Block view of the study programme

		Or	Th	Pr	Au	Cr
Block 1						
Compulsory courses						
CHIM0724-1	*Organic chemistry* (english language) - Thibault GENDRON, JeanChristophe MONBALIU	Q1	50	-	-	**5**
CHIM0726-1	*Emerging analytical approaches* - Christian DAMBLON, AnneSophie DUWEZ, Gauthier EPPE, JeanFrançois FOCANT, Loïc QUINTON	Q1	50	-	-	**5**
CHIM0727-1	*Macromolecular and materials chemistry* (english language) - Christine JÉRÔME, Bénédicte VERTRUYEN	Q1	50	-	-	**5**
CHIM0728-1	*Design, structure and reactivity of chemical architectures* - Lionel DELAUDE, AnneSophie DUWEZ	Q1	50	-	-	**5**
CHIM0729-1	*Biological chemistry* (english language) - Christian DAMBLON, Loïc QUINTON	Q1	50	-	-	**5**
CHIM0746-1	*Nuclear chemistry and introduction to labeling and imaging techniques* (english language) - Thibault GENDRON	Q2	50	-	-	**5**
SMEM0044-1	*Dissertation, Part A* - COLLÉGIALITÉ	Q2	-	-	-	**15**
Optional courses						
With the agreement of the Jury, choose courses totalling 15 credits among:						
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* - 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**
CHIM9322-2	*Industrial chemistry processes, Part 1 - the structure of the chemical industry* - MarieNoëlle DUMONT, Angélique LÉONARD, Dominique TOYE	Q2	28	-	-	**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) - *Part A* - Philippe LECOMTE - *Part B* - Philippe LECOMTE	Q1	 15 10	 - -	 - -	**3**

CHIM9260-1	(pas organisé en 2023-2024) *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 - [0,5d Vis., 10h Mon. WS]	Q1	15	-	[+]	**3**
Techniques of characterization and analysis						
BIOL0114-4	*Electronic microscopies, Part A* - Philippe COMPÈRE	Q2	15	-	-	**3**
CHIM9236-2	*Microstructure of materials : characterization techniques* (Odd years) - *Part A* - Catherine HENRIST - *Part B* - Catherine HENRIST	Q2	 15 10	 - -	 - -	**3**
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) - *Part A* - Christian DAMBLON, Philippe LECOMTE - *Part B* - Christian DAMBLON, Philippe LECOMTE	Q1	 15 10	 - -	 - -	**3**
CHIM9221-1	*Advanced techniques in nuclear magnetic resonance of biomolecules* - Christian DAMBLON	Q1	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**
CHIM0725-2	*Modelling molecules and extended systems* (english language) - Françoise REMACLE	Q1	20	-	-	**3**
CHIM0734-1	*Photochemistry* - Bernard LEYH (Odd years)	Q1	15	10	-	**3**

CHIM9233-1	(pas organisé en 2023-2024) *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	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* - *Theory* - Yaël NAZÉ - *Practice* - Yaël NAZÉ	Q2	 10 -	 - 6	 - -	**3**

Block 2

Compulsory course

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

Optional courses

With the agreement of the Jury, choose courses totalling 15 credits among:

	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* - 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**
CHIM9322-2	*Industrial chemistry processes, Part 1 - the structure of the chemical industry* - MarieNoëlle DUMONT, Angélique LÉONARD, Dominique TOYE	Q2	28	-	-	**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) - *Part A* - Philippe LECOMTE - *Part B* - Philippe LECOMTE	Q1	 15 10	 - -	 - -	**3**
CHIM9260-1	(pas organisé en 2023-2024) *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 - [0,5d Vis., 10h Mon. WS]	Q1	15	-	[+]	**3**
Techniques of characterization and analysis						
BIOL0114-4	*Electronic microscopies, Part A* - Philippe COMPÈRE	Q2	15	-	-	**3**
CHIM9236-2	*Microstructure of materials : characterization techniques* (Odd years) - *Part A* - Catherine HENRIST - *Part B* - Catherine HENRIST	Q2	 15 10	 - -	 - -	**3**
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) - *Part A* - Christian DAMBLON, Philippe LECOMTE - *Part B* - Christian DAMBLON, Philippe LECOMTE	Q1	 15 10	 - -	 - -	**3**
CHIM9221-1	*Advanced techniques in nuclear magnetic resonance of biomolecules* - Christian DAMBLON	Q1	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**
CHIM0725-2	*Modelling molecules and extended systems* (english language) - Françoise REMACLE	Q1	20	-	-	**3**
CHIM0734-1	*Photochemistry* - Bernard LEYH (Odd years)	Q1	15	10	-	**3**
CHIM9233-1	(pas organisé en 2023-2024) *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	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* - *Theory* - Yaël Nazé - *Practice* - Yaël Nazé	Q2	 10 -	 - 6	 - -	**3**

