

Cycle view of the study programme

B1 Or Th Pr Au Cr

Coordinating institution : UCL

Admission and registration procedures should be carried out with the referring establishment.

Compulsory courses (B1 : 30Cr)

NANO0001-1	<i>Seminars on the ethnical and socio-economic aspects of nanotechnology</i> - COLLÉGIALITÉ	B1	Q2	15	15	-	3
SMEM0038-1	<i>Final thesis</i> - COLLÉGIALITÉ	B1	TA	-	-	-	27

Optional courses (B1 : 30Cr)

In agreement with the Jury, choose courses with at least 1 in each of the four above-mentioned discipline, for a total of 30 credits, among : (B1 : 30Cr)

[...] Depending on the student's previous training and with the agreement of the jury, choose, if necessary, courses for a maximum of 9 credits among the course programme for the institutions organising the complementary masters :

A. Fundamental phenomena at the nanoscale

Courses organised at the UCL

HULG2105-1	<i>Nano-electronics</i> - Vincent BAYOT, Denis FLANDRE, JeanPierre RASKIN	B1	Q1	30	30	-	5
HULG2106-1	<i>Physics of nanostructures</i> - JeanChristophe CHARLIER, Xavier GONZE, Luc PIRAUX	B1	Q1	37,5	22,5	-	5

Courses organised at the ULB

HULG0437-1	<i>Chimie des interfaces et nanostructures</i> - N...	B1	Q1	36	24	-	5
HULG0438-1	<i>Nanochemistry and nanotechnology</i> (english language) - N...	B1	Q2	24	24	-	4
HULG2079-1	<i>Moteurs moléculaires et processus stochastiques</i> - N...	B1	Q1	16	24	-	5
HULG2107-1	<i>Nanophysics</i> - Pierre GASPARD, Marc HOU	B1	Q2	24	24	-	5

Courses organised at the ULg

CHIM0646-1	<i>Physical chemistry of nanostructures</i> (english language) - AnneSophie DUWEZ	B1	Q1	15	-	-	2
BIOC0724-1	<i>Chemistry of biological macromolecules</i> - Moreno GALLEN, André MATAGNE	B1	Q2	20	-	-	2
PHYS0096-1	<i>Physics of superconductors</i> (english language) - Alejandro SILHANEK	B1	Q1	15	-	-	2
ELEN0069-1	<i>Nanoelectronics / Optoelectronics</i> (english language) - Benoît VANDERHEYDEN - [40h Proj.]	B1	Q2	30	-	[+]	5
PHYS3003-1	<i>Physics of functional oxides</i> (english language) - Philippe GHOSEZ	B1	Q1	20	10	-	4

Course organised at the UMons

HULG0439-1	<i>Morphogenesis and instability</i> - N...	B1	Q2	30	15	-	4
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Courses organised at the UNamur

HULG0440-1	<i>Supramolecular chemistry</i> - N...	B1	Q1	22,5	-	-	3
HULG0441-1	<i>Advanced theoretical chemistry</i> - N...	B1	Q1	37,5	30	-	6
HULG0478-1	<i>Physique de la supraconductivité</i> - N...	B1	Q1	22	-	-	3

B. Nanofabrication, nanomanipulation, nanosynthesis

Course organised at the UCL

HULG2108-1 *Techniques of micro-and nanofabrication* - Vincent BAYOT, Denis FLANDRE, Laurent FRANCIS, JeanPierre RASKIN B1 Q2 30 30 - 5

Courses organised at the ULB

HULG2115-1 *Microfabrication processes* - N... B1 TA 24 12 - 5

HULG2094-1 *Biocompatible and nanostructured materials (english language)* - N... B1 Q2 36 24 - 5

Courses organised at the ULg

CHIM0088-1 *Nanomaterials, principles of synthesis and application* - Christophe DETREMBLEUR B1 Q1 15 - - 2

MECA0009-2 *Introduction to microtechnology (english language)* - Tristan GILET - [8h Labo., 22h Proj.] B1 Q2 12 12 [+] 5

CHIM0072-2 *Nanomaterials and divided materials engineering* - Benoît HEINRICHS, Stéphanie LAMBERT B1 Q1 15 15 - 3

Course organised at the UMons

HULG2095-1 *Polymer nanocomposite materials* - N... B1 Q2 15 15 - 3

C. Characterization of nanostructures

Courses organised at the UCL

HULG0442-1 *Advanced transistors (english language)* - N... B1 Q2 30 30 - 5

HULG2096-1 *Characterization of materials surface* - Yves DUFRENE, Christine DUPONT, Eric GAIGNEAUX B1 Q2 52,5 - - 5

HULG2097-1 *Analyse et traitement des surfaces solides* - N... B1 Q2 30 15 - 5

Courses organised at the ULB

HULG0443-1 *Surface analysis of materias (english language)* - N... B1 Q2 24 12 - 5

HULG2082-1 *Surface physics and surface characterization (english language)* - Norbert KRUSE B1 Q2 24 - - 3

Courses organised at the ULg

NANO0002-1 *Atomic force microscopy and related techniques* - AnneSophie DUWEZ B1 Q1 10 - - 2

PHYS0978-1 *Physics of semi-conductors* - Ngoc Duy NGUYEN B1 Q1 15 15 - 4

CHIM9266-1 *Characterization of nanostructures by scanning probe techniques (english language)* - AnneSophie DUWEZ B1 Q1 15 - - 2

CHIM9231-1 *Characterization of Biomaterials (english language)* - Edwin DE PAUW, MarieClaire GILLET B1 Q1 15 15 - 4

PHYS0977-1 *Spectroscopy of materials (english language)* - Matthieu VERSTRAETE B1 Q1 20 10 - 4

