

Two years programme (120 crédits)

First year

Compulsory Courses

INFO0085-1	<i>Compilers</i> - Pierre GEURTS - [75h Proj.]	Q2	25	-	[+]	5
INFO0051-1	<i>Logic</i> (english language) - Pascal GRIBOMONT - [10h Proj.]	Q1	30	25	[+]	6
INFO0016-1	<i>Introduction to the theory of computation</i> (english language) - Pierre WOLPER	Q1	30	30	-	5
MATH0462-1	<i>Discrete optimization</i> (english language) - Quentin LOUVEAUX - [25h Proj.]	Q1	30	20	[+]	5
MATH1222-2	<i>Introduction to stochastic processes, Markov chains</i> - Pierre GEURTS, Yvik SWAN	Q2	20	10	-	4
GEST3162-1	<i>Introduction to company management</i> (english language) - Michael GHILISSEN, François PICHAULT, Thierry PIRONET, Didier VAN CAILLIE	Q2	25	25	-	5
PROJ0010-1	<i>Integrated software project, including fundamentals in project management</i> (english language) - JeanLouis BINOT, Bernard BOIGELOT, Benoît DONNET, Guy LEDUC, Laurent MATHY - [290h Proj.]	TA	10	-	[+]	10

Optional courses

Students will choose one of the options below and will carry it on during the second year.

"Computer systems and networks" option

Compulsory courses

INFO0031-1	<i>Computer network architectures and multimedia</i> (english language) - Guy LEDUC - [6h Labo., 25h Proj.]	Q1	35	-	[+]	5
INFO0045-3	<i>Introduction to computer security</i> (english language) - Benoît DONNET - [8h Labo., 30h Proj.]	Q2	30	10	[+]	5

Students will choose 10 credits in the following list :

INFO0064-3	<i>Embedded systems</i> (english language) - Bernard BOIGELOT - [60h Proj.]	Q1	30	30	[+]	5
INFO0941-1	<i>Network measurement and monitoring</i> (english language) - Benoît DONNET - [60h Proj.]	Q2	20	-	[+]	5
INFO2051-1	<i>Object-oriented programming on mobile devices</i> (english language) - Laurent MATHY - [90h Proj.]	Q2	15	10	[+]	5
INFO0056-1	<i>Managing and securing computer networks</i> (english language) - Guy LEDUC - [12h Labo., 55h Proj.]	Q2	30	-	[+]	5
ELEN0062-1	<i>Applied Inductive Learning</i> (english language) - Pierre GEURTS, Louis WEHENKEL - [40h Proj.]	Q1	30	5	[+]	5
ELEN0002-2	<i>Introduction to audio and video techniques</i> (english language) - JeanJacques EMBRECHTS - [6h Labo.]	Q1	30	20	[+]	5

"Intelligent Systems" option

ELEN0062-1	<i>Applied Inductive Learning</i> (english language) - Pierre GEURTS, Louis WEHENKEL - [40h Proj.]	Q1	30	5	[+]	5
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Optional courses

Students will choose 15 credits in the following list :

INFO0064-3	<i>Embedded systems</i> (english language) - Bernard BOIGELOT - [60h Proj.]	Q1	30	30	[+]	5
ELEN0016-2	<i>Digital image and video processing</i> (english language) - Marc VAN DROOGENBROECK - [20h Proj.]	Q1	30	10	[+]	5
INFO0948-2	<i>Introduction to intelligent robotics</i> (english language) - Renaud DETRY - [80h Proj.]	Q2	30	4	[+]	5
INFO0049-1	<i>Knowledge representation</i> (english language) - Pascal GRIBOMONT - [50h Proj.]	Q2	30	25	[+]	5

INFO2049-1	<i>Web and Text Analytics</i> (english language) - Ashwin ITTOO - [90h Proj.]	Q2	15	5	[+]	5
INFO2046-2	<i>Computational geometry</i> (english language) - Eric BÉCHET - [90h Proj.]	TA	30	-	[+]	5
INFO0939-1	<i>High performance scientific computing</i> (english language) - Christophe GEUZAINÉ - [20h Proj.]	Q1	30	15	[+]	5

