

**Block view of the study programme**

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**Block 1**
**Compulsory courses**

BIOC0709-4	<i>Bioenergetics</i> - Pierre CARDOL, Fabrice FRANCK	Q1	20	-	-	3
BIOC0210-5	<i>Enzymology</i> - André MATAGNE - [10h Mon. WS]	Q1	20	-	[+]	3
BIOC0720-1	<i>Structural biology</i> - Paulette CHARLIER, Christian DAMBLON - [15h Mon. WS]	Q1	25	-	[+]	4
BIOC0721-1	<i>Optical spectroscopy for biochemistry</i> - Christian DAMBLON, André MATAGNE	Q1	15	-	-	2
GENE0001-4	<i>Genetic engineering</i> - Jacques DOMMES	Q1	20	-	-	3
GENE0432-4	<i>Genetic and biochemical evolution</i> - Moreno GALLEN, Claire REMACLE	Q1	30	-	-	3
GENE0003-1	<i>Genomics</i> - Marc HANIKENNE	Q1	20	-	-	3
BIOL0008-1	<i>Bioinformatics</i> - Denis BAURAIN - [5h Mon. WS]	Q1	20	-	[+]	3
BIOL0021-1	<i>Biology of the systems</i> - Patrick MEYER - [10h Mon. WS]	Q1	10	-	[+]	2
SSTG0009-1	<i>Placement or practical integrated work (including seminars)</i> - Denis BAURAIN, Paulette CHARLIER, Franck DEQUIEDT, JeanDenis DOCQUIER, Jacques DOMMES, Moreno GALLEN, André MATAGNE, Patrick MEYER, Johan MICHAUX, Patrick MOTTE, Claire PÉRILLEUX, Claire REMACLE, Catherine SADZOT, Marc THIRY - [8w Internship]	TA	-	-	[+]	12

**Optional courses**
**In agreement with the Jury, choose an option among :**
**Biochemistry**
*Notice* : Only accessible to students who have chosen this subject before the academic year 2019-2020.

**Genetics**
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**Physiology and developmental biology**
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**Microbiology and Immunology**
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**Biochemistry and microbiology**

BIOC0723-1	<i>Applied bioenergetics</i> - Pierre CARDOL, Fabrice FRANCK	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]	Q2	20	-	[+]	3
CHIM0688-1	<i>Biological mass spectrometry</i> - Loïc QUINTON - [5h Mon. WS]	Q2	15	-	[+]	2
BIOC0003-2	<i>Biochemistry and physiology of the micro-organisms</i> - JeanDenis DOCQUIER	Q2	15	-	-	2
BIOL0013-1	<i>Development of microorganisms</i> - Sébastien RIGALI	Q2	15	-	-	2
MICR1713-1	<i>Extremophile microorganisms</i> - Georges FELLER, Moreno GALLEN, Annick WILMOTTE - [5h Mon. WS]	Q2	10	-	[+]	2
MICR0004-1	<i>Bacterial pathogenesis</i> - JeanDenis DOCQUIER	Q2	15	-	-	2
MICR0005-1	<i>Protistology</i> - Denis BAURAIN	Q2	15	-	-	2

MICR0006-1	<i>Virology, immunology and vaccinology</i> - Catherine SADZOT	Q2	25	-	-	3
CHIM0059-6	<i>Industrial Microbiology</i> - Patrick FICKERS	Q2	20	-	-	2

#### Genetics, physiology and developmental biology

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

#### Optional free course

AESS0320-1	<i>Initiation to biology didactics</i> - MarieNoëlle HINDRYCKX	Q2	20	20	-	2
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#### Block 2

#### Compulsory courses

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)	TA	-	-	-	25
BIOL0022-1	<i>Introduction to intellectual property</i> - Hélène SABATEL - [10h Mon. WS]	Q1	10	-	[+]	3
BIOL0023-1	<i>Introduction to quality assurance</i> - Jacques DOMMES - [5h Mon. WS]	Q1	10	-	[+]	2

#### Focus to be chosen

Choose one focus from the following :

#### Research Focus

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

SSTG0044-1	<i>Research internship within an university outside ULiege or a company of the Wallonia-Brussels Federation</i> - COLLÉGIALITÉ, Moreno GALLEN - [3mois Internship] <b>Corequisite :</b> SMEM0019-1 - Mémoire	Q1	-	-	[+]	20
SSTG0045-1	<i>Research internship within the framework of an exchange scheme</i> - COLLÉGIALITÉ, Moreno GALLEN - [3mois Internship] <b>Corequisite :</b> SMEM0019-1 - Mémoire	Q1	-	-	[+]	20

