One-year master program (60 ECTS)

Access conditions to the Master 60 (http://www.ulg.ac.be/cms/c_46181/master-en-sciences-informatiques)

Compulsory courses

INFO0085-1	*Compilers* - Pierre GEURTS	30	30	-	**6**
INFO0031-1	*Computer network architectures and multimedia* (english language) - Guy LEDUC	30	30	-	**6**
INFO0051-1	*Artificial Intelligence Logics* - Pascal GRIBOMONT	30	30	-	**6**
INFO0063-1	*Object-Oriented Software Engineering* - Bernard BOIGELOT	30	30	-	**6**
INFO0016-1	*Introduction to the theory of computation* (english language) - Pierre WOLPER	30	30	-	**6**
ATFE0003-1	*Final work* - COLLÉGIALITÉ	-	-	-	**18**

Optional courses

[...]	With the agreement of the Jury, students choose 12 credits from the list of courses from the 1st year of Master in Computing Sciences in 2 years (120 credits), except from the training.

Programme for students who have passed the preparatory year for the Masters in Computer Science

Compulsory courses

INFO0085-1	*Compilers* - Pierre GEURTS	30	30	-	**6**
INFO0031-1	*Computer network architectures and multimedia* (english language) - Guy LEDUC	30	30	-	**6**
INFO0051-1	*Artificial Intelligence Logics* - Pascal GRIBOMONT	30	30	-	**6**
INFO0063-1	*Object-Oriented Software Engineering* - Bernard BOIGELOT	30	30	-	**6**
INFO0016-1	*Introduction to the theory of computation* (english language) - Pierre WOLPER	30	30	-	**6**
MATH0006-2	*Introduction to numerical analysis* - Quentin LOUVEAUX	25	15	-	**4**
INFO0039-2	*Object-Oriented Programming Project, I* - Pierre WOLPER	-	90	-	**8**
ATFE0003-1	*Final work* - COLLÉGIALITÉ	-	-	-	**18**

Programme for students holding a master's degree in Mathematics, professional focus in computer

Compulsory courses

DROI0101-1	*Computer Law Contracts* - Benoît KOHL	30	-	-	**3**
INFO0012-1	*Computation structures* (english language) - Pierre WOLPER	30	30	-	**6**
ELEN0040-1	*Digital Electronics* - Jacques DESTINÉ	30	30	-	**6**
INFO0027-2	*Programming techniques* - Laurent MATHY	30	30	-	**6**
INFO0010-1	*Introduction to computer networking* (english language) - Guy LEDUC	30	30	-	**6**
INFO0039-2	*Object-Oriented Programming Project, I* - Pierre WOLPER	-	90	-	**9**
INFO0063-1	*Object-Oriented Software Engineering* - Bernard BOIGELOT	30	30	-	**6**
ATFE0003-1	*Final work* - COLLÉGIALITÉ	-	-	-	**18**

Students who have already followed one or several compulsory course(s) from the Master in Mathematics have to replace it (them) by one or several course(s) from the following to reach 60 ECTS :

Optional courses

MATH0462-1	*Discrete optimization* - Quentin LOUVEAUX	30	30	-	**6**
SYST0002-1	*Linear systems* - Rodolphe SEPULCHRE	30	30	-	**6**
INFO0085-1	*Compilers* - Pierre GEURTS	30	30	-	**6**
INFO0049-1	*Knowledge Representation* - Pascal GRIBOMONT	30	30	-	**6**

With the approval of the president of the jury, students can also choose up to 12 ECTS from the list of courses from the Master in Computing Sciences in 2 years.

Two-Year Master Program (120 ECTS)

Access conditions to the Master 120 (http://www.ulg.ac.be/cms/c_46181/master-en-sciences-informatiques)

First Year

Compulsory courses

INFO0085-1	*Compilers* - Pierre GEURTS	30	30	-	**6**
INFO0031-1	*Computer network architectures and multimedia* (english language) - Guy LEDUC	30	30	-	**6**
INFO0051-1	*Artificial Intelligence Logics* - Pascal GRIBOMONT	30	30	-	**6**
INFO0063-1	*Object-Oriented Software Engineering* - Bernard BOIGELOT	30	30	-	**6**
INFO0016-1	*Introduction to the theory of computation* (english language) - Pierre WOLPER	30	30	-	**6**

Optional courses

Students choose 30 credits from the list of option courses below :

INFO0065-1	*Seminar on Intrusion Systems* - Marc DACIER	10	50	-	**6**
INFO0049-1	*Knowledge Representation* - Pascal GRIBOMONT	30	30	-	**6**
INFO0056-1	*Managing and securing computer networks* (english language) - Guy LEDUC	30	30	-	**6**
ELEN0016-1	*Digital Image Processing* - Marc VAN DROOGENBROECK	30	30	-	**6**
INFO0026-3	*Computer Graphics* - Eric BÉCHET	30	30	-	**6**
INFO0004-1	*Object-oriented programming project* - Laurent MATHY	10	30	-	**3**
ELEN0061-2	*Introduction to Stochastic Processes* - Louis WEHENKEL	15	15	-	**3**
INFO0939-1	*High performance scientific computing* (english language) - Christophe GEUZAINE	30	30	-	**6**
ASTG0021-1	*Internship* - COLLÉGIALITÉ	-	-	-	**12**