Second year

Compulsory Courses

ATFE0002-1	<i>Master thesis</i> - COLLÉGIALITÉ - [750h Proj.]	TA	-	-	[+]	25
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Optional courses

[...] With the agreement of the jury, students may choose 5 credits in any course programme of the University

Choose a focus among :

Research focus

Compulsory Courses

MATH0462-1	<i>Discrete optimization</i> (english language) - Quentin LOUVEAUX - [25h Proj.]	Q1	30	20	[+]	5
INFO0064-3	<i>Embedded systems</i> (english language) - Bernard BOIGELOT - [60h Proj.]	Q1	30	30	[+]	5
ELEN0062-1	<i>Applied Inductive Learning</i> (english language) - Pierre GEURTS, Louis WEHENKEL - [40h Proj.]	Q1	30	5	[+]	5

Optional courses

Students choose 15 credits in the following list :

GBIO0009-1	<i>Bioinformatics</i> (english language) - Kristel VAN STEEN	Q1	30	30	-	5
INFO0050-1	<i>Constraint programming</i> (english language) - Pascal GRIBOMONT - [80h Proj.]	Q1	15	10	[+]	5
INFO0060-1	<i>Concurrent system verification and temporal logic</i> (english language) - Bernard BOIGELOT, Pascal GRIBOMONT, Pierre WOLPER - [20h Proj.]	Q2	30	10	[+]	5
MATH0461-2	<i>Introduction to numerical optimization</i> (english language) - Quentin LOUVEAUX - [25h Proj.]	Q2	30	20	[+]	5
INFO2046-2	<i>Computational geometry</i> (english language) - Eric BÉCHET - [90h Proj.]	TA	30	-	[+]	5
ELEN0019-2	<i>Audio signal processing : principles and experiments</i> (english language) - JeanJacques EMBRECHTS - [24h Labo., 30h Proj.]	Q1	5	-	[+]	5
ELEN0002-2	<i>Introduction to audio and video techniques</i> (english language) - JeanJacques EMBRECHTS - [6h Labo.]	Q1	30	20	[+]	5
INFO0948-2	<i>Introduction to intelligent robotics</i> (english language) - Renaud DETRY - [80h Proj.]	Q2	30	4	[+]	5
INFO2051-1	<i>Object-oriented programming on mobile devices</i> (english language) - Laurent MATHY - [90h Proj.]	Q2	15	10	[+]	5
INFO0026-3	<i>Computer graphics</i> (english language) - Eric BÉCHET - [45h Proj.]	Q2	30	30	[+]	5
INFO2049-1	<i>Web and Text Analytics</i> (english language) - Ashwin ITTOO - [90h Proj.]	Q2	15	5	[+]	5
ASTG0021-1	<i>Entreprise Internship</i> (english language) - Guy LEDUC - [300h Proj.]	TA	-	-	[+]	10
ASTG9005-1	<i>Research Internship</i> (english language) - Guy LEDUC - [300h Proj.]	TA	-	-	[+]	10
PROJ0011-1	<i>Personal student project</i> (english language) - COLLÉGIALITÉ - [150h Proj.]	TA	-	-	[+]	5

Management focus

Notice : The specialisation in management will be taught for the last time in 2014-2015.

Compulsory courses

GEST3001-1	<i>People management and organisation</i> - Jocelyne ROBERT	Q1	24	24	-	4
GEST3002-1	<i>Human Resources</i> - Jocelyne ROBERT	Q1	24	-	-	2
GEST3003-1	<i>Competitive strategy in the marketplace</i> (english language) - Michael GHILISSEN	Q1	16	16	-	3

GEST3004-1	<i>Marketing (operations and management)</i> (english language) - Michael GHILISSEN	Q1	16	16	-	3
GEST3005-2	<i>Accountancy and Finance</i> - Jacques BERWART		24	24	-	4
GEST3006-1	<i>Operations and supply chain management I</i> (english language) - Yasemin ARDA	Q1	16	16	-	3
GSTG3001-1	<i>Business plan</i> - COLLÉGIALITÉ		-	30	-	4
GSTG3002-1	<i>Functional analysis of a company</i> - COLLÉGIALITÉ - [30h Internship]		-	-	[+]	4