#### Teaching focus

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)	TA	40	-	-	3
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	AESS0202-1 - Didactique générale : cours et exercices ; stages d'observation ; pratiques réflexives					
AESS1218-1	<i>Special didactics in biology : placements (1st part)</i>	TA				<b>3</b>
	- <i>Observation placements</i> - MarieNoëlle HINDRYCKX - [10h Internship]	-	-	[+]		
	- <i>Teaching placements</i> - MarieNoëlle HINDRYCKX - [20h Internship]	-	-	[+]		
	- <i>Reflexive practical work</i> - MarieNoëlle HINDRYCKX	-	5	-		
	<b>Corequisite :</b> AESS1217-1 - Didactique spéciale en biologie : cours et exercices (partim I) AESS0202-1 - Didactique générale : cours et exercices ; stages d'observation ; pratiques réflexives					
AESS2217-1	<i>Special didactics in biology : course and exercises (2nd part)</i> - MarieNoëlle HINDRYCKX	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>	TA				<b>5</b>
	- <i>Teaching placements</i> - MarieNoëlle HINDRYCKX - [20h Internship]	-	-	[+]		
	- <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]	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 key-players, educational policies</i> - Dominique LAFONTAINE - Suppl : MarieThérèse DELHOUNE	Q1	15	-	-	<b>1</b>
AESS0248-1	<i>Elements of sociology of education</i> - JeanFrançois GUILLAUME	Q2	10	-	-	<b>1</b>
AESS0004-1	<i>Media education</i> - Jérémy HAMERS	Q1	15	-	-	<b>1</b>
AESS0249-1	<i>Interdisciplinary seminar</i> - Annick FAGNANT	Q1	15	-	-	<b>1</b>
AESS0140-1	<i>Professional ethics and training to neutrality and citizenship</i> - Anne HERLA	Q2	25	-	-	<b>2</b>
AESS0143-1	<i>Educational Psychology of adolescents and young adults</i> - Annick FAGNANT, Christelle GOFFIN	Q1	15	-	-	<b>2</b>
AESS0339-1	<i>Understand and manage the diversity of public schools</i> - Ariane BAYE	Q2	10	15	-	<b>3</b>

#### Bioinformatics and Modelling

Focus accessible only to students who have chosen this focus before the academic year 2018-2019.

#### Bloc d'aménagement du programme de l'année

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

#### Compulsory courses

STAT0808-1	<i>Inferential statistics</i> - Amir ABOUBACAR	Q1	20	20	-	<b>3</b>
STAT0077-1	<i>Computing analysis and processing of biological data</i> - Patrick MEYER	Q1	25	-	-	<b>2</b>
MICR0720-1	<i>Phycology and mycology</i> - Denis BAURAIN	Q1	20	10	-	<b>3</b>

MICR0721-1	<i>Bacteriology</i> - JeanDenis DOCQUIER	Q1	20	10	-	<b>3</b>
MICR1716-1	<i>Virology</i> - Catherine SADZOT	Q2	20	10	-	<b>2</b>
BIOL0216-1	<i>Animal physiology</i> - JeanChristophe PLUMIER, Marc THIRY	Q1	60	30	-	<b>7</b>
BIOL0217-1	<i>Vegetal physiology</i> - Claire PÉRILLEUX	Q2	35	20	-	<b>5</b>
IMMU0521-1	<i>Immunology</i> - Catherine SADZOT	Q2	25	10	-	<b>3</b>
BIOL0003-1	<i>Biology of pluricellular organisms</i> - <i>Animal</i> - MarieFrance VERSALI - <i>Plant Biology</i> - Claire PÉRILLEUX	Q1				<b>5</b>
			15	15	-	
			15	15	-	
GENE9002-1	<i>Molecular biology of gene I</i> - Franck DEQUIEDT	Q1	30	-	-	<b>3</b>
GENE9003-1	<i>Molecular biology of gene II</i> - Franck DEQUIEDT	Q2	30	30	-	<b>4</b>
BIOC9242-2	<i>Biological macromolecules chemistry</i> - <i>Part A</i> - Moreno GALLEN, Loïc QUINTON - <i>Part B - Thermodynamics of biological systems</i> - Moreno GALLEN, Loïc QUINTON	Q1				<b>4</b>
			40	-	-	
			10	-	-	
BIOC9243-1	<i>Equilibria in biochemistry and enzyme kinetics</i> - Moreno GALLEN, André MATAGNE	Q2	20	40	-	<b>5</b>
BIOL0024-1	<i>Molecular physiology of the cell</i> - Patrick MOTTE	Q2	15	15	-	<b>2</b>
STRA0044-1	<i>Training in scientific communication</i> - Jacques DOMMES, Patrick MOTTE - [40h Internship]	Q2	-	-	[+]	<b>3</b>
PHIL1227-1	<i>Philosophy and bioethics</i> - <i>Éléments de philosophie des sciences</i> - Julien PIERON - <i>Bioéthique</i> - Florence CAEYMAEX, Jacques DOMMES, Vincent GEENEN	Q2				<b>2</b>
			15	-	-	
			15	-	-	
LANG0077-8	<i>English 2 (english language)</i> - Clara BRERETON, Véronique DOPPAGNE, Ellen HARRY	TA	45	-	-	<b>4</b>