



**On demand we advise you individually about application details and deadlines:**

**TU Dresden / IHI Zittau**

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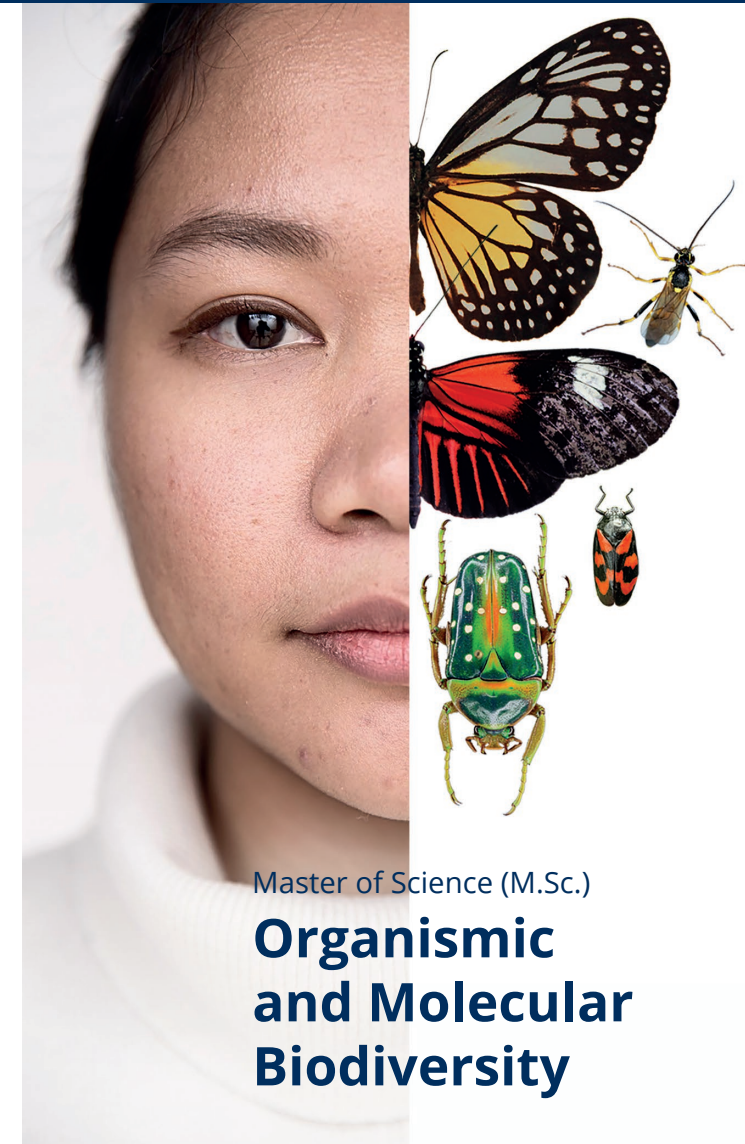


**Studying in Görlitz, Dresden & Zittau**

TU Dresden (IHI Zittau & Faculty of Biology) and Senckenberg (Görlitz & Dresden) have realized joint research programmes and academic courses for several years.

The MSc course enhances students' skills in describing and monitoring biodiversity, molecular and morphological aspects of biodiversity research, applied ecology and practical conservation at both national and international level. Successful graduates will be well placed to take up occupations in:

- Natural-history museums
- Planning authorities, in conservation biology and/or monitoring
- Environmental consultancies
- Governments and administrations, developing biodiversity policies and regulations
- Universities and research institutions



Master of Science (M.Sc.)

**Organismic  
and Molecular  
Biodiversity**

# Study organismic and molecular diversity!

## Content of your studies

## Master thesis

Understanding and safeguarding biodiversity is one of the key challenges of our time. Thus, scientific and societal interest in biodiversity has been growing consistently, and novel methods in biodiversity science are continuously opening up new research avenues. However, the increased need for biodiversity research and monitoring is not matched by the availability of trained personnel.

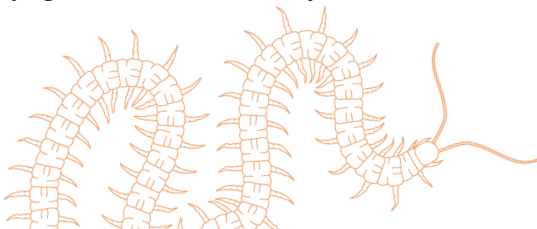
For this reason, the TU Dresden and Senckenberg offer a comprehensive master's program which addresses both organismic and molecular aspects of biodiversity research. The inclusion of collection-based research as well as applied topics allow graduates to work in a variety of fields.

### The master course opens three options for specializations

**Species Diversity and Natural-History Collections** offers courses on a broad range of taxa, covering identification, ecology and curation in natural-history collections. Teaching in museology and the communication of biodiversity topics, spans the bridge to society.

**Structural and Functional Biodiversity** focuses on the structural diversity of organisms and its evolution, including paleontological aspects. Here the link to society is provided by exploring applications in technology, architecture and design (bionics).

**Molecular Biodiversity** teaches modern molecular and cytogenetic techniques and how these can be used to trace species' evolution, domestication and conservation. Courses address the experimental design, generation of genetic, genomic and cytogenetic data and their analysis.



### Compulsory modules (Görlitz, Dresden)

- Systematics and Evolution of Animals, Fungi and Plants
- Applied Ecology
- Basic Molecular Approaches in Biodiversity Research
- Collecting and Analysing Biodiversity Data

### Elective modules

#### **Species Diversity and Natural-History Collections**

(Görlitz & Dresden)

Vegetation Science, Museums and Collections, Diversity and Ecology of Vascular Plants, Animals, Soil Animals, Mosses, Fungi and Lichens, Collection Internships, Museology

#### **Evolution of Functional Biodiversity** (Dresden)

Floral und Fruit Biology, Crops and Useful Plants, Plant-Microbial Interactions, Electron Microscopy, Morphology, Ethnobiology, Biomaterials and Biomechanics

#### **Molecular Biodiversity** (Dresden)

Population and Conservation Genetics, Plant Breeding, Cytogenomics, Barcoding, Data Visualization, Phylogenomics

#### **Further modules** (Zittau)

Intercultural Communication, Environmental Analyses, Fungal Genomics, German Course

### Degree: Master of Science (M. Sc.)

- Length of study: 4 semesters (120 ECTS) , including an optional Mobility Semester
- Language: English
- Places of study: Görlitz, Dresden, Zittau and other Senckenberg sites

### Admission requirements

- Degree in Biology or a related life or environmental science
- English skills equivalent to level B2 of the Common European Framework of Reference for Languages

