Cycle view of the study programme

		Bl	Or	Th	Pr	Au	Cr
Focus compulsory courses (B2 : 30Cr)							
AESS1216-1	*Special didactics in chemistry : course and exercises (1st part)* - Bernard LEYH	B2	TA	40	-	-	**3**
AESS1219-1	*Special didactics in chemistry : placements (1st part)*	B2	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	B2	TA	35	-	-	**4**
AESS2219-1	*Special didactics in chemistry : placements (2nd part)*	B2	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]	B2	TA	30	10	[+]	**4**
AESS0246-1	*Analysis of scholastic institutions and educational policies* - Annelise VOISIN	B2	Q2	15	-	-	**1**
AESS0248-1	*Elements of sociology of education* - JeanFrançois GUILLAUME	B2	Q2	10	-	-	**1**
AESS0004-1	*Media education* - Jeremy HAMERS	B2	Q1	15	-	-	**1**
AESS0249-1	*Interdisciplinary seminar* - Annick FAGNANT	B2	Q2	15	-	-	**1**
AESS0140-1	*Professional ethics and training to neutrality and citizenship* - Anne HERLA	B2	Q2	25	-	-	**2**
AESS0143-1	*Educational Psychology of adolescents and young adults* - Annick FAGNANT	B2	Q1	15	-	-	**2**
AESS0339-1	*Understand and manage the diversity of public schools* - Ariane BAYE	B2	TA	10	15	-	**3**
Core curriculum compulsory courses (B1 : 45Cr, B2 : 15Cr)							
CHIM0724-1	*Organic chemistry* (english language) - Thibault GENDRON, JeanChristophe MONBALIU	B1	Q1	50	-	-	**5**
CHIM0726-1	*Emerging analytical approaches* - Christian DAMBLON, AnneSophie DUWEZ, Gauthier EPPE, JeanFrançois FOCANT, Loïc QUINTON	B1	Q1	50	-	-	**5**
CHIM0727-1	*Macromolecular and materials chemistry* (english language) - Christine JÉRÔME, Bénédicte VERTRUYEN	B1	TA	50	-	-	**5**
CHIM0728-1	*Design, structure and reactivity of chemical architectures* - Lionel DELAUDE, AnneSophie DUWEZ	B1	Q1	50	-	-	**5**
CHIM0729-1	*Biological chemistry* (english language) - Christian DAMBLON, Loïc QUINTON	B1	Q1	50	-	-	**5**
CHIM0746-1	*Nuclear chemistry and introduction to labeling and imaging techniques* (english language) - Thibault GENDRON	B1	Q2	50	-	-	**5**
SMEM0044-1	*Dissertation, Part A* - COLLÉGIALITÉ	B1	Q2	-	-	-	**15**
SMEM0044-2	*Dissertation, Part B* - COLLÉGIALITÉ	B2	Q1	-	-	-	**15**
Common core courses (B1 : 15Cr, B2 : 15Cr)							

Choose courses, with the approval of the Jury, totalling 30 credits among : (B1 : 15Cr, B2 : 15Cr)

Language

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

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

Industrial chemistry

Code	Title						
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

Code	Title						
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	-	-	
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**
PHYS0999-1	*Digital creation in sciences* - Roland BILLEN, Valentin FISCHER, Pierre MATHONET, JeanChristophe MONBALIU, Eric PARMENTIER, Nicolas VANDEWALLE - [30h Proj.]	-	TA	10	-	[+]	**6**

Techniques of characterization and analysis

Code	Title						
BIOL0114-4	*Electronic microscopies, Part A* - Philippe COMPÈRE	-	Q2	15	-	-	**3**
CHIM9236-2	*Microstructure of materials : characterization techniques* (Odd years)	-	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**
CHIM0752-1	*Single-molecule approaches in biology and chemistry* (english language) - 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**
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* - Pierre FRANCOTTE - [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	15	-	-	**3**
CHIM0734-1	*Photochemistry* - Bernard LEYH (Odd years)		-	Q1	15	10	-	**3**
CHIM9233-1	*Molecular logic and quantum computing* (english language) - Françoise REMACLE		-	Q2	15	-	-	**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.

Bridging courses Master in chemistry (120 credits)

Optional courses (B0 : 60Cr)

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. (B0 : 60Cr)

Code	Course						
CHIM0704-1	*Theorical chemistry* - Françoise REMACLE - [18h Mon. WS]	B0	Q1	30	-	[+]	**5**
CHIM9287-1	*Theoritical and quantum chemistry* - Françoise REMACLE - [15h Mon. WS]	B0	Q1	30	20	[+]	**4**
CHIM9288-1	*Spectroscopy and statistical thermodynamics elements* - Bernard LEYH - [20h Mon. WS]	B0	Q1	30	-	[+]	**4**
CHIM0278-1	*Organic chemistry III* - Lionel DELAUDE - [15h Mon. WS]	B0	Q1	30	55	[+]	**7**
CHIM9289-1	*Analytical chemistry III - Physical methods*	B0	Q1				**8**
	- *Physico-chemical analysis methods* - Gauthier EPPE			15	-	-	
	- *Electrochemical analysis methods* - Gauthier EPPE			15	-	-	
	- *Practical work and tutorials* - Gauthier EPPE - [15h Mon. WS]			-	65	[+]	
CHIM0678-1	*Biochemistry* - André MATAGNE	B0	Q1	30	-	-	**3**
PHYS0968-1	*Signal processing* - Alejandro SILHANEK	B0	Q2	25	20	-	**4**
CHIM9285-1	*Chemical Kinetics, Introduction to Spectroscopy and Group Theory* - Bernard LEYH - [20h Mon. WS]	B0	Q2	35	-	[+]	**6**
CHIM9291-1	*Structural analysis* - Christian DAMBLON, Loïc QUINTON - [25h Mon. WS]	B0	Q2	20	-	[+]	**4**
CHIM0209-2	*Inorganic chemistry* - Bénédicte VERTRUYEN - [8h Mon. WS]	B0	Q2	30	70	[+]	**8**
CHIM0283-4	*Chemistry of the macromolecules* - Christine JÉRÔME	B0	Q2	20	20	-	**4**
PHIL0201-1	*Elements of sciences philosophy* - Pieter THYSSEN	B0	Q2	15	-	-	**2**
CHIM9292-1	*Chemical kinetics* - Bernard LEYH - [10h Mon. WS]	B0	Q2	20	-	[+]	**3**
CHIM9293-1	*Spectroscopy integrated laboratory* - Christian DAMBLON, Gauthier EPPE, Bernard LEYH, JeanChristophe MONBALIU, Loïc QUINTON	B0	Q2	-	100	-	**6**
CHIM9294-1	*Research projects and scientific communication* - Caroline COLLETTE, JeanChristophe MONBALIU - [30h Internship]	B0	Q2	5	-	[+]	**2**
LANG0076-1	*English 1* (english language) - Daphné BUI, Véronique DOPPAGNE	B0	TA	45	-	-	**4**
LANG0077-1	*English 2* (english language) - Clara BRERETON, Véronique DOPPAGNE	B0	TA	45	-	-	**4**