

## Block view of the study programme

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### Block 1

#### Compulsory courses

CHIM0724-1	<i>Organic chemistry</i> (english language) - André LUXEN, JeanChristophe MONBALIU	Q1	50	-	-	5
CHIM0725-1	<i>Modelling molecules and extended systems</i> (english language) - Bernard LEYH, Françoise REMACLE	Q1	50	-	-	5
CHIM0726-1	<i>Emerging analytical approaches</i> - Christian DAMBLON, AnneSophie DUWEZ, Gauthier EPPE, JeanFrançois FOCANT, Loïc QUINTON	Q1	50	-	-	5
CHIM0727-1	<i>Macromolecular and materials chemistry</i> (english language) - Christine JÉRÔME, Bénédicte VERTRUYEN	Q1	50	-	-	5
CHIM0728-1	<i>Design, structure and reactivity of chemical architectures</i> - Lionel DELAUDE, AnneSophie DUWEZ	Q1	50	-	-	5
CHIM0729-1	<i>Biological chemistry</i> - Christian DAMBLON, Loïc QUINTON	Q1	50	-	-	5
CHIM0096-1	<i>Nuclear chemistry</i> (english language) - André LUXEN	Q2	25	-	-	3
CHIM0730-1	<i>Introduction to the final thesis</i> - COLLÉGIALITÉ	Q2	-	-	-	15

#### Optional courses

Choose courses, with the approval of the Jury, totalling 12 credits among :

##### Language

LANG4007-1	<i>English - oral expression</i> (english language) - Véronique DOPPAGNE, ISLV	Q2	-	25	-	3
LANG2971-2	<i>Academic English Writing</i> (english language) - Clara BRERETON, Véronique DOPPAGNE, ISLV	Q1	25	-	-	3

##### Industrial chemistry

CHIM0081-3	<i>Industrial Chemistry Processes, structure of chemical industry</i> - Angélique LÉONARD - [1d FW]	Q1	30	-	[+]	3
CHIM0022-3	<i>Transport phenomena, Part A</i> (english language) - Andreas PFENNIG	Q2	30	-	-	3
CHIM0683-2	<i>Green chemistry</i> - Aurore RICHEL	Q2	5	20	-	3

##### Synthesis and materials

CHIM0707-1	<i>Physical organic chemistry</i> - JeanChristophe MONBALIU	Q2	25	-	-	3
CHIM9265-1	<i>Introduction to continuous flow organic synthesis</i> (english language) - JeanChristophe MONBALIU - [1d Vis.]	Q1	15	10	[+]	3
CHIM0731-1	(pas organisé en 2018-2019) <i>Chemistry and physical-chemistry of peptide and protein assemblies</i> - JeanChristophe MONBALIU, Loïc QUINTON	Q1	25	-	-	3
CHIM0656-1	<i>Organometallic catalysis</i> - Lionel DELAUDE	Q1	25	-	-	3
CHIM0219-1	<i>Industrial polymers</i> - Christine JÉRÔME	Q2	25	-	-	3
CHIM9234-2	<i>Polymers and environment</i> (english language) - Part A - Philippe LECOMTE - Part B - Philippe LECOMTE	Q1		15	-	3
				10	-	
CHIM9260-1	<i>Properties and applications of surfactants</i> - Guy BROZE, Antoine DEBUIGNE	Q2	25	-	-	3
CHIM0248-1	<i>Advanced ceramic materials : from design to use</i> - Rudi CLOOTS	Q2	25	-	-	3
CHIM9230-1	<i>Nanomaterials, (electro)synthesis and applications</i> (english language) - Christophe DETREMBLEUR, Christine JÉRÔME	Q1	25	-	-	3

