UNIVERSITÉ DE GENÈVE
FACULTÉ DES SCIENCES

Master of Science in Biology

Academic contacts :
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Dpt of Genetics & Evolution

Physical and computational Biology (PCB)

Name : **Student number :**

Code	Course	ECTS	Semesters A/P/AN	Courses Selection	ECTS
Mandatory safety days ! Registration will take place in November for the autumn semester and in March for the spring semester.					
14B012	Scientific Writing and Communication (mandatory)	4	A	✓	4
14B673	Research Training (equivalent to 320h)	16	P	✓	16
Core courses (6-9 ECTS)					
14B063A*	Microscopy and Imaging	3	A		
14B057A	Statistics & Probability	3	A		
14X026 ●	Data Science	6	A		
PCB Mandatory courses (31–34 ECTS from the three blocks)					
● **Biology (between 6 - 15 ECTS)**					
14B010	Principles of Cellular and Molecular Biology	8	AN		
14B017	Master Course in Genetics, Development and Evolution	9	AN		
13B009	Bioinformatics II Subtitle: Modeling biological complexity and diversity	6	A		
14B657	Phylogeny and molecular evolution	4	AN		
24N01	Principles of neurobiology	6	A		
● **Computer Science/Mathematics (at least 6 ECTS)**					
14M197	Modèles mathématiques pour les humains et les animaux	6	A		
14M53	Modélisation mathématique avec application à la biologie	6	?		
24N13	Trends in Computational Neuroscience	3	P		
14X011	Information Retrieval	4	P		
14X013	Métaheuristiques pour l'optimisation	6	A		
14X015	Modeling and simulation of natural and social phenomena	6	P		
14X050 ●	Deep learning	6	A		
14X061 ●	Graph Algorithms	5	P		
14X062 ●	Computational Imaging	5	P		
● **Physics (at least 5 ECTS)**					
14P017	Biophotonics	5	P		
14P034	Introduction to the Physics of biology	5	P		
14B084	Physics of Biological Systems: from cells to tissues	3	A		
14P063	Principles of pattern formation	5	A		
	Total (minimum 60 ECTS credits)				

***Pre-registration** required with the course instructor. Please check the "programme des cours" website for registration details.
● **Prérequis**: être titulaire du BASC (ou équivalent) / **Prerequisite**: A Bachelor of Science (BASc) degree or an equivalent

Signatures :

Student	**Academic Advisor of the Section**	**Academic Coordinator for the PCB Track**
Date:	**Date:**	**Date:**

A = Automne, Autumn
P = Printemps, Spring / AN = Annuel, Annual

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