

# Study Plan (AIMS)

## Specialisation: Data-Driven Biology



Name: \_\_\_\_\_

Year of Enrollment: \_\_\_\_\_

Matricule Number: \_\_\_\_\_

Mentor: \_\_\_\_\_

1 <sup>st</sup> 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 <b>Data-Driven Biology</b> 1.-3. Semester 37 CP (total)	Compulsory Elective (10-15 CP)		Metabolomic Biomarker Signatures	7 (comp. elective)		
			Applied Plant Transcriptomics	10 (comp. elective)		
		A) Sum of achieved CP for Specialisation				

2 <sup>nd</sup> 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 <b>Data-Driven Biology</b> 1.-3. Semester 37 CP (total)	Basic Module (10 CP)	x	Molecular Microbial Evolution and Diversity	10 (comp.)		
	Comp. Elective (10-15 CP)			Immunometabolism	10 (comp. elective)	
				Network Biology	5 (comp. elective)	
				Molecular Phylogenetics and Taxonomy	10 (comp. elective)	
				Data Literacy and Genome Research	10 (comp. elective)	
				Functional Genomics in Infection Biology	10 (comp. elective)	
				Microbial Proteomics	10 (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 <sup>rd</sup> Semester			30 CP		
		Module	CP		
		planned		Achieved CP	
Advanced Machine Learning and AI 2.-3. Semester 15 CP (total)	Comp. Elective		<i>Pattern Recognition</i> <i>(offered in German in winter term)</i>	5 (comp. elective)	
			Computer Lab Pattern Recognition	5 (comp. elective)	
Specialisation <b>Data-Driven Biology</b> 1.-3. Semester 37 CP (total)	Compulsory Elective (10-15 CP)		Metabolomic Biomarker Signatures	7 (comp. Elective)	
			Applied Plant Transcriptomics	10 (comp. elective)	
			C) Sum of achieved CP for Specialisation		
			37 CP - (A + B + C) = CP Research Lab (12-17 CP)		
		x	Research Lab		
Key Qualifications 1.-3. Semester 12 CP (total)	Comp. Elective		Ethics and Epistemology	5 (comp.)	
			Elective Modules	7 (comp. elective)	

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

Date: \_\_\_\_\_

Signature Student: \_\_\_\_\_

Signature Mentor: \_\_\_\_\_