M.Sc. Biology
Academic and Examination Regulations (FSPO) 20231, valid from WiSe23/24

TUM

Exemplary and overlapfree Curriculum (Mobility window exemplary; Stand: 20.11.2023)

Variant 1 specializing in **Plant Sciences, Genomics/Biostatistics, Microbiology**

Semester	Modules						Exams/ Credits
1.	WZ1718 Research Project Horticultural Economics and Management (specializing in plant sciences) W 10 CP	WZ4020 Effects of climate change on Plant Physiology (specializing in plant sciences) M 5 CP	WZ2372 Pathogenic Microorganisms (specializing in microbiology) K 5 CP	WZ2629 Research project chemical genetics (specializing in Genomics/ Biostatistics) LL 10 CP			4 30
2. (Mobility Window)	WZ2381 Plant systems biology (specializing in plant sciences) W 5 CP	WZ2424 Biotic plant stress physiology (specializing in plant sciences) K 5 CP	WZ2626 applied Microbiology (specializing in microbiology) K 5 CP	WZ2620 Applications of Evolutionary Theory in Agriculture. Population Genomics of Crop Pathogens and Disease Management (specializing in Genomics/ Biostatistics) W 5 CP	WZ2662 Modern Topics in Evolutionary Biology (specializing in Genomics/ Biostatistics) W 5 CP	WZ5440 Make your thing! A Project in the Makerspace (interdisciplinary qualifications) PRÄ 5 CP	6 30
3.	WZ1035 Host-Parasite Interaction (specializing in plant sciences) K 5 CP	WZ1817 Research project molecular fungal genetics (specializing in microbiology) LL 10 CP	WZ2375 Evolution of Pathogens (specializing in microbiology) K 5 CP	WZ1185 Plant Epigenetics and Epigenomics (specializing in Genomics/ Biostatistics) PRÄ 5 CP	WZ2659 Speciation from population genetics to phylogenetics (specializing in Genomics/ Biostatistics) K 5 CP		5 30
4.	WZ2590 Master's Thesis incl. scientific project planning (required) 30 CP						30

Key

Light Blue = specializing in plant scieces
Grey = specializing in Microbiology
Green = specializing in Genomics/Biostatistics
Orange = interdisciplinary Qualifications
Dark Blue = required module Master's Thesis

CP = Credit Points; M = oral exam
PRÄ = Presentation
W = research paper
LL = laboratory course
SL = Studienleistung

TUM School of Life Sciences

M.Sc. Biology
Academic and Examination Regulations (FSPO) 20231, valid from WiSe23/24

TUM

Exemplary and overlapfree Curriculum (Mobility window exemplary; Stand: 20.11.2023)

Variant 2 specializing in **Biochemistry/cell Biology, Medical Biology, Ecology/Environmental Management**

Semester	Modules						Exams/ Credits
1.	ME2656 Development of Vaccines against infectious diseases (specializing in medical Biology) PRÄ 5 CP	ME2648 Molecular Oncology (specializing in medical Biology) K + W (SL) 5 CP	WZ2732 Environmental monitoring and Data Analysis (specializing in Ecology/Environmental Management) W 5 CP	WZ6318 Geological Fundamentals of Bavarian Landscapes (specializing in Ecology/Environmental Management) K 5 CP	WZ1416 Research project: Chemistry of plant insect interactions (specializing in Ecology/Environmental Management) LL 10 CP		6 30
2. (Mobility Window)	WZ2580 Protein-Engineering (specializing in Biochemistry/cell biology) K 5 CP	WZ2388 Techniques in cell biology (specializing in Biochemistry/cell biology) K 5 CP	CS0076 Enzyme Engineering (specializing in Biochemistry/cell biology) ÜL 5 CP	ME2413 Pharmacology and Toxicology for students of Life Sciences (specializing in medical Biology) K 5 CP	ME2649 Molecular Oncology II (specializing in medical Biology) ÜL 5 CP	MW2473 Advances in Biotechnology (interdisciplinary Qualifications) B 5 CP	6 30
3.	LS20001 Research Internship Metabolic Programming (specializing in Biochemistry/cell biology) LL 10 CP	ME2414 Research Project Pharmacology and Toxicology (specializing in medical Biology) LL 10 CP	WZ6300 Ecosystem management and applied restoration ecology (specializing in Ecology/Environmental Management) W 5 CP	WZ4189 Fisheries and Aquatic Conservation (specializing in Ecology/Environmental Management) K + PRÄ 5 CP			5 30
4.	WZ2590 Master's Thesis incl. scientific project planning (required) 30 CP						30

TUM School of Life Sciences

Exemplary and overlapfree Curriculum (Mobility window exemplary; Stand: 20.11.2023)

Variant 3: **Animal Sciences, Plant Sciences, Genomics/Biostatistics** (english)

Semester	Modules					exams/ Credits
1.	WZ1718 Research Project Horticultural Economics and Management (specializing in Plant Sciences) W 10 CP	WZ1035 Host-Parasite Interaction (specializing in Plant Sciences) K 5 CP	WZ2404 Introduction to Mammalian Cell Culture (specializing in Animal Sciences) LL + PRÄ 5 CP	WZ2405 Phylogeny and Zoology of Vertebrates (specializing in Animal Sciences) K 5 CP	WZ1092 Transgenic Animals in Agriculture and in Biomedicine (interdisciplinary Qualifications) M 5 CP	6 30
2. (Mobility Window)	WZ2381 Plant Systems Biology (specializing in Plant Sciences) W 5 CP	WZ2581 Plant Biotechnology (specializing in Plant Sciences) K 5 CP	LS20005 Models in Computational Neuroscience (specializing in Animal Sciences) LL 10 CP	WZ2620 Applications of Evolutionary Theory in Agriculture. Population Genomics of Crop Pathogens and Disease Management (Wahl Genomics/ Biostatistics) W 5 CP	WZ2662 Modern Topics in Evolutionary Biology (Wahl Genomics/ Biostatistics) W 5 CP	5 30
3.	ME2656 Development of Vaccines against Infectious Diseases (specializing in Medical Biology PRÄ 5 CP	WZ2629 Research Project Chemical Genetics (specializing in Genomics/Biostatistics) LL 10 CP	WZ0033 Physiology of Growth, Reproduction and Lactation (specializing in Animal Sciences) M 5 CP	WZ1185 Plant Epigenetics and Epigenomics (specializing in Genomics/Biostatistics) PRÄ 5 CP	WZ2659 Speciation From Population Genetics to Phylogenetics (specializing in Genomics/Biostatistics) K 5 CP	5 30
4.	WZ2590 Master's Thesis incl. Scientific project planning (required) 30 CP					30

Key

Light Blue = specializing in Plant Sciences
Grey = specializing in Animal Sciences
Green = specializing in Genomics/Biostatistics
Orange = interdisciplinary Qualifications
Dark Blue = required module Master's Thesis

CP = Credit Points;
K = written exam; M = oral exam
W = research paper
PRÄ = Presentation; LL = laboratory course