List of courses Bachelor Study Bioinformatics USB České Budějovice - JKU Linz

Version WS2016	B = in Budweis / L = in Linz		Year 1		Year 2		Year 3		
			Sem1 / B	Sem2 / B	Sem3 / L	Sem4 / L	Sem5 / B	Sem6 / L	
			ECTS	ECTS	ECTS	ECTS	ECTS	ECTS	
FACH: Computer Science	**Typ**	**675COSC16**							
MODUL: Procedural Programming	(3h)	675COSCPRP13	4						
MODUL: Algorithms and Data Structures	(3h)	675COSCADS13	4						
MODUL: Working with Operating Systems	(2h)	675COSCWOS13		3					
FACH: Software Engineering and Information Systems		675SEIS16							
Software Engineering	2KV	TM1PEKVSWEN				3			
Information Systems	2KV	TM1PEKVINFO			3				
Information Systems for Bioinformatics	4KV	675SEISISBK16						6	
FACH: Introduction to R		675INTR13							
Introduction to R	2KV	675INTRITRK13				3			
MODUL: Parallel Programming		675COSCPAP13					4		ECTS
			8	3	3	6	4	6	30
FACH: Mathematics	**Typ**	**675MATH16**							
MODUL: Calculus I	(4h)	675MATHCA113	6						
MODUL: Linear Algebra	(2h)	675MATHLIA13	3						
MODUL: Calculus II	(5h)	675MATHCA213		6					
MODUL: Biostatistics	(4h)	663BIOLBST12					5		ECTS
			9	6	0	0	5	0	20
FACH: Bioinformatics	**Typ**	**675BINF16**							
MODUL: Introduction to Bioinformatics	(4h)	675BINFINB13		6					
FACH: Genome Analysis & Transcriptomics and Structural Bioinformatics		675GTSB16							
Genome Analysis & Transcriptomics	2KV	675GTSBGATK13				3			
Structural Bioinformatics	2KV	675GTSBSTBK13				3			
Topics in Genetics & Evolution	2KV	675GTSBTGEK15			3				
Sequence analysis and phylogenetics	2VL	675GTSBSAPV16			3				
Sequence analysis and phylogenetics	2UE	675GTSBSAPU16			3				
FACH: Machine Learning		675MALE16							
Artificial Intelligence	2VL	INBIPVOAINT			3				
Artificial Intelligence	1UE	INBIPUEAINT			1,5				
MODUL: Bioinformatics Project	(8h)	675BINFBIP13					8		ECTS
			0	6	13,5	6	8	0	33,5
FACH: Chemistry	**Typ**	**675CHEM13**							
MODUL: General Chemistry	(2h)	675CHEMGCH13		3					
FACH: Bioanalytics		675BIAN13							
Bioanalytics I	2VL	470WEBIBA1V14			3				
Bioanalytics I	1UE	470WEBIBA1U14			1,5				
FACH: Organic Chemistry		675ORCH13							
Chemie für Physiker II	2VL	LP2PCVOCHP2			3				
Biochemistry	2VL	TCBPFVOBICH				2,6			
MODUL: Methods and Appl. of Molecular Modelling	(3h)	675CHEMMAM13					4		ECTS
			0	3	7,5	2,6	4	0	17,1
FACH: Biology	**Typ**	**675BIOL13**							
MODUL: Biology of microorganisms	(4h)	663BIOLBMI12	5						

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MODUL: Molecular Biology and Genetics	(2h)	663MOBIMAG12	3						
MODUL: Diversity of life	(3h)	675BIOLDOL13		5					
MODUL: Introduction to Genomics	(2h)	675BIOLITG13		3					
MODUL: Molecular Phylogenetics	(4h)	675BIOLMOP13					6		ECTS
			8	8	0	0	6	0	22
FACH: Soft Skills	**Typ**	**675SOSK13**							
MODUL: Academic Writing for Cross Border Studies	(2h)	663KOETAWC15		3					
MODUL: Ethics	(2h)	675SOSKETH13		3					
FACH: Gender Studies		675GEND13							
Gender Studies TNF - Einführung *or*	2KV	GS-TNE				3			
Gender Studies und Soziale Kompetenz *or*	2KV	GS-SK2							
Ethik und Gender Studies *or*	2KV	INBIPKVETHG							
Einführung in IKT, Gesellschaft, Gender und Diversity	2KS	526SGAIGENK14							
FACH: English for Scientists		675ENSC13							
English for Chemistry 1 (understanding)	2KV	663KOETEC1K13			3,2				
English for Chemistry 2 (writing & presenting)	1KV	663KOETEC2K13				1,6			ECTS
			0	6	3,2	4,6	0	0	13,8

