this area. They will know the relevant legal and institutional framework conditions for environmental and nature conservation at the local, national, European and international level depending on the field of application, and can develop approaches for solving problems in various spatial contexts and make suggestions as to how these can be implemented. Students will learn management strategies, particularly operational environmental, sustainability and biodiversity management, and can select areas of focus for the microbiological, biochemical and analytical aspects of organismic diversity. Using these specialist skills as a basis, students will be able to encourage and lead intercultural communication in the field of ecosystem services and thus play a role in guiding international discussions on issues relating to sustainable development at different spatial levels and in different action contexts. Students will be familiar with the United Nation's Agenda 2030 and can use the knowledge they have acquired to actively contribute to realising SDGs (sustainable development goals) and setting the goals for sustainable development in industrialised nations as well as developing and emerging economies.

(2) The combination of expertise in economic sciences, environmental politics and sociocultural matters with fundamental knowledge of the natural sciences in the field of ecological contexts means that graduates of this globally unique educational programme will be able to contribute to a wide range of complex issues encountered in research, administration, business as well as in the fundamental implementation processes in politics. After an appropriate period of practical experience, graduates will be able to tackle these issues working in national and international institutions including public authorities and committees involved with practical nature and environmental conservation, in consultancies and associations. They will also have a specialist and interdisciplinary

qualification enabling them to lead the international dialogue on matters of sustainability and societal exploitation of ecosystem services.

### **§ 3**

#### **Admission requirements**

(1) To be admitted onto the degree programme, candidates must have completed a first recognised vocational university degree acquired in Germany or qualification from an officially recognised vocational academy in a similar or closely related programme of study such as life sciences, environmental sciences, forestry and agricultural ecology or economic and social sciences.

(2) English language proficiency at a minimum level of B2 in the Common European Framework of Reference for Languages is required. Where the applicants native language is not English and the applicant's school leaving certificate does not indicate their English language proficiency, this can be demonstrated by presenting a language test certificate such as the paper-based TOEFL test, computer-based TOEFL test, Internet-based TOEFL test or IELTS test.

### **§ 4**

#### **Commencement and duration of studies**

(1) The degree programme may be started in the winter semester.

(2) The normal period of study is 4 semesters and includes contact hours with teaching staff, self-study and the Master's examination.

### **§ 5**

#### **Teaching and learning formats**

(1) The programme content has a modular structure. Each module delivers, consolidates and deepens learning content through lectures, practical sessions, seminars, tutorials, projects, placements, excursions, e-learning exercises and self-study. For modules that are evidently subject to several sets of study regulations, synonyms are permitted for examinations in which the content is the same.

(2) Lectures introduce the material covered by the module; they provide an outline of the subject area or of key areas within the subject as well as present and go over the current state of research. Practical sessions are intended for students to apply, deepen and expand the knowledge they have acquired in specific areas. Seminars are intended for developing students' skills, informing students about specific issues using primarily literature, papers and other documentation, presenting completed work, holding group discussions and debates and/or written work. Tutorials support students, particularly during their first semester, in learning how to solve technical and methodical problems independently. Projects allow students to acquire the ability to work independently on interdisciplinary solutions and concepts for practical problems and tasks. Placements are intended for students to deepen and put into practice their theoretical knowledge of ecosystem service concepts in research institutions, commercial enterprises and public or social institutions. Excursions give students insight into current areas of research and research facilities as well as specialist and interdisciplinary applications/uses of nature and environmental conservation and environmental management in various institutions. Internet-based e-learning exercises provide a virtual training space where individual questions or statements are considered and direct feedback received within a specified time limit. Self-study is intended as preparation and revision time for

teaching sessions; students work on, consolidate and deepen their knowledge of the taught content as they see fit.

## § 6

### Structure and organisation of the degree programme

(1) The degree programme has a modular structure. The courses offered are spread over three semesters. The third semester is organised in such that it is ideal for a temporary stay at another university (mobility window). The fourth semester is reserved for completing the Master's dissertation and holding the colloquium. Part-time study is permitted in accordance with the Part-Time Study Regulations of the Technische Universität Dresden.

(2) The degree programme consists of 7 core modules and six electives for a total of 45 credit points. These electives allow the student focus on a particular area - environmental sciences, biotechnology, ecology and collections, forestry as well as spatial development and natural resource management. Students must register for electives and their selected focus areas according to Sec. 27(3)(1); the format and deadline for doing so will be determined by the Examination Board and announced at the start of each winter semester via the normal channels at the International Institute (IHI) Zittau. The selection is binding. It is possible to change the selection of modules; this requires the student to submit a written application to the Examinations Office stating the module they wish to drop and the new module they wish to join.

(3) Qualification objectives, content, teaching and learning formats used, requirements, applicability, frequency, amount of work and duration of individual modules are indicated in the module descriptions (Annex 1).

