Study Plan (AIMS)

Specialization: Spectroscopy and Imaging



Name:	Year of Enrollment:		
Matricle Number:	Mentor:		

Winter Semester (1st Semester)		approx. 30 CP		
			СР	
Foundations		Introduction to AIMS	5	Х
12. Semester	Compulsory	Mathematics for Engineers A	8	х
26 CP (total)		Programming in Python and Python Lab	8	х
		Biophysical Chemistry	8	
Specialization Spectroscopy and Imaging 13. Semester 37 CP (total) Elective (16-20 CP)		Modern Optical Methods and Imaging	8	
		Solar and Chemical Energy Conversion*	8	
	Elective (16-20 CP)	Physical Biology of the Cell	10	
	Chemometrics	5		
	Theoretical Spectroscopy	8		
	Machine Learning in Computational Chemistry	8		
	A) Sum of achieved CP for Specialization			
Van Onalifiaations	Compulsor			
Key Qualifications Compulsory	Ethics and Epistemology	5	Х	
13. Semester	Flaatius	Elective Modules	7	
12 CP (total)	Elective			

^{*}Frequency of courses: lectures: irregularly; practical course: every semester

Summer Semester (2nd Semester)		approx. 30 CP		
Foundations			СР	
12. Semester	Compulsory	Scientific Software Engineering – Lab	5	Х
26 CP (total)				
Advanced Machine		Machine Learning for Data Science	5	
Learning and Al 23. Semester 15 CP (total) Elective	Floctivo	Pattern Recognition	5	
	Liective	Computer Lab Pattern Recognition	5	
		Deep Learning Lab	5	
		Methods of Uncertainty Analysis and Quantification	5	
	Compulsory			
Specialization	Basic Module	Molecular Spectroscopy	5	х
Spectroscopy and	(5 CP)			
Imaging	E1	1		
13. Semester	Elective	Solar and Chemical Energy Conversion*	8	
37 CP (total)	(16-20 CP)	Sophisticated Imaging	10	
		B) Sum of achieved CP for Specialization		
Key Qualifications				-
13. Semester	Elective	Elective Modules	7	
12 CP (total)				

^{*}Frequency of courses: lectures: irregularly; practical course: every semester

Winter Semester (3rd Semester)		approx. 30 CP		
Advanced Machine			СР	•
		Pattern Recognition		
Learning and Al	Elective	(offered in German in winter semester)	5	
23. Semester 15 CP (total)		Computer Lab Pattern Recognition	5	
15 CF (total)				
Specialization (16-20 Spectroscopy and	Elective	Biophysical Chemistry	8	
		Modern Optical Methods and Imaging	8	
		Solar and Chemical Energy Conversion*	8	
		Physical Biology of the Cell	10	
	(16-20 CP)	Chemometrics	6	
		Theoretical Spectroscopy	8	
Imaging 13. Semester		Machine Learning in Computational Chemistry	8	
37 CP (total)		C) Sum of achieved CP for Specialization		
37 Ci (total)				
	Compulsory	Research Lab	12-16	Х
	(12-16 CP)	37 CP - (A + B + C) = CP Research Lab		
Key Qualifications	Compulsory	Estate and Endatum days	T 5	Х
13. Semester 12 CP (total) Elective		Ethics and Epistemology		^
	Elective	Elective Modules	7	

^{*}Frequency of courses: lectures: irregularly; practical course: every semester

Summer Semester (4th Semester)		ester (4th Semester)	approx. 30 CP		
Master's Thesis			СР		
4. Semester	Compulsory	Master's Thesis	30	х	
30 CP			-		

Date:	Signature Student:	
	Signature Mentor:	