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			Year 1		Year 2		Year 3	
			1. Sem / B	2. Sem / B	3. Sem / L	4. Sem / L	5. Sem / B	6. Sem / L
			ECTS	ECTS	ECTS	ECTS	ECTS	ECTS
FACH: Area of Specialisation	**Typ**	**675ARSP13**						
MODUL: Advanced Database Systems		675ARSPADS13						
MODUL: Epigenetics		675ARSPEPG13						
MODUL: Introduction to Immunology		675ARSPINI13						
MODUL: Methods in Molecular Biology		675ARSPMMB13						
MODUL: Molecular Ecology		675ARSPMOE13						
MODUL: Project Management and its Economy		675ARSPPME13						
MODUL: Basic Methods of Molecular Biology		675ARSPBMM14						
MODUL: Evolutionary Genomics		675ARSPEVG14						
MODUL: Vertebratological Excursion		675ARSPVEE14						
MODUL: Polar Ecology		675ARSPVPEC14						
MODUL: Polar Ecology (Life Science)		675ARSPVPEL14						
Chemical Calculations	2KV/3,2ECTS	BCBPGKVCCAL						
Advanced NMR 2	1KV/1,6ECTS	863STBCAN2K10						
Biologische Signalisierung II	1,5VL	TPMWBVOBIS2						
Biologische Signalisierung I	3VO/3ECTS	TPMPBVOBIS1						
Biophysik II	1VO/1,5ECTS	TPMPBVOBIP2						
Charakterisierung von Bio-Nanostrukturen	2VL/3ECTS	TPMPBVOCBIN						
Advanced Topics of Molecular Biotechnologies	2VU/3ECTS	865AABBATMU16						
Mikroskopie an Biomolekülen	2VL/3ECTS	TPMPBVOMIBI						
Stochastische Simulation	1UE/1,5ECTS	TMCPAUESIMU						
Stochastische Simulation	2VL/3ECTS	TMCPAVOSIMU						
Inverse Probleme	2VL/3ECTS	TMBPAVOINVE						
Stochastische Prozesse	2VL/3ECTS	TMBPAVOPROZ						
Software Engineering	1UE/1,5ECTS	INBIPUESENG						
Software Engineering	2VL/3ECTS	INBIPVOSENG						
Application Oriented Knowledge Processing	2KV/3ECTS	921CGELAOKK13						
Biometrische Identifikation	2VL/3ECTS	INMAWVOBIDE						
Computer Forensics and IT Law	2VL/3ECTS	921NESECILV13						
Human/Computer Interaction	2VL/3ECTS	921CGELHCIV13						
Parallel Computing	3KV/4,5ECTS	921COENPACK13						
Software Architectures	3KV/4,5ECTS	921SOENSARK13						
Software Testing	2KV/3ECTS	921SOENSOTK13						
Theoretical Concepts of Machine Learning	1UE/1,5ECTS	INMAWUETCML						
Theoretical Concepts of Machine Learning	2VL/3ECTS	INMAWVOTCML						
Web Search and Mining	2KV/3ECTS	921CGELWIRK13						
Statistische Signalverarbeitung	2VL/3ECTS	MEMWDVOSTSV						
Biophysik I für Molekulare Biowissenschaften	3VL/4,5ECTS	665PHBPBPHV11						
Genomische Datenanalyse	4VU/6ECTS	665GEDAGEDU11						
Physik für Molekulare Biowissenschaften	2VL/3ECTS	665PHBPPHYV11						
Advanced NMR 1	1VL/1,3ECTS	491WORCAN1V10						
Computer Algebra	1UE/1,5ECTS	201ALGECALU12						
Computer Algebra	2VL/3ECTS	201ALGECALV12						

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Diskrete Optimierung	1UE/1,5ECTS	TM1WGUEDOPT							
Diskrete Optimierung	2VL/3ECTS	TM1WGVODOPT							
Inverse Probleme	1UE/1,5ECTS	TM1WEUEINVE							
Logik als Arbeitssprache	2KV/3ECTS	TM1PGKVLOGA							
Markov-Ketten	1UE/1,5ECTS	TM1WCUEMARK							
Markov-Ketten	2VL/3ECTS	TM1WCVOMARK							
Optimierung	4KV/6ECTS	TM1PDKVOPTI							
Stochastische Prozesse	1UE/1,5ECTS	TM1WCUEPROZ							
Biophysik I	2VL3ECTS	261BIPHBIPV15							
Stochastic Processes	2KV/4ECTS	951MATSSPRK14							
Computer Algebra for Concrete Mathematics	2VL/3ECTS	201SYMRCACV12							
Machine Learning and Pattern Classification	3KV/4,5ECTS	921PECOMLPK13							
					3	7,5	3	11,1	ECTS
			0	0	3	7,5	3	11,1	24,6
FACH: Bachelor's Thesis	**Typ**	**675BAAR13**							
Bachelor's Seminar	1SE	675BAARBASS13						6	ECTS
			0	0	0	0	0	6	6
FACH: Free Electives	**Typ**	**675FRST13**							
			3			3		3	
									ECTS
			3	0	0	3	0	3	9
			28	32	30,2	29,7	30	26,1	176
Bachelor's Examination (USB)									4
									180

Stand 7.6.2016