##### Techniques of characterization and analysis

BIOL0114-4	<i>Electronic microscopies, Part A</i> - Philippe COMPÈRE	Q2	15	-	-	3
CHIM9236-2	<i>Microstructure of materials : characterization techniques</i> - Part A - Catherine HENRIST - Part B - Catherine HENRIST	Q2	15 10	- -	- -	3
CHIM9264-1	<i>Electrical and magnetic properties of materials</i> - Bénédicte VERTRUYEN	Q1	15	10	-	3
CHIM0732-1	<i>Characterisation of surfaces and interfaces</i> - AnneSophie DUWEZ	Q1	25	-	-	3
CHIM0220-1	<i>Recent nuclear magnetic resonance (NMR) methods in chemistry</i> - Christian DAMBLON	Q1	25	-	-	3
CHIM9257-2	<i>Introduction to solid state NMR (english language)</i> - Part A - Christian DAMBLON, Philippe LECOMTE - Part B - Christian DAMBLON, Philippe LECOMTE	Q1	15 10	- -	- -	3
CHIM9221-1	<i>Advanced techniques in nuclear magnetic resonance of biomolecules</i> - Christian DAMBLON	Q1	25	-	-	3
CHIM0653-1	<i>Imaging and marking techniques</i> - André LUXEN	Q2	25	-	-	3
CHIM0655-1	<i>Advanced mass spectrometry methods</i> - Gauthier EPPE, JeanFrançois FOCANT, Loïc QUINTON	Q1	25	-	-	3
CHIM0657-1	<i>Emerging techniques in the science of separation</i> - JeanFrançois FOCANT, PierreHugues STEFANUTO	Q2	25	-	-	3
CHIM9259-2	<i>Analytical techniques in forensic chemistry</i> - JeanFrançois FOCANT, PierreHugues STEFANUTO	Q2	15	10	-	3
CHIM0248-1	<i>Advanced ceramic materials : from design to use</i> - Rudi CLOOTS	Q2	25	-	-	3
CRIS0204-1	<i>Complement of crystallography</i> - Frédéric HATERT	Q2	15	10	-	3
CHIM9310-1	<i>Advanced spectroscopic analysis methods</i> - Gauthier EPPE, Cédric MALHERBE	Q2	20	5	-	3
<b>Biological chemistry</b>						
BIOC0232-1	<i>Macromolecular biochemistry (english language)</i> - Moreno GALLEN	Q1	25	-	-	3
CHIM9221-1	<i>Advanced techniques in nuclear magnetic resonance of biomolecules</i> - Christian DAMBLON	Q1	25	-	-	3
CHIM0655-1	<i>Advanced mass spectrometry methods</i> - Gauthier EPPE, JeanFrançois FOCANT, Loïc QUINTON	Q1	25	-	-	3
CHIM9262-1	<i>Biomimetic chemistry : when the Man is inspired by nature</i> - Loïc QUINTON	Q2	25	-	-	3
CHIM0731-1	(pas organisé en 2018-2019) <i>Chemistry and physical-chemistry of peptide and protein assemblies</i> - JeanChristophe MONBALIU, Loïc QUINTON	Q1	25	-	-	3
BIOC0719-1	<i>Enzymology</i> - André MATAGNE - [10h SEM]	Q2	15	-	[+]	3
CHIM0218-1	<i>Elements of medicinal chemistry</i> - Bernard PIROTTE - [5h SEM]	Q2	20	-	[+]	3
CHIM0683-2	<i>Green chemistry</i> - Aurore RICHEL	Q2	5	20	-	3
<b>Modelling and molecular dynamics</b>						
CHIM0707-1	<i>Physical organic chemistry</i> - JeanChristophe MONBALIU	Q2	25	-	-	3
CHIM0733-1	<i>Molecular dynamics</i> - Benoît MIGNOLET	Q2	25	-	-	3
CHIM0734-1	<i>Photochemistry</i> - Bernard LEYH	Q1	15	10	-	3
CHIM9233-1	<i>Molecular logic (english language)</i> - Françoise REMACLE	Q1	25	-	-	3
SPAT0054-1	<i>Astrophysics and astrochemistry</i> - Michaël DE BECKER	Q2	15	5	-	3
<b>Didactics of science</b>						
CHIM0735-1	<i>Sciences and chemistry history</i> - Bernard LEYH	Q2	15	10	-	3

