

# Master of Science in Biochemistry and Chemical Biology

## Credits according to categories – HS24 / FS24

Categories according to study regulation (SR) 2023			Hours	Credits		Performance assessment mode / minutes	
Examination subjects	Courses according to curriculum			ECTS	min. per category		
<b>Pre-study option during Bachelor's studies</b>							
<b>Research Project</b>					<b>32</b>		
529-0260-00	Research Project I		34A	16		ungraded semester performance	
529-0265-00	Research Project II		34A	16		ungraded semester performance	
<b>Master's studies</b>							
<b>Core Subjects</b>					<b>18</b>		
a	529-0733-02	Chemical Biology and Synthetic Biochemistry	3G	6		w	100
b	529-0240-00	Chemical Biology - Peptides	3G	6		w+o	60+20
c	529-0241-10	Selectivity in Organic Synthesis	3G	6		w+o	60+20
<b>Compensatory Subjects</b>							
a	529-0615-01	Biochemical and Polymer Reaction Engineering	3G	6		o	30
b	529-0242-00	Supramolecular Chemistry	3G	6		w+o	60+30
c	529-0243-01	Transition Metal Catalysis: From Mechanisms to Applications	3G	6		w+o	60+30
<b>Electives</b>					<b>36</b>		
	535-0030-00	Pharmaceutical Immunology II & Therapeutic Proteins	3G	3		o	15
	535-0230-00	Medizinische Chemie I	2V	2		o	20
	551-0313-00	Microbiology (Part I)	2V	3		w	75
	529-0041-00	Modeme Massenspektroskopie, gekoppelte Analysenmethoden, Chemometrie	3G	6		w+o	60+30
	551-1299-00	Bioinformatics	4G	6		w	150
	551-0319-00	Cellular Biochemistry (Part I)	2V	3		w	75
	551-0309-00	Concepts in Modern Genetics	4V	6		w	150
	551-0317-00	Immunology I	2V	3		w	60
	551-0127-00	Fundamentals of Biology III: Multicellularity	6G	8		w	150
	551-1005-00	Bioanalytics	4G	4		w	150
	529-0004-01	Classical Simulation of (Bio)Molecular Systems	4G	6		o	30
	529-0043-01	Analytical Strategy	3G	6		w+o	60+30
	529-0615-01	Biochemical and Polymer Reaction Engineering	3G	6		o	30
	227-0939-00	Cell Biophysics	4G	6		w	180
	529-0231-00	Organic Chemistry III: Introduction to Asymmetric Synthesis	3G	4		w+o	60+30
	327-0312-00	Materials Synthesis I - Polymers	4G	4		w	120
	636-0108-00	Biological Engineering and Biotechnology	3V	4		w	90
	529-0233-01	Organic Synthesis: Methods and Strategies	3G	6		w+o	60+30
	551-1407-00	RNA Biology Lecture Series I: Transcription & Processing & Translation	2V	4		w	90
	551-1409-00	RNA Biology Lecture Series II: Non-Coding RNAs: Biology and Therapeutics	2V	4		w	90
	529-0132-00	Anorganische Chemie III: Metallorganische Chemie und Homogenkatalyse	3G	4		o	30
	529-0243-01	Transition Metal Catalysis: From Mechanisms to Applications	3G	6		w+o	60+30
	551-0318-00	Immunology II	2V	3		w	60
	535-0231-00	Medizinische Chemie II	2V	2		o	20
	551-0364-00	Functional Genomics	2V	3		w	90
	551-0320-00	Cellular Biochemistry (Part II)	2V	3		w	75
	551-0324-00	Systems Biology	4V	6		w	150
	529-0042-00	Structure Elucidation by NMR	2G	4		w	60
	551-0314-00	Microbiology (Part II)	2V	3		w	75
	529-0941-00	Introduction to Macromolecular Chemistry	3G	4		w	60
	551-1402-00	Molecular and Structural Biology III: Biophysical Analysis of Macromolecular Mechanisms	2V	4		w	60
	636-0111-00	Synthetic Biology I	3G	4		w	120
	529-0242-00	Supramolecular Chemistry	3G	6		w+o	60+30
	551-1103-00	Microbial Biochemistry	2V	4		o	20
	529-0232-00	Organic Chemistry IV: Physical Organic Chemistry	2V+1U	4		w+o	60+30
	551-1126-00	Technologies in Molecular Microbiology	2V	4		w	120
	529-0059-00	Nanoscale Molecular Imaging	2G	3		o	20
	551-1414-00	Molecular and Structural Biology V: Studying Macromolecules by NMR and EPR	2V	4		w	60
	529-0150-00	Digital Chemistry	3G	6		o	30
	327-1206-00	Chemistry of Soft Materials	4G	5		w	120
	551-1412-00	Molecular and Structural Biology IV: Visualizing Macromolecules by X-Ray Crystallography and EM	2V	4		w	60
	529-0077-00	Biosynthesis of Fragrant and Medicinal Natural Products	2G	3		w	120
	551-0224-00	Advanced Proteomics	6G	4		graded semester performance	
	Master Thesis	Master Thesis (26 weeks)	69D	32	32	graded semester performance	
<b>Compulsory Electives in 'Science in Perspective' (SiP)</b>					<b>2</b>	<b>acc. to performance ass.</b>	
Total						120	
Sum according to regulation						120	

spring semester  
autumn and spring semester