Second year

Compulsory courses

ATFE0002-1	*Final Work (including an introduction to methodology and research)* - COLLÉGIALITÉ	-	-	-	**24**

Optional courses

[...]	Choose 6 credits in the University's programme of courses; this choice must have the approval of the cycle's Jury president

Choose one of the following focus :

Research Focus

Compulsory courses

MATH0462-1	*Discrete optimization* - Quentin LOUVEAUX	30	30	-	**6**
INFO0064-1	*Embedded Systems* - Bernard BOIGELOT	30	30	-	**6**
ELEN0062-1	*Applied Inductive Learning* - Pierre GEURTS, Louis WEHENKEL	30	30	-	**6**

Optional courses

Choose courses totalling 12 ECTS from the following :

ELEN0070-1	*Signal Processing* - Jacques VERLY	30	30	-	**6**
GBIO0009-1	*Bioinformatics* (english language) - Kristel VAN STEEN	30	30	-	**6**
INFO0050-1	*Constrained programming* - Pascal GRIBOMONT	30	30	-	**6**
INFO0060-1	*Concurrent System Verification and Temporal Logic* - Bernard BOIGELOT, Pascal GRIBOMONT, Pierre WOLPER	30	30	-	**6**
INFO0939-1	*High performance scientific computing* (english language) - Christophe GEUZAINE	30	30	-	**6**
MATH0017-4	*Mathematical Logic and Set Theory* - Georges HANSOUL	30	30	-	**6**
MATH0024-1	*Further Study of Digital Analysis (Equations with Partial Derivatives)* - Jean-André ESSERS	30	30	-	**6**
MATH0234-3	*Boolean Topology and Boolean Algebra* - Georges HANSOUL	30	30	-	**6**
MATH0245-3	*Discrete structures (Compléments)* - Michel RIGO	30	30	-	**6**
MATH0461-1	*Introduction to numerical optimization* (english language) - Quentin LOUVEAUX	30	30	-	**6**
INFO0027-2	*Programming techniques* - Laurent MATHY	30	30	-	**6**
ELEN0019-1	*Treatment of the audio signals : principles and experiments* - Jean-Jacques EMBRECHTS	30	30	-	**6**
ELEN0002-1	*Introduction to Audio and Video Techniques* - Jean-Jacques EMBRECHTS	30	30	-	**6**
INFO2046-1	*Computational Geometry* - Eric BÉCHET	30	30	-	**6**

Professional focus in management

Compulsory courses

GEST3001-1	*People management and organisation* - Jocelyne ROBERT	24	24	-	**4**
GEST3002-1	*Human Resources* - Jocelyne ROBERT	24	-	-	**2**
GEST3003-1	*Competitive strategy in the marketplace* (english language) - Michael GHILISSEN	16	16	-	**3**
GEST3004-1	*Marketing (operations and management)* (english language) - Michael GHILISSEN	16	16	-	**3**
GEST3005-2	*Accountancy and Finance* - Jacques BERWART	24	24	-	**4**
GEST3006-1	*Operations and supply chain management I* - Yasemin ARDA	16	16	-	**3**
GSTG3001-1	*Business plan* - COLLÉGIALITÉ	-	30	-	**4**
GSTG3002-1	*Functional analysis of a company* - COLLÉGIALITÉ - [30h Internship]	-	-	[+]	**4**

Optional courses

Choose one of the following courses :

GEST3010-1	*Operations and supply chain management II* - Sabine LIMBOURG	16	16	-	**3**
GEST3011-2	*ICT for Business* - Alain DUBOIS	16	16	-	**3**
GEST3012-1	*Financial and actuarial modelling* - Louis ESCH	16	16	-	**3**

Adjusted programme for students who passed the preparatory year for the Masters in Computer Science

First Year

Compulsory courses

INFO0085-1	*Compilers* - Pierre GEURTS	30	30	-	**6**
INFO0031-1	*Computer network architectures and multimedia* (english language) - Guy LEDUC	30	30	-	**6**
INFO0051-1	*Artificial Intelligence Logics* - Pascal GRIBOMONT	30	30	-	**6**
INFO0063-1	*Object-Oriented Software Engineering* - Bernard BOIGELOT	30	30	-	**6**
INFO0016-1	*Introduction to the theory of computation* (english language) - Pierre WOLPER	30	30	-	**6**
MATH0006-2	*Introduction to numerical analysis* - Quentin LOUVEAUX	25	15	-	**4**
INFO0039-2	*Object-Oriented Programming Project, I* - Pierre WOLPER	-	90	-	**8**

Optional courses

[...]	Students choose 18 credits from the optional courses list of the first year in the two year Computer Sciences Masters.

Second year

The programme is identical to that of the 2nd year in the Masters in Computer Sciences in two years.