

**Cycle view of the study programme**

		B1	Or	Th	Pr	Au	Cr
<b>Compulsory courses (B1 : 38Cr, B2 : 30Cr)</b>							
BIOC0709-4	<i>Bioenergetics</i> - Pierre CARDOL	B1	Q1	20	-	-	3
BIOC0210-5	<i>Enzymology</i> - André MATAGNE - [10h Mon. WS]	B1	Q1	20	-	[+]	3
BIOC0720-1	<i>Structural biology</i> - Christian DAMBLON, Frédéric KERFF - [15h Mon. WS]	B1	Q1	25	-	[+]	4
BIOC0721-1	<i>Optical spectroscopy for biochemistry</i> - Christian DAMBLON, André MATAGNE	B1	Q1	15	-	-	2
GENE0001-4	<i>Genetic engineering</i> - Frédéric BOUCHÉ, Alain BRANS, Franck DEQUIEDT, Mireille DUMOULIN, Yvette HABRAKEN, Sylvie LEGRAND, Isabelle MANFROID, H. PENDEVILLE SAMAIN, Mohammed TERRAK, Marianne VOZ	B1	Q1	20	-	-	3
GENE0432-4	<i>Genetic and biochemical evolution</i> - Moreno GALLEN, Claire REMACLE	B1	Q1	30	-	-	3
GENE0003-1	<i>Genomics</i> - Marc HANIKENNE	B1	Q2	20	-	-	3
BIOL0008-1	<i>Bioinformatics</i> - Denis BAURAIN - [5h Mon. WS]	B1	Q1	20	-	[+]	3
BIOL0021-1	<i>Biology of the systems</i> - Patrick MEYER - [10h Mon. WS]	B1	Q1	10	-	[+]	2
SSTG0009-1	<i>Placement or practical integrated work (including seminars)</i> - Denis BAURAIN, Franck DEQUIEDT, Moreno GALLEN, Marc HANIKENNE, André MATAGNE, Patrick MEYER, Johan MICHAUX, Patrick MOTTE, Claire PÉRILLEUX, Claire REMACLE, Catherine SADZOT, Marc THIRY - [8w Internship]	B1	TA	-	-	[+]	12
SMEM0019-1	<i>Final thesis</i> - COLLÉGIALITÉ <b>Prerequisite :</b> SSTG0009-1 - Stages ou travaux pratiques intégrés (y compris séminaires) <b>Corequisite :</b> BBMC0020-1 - Mémoire (complément)	B2	TA	-	-	-	25
BIOL0022-1	<i>Introduction to intellectual property</i> - Fabienne PIRON - [10h Mon. WS]	B2	Q1	10	-	[+]	3
BIOL0023-1	<i>Introduction to quality assurance</i> - Philippe HUBERT, Joëlle WIDART - [5h Mon. WS]	B2	Q1	10	-	[+]	2

**Optional courses (B1 : 22Cr, B2 : 30Cr)**

**In agreement with the Jury, choose an option among : (B1 : 1Nbr)**

**Biochemistry (B1 : 15Cr)**

*Notice :* Only accessible to students who have chosen this subject before the academic year 2019-2020.

**Genetics (B1 : 15Cr)**

*Notice :* Only accessible to students who have chosen this subject before the academic year 2019-2020.

**Physiology and developmental biology (B1 : 15Cr)**

*Notice :* Only accessible to students who have chosen this subject before the academic year 2019-2020.

**Microbiology and Immunology (B1 : 15Cr)**

*Notice :* Only accessible to students who have chosen this subject before the academic year 2019-2020.

**Biochemistry and microbiology (B1 : 22Cr)**

BIOC0723-1	<i>Applied bioenergetics</i> - Pierre CARDOL	B1	Q2	15	-	-	2
BIOC0722-1	<i>Application of spectroscopic techniques to the study of folding and stability of proteins</i> - André MATAGNE - [10h Mon. WS]	B1	Q2	20	-	[+]	3

CHIM0688-1	<i>Biological mass spectrometry</i> - Loïc QUINTON - [5h Mon. WS]	B1	Q2	15	-	[+]	2
BIOC0003-2	<i>Biochemistry and physiology of the micro-organisms</i>	B1	Q2	15	-	-	2
BIOL0013-1	<i>Development of microorganisms</i> - Sébastien RIGALI - [5h Mon. WS]	B1	Q2	15	-	[+]	2
MICR1713-1	<i>Extremophile microorganisms</i> - Georges FELLER, Moreno GALLEN, Annick WILMOTTE - [5h Mon. WS]	B1	Q2	10	-	[+]	2
MICR0004-1	<i>Bacterial pathogenesis</i>	B1	Q2	15	-	-	2
MICR0005-1	<i>Protistology</i> - Denis BAURAIN	B1	Q2	15	-	-	2
MICR0006-1	<i>Virology, immunology and vaccinology</i> - Catherine SADZOT	B1	Q2	25	-	-	3
CHIM0059-6	<i>Industrial Microbiology</i> - Patrick FICKERS	B1	Q2	20	-	-	2