Course organised at the UMons

HULG2083-1 *Local probe microscopy* - Roberto LAZZARONI, Philippe LECLÈRE B1 Q2 15 15 - 3

Courses organised at the UNamur

HULG0444-1 *Optical spectroscopies of surfaces and nanostructures* - N... B1 Q1 22 8 - 4

HULG2081-1 *Microscopie électronique, diffraction et EELS* - N... B1 Q1 15 15 - 3

D. Simulation at the nanoscale

Course organised at the UCL

HULG2117-1 *Atomistic and nanoscopic simulations* - JeanChristophe CHARLIER, B1 Q2 30 30 - 5

Xavier GONZE

Course organised at the ULg

HULG0479-1 *Approches computationnelles des états de la matière* - N... B1 Q1 36 24 - 5

Courses organised at the ULg

CHIM0090-1 *Theory and modeling of hybrid molecular complexes* -
Françoise REMACLE B1 Q1 15 - - 3

PHYS0976-1 *Quantum modeling of material properties* (english language) -
Philippe GHOSEZ, Matthieu VERSTRAETE B1 Q1 20 10 - 4

PHYS0950-1 *Physics of nanomaterials* (english language) - JeanYves RATY B1 Q1 20 10 - 4

Course organised at the UMONS

HULG0445-1 *Molecular modeling in chemistry* - N... B1 Q2 15 15 - 3

Course organised at the UNamur

HULG0446-1 *Simulation in materials physics* - N... B1 Q1 15 15 - 3

HULG0480-1 *Physique des matériaux structurés et des nanostructures* - N... B1 Q2 30 15 - 4

HULG0481-1 *Compléments de chimie quantique* - N... B1 Q1 15 - - 2

E. Miscellaneous

Courses organised at the UCL

HULG2085-1 *Nanobiotechnology* - N... B1 Q2 30 - - 3

HULG0447-1 *Special electronic devices* (english language) - N... B1 Q1 30 30 - 5

HULG2111-1 *Design of Micro and Nanosystems* (english language) -
Denis FLANDRE, Laurent FRANCIS, Thomas PARDOEN,
JeanPierre RASKIN B1 Q1 30 30 - 5

HULG2086-1 *Macromolecular nanotechnology* (english language) -
Sophie DEMOUSTIER, JeanFrançois GOHY, Alain JONAS,
Bernard NYSTEN B1 Q2 45 15 - 5

HULG2112-1 *Transport phenomena in solids and nanostructures* (english
language) - JeanChristophe CHARLIER, Xavier GONZE, Luc PIRAUX B1 Q2 30 30 - 5

HULG2113-1 *Lasers and Applications* - N... B1 Q2 45 15 - 6

HULG2090-1 *Chemometrics* - Bernadette GOVAERTS B1 Q1 22,5 15 - 3

HULG2104-1 *Principles of heterogeneous catalysis* - Eric GAIGNEAUX B1 Q1 52,5 - - 5

HULG2091-1 *Statistical Quality Control* - Anne DE FRENNE,
Bernadette GOVAERTS B1 Q1 15 5 - 4

Courses organised at the ULB

HULG0482-1 *Interactions supramoléculaires* - N... B1 Q2 24 24 - 5

HULG0449-1 *Micro- and nanobiotechnology* (english language) - N... B1 Q2 13 26 - 3

HULG0450-1 *(Multi)functional polymers* (english language) - N... B1 Q2 12 24 - 3

HULG0451-1 *Molecular engineering applied to the biomedical field* - N... B1 Q1 24 - - 2

HULG0452-1 *Molecular and biomolecular engineering* (english language) - N... B1 Q2 24 12 - 3

HULG2116-1 *Composants microtechniques* - N... B1 TA 24 36 - 5

Courses organised at the ULg

PHYS0975-1 *Introduction to soft matter and complex systems* -
Nicolas VANDEWALLE B1 Q1 30 - - 4

CHIM9217-1 *Application of nanotechnology to develop new medicine* - B1 10 - - 1

VRARD, Géraldine PIEL

MECA0008-1	<i>Microfluidics</i> (english language) - Tristan GILET - [16h Labo., 14h Proj.]	B1	Q1	22	8	[+]	5
PHYS3023-1	<i>Physics of magnetic materials</i> (english language) - Eric BOUSQUET	B1	Q1	20	10	-	4
CHIM0654-1	<i>Molecular devices and molecular machines</i> - AnneSophie DUWEZ	B1	Q2	15	-	-	2
ELEN0038-1	<i>Microsystems</i> (english language) - Michael KRAFT - [20h Labo., 40h Proj.]	B1	Q2	30	5	[+]	5
CHIM9233-1	<i>Molecular logic</i> (english language) - Françoise REMACLE	B1	Q1	15	-	-	2
CHIM0433-1	<i>Proteomics</i> - Marianne FILLET, Pierre LEPRINCE, Gabriel MAZZUCHELLI	B1	Q2	20	10	-	3
CHIM9216-1	<i>The contribution of electrochemistry to macromolecular chemistry</i> - Christine JÉRÔME	B1	Q2	10	-	-	1
BIOC0720-1	<i>Structure of biological macromolecules</i> - Paulette CHARLIER - [5h Mon. WS]	B1	Q1	15	20	[+]	4
CHIM0637-3	<i>Chemistry of materials, Inorganic materials</i> (english language) - Bénédicte VERTRUYEN	B1	Q1	20	-	-	2

Courses organised at the UMons

HULG0453-1	<i>Nanotechnology of the controlled-release formulations</i> - N...	B1	Q2	15	-	-	2
HULG2089-1	<i>Introduction to Nanotechnology</i> - Michel WAUTELET	B1	Q1	15	-	-	2

Course organised at the UNamur

HULG2084-1	<i>Interactions intermoléculaires</i> - N...	B1		15	-	-	3
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