
Master Programme Biotechnology

Specialization Bioinformatics

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Bioinformatics

- Analysis of biological data
 - DNA sequencing data
 - Protein structures
 - Image data
 - Modelling and predictions
- Toolkit
 - Computational methods
 - Biological knowledge
- Job perspectives
 - Scientific career, academia
 - Research + development, private industry
 - Technical position, scientific service

Compulsory courses

Pflicht - Grundlagen					
LVA	LVA Nr	Typ	Lehrende/r	SSt	ECTS
Statistics with R	851309	VU	Melcher, Spangl	2	2
Introduction to Programming	851319	VU	Moder	2	3
Essentials for bioinformatics data analysis	791029	VU	Dohm	2	3
Pflicht - Vertiefung					
LVA	LVA Nr	Typ	Lehrende/r	SSt	ECTS
Multivariate Statistics	851318	VU	Moder	3	3
Modelling and Simulation of Biomolecules	894304	VU	Oostenbrink	3	3
Introduction to Metabolic Modelling	791355	VU	Zanghellini	2	2
High-throughput sequencing and genome analysis	791018	VS	Himmelbauer	3	3
Bioinformatics: Selected aspects	791330	VU	Kreil	3	3
Machine Learning and Pattern Recognition	791331	VU	Sykacek	3	4
Bioinformatics Lab Rotation	--	VU	Dohm, Zanghellini, Oostenbrink, Sykacek, Himmelbauer	2	2
				25	28

Elective courses

Wahllehrveranstaltungen					
LVA	LVA Nr	Typ	Lehrende/r	SSt	ECTS
Statistical thermodynamics and molecular simulation	894307	VU	Oostenbrink	3	3
Molecular evolution and phylogenetics	791027	VO	Himmelbauer	1	1
Bayesian data analysis in the life sciences	791329	VU	Sykacek	3	4
Efficient microarray data analysis with R/FSPMA	791402	VU	Sykacek	1	1
Expression analysis by next generation sequencing	791015	VU	Labaj	2	2
Sequencing data analysis	791020	UE	Himmelbauer, Dohm	3	3
Modern Bioinformatics	791328	VS	Kreil, Sykacek, Oostenbrink, Leisch	2	2