# Study programmes 2018-2019

## Faculty of Sciences

### Master in chemistry (120 ECTS)

CHIM0736-1	<i>Conceptual approach to basic chemistry</i> - Bernard LEYH	Q1	15	10	-	<b>3</b>
PHIL0040-1	<i>Introduction to the philosophy of sciences</i> - Laurence BOUQUIAUX	Q1	30	-	-	<b>3</b>
DOCU0455-1	<i>Introduction to critical thinking</i> - Yaël NAZÉ	Q2	10	5	-	<b>3</b>

#### Block 2

#### Compulsory courses

SMEM0016-1	<i>Final thesis</i> - COLLÉGIALITÉ	TA	-	-	-	<b>21</b>
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#### Optional courses

Choose courses totalling 9 ECTS from the following :

#### Language

LANG4007-1	<i>English - oral expression</i> (english language) - Véronique DOPPAGNE, ISLV	Q2	-	25	-	<b>3</b>
LANG2971-2	<i>Academic English Writing</i> (english language) - Clara BRERETON, Véronique DOPPAGNE, ISLV	Q1	25	-	-	<b>3</b>

#### Industrial chemistry

CHIM0081-3	<i>Industrial Chemistry Processes, structure of chemical industry</i> - Angélique LÉONARD - [1d FW]	Q1	30	-	[+]	<b>3</b>
CHIM0022-3	<i>Transport phenomena, Part A</i> (english language) - Andreas PFENNIG	Q2	30	-	-	<b>3</b>
CHIM0683-2	<i>Green chemistry</i> - Aurore RICHEL	Q2	5	20	-	<b>3</b>

#### Synthesis and materials

CHIM0707-1	<i>Physical organic chemistry</i> - JeanChristophe MONBALIU	Q2	25	-	-	<b>3</b>
CHIM9265-1	<i>Introduction to continuous flow organic synthesis</i> (english language) - JeanChristophe MONBALIU - [1d Vis.]	Q1	15	10	[+]	<b>3</b>
CHIM0731-1	(pas organisé en 2018-2019) <i>Chemistry and physical-chemistry of peptide and protein assemblies</i> - JeanChristophe MONBALIU, Loïc QUINTON	Q1	25	-	-	<b>3</b>
CHIM0656-1	<i>Organometallic catalysis</i> - Lionel DELAUDE	Q1	25	-	-	<b>3</b>
CHIM0219-1	<i>Industrial polymers</i> - Christine JÉRÔME	Q2	25	-	-	<b>3</b>
CHIM9234-2	<i>Polymers and environment</i> (english language) - Part A - Philippe LECOMTE - Part B - Philippe LECOMTE	Q1				<b>3</b>
			15	-	-	
			10	-	-	
CHIM9260-1	<i>Properties and applications of surfactants</i> - Guy BROZE, Antoine DEBUIGNE	Q2	25	-	-	<b>3</b>
CHIM0248-1	<i>Advanced ceramic materials : from design to use</i> - Rudi CLOOTS	Q2	25	-	-	<b>3</b>
CHIM9230-1	<i>Nanomaterials, (electro)synthesis and applications</i> (english language) - Christophe DETREMBLEUR, Christine JÉRÔME	Q1	25	-	-	<b>3</b>

#### Techniques of characterization and analysis

BIOL0114-4	<i>Electronic microscopies, Part A</i> - Philippe COMPÈRE	Q2	15	-	-	<b>3</b>
CHIM9236-2	<i>Microstructure of materials : characterization techniques</i> - Part A - Catherine HENRIST - Part B - Catherine HENRIST	Q2				<b>3</b>
			15	-	-	
			10	-	-	
CHIM9264-1	<i>Electrical and magnetic properties of materials</i> - Bénédicte VERTRUYEN	Q1	15	10	-	<b>3</b>
CHIM0732-1	<i>Characterisation of surfaces and interfaces</i> - AnneSophie DUWEZ	Q1	25	-	-	<b>3</b>
CHIM0220-1	<i>Recent nuclear magnetic resonance (NMR) methods in chemistry</i> - Christian DAMBLON	Q1	25	-	-	<b>3</b>
CHIM9257-2	<i>Introduction to solid state NMR</i> (english language)	Q1				<b>3</b>

