

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
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	TA	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> (english language) - Christian DAMBLON, Loïc QUINTON	Q1	50	-	-	5
CHIM0746-1	<i>Nuclear chemistry and introduction to labeling and imaging techniques</i> (english language) - Thibault GENDRON	Q2	50	-	-	5
SMEM0044-1	<i>Dissertation, Part A</i> - COLLÉGIALITÉ	Q2	-	-	-	15

Optional courses

With the agreement of the Jury, choose courses totalling 15 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> - 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
CHIM9322-2	<i>Industrial chemistry processes, Part 1 - the structure of the chemical industry</i> - MarieNoëlle DUMONT, Angélique LÉONARD, Dominique TOYE	Q2	28	-	-	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				3
			15	-	-	
			10	-	-	

CHIM9260-1	(pas organisé en 2023-2024) <i>Properties and applications of surfactants</i> - N...	Q2	25	-	-	3
CHIM9230-1	<i>Nanomaterials: synthesis, properties and applications</i> (english language) - AnneSophie DUWEZ, Christine JÉRÔME, Damien SLUYSMANS	Q1	25	-	-	3
CHIM0742-1	<i>Chemistry of materials and sustainable development</i> - Catherine HENRIST - [0,5d Vis., 10h Mon. WS]	Q1	15	-	[+]	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> (Odd years) - 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
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
CHIM0725-2	<i>Modelling molecules and extended systems</i> (english language) - Françoise REMACLE	Q1	20	-	-	3
CHIM0734-1	<i>Photochemistry</i> - Bernard LEYH (Odd years)	Q1	15	10	-	3

CHIM9233-1	(pas organisé en 2023-2024) <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	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				3
			10	-	-	
			-	6	-	

Block 2

Compulsory course

SMEM0044-2	<i>Dissertation, Part B</i> - COLLÉGIALITÉ	Q1	-	-	-	15
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Optional courses

With the agreement of the Jury, choose courses totalling 15 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> - 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
CHIM9322-2	<i>Industrial chemistry processes, Part 1 - the structure of the chemical industry</i> - MarieNoëlle DUMONT, Angélique LÉONARD, Dominique TOYE	Q2	28	-	-	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 DELAUBE	Q1	25	-	-	3
CHIM0219-1	<i>Industrial polymers</i> - Christine JÉRÔME	Q2	25	-	-	3
CHIM9234-2	<i>Polymers and environment</i> (english language) - <i>Part A</i> - Philippe LECOMTE - <i>Part B</i> - Philippe LECOMTE	Q1				3
			15	-	-	
			10	-	-	
CHIM9260-1	(pas organisé en 2023-2024) <i>Properties and applications of surfactants</i> - N...	Q2	25	-	-	3

CHIM9230-1	<i>Nanomaterials: synthesis, properties and applications</i> (english language) - AnneSophie DUWEZ, Christine JÉRÔME, Damien SLUYSMANS	Q1	25	-	-	3
CHIM0742-1	<i>Chemistry of materials and sustainable development</i> - Catherine HENRIST - [0,5d Vis., 10h Mon. WS]	Q1	15	-	[+]	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> (Odd years) - 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
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
CHIM0725-2	<i>Modelling molecules and extended systems</i> (english language) - Françoise REMACLE	Q1	20	-	-	3
CHIM0734-1	<i>Photochemistry</i> - Bernard LEYH (Odd years)	Q1	15	10	-	3
CHIM9233-1	(pas organisé en 2023-2024) <i>Molecular logic</i> (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 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 -

[...] 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 *Research placement (english language)* - COLLÉGIALITÉ - [5mois Internship] Q2 - - [+] 30

Teaching focus

AESS1216-1 *Special didactics in chemistry : course and exercises (1st part)* - Bernard LEYH TA 40 - - 3

AESS1219-1 *Special didactics in chemistry : placements (1st part)* TA 3
 - *Observation placements* - Bernard LEYH - [10h Internship] - - [+]
 - *Teaching placements* - Bernard LEYH - [20h Internship] - - [+]
 - *Reflexive practical work* - Bernard LEYH - 5 -

AESS2216-1 *Special didactics in chemistry : course and exercises (2nd part)* - Bernard LEYH TA 35 - - 4

AESS2219-1 *Special didactics in chemistry : placements (2nd part)* TA 5
 - *Teaching placements* - Bernard LEYH - [20h Internship] - - [+]
 - *Reflexive practical work* - Bernard LEYH - 5 -
 - *Extra-scholar teaching activities* - Bernard LEYH - 10 -

AESS0202-1 *General didactics: course and exercises ; observation placements ; reflexive practices* - Annick FAGNANT - [10h Internship] TA 30 10 [+] 4

AESS0246-1 *Analysis of scholastic institutions and educational policies* - Annelise VOISIN Q2 15 - - 1

AESS0248-1 *Elements of sociology of education* - JeanFrançois GUILLAUME Q2 10 - - 1

AESS0004-1 *Media education* - Jeremy HAMERS Q1 15 - - 1

AESS0249-1 *Interdisciplinary seminar* - Annick FAGNANT Q2 15 - - 1

AESS0140-1 *Professional ethics and training to neutrality and citizenship* - Anne HERLA Q2 25 - - 2

AESS0143-1 *Educational Psychology of adolescents and young adults* - Annick FAGNANT Q1 15 - - 2

AESS0339-1 *Understand and manage the diversity of public schools* - Ariane BAYE TA 10 15 - 3

Professional Focus

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

SSTG0057-1 *Industrial research placement (english language)* - COLLÉGIALITÉ - [5mois Internship] Q2 - - [+] 30

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>Research projects and scientific communication</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