

Study Plan (AIMS)

Specialisation: Data-Driven Biology



Name: _____ Year of Enrollment: _____

Matricle Number: _____ Mentor: _____

1 st Semester (winter semester)			30 CP
			CP

Compulsory	Introduction to AIMS	5	x
	Mathematics for Engineers A	8	x
	Programming in Python and Python Lab	9	x
Compulsory Elective (10-15 CP)	Metabolomic Biomarker Signatures	10	
	A) Sum of achieved CP for Specialisation		
Compulsory	Ethics and Epistemology	5	x

Foundations 1.-2. Semester 26 CP (total)
Specialisation Data-Driven Biology 1.-3. Semester 37 CP (total)
Key Qualifications 1.-3. Semester 12 CP (total)

2 nd Semester (summer semester)			30 CP
			CP

Compulsory	Scientific Software Engineering – Lab	5	x
Compulsory Elective	Machine Learning for Data Science	5	
	Pattern Recognition	5	
	Computer Lab Pattern Recognition	5	
	Deep Learning Lab	5	
	Methods of Uncertainty Analysis and Quantification	5	
Basic Module (10 CP)	Molecular Microbial Evolution and Diversity	10	x
Compulsory Elective (10-15 CP)	Immunometabolism	10	
	Network Biology	5	
	Functional Genomics in Infection Biology	10	
	Microbial Proteomics	10	
	B) Sum of achieved CP for Specialisation		
Compulsory Elective	Elective Modules	7	

Foundations 1.-2. Semester 26 CP (total)
Advanced Machine Learning and AI 2.-3. Semester 15 CP (total)
Specialisation Data-Driven Biology 1.-3. Semester 37 CP (total)
Key Qualifications 1.-3. Semester 12 CP (total)

3rd Semester (winter semester)	30 CP
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CP

Compulsory Elective

Pattern Recognition

(offered in German in winter term)

5

Computer Lab Pattern Recognition

5

Compulsory Elective
(10-15 CP)

Metabolomic Biomarker Signatures

10

C) Sum of achieved CP for Specialisation

37 CP - (A + B + C) = CP Research Lab (12-17 CP)

Research Lab

12-17

x

planned CP Research Lab

Compulsory Elective

Ethics and Epistemology

5

x

Elective Modules

7

Advanced Machine Learning and AI
2.-3. Semester
15 CP (total)

Specialisation
Data-Driven Biology
1.-3. Semester
37 CP (total)

Key Qualifications
1.-3. Semester
12 CP (total)

4th Semester (summer semester)	30 CP
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CP

Compulsory

Master Thesis

30

x

Master Thesis
4. Semester
30 CP

Date: _____ Signature Student: _____

Signature Mentor: _____