	- Part A - Christian DAMBLON, Philippe LECOMTE	15	-	-	
	- Part B - Christian DAMBLON, Philippe LECOMTE	10	-	-	
CHIM9221-1	<i>Advanced techniques in nuclear magnetic resonance of biomolecules</i> - Christian DAMBLON	Q1 25	-	-	3
CHIM0653-1	<i>Imaging and marking techniques</i> - André LUXEN	Q2 25	-	-	3
CHIM0655-1	<i>Advanced mass spectrometry methods</i> - Gauthier EPPE, JeanFrançois FOCANT, Loïc QUINTON	Q1 25	-	-	3
CHIM0657-1	<i>Emerging techniques in the science of separation</i> - JeanFrançois FOCANT, PierreHugues STEFANUTO	Q2 25	-	-	3
CHIM9259-2	<i>Analytical techniques in forensic chemistry</i> - JeanFrançois FOCANT, PierreHugues STEFANUTO	Q2 15	10	-	3
CHIM0248-1	<i>Advanced ceramic materials : from design to use</i> - Rudi CLOOTS	Q2 25	-	-	3
CRIS0204-1	<i>Complement of crystallography</i> - Frédéric HATERT	Q2 15	10	-	3
CHIM9310-1	<i>Advanced spectroscopic analysis methods</i> - Gauthier EPPE, Cédric MALHERBE	Q2 20	5	-	3

#### Biological chemistry

BIOC0232-1	<i>Macromolecular biochemistry (english language)</i> - Moreno GALLEN	Q1 25	-	-	3
CHIM9221-1	<i>Advanced techniques in nuclear magnetic resonance of biomolecules</i> - Christian DAMBLON	Q1 25	-	-	3
CHIM0655-1	<i>Advanced mass spectrometry methods</i> - Gauthier EPPE, JeanFrançois FOCANT, Loïc QUINTON	Q1 25	-	-	3
CHIM9262-1	<i>Biomimetic chemistry : when the Man is inspired by nature</i> - Loïc QUINTON	Q2 25	-	-	3
CHIM0731-1	(pas organisé en 2018-2019) <i>Chemistry and physical-chemistry of peptide and protein assemblies</i> - JeanChristophe MONBALIU, Loïc QUINTON	Q1 25	-	-	3
BIOC0719-1	<i>Enzymology</i> - André MATAGNE - [10h SEM]	Q2 15	-	[+]	3
CHIM0218-1	<i>Elements of medicinal chemistry</i> - Bernard PIROTTE - [5h SEM]	Q2 20	-	[+]	3
CHIM0683-2	<i>Green chemistry</i> - Aurore RICHEL	Q2 5	20	-	3

#### Modelling and molecular dynamics

CHIM0707-1	<i>Physical organic chemistry</i> - JeanChristophe MONBALIU	Q2 25	-	-	3
CHIM0733-1	<i>Molecular dynamics</i> - Benoît MIGNOLET	Q2 25	-	-	3
CHIM0734-1	<i>Photochemistry</i> - Bernard LEYH	Q1 15	10	-	3
CHIM9233-1	<i>Molecular logic (english language)</i> - Françoise REMACLE	Q1 25	-	-	3
SPAT0054-1	<i>Astrophysics and astrochemistry</i> - Michaël DE BECKER	Q2 15	5	-	3

#### Didactics of science

CHIM0735-1	<i>Sciences and chemistry history</i> - Bernard LEYH	Q2 15	10	-	3
CHIM0736-1	<i>Conceptual approach to basic chemistry</i> - Bernard LEYH	Q1 15	10	-	3
PHIL0040-1	<i>Introduction to the philosophy of sciences</i> - Laurence BOUQUIAUX	Q1 30	-	-	3
DOCU0455-1	<i>Introduction to critical thinking</i> - Yaël NAZÉ	Q2 10	5	-	3

[...] Or for a maximum of six credits in the course programmes of other sectors in the Faculty of Science, other faculties or other universities.

