

Block view of the study programme

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Block 1

Compulsory courses

CHIM0724-1	<i>Organic chemistry</i> (english language) - Thibault GENDRON, JeanChristophe MONBALIU	Q1	50	-	-	5
CHIM0725-1	<i>Modelling molecules and extended systems</i> (english language) - Partim A - Bernard LEYH, Françoise REMACLE - Partim B - Bernard LEYH, Françoise REMACLE	Q1		30	-	5
				20	-	
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) - Thibault GENDRON	Q2	25	-	-	3
SMEM0044-1	<i>Dissertation, Part A</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) - Clara BRERETON, Véronique DOPPAGNE	Q2	-	25	-	3
LANG2971-2	<i>Academic English Writing</i> (english language) - Clara BRERETON, Véronique DOPPAGNE	Q1	25	-	-	3

Industrial chemistry

CHIM0074-2	<i>Seminars on industrial security</i> - JeanLuc BOZET, Angélique LÉONARD, Dominique TOYE - [2d FW]	Q1	15	-	[+]	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
CHIM0699-2	<i>Life cycle assessment - Ecodesign</i> (english language) - Angélique LÉONARD	Q1	10	30	-	3

Synthesis and materials

CHIM0745-1	<i>Physico-chemistry in non-aqueous solvents</i> (english language) - Cédric MALHERBE	Q2	25	-	-	3
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	<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	(pas organisé en 2022-2023) <i>Properties and applications of surfactants</i> -	Q2	25	-	-	3

N...

CHIM9230-1 *Nanomaterials: synthesis, properties and applications* (english language) - AnneSophie DUWEZ, Christine JÉRÔME, Damien SLUYSMANS Q1 25 - - 3

CHIM0742-1 *Chemistry of materials and sustainable development* - Catherine HENRIST Q1 15 - [+]
- [0,5d Vis., 10h Mon. WS] 3

Techniques of characterization and analysis

BIOL0114-4 *Electronic microscopies, Part A* - Philippe COMPÈRE Q2 15 - - 3

CHIM9236-2 *Microstructure of materials : characterization techniques* Q2 3
- Part A - Catherine HENRIST 15 - -
- Part B - Catherine HENRIST 10 - -

CHIM9264-1 *Electrical and magnetic properties of materials* - Bénédicte VERTRUYEN Q1 15 10 - 3

CHIM0732-1 *Characterisation of surfaces and interfaces* - AnneSophie DUWEZ, Damien SLUYSMANS Q1 25 - - 3

CHIM0220-1 *Recent nuclear magnetic resonance (NMR) methods in chemistry* - Christian DAMBLON Q1 25 - - 3

CHIM9257-2 *Introduction to solid state NMR* (english language) Q1 3
- Part A - Christian DAMBLON, Philippe LECOMTE 15 - -
- Part B - Christian DAMBLON, Philippe LECOMTE 10 - -

CHIM9221-1 *Advanced techniques in nuclear magnetic resonance of biomolecules* - Christian DAMBLON Q1 25 - - 3

CHIM0653-1 *Imaging and marking techniques* - Thibault GENDRON Q2 25 - - 3

CHIM0657-1 *Emerging techniques in the science of separation* - JeanFrançois FOCANT, PierreHugues STEFANUTO Q2 10 15 - 3

CHIM9259-2 *Analytical techniques in forensic chemistry* - JeanFrançois FOCANT, PierreHugues STEFANUTO Q2 15 10 - 3

CRIS0204-1 *Complement of crystallography* - Frédéric HATERT Q2 15 10 - 3

CHIM9310-1 *Advanced spectroscopic analysis methods* - Gauthier EPPE, Cédric MALHERBE Q2 20 5 - 3

CHIM0743-1 *Introduction to data handling with MetaboAnalyst* (english language) - PierreHugues STEFANUTO Q1 15 10 - 3

CHIM0744-1 *Introduction to quality assurance* - JeanFrançois FOCANT (Odd years) Q2 15 - - 3

Biological chemistry

BIOC0232-1 *Macromolecular biochemistry* (english language) - Moreno GALLENI Q1 25 - - 3

CHIM9221-1 *Advanced techniques in nuclear magnetic resonance of biomolecules* - Christian DAMBLON Q1 25 - - 3

CHIM9262-1 *Biomimetic chemistry : when the Man is inspired by nature* - Loïc QUINTON Q2 25 - - 3

CHIM0731-1 *Chemistry and physical-chemistry of peptide and protein assemblies* - JeanChristophe MONBALIU, Loïc QUINTON Q1 25 - - 3

BIOC0719-1 *Enzymology* - André MATAGNE - [10h SEM] Q2 15 - [+]
3

CHIM0218-1 *Elements of medicinal chemistry* - Bernard PIROTTE - [5h SEM] Q2 20 - [+]
3