(4) Lectures are normally held in English. Notwithstanding sentence 1, lectures are

1. held in the German language for module Ecological and Revitalising Urban Restructuring ("Ökologischer und revitalisierender Stadtumbau"),
2. held in the German language, or in English upon application by the student to the Examination Board, for modules Foresight and Integrated Assessment in Environmental Development and Intercultural Communication and Foreign Language Skills, as well as
3. the modules on Quantitative Methods of Empirical Research, International Spatial Development and Regional Management as well as Environmental Development are held in either German or English as indicated in the module descriptions.

(5) The optimum distribution of modules across individual semesters such as to allow the degree programme to be completed within the standard period of study, along with the type and scope of lectures contained therein and the required study and examination activities, can be found in the included study plan (Annex 2) or in a personalised study plan for part-time students that has been approved by the International Institute (IHI) Zittau.

(6) Those responsible for organising the electives (the lecturers in charge of the modules) can set a minimum limit of 5 students for the module courses to take place. The affected electives, including information about minimum required participants, will be made known with the format and deadline for registration via the usual methods at the International Institute (IHI) Zittau. If the number of participants falls below the minimum required during the course of the module, then the remaining students are entitled to continue the elective to its completion.

## § 7

### Content of the degree programme

(1) The Master's degree programme in Ecosystem Services is a research-focussed programme.

(2) The Master's degree programme in Ecosystem Services is a complex and interdisciplinary programme that deals with ecosystems in their entirety as well as looks at how they are managed and the varied links to the environment and society. The degree programme consists of the following areas of specialisation, from which the student may select:

1. Environmental Social Sciences
2. Biotechnology
3. Ecology and Collections
4. Forestry
5. Spatial Development and Natural Resource Management.

The degree programme links the natural and engineering sciences with the economic and social sciences as well as specialising in the fields of regional science and planning.

(3) The degree programme covers the fundamental principles of the natural and social sciences which form the requirements for understanding the systems and research-based development and which are necessary for applying scientific methods. Using case studies, it further comprises the principles and potential applications of methodical tools for looking at problems in a practical setting. The degree programme also provides an overview of the historical development and current forms of the concept of ecosystem services, methods for understanding and evaluating ecosystem services as well as concepts for the governance of ecosystem services and biodiversity. Furthermore, the programme teaches the fundamentals of sustainability, empirical social research and intercultural communication. The programme also provides an overview of the classification, taxonomy and behaviour of selected animal and plant groups as well as the foundation of environmental history, biogeography and both terrestrial and aquatic ecological systems.

## **§ 8**

### **Credit points**

(1) ECTS credit points document the average workload on students and their progress through their studies. One credit point equates to a workload of 30 hours. In general, 60 credit points are awarded per academic year, i.e. 30 points per semester. The total workload for the degree programme is 120 credit points and comprises teaching and learning formats of the type and scope indicated in the module description as well as the Master's dissertation and colloquium.

(2) The number of credit points earned by completing a module are indicated in the module description. Credit points are earned upon successful completion of the module. Sec. 28 of the examination regulations remains unaffected.

## **§ 9**

### **Student counselling services**

(1) General student counselling services are provided via the Student Office at the International Institute (IHI) Zittau and offer advice on issues relating to study options, ways of enrolment and other general matters affecting students. Course-specific advice is the responsibility of the degree programme coordinator and the academic adviser for the Ecosystem Services Master's programme. Academic advisers provide supports to students with issues relating to the organisation of the studies.

(2) At the start of the third semester, each student who has not yet completed any part of their

studies is required to attend an academic advice session.

## **§ 10**

### **Changes to module descriptions**

(1) A simplified procedure exists for making changes to module descriptions in order to optimise the organisation of studies where conditions have changed. Fields that are excluded from this procedure are "Module name", "Objectives", "Content", "Teaching and learning formats", "Requirements for awarding of credit points" as well as "Credit points and grades".

(2) According to this simplified procedure, the Academic Council of the International Institute (IHI) Zittau enacts the change to the module description at the request of the Academic Affairs Committee. The changes are announced via the normal channels for the International Institute (IHI) Zittau.

## **§ 11**

### **Effective date, publication and transitional provisions**

(1) These study regulations come into force on 1 April 2019 and are published in the official announcements of the Technische Universität Dresden.

(2) They apply for all students enrolling onto the Ecosystem Services Master's degree programme for the winter semester 2019/2020 or later.

(3) The previous study regulations for the Ecosystem Services Master's degree programme apply for students who enrolled before the winter semester 2019/2020 if they do not submit a written declaration of their acceptance of the new regulations to the Examination Board. The form and deadline for this declaration will be determined by the Examination Board and announced via the normal channels at the International Institute (IHI) Zittau.

Issued upon the decision the Academic Council of the International Institute (IHI) Zittau on 9 April 2018 and the authorisation of the Central University Administration on 21 August 2018.

Dresden,

The Dean  
of TU Dresden

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