

## First Year

### 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> - Christian DAMBLON	15	-	-	2
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

**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