CHIM0683-2 *Green chemistry* - Aurore RICHEL Q2 5 20 - 3

Modelling and molecular dynamics

CHIM0707-1 *Physical organic chemistry* - JeanChristophe MONBALIU Q2 25 - - 3

CHIM0734-1 *Photochemistry* - Bernard LEYH (Odd years) Q1 15 10 - 3

CHIM9233-1 *Molecular logic* (english language) - Françoise REMACLE Q2 25 - - 3

SPAT0054-1 *Astrophysics and astrochemistry* - Michaël DE BECKER Q2 20 - - 3

Sciences teaching

CHIM0735-1 *Sciences and chemistry history* - Bernard LEYH (Even years) Q1 15 10 - 3

CHIM0736-1 *Conceptual approach to basic chemistry* - Bernard LEYH (Odd years) Q2 15 10 - 3

PHIL0040-1 *Introduction to the philosophy of sciences* - Laurence BOUQUIAUX Q1 30 - - 3

DOCU0455-1 *Introduction to critical thinking* Q2 3
 - *Theory* - Yaël NAZÉ 10 - -
 - *Practice* - Yaël NAZÉ - 6 -

Block 2

Compulsory course

SMEM0044-2 *Dissertation, Part B* - COLLÉGIALITÉ Q1 - - - 15

Optional courses

En accord avec le Jury, choisir des cours non déjà choisis pour un total de 15 crédits parmi :

Language

LANG4007-1 *English - oral expression* (english language) - Clara BRERETON, Véronique DOPPAGNE Q2 - 25 - 3

LANG2971-2 *Academic English Writing* (english language) - Clara BRERETON, Véronique DOPPAGNE Q1 25 - - 3

Industrial chemistry

CHIM0074-2 *Seminars on industrial security* - JeanLuc BOZET, Angélique LÉONARD, Dominique TOYE - [2d FW] Q1 15 - [+] 3

CHIM0022-3 *Transport phenomena, Part A* (english language) - Andreas PFENNIG Q2 30 - - 3

CHIM0683-2 *Green chemistry* - Aurore RICHEL Q2 5 20 - 3

CHIM0699-2 *Life cycle assessment - Ecodesign* (english language) - Angélique LÉONARD Q1 10 30 - 3

Synthesis and materials

CHIM0745-1 *Physico-chemistry in non-aqueous solvents* (english language) - Cédric MALHERBE Q2 25 - - 3

CHIM0707-1 *Physical organic chemistry* - JeanChristophe MONBALIU Q2 25 - - 3

CHIM9265-1 *Introduction to continuous flow organic synthesis* (english language) - JeanChristophe MONBALIU - [1d Vis.] Q1 15 10 [+] 3

CHIM0731-1 *Chemistry and physical-chemistry of peptide and protein assemblies* - JeanChristophe MONBALIU, Loïc QUINTON Q1 25 - - 3

CHIM0656-1 *Organometallic catalysis* - Lionel DELAUDE Q1 25 - - 3

CHIM0219-1 *Industrial polymers* - Christine JÉRÔME Q2 25 - - 3

CHIM9234-2 *Polymers and environment* (english language) Q1 3
 - *Part A* - Philippe LECOMTE 15 - -
 - *Part B* - Philippe LECOMTE 10 - -

CHIM9260-1 (pas organisé en 2022-2023) *Properties and applications of surfactants* - N... Q2 25 - - 3

CHIM9230-1 *Nanomaterials: synthesis, properties and applications* (english language) - AnneSophie DUWEZ, Christine JÉRÔME, Damien SLUYSMANS Q1 25 - - 3

CHIM0742-1 *Chemistry of materials and sustainable development* - Catherine HENRIST Q1 15 - [+] 3
 - [0,5d Vis., 10h Mon. WS]

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, Damien SLUYSMANS	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</i> (english language) - 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> - Thibault GENDRON	Q2	25	-	-	3
CHIM0657-1	<i>Emerging techniques in the science of separation</i> - JeanFrançois FOCANT, PierreHugues STEFANUTO	Q2	10	15	-	3
CHIM9259-2	<i>Analytical techniques in forensic chemistry</i> - JeanFrançois FOCANT, PierreHugues STEFANUTO	Q2	15	10	-	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
CHIM0743-1	<i>Introduction to data handling with MetaboAnalyst</i> (english language) - PierreHugues STEFANUTO	Q1	15	10	-	3
CHIM0744-1	<i>Introduction to quality assurance</i> - JeanFrançois FOCANT (Odd years)	Q2	15	-	-	3
Biological chemistry						
BIOC0232-1	<i>Macromolecular biochemistry</i> (english language) - Moreno GALLEN	Q1	25	-	-	3
CHIM9221-1	<i>Advanced techniques in nuclear magnetic resonance of biomolecules</i> - Christian DAMBLON	Q1	25	-	-	3
CHIM9262-1	<i>Biomimetic chemistry : when the Man is inspired by nature</i> - Loïc QUINTON	Q2	25	-	-	3
CHIM0731-1	<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
CHIM0734-1	<i>Photochemistry</i> - Bernard LEYH (Odd years)	Q1	15	10	-	3
CHIM9233-1	<i>Molecular logic</i> (english language) - Françoise REMACLE	Q2	25	-	-	3
SPAT0054-1	<i>Astrophysics and astrochemistry</i> - Michaël DE BECKER	Q2	20	-	-	3
Sciences teaching						
CHIM0735-1	<i>Sciences and chemistry history</i> - Bernard LEYH (Even years)	Q1	15	10	-	3
CHIM0736-1	<i>Conceptual approach to basic chemistry</i> - Bernard LEYH (Odd years)	Q2	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> - <i>Theory</i> - Yaël NAZÉ - <i>Practice</i> - Yaël NAZÉ	Q2	10	-	-	3
			-	6	-	