Optional courses

Choose one of the following courses :

GEST3010-1	<i>Operations and supply chain management II</i> - Sabine LIMBOURG	Q1	16	16	-	3
GEST3011-2	<i>ICT for Business</i> - Alain DUBOIS	Q1	16	16	-	3
GEST3012-1	<i>Financial and actuarial modelling</i> - Louis ESCH	Q1	16	16	-	3

Adjusted programme for students who passed the preparatory year for the Master of science in Computer Science

First year

Compulsory Courses

INFO0085-1	<i>Compilers</i> - Pierre GEURTS - [75h Proj.]	Q2	25	-	[+]	5
INFO0051-1	<i>Logic</i> (english language) - Pascal GRIBOMONT - [10h Proj.]	Q1	30	25	[+]	5
INFO0063-1	<i>Object-oriented software engineering</i> (english language) - Bernard BOIGELOT - [30h Proj.]	Q1	30	24	[+]	5
INFO0016-1	<i>Introduction to the theory of computation</i> (english language) - Pierre WOLPER	Q1	30	30	-	5
MATH0500-1	<i>Introduction to numerical algorithmic</i> - Quentin LOUVEAUX - [6h Labo., 45h Proj.]	Q1	24	14	[+]	5
MATH0462-1	<i>Discrete optimization</i> (english language) - Quentin LOUVEAUX - [25h Proj.]	Q1	30	20	[+]	5
GEST3162-1	<i>Introduction to company management</i> (english language) - Michael GHILISSEN, François PICHault, Thierry PIRONET, Didier VAN CAILLIE	Q2	25	25	-	5
PROJ0010-1	<i>Integrated software project, including fundamentals in project management</i> (english language) - JeanLouis BINOT, Bernard BOIGELOT, Benoît DONNET, Guy LEDUC, Laurent MATHY - [290h Proj.]	TA	10	-	[+]	10

Optional courses

Students will choose one of the orientations below and will carry it on during the second year.

"Computer systems and networks" option

INFO0031-1	<i>Computer network architectures and multimedia</i> (english language) - Guy LEDUC - [6h Labo., 25h Proj.]	Q1	35	-	[+]	5
INFO0045-3	<i>Introduction to computer security</i> (english language) - Benoît DONNET - [8h Labo., 30h Proj.]	Q2	30	10	[+]	5

Students will choose 5 credits in the following list :

INFO0064-3	<i>Embedded systems</i> (english language) - Bernard BOIGELOT - [60h Proj.]	Q1	30	30	[+]	5
INFO0941-1	<i>Network measurement and monitoring</i> (english language) - Benoît DONNET - [60h Proj.]	Q2	20	-	[+]	5
INFO2051-1	<i>Object-oriented programming on mobile devices</i> (english language) - Laurent MATHY - [90h Proj.]	Q2	15	10	[+]	5
INFO0056-1	<i>Managing and securing computer networks</i> (english language) - Guy LEDUC - [12h Labo., 55h Proj.]	Q2	30	-	[+]	5
ELEN0062-1	<i>Applied Inductive Learning</i> (english language) - Pierre GEURTS, Louis WEHENKEL - [40h Proj.]	Q1	30	5	[+]	5
ELEN0002-2	<i>Introduction to audio and video techniques</i> (english language) - JeanJacques EMBRECHTS - [6h Labo.]	Q1	30	20	[+]	5

"Intelligent Systems" option

ELEN0062-1	<i>Applied Inductive Learning</i> (english language) - Pierre GEURTS, Louis WEHENKEL - [40h Proj.]	Q1	30	5	[+]	5
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Students will choose 10 credits in the following list :

