

## Two-Year Master Program (120 ECTS)

### First Year

#### Compulsory courses

BIOC0210-4	<i>Functional properties of biological macromolecules</i> - Edwin DE PAUW, André MATAGNE - [15h Mon. WS]	30	20	[+]	5
CHIM9218-1	<i>Biospectroscopy and nuclear magnetic resonance applied to biology</i> - Christian DAMBLON - [15h Mon. WS]	20	-	[+]	3
BIOC9233-1	<i>Structure and Dynamic of biological macromolecules</i> - Paulette CHARLIER, André MATAGNE - [20h Mon. WS]	20	20	[+]	4
BIOC0709-2	<i>Bioenergetics</i> - Fabrice FRANCK, Francis SLUSE - Suppl : Pierre CARDOL, Fabrice FRANCK - [15h Mon. WS]	30	20	[+]	5
BIOL0803-2	<i>Molecular and cellular physiology</i> - Patrick MOTTE, Francis SLUSE - Suppl : Marc MULLER, Marc THIRY	40	20	-	5
BIOC0710-2	<i>Metabolic pathways</i> - Fabrice FRANCK	15	20	-	2
GENE0001-3	<i>Genetic engineering</i> - Jacques DOMMES, Joseph MARTIAL	30	20	-	4
BIOL0804-2	<i>Developmental Biology</i> - Bernard PEERS, Claire PÉRILLEUX	25	20	-	3
GENE0432-3	<i>Genetic and biochemical aspects of evolution</i> - Vincent DEMOULIN, Moreno GALLEN, Claire REMACLE - Suppl : Denis BAURAIN	25	20	-	3
BIOC0003-2	<i>Biochemistry and physiology of the micro-organisms</i> - Bernard JORIS	20	20	-	2
MICR0207-2	<i>Further Immunology</i> - Catherine SADZOT	15	20	-	2
CHIM0059-4	<i>Industrial Microbiology</i> - Philippe THONART	15	20	-	2
SSTG0009-1	<i>Placement or practical integrated work (including seminars)</i> - COLLÉGIALITÉ - [10w Internship]	-	-	[+]	20

#### Optional free course

AESS0254-1	<i>Introduction to biology didactics</i> - Marie-Noëlle HINDRYCKX	20	-	-	2
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### Second year

#### Compulsory courses

SMEM0019-1	<i>Final thesis</i> - COLLÉGIALITÉ	-	-	-	25
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#### Optional courses

Choose 1 course, with the approval of the Board of Studies, amongst :

BBMC0001-1	<i>Inter-academy thematic week</i> - COLLÉGIALITÉ - [1w SEM]	-	-	[+]	5
BBMC0001-2	<i>Inter-academy thematic week</i> - COLLÉGIALITÉ - [1w SEM]	-	-	[+]	5
BBMC0001-3	<i>Inter-academy thematic week</i> - COLLÉGIALITÉ - [1w SEM]	-	-	[+]	5
BBMC0001-4	<i>Inter-academy thematic week</i> - COLLÉGIALITÉ - [1w SEM]	-	-	[+]	5
BIOC0715-1	<i>Proteins structure and function</i> - Paulette CHARLIER, Mireille DUMOULIN	25	25	-	5
BIOC0716-1	<i>Antibiotic resistance</i> - Moreno GALLEN	25	25	-	5
BOTA0403-1	<i>Signal transduction pathways in plants</i> - Jacques DOMMES, Patrick MOTTE, Claire PÉRILLEUX	25	25	-	5
GENE0440-1	<i>Genetics and evolution</i> - Vincent DEMOULIN, Fabrice FRANCK, Claire REMACLE - Suppl : Denis BAURAIN	25	25	-	5
MICR0713-1	<i>Extremophile microorganisms</i> - Georges FELLER, Moreno GALLEN, Annick WILMOTTE	25	25	-	5
BIOL0805-1	<i>Complements of developmental biology</i> - Marc MULLER, Bernard PEERS, Marianne VOZ	25	25	-	5
BIOL0806-1	<i>Cell Biology and visualization methods</i> - Patrick MOTTE, Marc THIRY	25	25	-	5
MICR0716-1	<i>Immunology - virology</i> - Jacques PIETTE, Catherine SADZOT	25	25	-	5
MICR0715-1	<i>Applied Bacteriology</i> - Philippe THONART	25	25	-	5

*Notice* : The courses 'Protein Structures and Functions', 'Antibiotic Resistance', 'Signalling paths in plants', 'Extremophile Micro-organisms' 'Complementary themes

on the biology of development', 'Cell biology and visualisation methods' and 'Immunology-Virology' are offered in the framework of the inter-academy thematic week (mobility week).

#### Choose one of the following focus :

##### Research Focus

###### Compulsory courses

GENE0208-2	<i>Genomics and bioinformatics</i> - Michel GEORGES, Bernard JORIS	25	-	-	<b>3</b>
SSTG0010-1	<i>Additional placements and practical work</i> - COLLÉGIALITÉ - [6w Internship]	-	-	[+]	<b>8</b>
BBMC0020-1	<i>Final thesis (complement)</i> - COLLÉGIALITÉ	-	-	-	<b>4</b>

###### Optional courses

Choose 3 course different to the option courses chosen in the 2 year, amongst :

