

Abbreviations

C = Course
E/S = Exercise/Seminar
PW = Practical Work
E = English
F = French

Autumn Semester

Course	Teaching Staff	Hours per semester			ECTS Credits	English /French
		C	E/S	PW		
Compulsory						
Genes: from sequence to function	Rivolta C., Bergmann S. Weber J. Chrast R.	16	8		2	E
Early development and signalisation pathways	Michalik L., Rotman N.	12	2		1.5	E
Understanding bacterial metabolism from a genomic perspective	Van der Meer J., McKinney J.	20			2	E
Plant genetic	Poirier Y.	20			2	E
Host - pathogen interactions	Telenti A.	16			2	E
Cellular mechanisms of protein homeostasy	Goloubinoff P.	7			1	E
Structure of plant-genomes	Fankhauser C.	7			1	E
Seminars Biology and Integrative Genetics	Van der Meer J.		3		0.5	E
Personal Research Work - Introduction	Fankhauser C.			200	11	E
Total					23	
One study path among the following three						
Plant Biology						
Genetic engineering and metabolism	Poirier Y.				7	
Plant functional genomics	Poirier Y.	22				E
Plant symbiosis from mutualism to parasitism	Reymond P.	8				E
Institute seminars	Paszowski U.	10				E
	Poirier Y.		11			E
Microbiology						
Molecular bases of bacterial virulence	Sanglard D.				7	
Molecular bases of bacterial virulence	Greub G.	8				E
Pathogenic fungi and yeasts: fundamental aspects	Sanglard D.	8				E
Power of bacterial genetics	Collier J.	9				E
Molecular bases of viral virulence	Telenti A.	7				E
Small RNA and global regulation	Reimann C.	6				E
Mobile DNA elements in bacteria	Van der Meer J.	6				E
Institute seminars	Entenza J.		11			E
Development						
Michalik L.						
Development of skeletal muscle and adipose tissue	Wahli W.	8	14			E
Development of the nervous system	Braissant O.	12	11			E
Development of Vertebrate limb	Grapin-Botton A.	8	14			E
Total					30	

Spring Semester

Course	Teaching Staff	Hours per semester			ECTS Credits	English /French
		C	E/S	PW		
Optional (choice -> 15 credits)						
Cellular and systemic pathogenesis of microorganisms	Sanglard D. , Buetti E., Monod M., Sahli R., Greub G., Nardelli D., Meylan P., Calandra T.,	24			3	E
Cytoskeleton and morphogenesis: from microbes to man	Martin S. , Collier J.	12			1.5	E
Epidemiology of infectious diseases	Blanc D. , Hauser P., Meylan P., Zanetti G., Sanglard D.	14			1.5	E
From receptor to gene: selected chapters of molecular endocrinology	Mermod N.	24			3	E
Genomics, Proteomics, and Quantitative Genetics	Franken P. , Tafti M., Quadroni M., Goudet J., Weber J., Harshman K.,	24			3	E
Interactions between prokaryotes and eukaryotes: genetic regulation and signals	Keel C.	12			1.5	E
Landmark papers in Global Health	Cole S.	42	28		5	E
Microorganisms and tools in experimental biology	Sanglard D. , Ciuffi A.	12			1.5	E
Nuclear receptors and the Regulation of Genes	Wahli W.	12			1.5	E
Overview of strategies to combat infections	Telenti A. , Nardelli D., Hauser P., Greub G., Sanglard D.	14			1.5	E
Problem solving in bioinformatics	Robinson-Rechavi M.	28			3	E
Recombinant proteins: applications in research and medicine	Corthésy B.	12			1.5	E
The biology/biochemistry of stress	Goloubinoff P.	12			1.5	E
The effects of the environment on development	Fankhauser C. , Geldner N., Hardtke C.	24			3	E
Transmission of signals in plant defence	Farmer E.	24			3	E
Virus-Host Cell Interaction	Kunz S. , Moradpour D., Herr W.	12			1.5	E
Institute seminars	Fankhauser C.					E
Compulsory personal research work						
Personal Research Work - Master thesis				280	15	E