

One-year master program (60 ECTS)

Access conditions to the Master 60 (http://www.ulg.ac.be/cms/c_46055/master-en-sciences-chimiques)

Compulsory courses

CHIM0213-2	<i>Structural analysis</i> - Christian DAMBLON, Edwin DE PAUW	45	-	-	4
CHIM0609-1	<i>Advanced organic chemistry</i> - André LUXEN	30	-	-	4
CHIM0635-1	<i>Advanced physical chemistry</i> (english language) - Bernard LEYH	30	-	-	4
CHIM0636-1	<i>Macromolecular physical chemistry</i> (english language) - Christine JÉRÔME	30	-	-	4
CHIM0637-1	<i>Chemistry of materials</i> (english language)				4
	- <i>Inorganic materials</i> - Bénédicte VERTRUYEN	20	-	-	
	- <i>Organic and biological materials</i> - Anne-Sophie DUWEZ - Suppl : Nicolas WILLET	20	-	-	
BIOC0232-1	<i>Macromolecular biochemistry</i> - Moreno GALLEN	30	30	-	4
CHIM0638-1	<i>Surfaces and interfaces</i> (english language) - Anne-Sophie DUWEZ	15	-	-	2
CHIM9219-1	<i>Theoretical and quantum chemistry</i> (english language) - Françoise REMACLE - [15h QA Sess.]	30	15	[+]	4
CHIM0096-1	<i>Nuclear chemistry</i> (english language) - André LUXEN	15	-	-	2
SMEM0015-1	<i>Final thesis</i> - COLLÉGIALITÉ	-	-	-	16

Optional courses

Choose courses totalling 12 ECTS from the following :

Chemistry

CHIM0081-1	<i>Industrial Chemistry Processes, structure of chemical industry</i> - Angélique LÉONARD	30	-	-	4
BIOL0114-4	<i>Electronic microscopies</i> - Philippe COMPÈRE	15	-	-	2
CHIM9236-1	<i>Microstructure of Materials : characterization techniques</i> - Catherine HENRIST	15	-	-	2
CHIM0641-1	<i>Electronic, optical and magnetic properties of solids</i> - Bénédicte VERTRUYEN	15	-	-	2
CHIM0642-1	<i>Molecular dynamics and photochemistry</i> - Bernard LEYH	30	-	-	4
BIOC0719-1	<i>Enzymology</i> - André MATAGNE	15	-	-	2
CHIM9258-1	<i>Thermodynamic and spectroscopic characterization of biomolecules</i> - Valérie GABELICA	15	-	-	2
CHIM9259-2	<i>Analytical techniques in forensic chemistry</i> - Jean-François FOCANT	15	-	-	2
CHIM0218-1	<i>Elements of medicinal chemistry</i> - Bernard PIROTTE	15	-	-	2
AESS0255-1	<i>Introduction to chemistry didactics</i> - Bernard LEYH	15	-	-	2

Environmental management

ENVT0031-2	<i>Society / Environment (epistemology, law, economics and social sciences towards the environment)</i> - François MELARD, Marc MORMONT	24	12	-	3
ENVT0030-2	<i>Managing the environment (transitional issues, instruments, case studies)</i> - Jean-Marie HAUGLUSTAINE, François MELARD, Marc MORMONT, Catherine MOUGENOT, Pierre M. STASSART	24	12	-	3
ENVT0034-1	<i>GIS data management</i> - Philippe ANDRE, Jacques NICOLAS, Anne-Claude ROMAIN, Bernard TYCHON	12	12	-	2
ENVT0013-3	<i>Assessment tools (impact assessment, LCA)</i> - Alain HANSON, Jacques NICOLAS, Nathalie SEMAL	12	12	-	2
ENVT0848-3	<i>Impacts of human activities on ecosystems and including land use</i> - Célia JOAQUIM#JUSTO, Angélique LÉONARD, Roberto RENZONI, Emmanuël SÉRUSIAUX	20	10	-	2

Notice : Students who choose the two courses from the "Environmental Science and Management" module will have direct access to the 2nd year of the Masters in Environmental Science and Management, organised on the Arlon campus. Other students will also have access to the 2nd year of the Masters in Environmental Science and Management, on the condition that they take courses corresponding to these 12 credits in addition to the 60 credits taken during this study year.