#### Choose one focus from the following :

##### Research Focus

CHIM0646-1	<i>Physical chemistry of nanostructures (english language)</i> -	Q1 15	-	-	2
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DUWEZ

CHIM0647-1	<i>Coordination Chemistry and Catalysis</i> - Lionel DELAUBE	Q1	30	-	-	4
CHIM0648-1	<i>Chemometrics and quality systems</i> (english language) - JeanFrançois FOCANT	Q2	15	-	-	2
CHIM0649-1	<i>Molecular Modelling</i> - Françoise REMACLE	Q1	20	-	-	3
CHIM0650-1	<i>Structural biological chemistry</i> (english language) - Christian DAMBLON	Q1	30	-	-	4
CHIM9220-1	<i>Introduction to research</i> - AnneSophie DUWEZ	TA	-	-	-	2
STRA0027-1	<i>Final thesis complement</i> - COLLÉGIALITÉ	TA	-	-	-	9
STRA0037-1	<i>Final thesis monitoring</i> - COLLÉGIALITÉ	TA	-	-	-	4
<b>Teaching focus</b>						
AESS1216-1	<i>Special didactics in chemistry : course and exercises (1st part)</i> - Bernard LEYH	TA	40	-	-	3
AESS1219-1	<i>Special didactics in chemistry : placements (1st part)</i> - <i>Observation placements</i> - Bernard LEYH - [10h Internship] - <i>Teaching placements</i> - Bernard LEYH - [20h Internship] - <i>Reflexive practical work</i> - Bernard LEYH	TA	-	-	[+] [+] 5	3
AESS2216-1	<i>Special didactics in chemistry : course and exercises (2nd part)</i> - Bernard LEYH	TA	35	-	-	4
AESS2219-1	<i>Special didactics in chemistry : placements (2nd part)</i> - <i>Teaching placements</i> - Bernard LEYH - [20h Internship] - <i>Reflexive practical work</i> - Bernard LEYH - <i>Extra-scholar teaching activities</i> - Bernard LEYH	TA	-	-	[+] 5 10	5
AESS0202-1	<i>General didactics: course and exercises ; observation placements ; reflexive practices</i> - Annick FAGNANT - [10h Internship]	TA	30	10	[+]	4
AESS0246-1	<i>Analysis of scholastic institutions and key-players, educational policies</i> - Dominique LAFONTAINE - Suppl : MarieThérèse DELHOUNE	Q1	15	-	-	1
AESS0248-1	<i>Elements of sociology of education</i> - JeanFrançois GUILLAUME	Q2	10	-	-	1
AESS0004-1	<i>Media education</i> - Jérémy HAMERS	Q1	15	-	-	1
AESS0249-1	<i>Interdisciplinary seminar</i> - Annick FAGNANT	Q1	15	-	-	1
AESS0140-1	<i>Professional ethics and training to neutrality and citizenship</i> - Anne HERLA	Q2	25	-	-	2
AESS0143-1	<i>Educational Psychology of adolescents and young adults</i> - Annick FAGNANT	Q1	15	-	-	2
AESS0339-1	<i>Understand and manage the diversity of public schools</i> - Ariane BAYE	Q2	10	15	-	3
<b>Professional Focus</b>						
CHIM0679-1	<i>Introduction to quality assurance</i> (english language) - JeanFrançois FOCANT	Q2	30	-	-	3
CHIM0074-2	<i>Seminars on industrial security</i> - JeanLuc BOZET, Angélique LÉONARD, Dominique TOYE - [2d FW]	Q1	15	-	[+]	3
TOXI0341-3	<i>Toxicological chemistry, Part I, Toxicological chemistry</i> - Corinne CHARLIER	Q1	20	-	-	3
GEST3002-1	<i>Human Resources</i> - Jocelyne ROBERT	Q1	24	-	-	3
SSTG0008-1	<i>Internship</i> - COLLÉGIALITÉ, Gauthier EPPE	Q2	-	-	-	16
SSTG0028-1	<i>Placement monitoring</i> - COLLÉGIALITÉ, Gauthier EPPE	Q2	-	-	-	2