[...] Or for a maximum of 9 credits in the course programmes of other sectors in the Faculty of Science, other faculties or other universities. Any request for exemption from the rule of 9 credits maximum will be examined by the jury.

Choose one focus from the following :

Research Focus

Students must do a 5-month research internship in a university or research centre, in Belgium or preferably abroad.

SSTG0056-1	<i>Research placement (english language)</i> - COLLÉGIALITÉ - [5mois Internship]	Q2	-	-	[+]	30
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Teaching focus

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	-	-	[+]	3
			-	-	[+]	
			-	5	-	
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
			-	5	-	
			-	10	-	
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 educational policies</i> - Annelise VOISIN	Q2	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	Q2	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	TA	10	15	-	3

Professional Focus

Students must do a 5-month internship in a company, in Belgium or abroad.

SSTG0057-1	<i>Industrial research placement (english language)</i> - COLLÉGIALITÉ - [5mois Internship]	Q2	-	-	[+]	30
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Bloc d'aménagement du programme de l'année

Additional ECTS 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	-	[+]	4
CHIM9287-1	<i>Theoretical and quantum chemistry</i> - Françoise REMACLE - [15h QA Sess.]	Q1	30	20	[+]	4
CHIM9288-1	<i>Spectroscopy and statistical thermodynamics elements</i> - Bernard LEYH - [20h QA Sess.]	Q1	30	-	[+]	4
CHIM0278-1	<i>Organic chemistry III</i> - Lionel DELAUDE - [15h QA Sess.]	Q1	30	55	[+]	7
CHIM9289-1	<i>Analytical chemistry III - Physical methods</i> - <i>Physico-chemical methods of analysis</i> - Gauthier EPPE - <i>Electrochemical methods of analysis</i> - Gauthier EPPE - <i>Travaux pratiques et répétitions</i> - Gauthier EPPE - [15h QA Sess.]	Q1	15	-	-	8
CHIM0678-1	<i>Biochemistry</i> - André MATAGNE	Q1	30	-	-	3
INFO0202-1	<i>Programming Methods Applied to Chemistry</i> - Peter SCHLAGHECK	Q2	15	15	-	2
PHYS0968-1	<i>Signal processing</i> - Alejandro SILHANEK	Q2	25	20	-	4
CHIM9285-1	<i>Chemical Kinetics, Introduction to Spectroscopy and Group Theory</i> - Bernard LEYH - [20h QA Sess.]	Q2	35	-	[+]	6
CHIM9291-1	<i>Structural analysis</i> - Christian DAMBLON, Loïc QUINTON	Q2	20	25	-	4
CHIM0209-2	<i>Inorganic chemistry</i> - Bénédicte VERTRUYEN - [8h QA Sess.]	Q2	30	70	[+]	8
CHIM0283-4	<i>Chemistry of the macromolecules</i> - Christine JÉRÔME	Q2	20	20	-	4
PHIL0201-1	<i>Elements of sciences philosophy</i> - Julien PIERON	Q2	15	-	-	2
CHIM9292-1	<i>chemical Kinetics</i> - Bernard LEYH - [10h QA Sess.]	Q2	20	-	[+]	3
CHIM9293-1	<i>Spectroscopy integrated laboratory</i> - Christian DAMBLON, Gauthier EPPE, Bernard LEYH, JeanChristophe MONBALIU, Loïc QUINTON	Q2	-	100	-	6
CHIM9294-1	<i>Bibliographic research, research project</i> - Caroline COLLETTE, JeanChristophe MONBALIU - [30h Internship]	Q2	5	-	[+]	2
LANG0076-1	<i>English 1</i> (english language) - Daphné BUI, Véronique DOPPAGNE	TA	45	-	-	4
LANG0077-1	<i>English 2</i> (english language) - Clara BRERETON, Véronique DOPPAGNE	TA	45	-	-	4