#### Genetics, physiology and developmental biology (B1 : 22Cr)

GENE0445-1	<i>Quantitative genetics</i> - Franck DEQUIEDT - [15h Mon. WS]	B1	Q2	15	-	[+]	3
GENE0441-2	<i>Organelle genetics, Part A</i> - Claire REMACLE	B1	Q2	15	-	-	2
BIOL0009-1	<i>Molecular and cellular physiology and animal signaling pathways</i> - Marc MULLER, Ingrid STRUMAN, Marc THIRY	B1	Q2	25	-	-	3
BIOL0010-1	<i>Molecular and cellular physiology and plant signaling pathways</i> - Patrick MOTTE	B1	Q2	20	-	-	3
BIOL0011-1	<i>Biology of animal development</i> - Bernard PEERS	B1	Q2	25	-	-	3
BIOL0012-1	<i>Biology of plant development</i> - Claire PÉRILLEUX	B1	Q2	25	-	-	3
BIOL0032-1	<i>Evolutionary developmental biology</i> - Bernard PEERS, Claire PÉRILLEUX	B1	Q2	15	-	-	2
BIOL0014-1	<i>Dynamic molecular imaging</i> - Patrick MOTTE	B1	Q2	20	-	-	3

#### Choose one focus from the following : (B2 : 1Nbr)

##### Research Focus (B2 : 30Cr)

BBMC0020-1	<i>Final thesis (complement)</i> - COLLÉGIALITÉ <b>Corequisite :</b> SMEM0019-1 - Mémoire	B2	TA	-	-	-	10
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In agreement with the Jury, choose a placement from among: (B2 : 20Cr)

SSTG0044-1	<i>Research internship within an university outside ULiege or a company of the Wallonia-Brussels Federation</i> - COLLÉGIALITÉ - [3mois Internship]	B2	Q1	-	-	[+]	20
SSTG0045-1	<i>Research internship within the framework of an exchange scheme</i> - COLLÉGIALITÉ - [3mois Internship]	B2	Q1	-	-	[+]	20

##### Teaching focus (B2 : 30Cr)

AESS1217-1	<i>Special didactics in biology : course and exercises (1st part)</i> - MarieNoëlle HINDRYCKX <b>Corequisite :</b> AESS1218-1 - Didactique spéciale en biologie : stages (partim I) AESS0202-1 - Didactique générale : cours et exercices ; stages d'observation ; pratiques réflexives	B2	TA	40	-	-	3
AESS1218-1	<i>Special didactics in biology : placements (1st part)</i> - <i>Observation placements</i> - MarieNoëlle HINDRYCKX - [10h Internship] - <i>Teaching placements</i> - MarieNoëlle HINDRYCKX - [20h Internship] - <i>Reflexive practical work</i> - MarieNoëlle HINDRYCKX <b>Corequisite :</b> AESS1217-1 - Didactique spéciale en biologie : cours et exercices (partim I)	B2	TA	-	-	[+]	3
				-	-	[+]	
				-	5	-	

	AESS0202-1 - Didactique générale : cours et exercices ; stages d'observation ; pratiques réflexives								
AESS2217-1	<i>Special didactics in biology : course and exercises (part II)</i> - MarieNoëlle HINDRYCKX - [1d FW]	B2	TA	35	-	[+]			<b>4</b>
	<b>Corequisite :</b> AESS2218-1 - Didactique spéciale en biologie : stages (partim II) AESS1218-1 - Didactique spéciale en biologie : stages (partim I) AESS1217-1 - Didactique spéciale en biologie : cours et exercices (partim I) AESS0202-1 - Didactique générale : cours et exercices ; stages d'observation ; pratiques réflexives								
AESS2218-1	<i>Special didactics in biology : placements (2nd part)</i> - Teaching placements - MarieNoëlle HINDRYCKX - [20h Internship]	B2	TA						<b>5</b>
	- <i>Reflexive practical work</i> - MarieNoëlle HINDRYCKX				-	5	-		
	- <i>Extra-scholar teaching activities</i> - MarieNoëlle HINDRYCKX				-	10	-		
	<b>Corequisite :</b> AESS2217-1 - Didactique spéciale en biologie : cours et exercices (partim II) AESS1218-1 - Didactique spéciale en biologie : stages (partim I) AESS1217-1 - Didactique spéciale en biologie : cours et exercices (partim I) AESS0202-1 - Didactique générale : cours et exercices ; stages d'observation ; pratiques réflexives								
AESS0202-1	<i>General didactics: course and exercises ; observation placements ; reflexive practices</i> - Annick FAGNANT - [10h Internship]	B2	TA	30	10	[+]			<b>4</b>
	<b>Corequisite :</b> AESS1218-1 - Didactique spéciale en biologie : stages (partim I) AESS1217-1 - Didactique spéciale en biologie : cours et exercices (partim I)								
AESS0246-1	<i>Analysis of scholastic institutions and educational policies</i> - Annelise VOISIN	B2	Q2	15	-	-			<b>1</b>
AESS0248-1	<i>Elements of sociology of education</i> - JeanFrançois GUILLAUME	B2	Q2	10	-	-			<b>1</b>
AESS0004-1	<i>Media education</i> - Jérémy HAMERS	B2	Q1	15	-	-			<b>1</b>
AESS0249-1	<i>Interdisciplinary seminar</i> - Annick FAGNANT	B2	Q2	15	-	-			<b>1</b>
AESS0140-1	<i>Professional ethics and training to neutrality and citizenship</i> - Anne HERLA	B2	Q2	25	-	-			<b>2</b>
AESS0143-1	<i>Educational Psychology of adolescents and young adults</i> - Annick FAGNANT	B2	Q1	15	-	-			<b>2</b>
AESS0339-1	<i>Understand and manage the diversity of public schools</i> - Ariane BAYE	B2	TA	10	15	-			<b>3</b>