Two-Year Master Program (120 ECTS)

Access conditions to the Master 120 (http://www.ulg.ac.be/cms/c_46055/master-en-sciences-chimiques)

First Year

ULg : Students and Studies Administration - Academic Affairs
 Contact : Monique Marcourt, General Director for Education and Training
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Compulsory courses

CHIM0213-2	<i>Structural analysis</i> - Christian DAMBLON, Edwin DE PAUW	45	-	-	4
CHIM0609-1	<i>Advanced organic chemistry</i> - André LUXEN	30	-	-	4
CHIM0635-1	<i>Advanced physical chemistry</i> (english language) - Bernard LEYH	30	-	-	4
CHIM0636-1	<i>Macromolecular physical chemistry</i> (english language) - Christine JÉRÔME	30	-	-	4
CHIM0637-1	<i>Chemistry of materials</i> (english language) - <i>Inorganic materials</i> - Bénédicte VERTRUYEN	20	-	-	4
	- <i>Organic and biological materials</i> - Anne-Sophie DUWEZ - Suppl : Nicolas WILLET	20	-	-	
BIOC0232-1	<i>Macromolecular biochemistry</i> - Moreno GALLEN	30	30	-	4
CHIM0638-1	<i>Surfaces and interfaces</i> (english language) - Anne-Sophie DUWEZ	15	-	-	2
CHIM9219-1	<i>Theoretical and quantum chemistry</i> (english language) - Françoise REMACLE - [15h QA Sess.]	30	15	[+]	4
CHIM0096-1	<i>Nuclear chemistry</i> (english language) - André LUXEN	15	-	-	2
CHIM0645-1	<i>Integrated research project in laboratory (including group projects and bibliography)</i> - - Anne-Sophie DUWEZ	-	-	-	14

Optional courses

Choose courses totalling 14 ECTS from the following :

CHIM0081-1	<i>Industrial Chemistry Processes, structure of chemical industry</i> - Angélique LÉONARD	30	-	-	4
BIOL0114-4	<i>Electronic microscopies</i> - Philippe COMPÈRE	15	-	-	2
CHIM9236-1	<i>Microstructure of Materials : characterization techniques</i> - Catherine HENRIST	15	-	-	2
CHIM0641-1	<i>Electronic, optical and magnetic properties of solids</i> - Bénédicte VERTRUYEN	15	-	-	2
CHIM0642-1	<i>Molecular dynamics and photochemistry</i> - Bernard LEYH	30	-	-	4
BIOC0719-1	<i>Enzymology</i> - André MATAGNE	15	-	-	2
CHIM9258-1	<i>Thermodynamic and spectroscopic characterization of biomolecules</i> - Valérie GABELICA	15	-	-	2
CHIM9259-2	<i>Analytical techniques in forensic chemistry</i> - Jean-François FOCANT	15	-	-	2
CHIM0218-1	<i>Elements of medicinal chemistry</i> - Bernard PIROTTE	15	-	-	2
AESS0255-1	<i>Introduction to chemistry didactics</i> - Bernard LEYH	15	-	-	2

Second year

Compulsory courses

CHIM0651-1	<i>Series of Seminars (all fields of chemistry)</i> - Anne-Sophie DUWEZ	-	-	-	2
SMEM0016-1	<i>Final thesis</i> - COLLÉGIALITÉ	-	-	-	20

Optional courses

Choose, with the approval of the Board of Studies in Chemistry, courses totaling 8 credits from the list below or from the programme of other masters inside or outside the ULg.

Synthesis and materials

CHIM0246-1	<i>New reactions in organic synthesis</i> - Albert DEMONCEAU	15	-	-	2
CHIM0656-1	<i>Organometallic Catalysis</i> - Lionel DELAUE	15	-	-	2
CHIM0219-1	<i>Industrial polymers</i> - Christine JÉRÔME	15	-	-	2
CHIM0659-1	<i>Polymers and Environment</i> - Philippe LECOMTE, Jutta RIEGER	15	-	-	2
CHIM9260-1	<i>Properties and applications of surfactants</i> - Guy BROZE, Antoine DEBUIGNE	15	-	-	2
CHIM0248-1	<i>Advanced ceramic materials : synthesis, characterization and use</i> - Rudi CLOOTS	15	-	-	2
CHIM0088-1	<i>Nanomaterials, principles of synthesis and application</i> - Christophe DETREMBLEUR	15	-	-	2
CHIM0654-1	<i>Molecular devices and molecular machines</i> - Anne-Sophie DUWEZ - Suppl : Perrine LUSSIS	15	-	-	2

Techniques of characterization and analysis

CHIM0658-1	<i>Analytical Electrochemistry</i> - Bernard GILBERT	15	-	-	2
CHIM0220-1	<i>Recent nuclear magnetic resonance (NMR) methods in chemistry</i> - Christian DAMBLON	15	-	-	2
CHIM9261-1	<i>Introduction to NMR in solid phase</i> - Christian DAMBLON, Philippe LECOMTE, Bénédicte VERTRUYEN	15	-	-	2
CHIM9221-1	<i>Advanced techniques in nuclear magnetic resonance of biomolecules</i> -	15	-	-	2

