

## Module der Masterstudiengänge Fakultät Biologie zum Ersatz des Rigorosums

### Lehrveranstaltungen MSc Biology in Society

Veranstaltung/lecture	Prüfer*in/examiner
Crop plants, breeding genetics, plant parasites	Auer, Heitkam
Economic zoology	Reinhardt, Zierau
Health challenges of the 21 century	Zierau
Human evolution, population genetics	Zierau, Stuckas
Molecular Genetics & Developmental biology Organismic zoology (2 out of 5: Adv Evol Biol, Biomaterials)	Dahmann
Physiology & Endocrinology lecture +seminar	Schirmeier
Physiology lecture + Experimental Animals 2-skills-Module	Schirmeier, Zierau, Pfennig
Reprod Biol, Ecol Lipidol, Genet. Forensics)	Reinhardt, Politi, Pfennig, Brankatschk

### MSc Organismic and Molecular Biodiversity

Veranstaltung/lecture	Prüfer*in/examiner
Applied Ecology	Wesche, Rüssel, Ernst
Barcoding of Life	Heitkam, Wanke, Menzel
Basic Molecular Approaches in Biodiversity Research	Wanke, Stuckas, Hundsdörfer
Biodiversity in Applied Plant Breeding	Schröpfer, Wöhner
Collecting and Analysing Biodiversity Data	Wesche, Ernst
Crops and Useful Plants of the World	Lautenschläger
Data Visualization in Biodiversity	Heitkam
Diversity and Ecology of Fungi and Lichens	Otte, Damm
Environmental and Fungal Genomics	Hoffrichter, Kellner
Ethnobiology	Lautenschläger
Floral Biology	Ditsch
Fruit Morphology and Seed Dispersal	Ditsch
Museum and Collections	Xylander
Plant (Phylo-)Genomics	Wanke, Heitkam
Plant Functional Morphology, Anatomy and Biomechanics	Neinhuis
Population and Conservation Genetics	Stuckas, Vamberger
Scanning Electron Microscopy	Neinhuis, Voigt
Systematics and Bioindication of Bryophytes	Müller
The Biomaterials of Arthropods	Politi, Bertinetti
Vegetation Science	Müller
Vintage Molecular Biology	Menzel

## MSc Molecular Biosciences and Productive Biosystems

Veranstaltung/lecture	Prüfer*in/examiner
Application Technologies	Ansorge-Schumacher
Productive Pathways	Rother
Systems Biology and Genomics	Mascher

## MSc Physics of Life

Veranstaltung/lecture	Prüfer*in/examiner
Active Matter Hydrodynamics	Grill
Advanced Biological Physics	Friedrich
Advanced Biophysics	
Advanced Nanotechnology	
Advanced Theoretical Biophysics	
Applied Biophysics	
Applied Nanotechnology	
Cell- and Mechanobiology	Alberti, Doyle, Mateus
Cellular Machines	Diez
Computational Biophysics	
Experimental Biophysical Methods	Schlierf
Introduction to nanobiotechnology	Cuniberti
Molecular Biology and Biochemistry of Life	Alberti
Pattern Formation in Biology	Campas
Physical Chemistry of Biomolecules	Fischer-Friedrich
Physics for Biology	Friedrich
Polymer Physics	Schiessel, Sommer
Stochastic Processes	Schiessel
Tissue Dynamics	Alberti, Doyle, Mateus

## Regenerative Biology and Medicine

Veranstaltung/event	Prüfer*in/examiner
Clinical Translations and Trials in Practice	Bornhäuser
Organ Systems and Disease	Bonifacio
Quantitative Biology	Kempermann
Stem Cells, Development and Regeneration	Brand

## Molecular Bioengineering

Veranstaltung/lecture	Prüfer*in/examiner
Applied Bioinformatics	Schroeder
Applied Bionanotechnology	Cuniberti
Bio-image analysis, bio-statistics, programming and machine-learning for computational biology	Haase/Poetsch
Biomedical Tissue Engineering	Corbeil
Biophysical Methods	Schlierf
Cellular Machines - Fundamentals and Applications of Biomolecular Mechanosystems	Diez
Cellular Machines- From Cellular Function to Technological Applications	Diez
Combinatorial Principles of Chemistry and Biochemistry	Zhang
Dynamics of Protein Networks	Alberti
Genome Engineering	Bringmann
Genomes and Evolution	Bringmann
Introduction to Bionanotechnology	Cuniberti
Introduction to Proteomics	Alberti
Materials in Biomedicine	Hintze
Microsystems Technology	Braun
Principles of Biophysics	Schlierf
Protein Engineering	Alberti
Stem Cell Engineering	Anastassiadis
Structural and Computational Biology	Pisabarro
Surface Chemistry	Werner

## DIPP Lectures

Veranstaltung/lecture	Prüfer*in/examiner
Introduction to spatiotemporal modeling and simulation of biological systems	Sbalzarini
Neuroscience: Molecular Cell Biology and CNS Function	Calegari, Ader, Becker
Principles in Developmental Biology	Knust
Statistical Principles for Data Analysis	Röder
The world of stem and germ cells	Toth, Wielockx