INFO0064-3	<i>Embedded systems</i> (english language) - Bernard BOIGELOT - [60h Proj.]	Q1	30	30	[+]	5
ELEN0016-2	<i>Digital image and video processing</i> (english language) - Marc VAN DROOGENBROECK - [20h Proj.]	Q1	30	10	[+]	5
INFO0948-2	<i>Introduction to intelligent robotics</i> (english language) - Renaud DETRY - [80h Proj.]	Q2	30	4	[+]	5
INFO0049-1	<i>Knowledge representation</i> (english language) - Pascal GRIBOMONT - [50h Proj.]	Q2	30	25	[+]	5
INFO2046-2	<i>Computational geometry</i> (english language) - Eric BÉCHET - [90h Proj.]	TA	30	-	[+]	5
INFO0939-1	<i>High performance scientific computing</i> (english language) - Christophe GEUZAINÉ - [20h Proj.]	Q1	30	15	[+]	5

Second year

The programme is identical to the programme of the second year of the master in computer science.

One-year master program (60 ECTS)

Compulsory Courses

Notice : the master in computer science in one year is given in English.

INFO0085-1	<i>Compilers</i> - Pierre GEURTS - [75h Proj.]	Q2	25	-	[+]	5
INFO0031-1	<i>Computer network architectures and multimedia</i> (english language) - Guy LEDUC - [6h Labo., 25h Proj.]	Q1	35	-	[+]	5
INFO0051-1	<i>Logic</i> (english language) - Pascal GRIBOMONT - [10h Proj.]	Q1	30	25	[+]	5
INFO0016-1	<i>Introduction to the theory of computation</i> (english language) - Pierre WOLPER	Q1	30	30	-	5
INFO0045-3	<i>Introduction to computer security</i> (english language) - Benoît DONNET - [8h Labo., 30h Proj.]	Q2	30	10	[+]	5
ATFE0003-1	<i>Master thesis</i> (english language) - COLLÉGIALITÉ - [750h Proj.]	TA	-	-	[+]	25

Optional courses

With the agreement of the Jury, students choose 10 credits (with the exception of the internship) in :

[...] the programme of the Two-year Master in science in Computer science.

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

Compulsory Courses

DROI0101-1	<i>Computer Law Contracts</i> - Benoît KOHL	Q1	30	-	-	3
INFO0012-2	<i>Computation structures</i> (english language) - Pierre WOLPER - [40h Proj.]	Q1	30	25	[+]	6
ELEN0040-1	<i>Digital Electronics</i> - Michael KRAFT - Suppl : Patricia ROUSSEAUX	Q2	30	30	-	6
INFO0027-2	<i>Programming techniques</i> (english language) - Laurent MATHY - [70h Proj.]	Q2	30	24	[+]	6
INFO0010-4	<i>Introduction to computer networking</i> (english language) - Guy LEDUC - [40h Proj.]	Q2	35	15	[+]	6
INFO0063-1	<i>Object-oriented software engineering</i> (english language) - Bernard BOIGELOT - [30h Proj.]	Q1	30	24	[+]	6
ATFE0003-2	<i>Master thesis</i> (english language) - COLLÉGIALITÉ - [630h Proj.]	TA	-	-	[+]	21

Students who have already followed one or several compulsory course(s) have to replace it (them) by one of several

course(s) from the following to reach 60 ECTS :

Optional courses

MATH0462-1	<i>Discrete optimization</i> (english language) - Quentin LOUVEAUX - [25h Proj.]	Q1	30	20	[+]	6
SYST0002-2	<i>Modelling and analysis of systems</i> - Rodolphe SEPULCHRE - Suppl : Erik QUAEGHEBEUR - [15h Proj.]	Q1	30	30	[+]	6
INFO0085-1	<i>Compilers</i> - Pierre GEURTS - [75h Proj.]	Q2	25	-	[+]	6
INFO0049-1	<i>Knowledge representation</i> (english language) - Pascal GRIBOMONT - [50h Proj.]	Q2	30	25	[+]	6
INFO0940-1	<i>Operating systems</i> (english language) - Laurent MATHY - [80h Proj.]	Q2	30	6	[+]	6

With the agreement of the jury, students can also choose up to 12 credits in the programme of the Two-year Master in science in Computer Science.