

Period 1		Period 2		Period 3	Period 4		Period 5		Period 6
sept	oct	nov	dec	jan	feb	mar	apr	may	jun

### Bioinformatics and Systems Biology - Compulsory (24 + 18 ec)

Fundamentals of Bioinformatics (6 ec) VU + UvA	Algorithms in Sequence Analysis (6 ec) VU	Biosystems Data Analysis (6 ec) UvA	Structural Bioinformatics (6 ec) VU	Bioinformatics for Translational Medicine (6 ec) VU	Advanced Modeling in Systems Biology (6 ec) VU #
Introduction to Systems Biology (6 ec) VU + UvA	Systems Biology in Practice (6 ec) UvA		Basic Models of Biological Networks (6 ec) VU	Statistics with R (6ec) VU #	

One out of Proposal Writing (6 ec) VU or Thesis Writing (6 ec) UvA. Both are individual work that can be flexibly planned.

### Optional Recommended Courses

Molecular Structures in Biology (6ec) UvA			Synthetic Biology and Biomedicine (6ec) VU/UvA		Molecular Microbial Physiology (6 ec) UvA
			Computational Biology (6ec) UvA		

### Preparatory Bachelor Courses (assigned to address deficiencies; max 12 ec)

	Inleiding Programmeren (Python) (6ec) VU		Machine Learning (6 ec) VU		
Probleemoplossen (3ec) VU	Probleemoplossen (3ec) VU				
Lineaire algebra voor BWI en N (6ec) VU			Lineaire algebra I (6ec) VU		
	Calculus 1 (3ec) VU				
	Physical Biology o/t Cell I (3 ec) VU		Moleculaire Celbiologie en Genetica (6ec) VU		
	Biochemie I (3ec) VU		Biochemie II (3ec) VU		

### Optional Courses Other Masters (possibly in second year)

Neural Networks (6 ec) VU	Stochastic Simulation (6 ec) UvA	Understanding Molecular Simulation (6ec) UvA	Scientific Computing (6 ec) UvA	Data Mining Techniques (6 ec) VU	Complex System Simulation (6ec) UvA
Evolutionary Computing (6 ec) VU	Computer Graphics (6 ec) VU				
Parallel Programming (6 ec) VU	Advanced Selforganisation (6ec) VU				
Principles of Neuroscience (6 ec) VU	Genomes and Gene Expression	Physical Biology o/t Cell II (3 ec) VU			
		Signal Transduction in Health and Disease (6ec) VU			

### Key:

<b>Compulsory</b>	First year:	Second year:
<b>Bioinformatics Profile</b>	o 42 ects are compulsory:	o 60 ects of projects:
<b>Systems Biology Profile</b>	- 24 ects are compulsory for all students	- major (max. 42 ects) must match profile (Bioinformatics or Systems Biology)
<b>Recommended Optional Courses</b>	- 18 ects differentiate between the Bioinformatics and Systems Biology profiles	- minor (min. 18 ects)
<b>Supplementary Courses</b>	o 18 ects are can be chosen freely.	
<b>Optional Courses</b>	# choose one out of <i>Advanced Modeling in Systems Biology</i> or <i>Programming in R</i>	
	* Choose one out of <i>Proposal Writing</i> (6 ec – VU) or <i>Thesis Writing</i> (6 ec – UvA). Both are individual work that can be flexibly scheduled.	