#### Optional free courses (B1 : 5Cr)

AESS0320-1	<i>Initiation to biology didactics</i> - MarieNoëlle HINDRYCKX	B1	TA	20	20	-			<b>2</b>
SBIM0486-2	<i>Experimental methodologies in living animals</i> - Pierre DRION	B1	Q1	25	10	-			<b>3</b>

### Additional ECTS Master in biochemistry and molecular and cell biology

#### Compulsory courses (B0 : 60Cr)

STAT0750-1	<i>Multivariate statistical analysis (software R)</i> - Arnout VAN MESSEM	B0	Q2	10	10	-			<b>3</b>
STAT0077-1	<i>Computing analysis and processing of biological data</i> - Patrick MEYER	B0	Q1	25	-	-			<b>2</b>
MICR0720-1	<i>Phycology and mycology</i> - Denis BAURAIN	B0	Q1	20	10	-			<b>3</b>
MICR0721-1	<i>Bacteriology</i>	B0	Q1	20	10	-			<b>3</b>
MICR1716-1	<i>Virology</i> - Catherine SADZOT	B0	Q2	20	10	-			<b>2</b>
BIOL0216-1	<i>Animal physiology</i> - JeanChristophe PLUMIER, Marc THIRY	B0	Q1	60	30	-			<b>7</b>
BIOL0217-1	<i>Vegetal physiology</i>	B0	Q2						<b>5</b>

	- <i>Theory</i> - Claire PÉRILLEUX		35	-	-		
	- <i>Practice</i> - Claire PÉRILLEUX		-	20	-		
IMMU0521-1	<i>Immunology</i> - Catherine SADZOT	B0 Q2	25	10	-		<b>3</b>
BIOL0003-1	<i>Biology of pluricellular organisms</i>	B0 Q1					<b>5</b>
	- <i>Animal</i> - Loïc MICHEL		15	15	-		
	- <i>Plant Biology</i> - Claire PÉRILLEUX		15	15	-		
GENE9002-1	<i>Molecular biology of gene I</i> - Franck DEQUIEDT	B0 Q1	30	-	-		<b>3</b>
GENE9003-1	<i>Molecular biology of gene II</i> - Franck DEQUIEDT	B0 Q2	30	30	-		<b>4</b>
BIOC9242-2	<i>Biological macromolecules chemistry</i>	B0 Q1					<b>4</b>
	- <i>Part A</i> - Moreno GALLEN, Loïc QUINTON		40	-	-		
	- <i>Part B - Thermodynamics of biological systems</i> - Moreno GALLEN		10	-	-		
BIOC9243-1	<i>Equilibria in biochemistry and enzyme kinetics</i> - Moreno GALLEN, André MATAGNE	B0 Q2	20	40	-		<b>5</b>
BIOL0024-1	<i>Molecular physiology of the cell</i> - Patrick MOTTE	B0 Q2	15	15	-		<b>2</b>
STRA0044-1	<i>Training in scientific communication</i> - Moreno GALLEN, Patrick MOTTE, Marianne VOZ - [40h Internship]	B0 Q2	-	-		[+]	<b>3</b>
PHIL1227-1	<i>Philosophy and bioethics</i>	B0 Q2					<b>2</b>
	- <i>Éléments de philosophie des sciences</i> - Julien PIERON		15	-	-		
	- <i>Bioéthique</i> - Florence CAEYMAEX, Patrick DU JARDIN		15	-	-		
LANG0077-8	<i>English 2 (english language)</i> - Clara BRERETON, Véronique DOPPAGNE, Ellen HARRY	B0 TA	45	-	-		<b>4</b>