[...] 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)* - *Observation placements* - Bernard Leyh - [10h Internship] - *Teaching placements* - Bernard Leyh - [20h Internship] - *Reflexive practical work* - Bernard Leyh	TA	 - - -	 - - 5	 [+] [+] -	**3**
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)* - *Teaching placements* - Bernard Leyh - [20h Internship] - *Reflexive practical work* - Bernard Leyh - *Extra-scholar teaching activities* - Bernard Leyh	TA	 - - -	 - 5 10	 [+] - -	**5**
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	*Theorical chemistry* - Françoise REMACLE - [15h QA Sess.]	Q1	25	-	[+]	**4**
CHIM9287-1	*Theoritical and quantum chemistry* - Françoise REMACLE - [15h QA Sess.]	Q1	30	20	[+]	**4**
CHIM9288-1	*Spectroscopy and statistical thermodynamics elements* - Bernard LEYH - [20h QA Sess.]	Q1	30	-	[+]	**4**
CHIM0278-1	*Organic chemistry III* - Lionel DELAUDE - [15h QA Sess.]	Q1	30	55	[+]	**7**
CHIM9289-1	*Analytical chemistry III - Physical methods* *- Physico-chemical methods of analysis* - Gauthier EPPE *- Electrochemical methods of analysis* - Gauthier EPPE *- Travaux pratiques et répétitions* - Gauthier EPPE - [15h QA Sess.]	Q1	 15 15 -	 - - 65	 - - [+]	**8**
CHIM0678-1	*Biochemistry* - André MATAGNE	Q1	30	-	-	**3**
INFO0202-1	*Programming Methods Applied to Chemistry* - Peter SCHLAGHECK	Q2	15	15	-	**2**
PHYS0968-1	*Signal processing* - Alejandro SILHANEK	Q2	25	20	-	**4**
CHIM9285-1	*Chemical Kinetics, Introduction to Spectroscopy and Group Theory* - Bernard LEYH - [20h QA Sess.]	Q2	35	-	[+]	**6**
CHIM9291-1	*Structural analysis* - Christian DAMBLON, Loïc QUINTON	Q2	20	25	-	**4**
CHIM0209-2	*Inorganic chemistry* - Bénédicte VERTRUYEN - [8h QA Sess.]	Q2	30	70	[+]	**8**
CHIM0283-4	*Chemistry of the macromolecules* - Christine JÉRÔME	Q2	20	20	-	**4**
PHIL0201-1	*Elements of sciences philosophy* - Julien PIERON	Q2	15	-	-	**2**
CHIM9292-1	*chemical Kinetics* - Bernard LEYH - [10h QA Sess.]	Q2	20	-	[+]	**3**
CHIM9293-1	*Spectroscopy integrated laboratory* - Christian DAMBLON, Gauthier EPPE, Bernard LEYH, JeanChristophe MONBALIU, Loïc QUINTON	Q2	-	100	-	**6**
CHIM9294-1	*Research projects and scientific communication* - Caroline COLLETTE, JeanChristophe MONBALIU - [30h Internship]	Q2	5	-	[+]	**2**
LANG0076-1	*English 1* (english language) - Daphné BUI, Véronique DOPPAGNE	TA	45	-	-	**4**
LANG0077-1	*English 2* (english language) - Clara BRERETON, Véronique DOPPAGNE	TA	45	-	-	**4**