	AMBLON			
CHIM0653-1	<i>Imaging and marking techniques</i> - André LUXEN	15	-	2
CHIM0655-1	<i>Advanced mass spectrometry methods</i> - Edwin DE PAUW	15	-	2
CHIM0657-1	<i>Emerging techniques in the science of separation</i> - Jean-François FOCANT	15	-	2
CHIM0248-1	<i>Advanced ceramic materials : synthesis, characterization and use</i> - Rudi CLOOTS	15	-	2
CRIS0204-1	<i>Crystallography - additional issues</i> - Frédéric HATERT	15	-	2
Biological chemistry				
CHIM0652-1	<i>Molecular recognition and non-covalent interactions</i> - Valérie GABELICA	15	-	2
CHIM9221-1	<i>Advanced techniques in nuclear magnetic resonance of biomolecules</i> - Christian DAMBLON	15	-	2
CHIM0655-1	<i>Advanced mass spectrometry methods</i> - Edwin DE PAUW	15	-	2
CHIM9262-1	<i>Biomimetic chemistry : when the Man is inspired by nature</i> - Loïc QUINTON	15	-	2
Modelling and molecular dynamics				
CHIM0654-1	<i>Molecular devices and molecular machines</i> - Anne-Sophie DUWEZ - Suppl : Perrine LUSSIS	15	-	2
CHIM0090-1	<i>Theory and modeling of hybrid molecular complexes</i> - Françoise REMACLE	15	-	2
CHIM0089-1	<i>Molecular logic</i> - Françoise REMACLE	15	-	2
CHIM0231-1	<i>Chemical reaction dynamics : experimental approaches</i> - Bernard LEYH	15	-	2
SPAT0054-1	<i>Astrophysics and astrochemistry</i> - Michaël DE BECKER	15	5	2
Programme of courses for other masters degrees				
[...]	Programme of courses of other Master in the ULg and out of the ULg			

Choose one focus from the following :

Research Focus

Compulsory courses

CHIM0646-1	<i>Physical chemistry of nanostructures (english language)</i> - Anne-Sophie DUWEZ	15	-	2
CHIM0647-1	<i>Coordination Chemistry and Catalysis</i> - Lionel DELAUDE	30	-	4
CHIM0648-1	<i>Chemometrics and quality systems (english language)</i> - Jean-François FOCANT	15	-	2
CHIM0649-1	<i>Molecular Modeling</i> - Françoise REMACLE	20	-	3
CHIM0650-1	<i>Structural biological chemistry (english language)</i> - Christian DAMBLON	30	-	4
CHIM9220-1	<i>Introduction to research</i> - Anne-Sophie DUWEZ	-	-	2
STRA0027-1	<i>Final thesis complement</i> - COLLÉGIALITÉ	-	-	9
STRA0037-1	<i>Final thesis monitoring</i> - COLLÉGIALITÉ	-	-	4

Teaching focus

Compulsory courses

AESS0246-1	<i>Analysis of scholastic institutions and key-players, educational policies</i> - Jacqueline BECKERS	15	-	1
AESS0247-1	<i>Views on cultural diversity</i> - Jérôme JAMIN	10	-	1
AESS0248-1	<i>Elements of sociology of education</i> - Jean-François GUILLAUME	10	-	1
AESS0140-1	<i>Professional ethics and training to neutrality and citizenship</i> - Anne HERLA	25	-	2
AESS0202-1	<i>General didactics: course and exercises ; observation placements ; reflexive practices</i> - Annick FAGNANT - [10h Internship]	30	10	[+] 4
AESS0004-1	<i>Media education</i> - Geneviève VAN CAUWENBERGE	15	-	1
AESS0249-1	<i>Interdisciplinary seminar</i> - Annick FAGNANT	15	-	1
AESS0143-1	<i>Educational Psychology of adolescents and young adults</i> - Annick FAGNANT	15	-	2
AESS0142-1	<i>Seminar on prevention and management of difficult school situations</i> - Jocelyne ROBERT	15	-	2
AESS0216-1	<i>Specialized chemistry didactics (Part I)</i> - Course and exercises - Bernard LEYH	40	-	-
	- Observation practicums - Bernard LEYH - [10h Internship]	-	-	[+]
	- Teaching practicums - Bernard LEYH - [20h Internship]	-	-	[+]
	- Reflexive practice - Bernard LEYH	-	5	-
AESS0234-1	<i>Specialized chemistry didactics (part II)</i> - Course and exercises - Bernard LEYH	35	-	-
	- Teaching practicums - Bernard LEYH - [20h Internship]	-	-	[+]
	- Reflexive practice - Bernard LEYH	-	5	-
	- Extra-scholar teaching activities - Bernard LEYH	-	10	-

Professional Focus

Compulsory courses

CHIM0022-3	<i>Introduction to Chemical Engineering</i> - Michel CRINE	30	-	-	4
CHIM0679-1	<i>Introduction to quality assurance (english language)</i> - Jean-François FOCANT	15	-	-	2
CHIM0074-2	<i>Seminars on industrial security</i> - Georges HEYEN, Angélique LÉONARD, Dominique TOYE - [10h SEM, 2d FW]	-	-	[+]	2
TOXI0004-1	<i>Principles of toxicology</i> - Corinne CHARLIER	20	-	-	3
GEST3002-1	<i>Human Resources</i> - Jocelyne ROBERT	24	-	-	3
SSTG0008-1	<i>Internship</i> - COLLÉGIALITÉ	-	-	-	14
SSTG0028-1	<i>Placement monitoring</i> - COLLÉGIALITÉ	-	-	-	2