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

#### Additional ECTS Master in chemistry (120 ECTS)

Liège Students and Studies Administration - Academic Affairs  
 Contact : Monique Marcourt, General Director for Education and Training  
 Date of data : 24/04/2019 - Page 5 / 6

# Study programmes 2018-2019

## Faculty of Sciences

### Master in chemistry (120 ECTS)

#### Optional courses

Students will follow a study programme worth 15 to 60 ECTS selected from the courses below. The programme will be established by the master's jury for each student according to their qualifications.

CHIM0704-1	<i>Theoretical chemistry</i> - Françoise REMACLE - [15h QA Sess.]	Q1	25	-	[+]	<b>4</b>
CHIM9287-1	<i>Theoretical and quantum Chemistry</i> - Françoise REMACLE - [15h QA Sess.]	Q1	30	-	[+]	<b>4</b>
CHIM9288-1	<i>Spectroscopy and statistical thermodynamics elements</i> - Bernard LEYH - [20h QA Sess.]	Q1	30	-	[+]	<b>4</b>
CHIM0278-1	<i>Organic chemistry III</i> - Lionel DELAUDE - [15h QA Sess.]	Q1	30	55	[+]	<b>7</b>
CHIM9289-1	<i>Analytical chemistry III - Physical methods</i> - <i>Theory</i> - Gauthier EPPE - <i>Practical work and practice</i> - Gauthier EPPE - [15h QA Sess.]	Q1	30	-	-	<b>8</b>
			-	65	[+]	
CHIM0678-1	<i>Biochemistry</i> - André MATAGNE	Q1	30	-	-	<b>3</b>
INFO0202-1	<i>Programming Methods Applied to Chemistry</i> - Alejandro SILHANEK	Q2	15	15	-	<b>2</b>
PHYS0968-1	<i>Signal processing</i> - Alejandro SILHANEK	Q2	25	20	-	<b>4</b>
CHIM9285-1	<i>Chemical Kinetics, Introduction to Spectroscopy and Group Theory</i> - Bernard LEYH - [20h QA Sess.]	Q2	35	-	[+]	<b>6</b>
CHIM9291-1	<i>Structural analysis</i> - Christian DAMBLON, Loïc QUINTON - [25h QA Sess.]	Q2	20	-	[+]	<b>4</b>
CHIM0209-2	<i>Inorganic chemistry</i> - Bénédicte VERTRUYEN - [5h QA Sess., 1d Vis. Ind. Pl. ]	Q2	30	70	[+]	<b>8</b>
CHIM0283-4	<i>Chemistry of the macromolecules</i> - Christine JÉRÔME	Q2	20	20	-	<b>4</b>
PHIL0201-1	<i>Elements of sciences philosophy</i> - Julien PIERON	Q2	15	-	-	<b>2</b>
CHIM9292-1	<i>chemical Kinetics</i> - Bernard LEYH - [10h QA Sess.]	Q2	20	-	[+]	<b>3</b>
CHIM9293-1	<i>spectroscopy Integrated laboratory</i> - Christian DAMBLON, Gauthier EPPE, Bernard LEYH, JeanChristophe MONBALIU, Loïc QUINTON, Françoise REMACLE	Q2	-	105	-	<b>6</b>
CHIM9294-1	<i>Bibliographic research, research project</i> - Caroline COLLETTE, JeanChristophe MONBALIU - [30h Internship]	Q2	5	-	[+]	<b>2</b>
LANG0076-1	<i>Anglais 1</i> (english language) - Véronique DOPPAGNE, ISLV	TA	45	-	-	<b>4</b>
LANG0077-1	<i>Anglais 2</i> (english language) - Véronique DOPPAGNE, ISLV	TA	45	-	-	<b>4</b>