BBMC0001-1	<i>Inter-academy thematic week</i> - COLLÉGIALITÉ - [1w SEM]	-	-	[+]	<b>5</b>
BBMC0001-2	<i>Inter-academy thematic week</i> - COLLÉGIALITÉ - [1w SEM]	-	-	[+]	<b>5</b>
BBMC0001-3	<i>Inter-academy thematic week</i> - COLLÉGIALITÉ - [1w SEM]	-	-	[+]	<b>5</b>
BBMC0001-4	<i>Inter-academy thematic week</i> - COLLÉGIALITÉ - [1w SEM]	-	-	[+]	<b>5</b>
BIOC0715-1	<i>Proteins structure and function</i> - Paulette CHARLIER, Mireille DUMOULIN	25	25	-	<b>5</b>
BIOC0716-1	<i>Antibiotic resistance</i> - Moreno GALLEN	25	25	-	<b>5</b>
BOTA0403-1	<i>Signal transduction pathways in plants</i> - Jacques DOMMES, Patrick MOTTE, Claire PÉRILLEUX	25	25	-	<b>5</b>
GENE0440-1	<i>Genetics and evolution</i> - Vincent DEMOULIN, Fabrice FRANCK, Claire REMACLE - Suppl : Denis BAURAIN	25	25	-	<b>5</b>
MICR0713-1	<i>Extremophile microorganisms</i> - Georges FELLER, Moreno GALLEN, Annick WILMOTTE	25	25	-	<b>5</b>
BIOL0805-1	<i>Complements of developmental biology</i> - Marc MULLER, Bernard PEERS, Marianne VOZ	25	25	-	<b>5</b>
BIOL0806-1	<i>Cell Biology and visualization methods</i> - Patrick MOTTE, Marc THIRY	25	25	-	<b>5</b>
MICR0716-1	<i>Immunology - virology</i> - Jacques PIETTE, Catherine SADZOT	25	25	-	<b>5</b>
MICR0715-1	<i>Applied Bacteriology</i> - Philippe THONART	25	25	-	<b>5</b>

Note : the "Structure and Function of Proteins", "Antibiotic Resistance", "Signaling Pathways in Plants", "Extremophile Microorganisms", "Cellular Biology and Visualisation Methods" and "Immunology-Virology" courses are offered within the framework of the inter-academy thematic week (mobility week).

##### Teaching focus

###### Compulsory courses

AESS0246-1	<i>Analysis of scholastic institutions and key-players, educational policies</i> - Jacqueline BECKERS	15	-	-	<b>1</b>
AESS0247-1	<i>Views on cultural diversity</i> - Jérôme JAMIN	10	-	-	<b>1</b>
AESS0248-1	<i>Elements of sociology of education</i> - Jean-François GUILLAUME	10	-	-	<b>1</b>
AESS0140-1	<i>Professional ethics and training to neutrality and citizenship</i> - Véronique DORTU	25	-	-	<b>2</b>
AESS0202-1	<i>General didactics: courses and exercises; observation placements; reflexive practices</i> - Annick FAGNANT - [10h Internship]	30	10	[+]	<b>4</b>
AESS0004-1	<i>Media education</i> - Geneviève VAN CAUWENBERGE	15	-	-	<b>1</b>
AESS0249-1	<i>Interdisciplinary seminar</i> - Nicolas LECLERCQ	15	-	-	<b>1</b>
AESS0143-1	<i>Educational Psychology of adolescents and young adults</i> - Dieudonné LECLERCQ	15	-	-	<b>2</b>
AESS0142-1	<i>Seminar on prevention and management of difficult scholastic situations</i> - Jocelyne ROBERT	15	-	-	<b>2</b>
AESS0217-1	<i>Special didactics in biology (part I)</i>				<b>6</b>
	- <i>Course and exercises</i> - Marie-Noëlle HINDRYCKX	40	-	-	
	- <i>Observation placements</i> - Marie-Noëlle HINDRYCKX - [10h Internship]	-	-	[+]	
	- <i>Teaching placements</i> - Marie-Noëlle HINDRYCKX - [20h Internship]	-	-	[+]	
	- <i>Reflexive practical work</i> - Marie-Noëlle HINDRYCKX	-	5	-	
AESS0235-1	<i>Special didactics in biology (part II)</i>				<b>9</b>
	- <i>Course and exercises</i> - Marie-Noëlle HINDRYCKX	35	-	-	
	- <i>Teaching placements</i> - Marie-Noëlle HINDRYCKX - [20h Internship]	-	-	[+]	

- Reflexive practical work - Marie-Noëlle HINDRYCKX	-	5	-
- School practical outside lectures - Marie-Noëlle HINDRYCKX	-	10	-

**Professional Focus in Industrial Biochemistry**

**Compulsory courses**

**Industrial Biochemistry**

BIOC0219-3	<i>Industrial biochemistry including biochemical engineering</i> - Michel CRINE, Frank DELVIGNE	24	-	-	<b>2</b>
CHIM0633-1	<i>Industrial physical chemistry</i> - Christine JÉRÔME	24	-	-	<b>2</b>
CHIM0634-1	<i>Bioindustries</i> - Antoine CLINQUART, Philippe THONART	24	-	-	<b>2</b>
<b>Economy</b>					
GEST0312-1	<i>Management Principles</i> - Annie CORNET	30	-	-	<b>2</b>
GEST3005-2	<i>Accountancy and Finance</i> - Jacques BERWART	24	24	-	<b>2</b>
DROI2110-2	<i>Intellectual property, Patents</i> - Bernard VANBRABANT	24	-	-	<b>2</b>
SSTG0021-1	<i>Practical work, including internship</i> - COLLÉGIALITÉ - [8w Internship]	-	-	[+]	<b>11</b>
BIOC0717-1	<i>Applied Bioinformatics</i> - Michel GEORGES, Bernard JORIS	36	-	-	<b>3</b>
BREV0002-1	<i>Quality and security of products, including procedures of certification and accreditation</i> - Georges DAUBE	24	-	-	<b>2</b>
STRA0015-1	<i>Seminars led by industrialists</i> - Philippe THONART	24	-	-	<b>2</b>