

Study Plan (AIMS)

Specialisation: Chemical Synthesis and Drugs



Name: _____

Year of Enrollment: _____

Matricule Number: _____

Mentor: _____

1 st Semester				30 CP	
		Module	CP		
Foundations 1.-2. Semester 26 CP (total)	Compulsory	planned		Achieved CP	
		x	Introduction to AIMS	5 (comp.)	
		x	Mathematics for Engineers A	8 (comp.)	
		x	Programming in Python and Python Lab	8 (comp.)	
Specialisation Chemical Synthesis and Drugs 1.-3. Semester 37 CP (total)	Basic Module (4 CP) <i>one of two</i>		Organometallic Chemistry	4 (comp.)	
			Advanced Aspects in Inorganic Chemistry	8 (comp. elective)	
	Compulsory Elective (16-20 CP)		Organic Synthesis Planning	4 (comp. elective)	
			Enzyme Engineering	10 (comp. elective)	
			Fundamentals of protein structure analysis	10 (comp. elective)	
			Advanced Theoretical Chemistry	8 (comp. elective)	
			Machine Learning in Computational Chemistry	8 (comp. elective)	
A) Sum of achieved CP for Specialisation					

2 nd Semester				30 CP	
		Module	CP		
Foundations 1.-2. Semester 26 CP (total)	Compulsory	planned		Achieved CP	
		x	Scientific Software Engineering – Lab	5 (comp.)	
Advanced Machine Learning and AI 2.-3. Semester 15 CP (total)	Comp. Elective		Introduction to Machine Learning	5 (comp. elective)	
			Pattern Recognition	5 (comp. elective)	
			Computer Lab Pattern Recognition	5 (comp. elective)	
			Deep Learning Lab	5 (comp. elective)	
			Methods of Uncertainty Analysis and	5 (comp. elective)	
Specialisation Chemical Synthesis and Drugs 1.-3. Semester 37 CP (total)	Basic Module (4 CP) <i>one of two</i>		Reaction Mechanism	4 (comp.)	
			Catalysis	8 (comp. elective)	
	Compulsory Elective (16-20 CP)		Biomolecular Modelling	8 (comp. elective)	
B) Sum of achieved CP for Specialisation					
Key Qualifications 1.-3. Semester 12 CP (total)	Comp. Elective		Elective Modules	7 (comp. elective)	

3 rd Semester			30 CP		
		Module	CP		
Advanced Machine Learning and AI 2.-3. Semester 15 CP (total)	Comp. Elective	planned		Achieved CP	
			Pattern Recognition (offered in German in winter term)	5 (comp. elective)	
			Computer Lab Pattern Recognition	5 (comp. elective)	
Specialisation Chemical Synthesis and Drugs 1.-3. Semester 37 CP (total)	Compulsory Elective (16-20 CP)		Advanced Aspects in Inorganic Chemistry	8 (elective)	
			Organic Synthesis Planning	4 (elective)	
			Enzyme Engineering	10 (elective)	
			Fundamentals of protein structure analysis	10 (elective)	
			Advanced Theoretical Chemistry	8 (elective)	
			Machine Learning in Computational Chemistry	8 (elective)	
			C) Sum of achieved CP for Specialisation		
		37 CP - (A + B + C) = CP Research Lab (13-17 CP)			
		x	Research Lab	13-17 (elective)	
Key Qualifications 1.-3. Semester 12 CP (total)	Comp. Elective	x	Ethics and Epistemology	5 (comp.)	
			Elective Modules	7 (comp. elective)	

4 th Semester			30 CP		
		Module	CP		
Master Thesis 4. Semester 30 CP	Compulsory	x	Master Thesis in AIMS	30 (comp.)	

Date: _____

Signature Student: _____

Signature Mentor: _____