

Vue bloc du programme des cours

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Bloc 1

Depending on your track record or your professional/research focus, some prerequisites/corequisites of your first year program might appear in bloc 2. You are therefore invited to go through the list of courses suggested in bloc 2 even if you enroll for the first time in this master program.

Compulsory courses

INFO0085-1	<i>Compilers</i> (anglais) - Pierre GEURTS - [75h Proj.]	Q2	25	-	[+]	5
	Corequis : INFO0016-1 - Introduction to the theory of computation INFO2050-1 - Programmation avancée INFO0012-2 - Computation structures INFO0940-1 - Operating systems					
INFO0051-1	<i>Logic</i> (anglais) - Pascal GRIBOMONT - [10h Proj.]	Q1	30	25	[+]	5
INFO0016-1	<i>Introduction to the theory of computation</i> (anglais) - Pierre WOLPER	Q1	30	30	-	5
MATH0462-1	<i>Discrete optimization</i> (anglais) - Quentin LOUVEAUX - [25h Proj.]	Q1	30	20	[+]	5
	Corequis : MATH0500-1 - Introduction à l'algorithmique numérique					
PROJ0010-1	<i>Integrated software project, including fundamentals in project management</i> (anglais) - JeanLouis BINOT, Bernard BOIGELOT, Benoît DONNET, Guy LEDUC, Laurent MATHY - [290h Proj.]	TA	10	-	[+]	10
	Corequis : INFO0010-4 - Introduction to computer networking INFO0063-1 - Object-oriented software engineering					

Optional courses

Choose one focus among the three below

Professional focus on "Computer systems and networks"

Students choosing this focus shall select, in addition to 10 credits of compulsory courses, 50 credits of elective courses inside or outside the focus. However, for his/her whole master program (block 1 and block 2), a total of 20 credits of options must be taken inside the focus. The regulation allows students to choose elective courses during the block of their choice, in accordance with the prerequisites and co-requisites. Students must also be attentive to schedule constraints.

Compulsory courses

INFO0031-1	<i>Computer network architectures and multimedia</i> (anglais) - Guy LEDUC - [10h Labo., 25h Proj.]	Q1	35	-	[+]	5
	Corequis : INFO0010-4 - Introduction to computer networking					
INFO0045-3	<i>Introduction to computer security</i> (anglais) - Benoît DONNET - [8h Labo., 30h Proj.]	Q2	30	10	[+]	5

Choose 20 credits in the following list :

INFO0064-2	<i>Embedded systems</i> (anglais) - Bernard BOIGELOT	Q1	25	20	-	3
INFO2055-1	<i>Embedded systems project</i> (anglais) - Bernard BOIGELOT - [60h Proj.]	Q2	-	-	[+]	2
	Corequis : INFO0064-2 - Embedded systems					
INFO0941-1	<i>Network measurement and monitoring</i> (anglais) - Benoît DONNET - [60h Proj.]	Q2	20	-	[+]	5
	Corequis : INFO0031-1 - Computer network architectures and multimedia					
INFO2051-1	<i>Object-oriented programming on mobile devices</i> (anglais) -	Q2	15	10	[+]	5

MATHY - [90h Proj.]

INFO0056-1	<i>Managing and securing computer networks</i> (anglais) - Guy LEDUC - [12h Labo., 55h Proj.] Corequis : INFO0045-3 - Introduction to computer security	Q2	30	-	[+]	5
ELEN0002-2	<i>Introduction to audio and video techniques</i> (anglais) - JeanJacques EMBRECHTS - [8h Labo.]	Q1	30	22	[+]	5
INFO0939-1	<i>High performance scientific computing</i> (anglais) - Christophe GEUZAIN - [20h Proj.]	Q1	30	15	[+]	5

Professional focus on "Intelligent Systems"

Students choosing this focus shall select, in addition to 5 credits of compulsory courses, 55 credits of elective courses inside or outside the focus. However, for his/her whole master program (block 1 and block 2), a total of 25 credits of options must be taken inside the focus. The regulation allows students to choose elective courses during the block of their choice, in accordance with the prerequisites and co-requisites. Students must also be attentive to schedule constraints.

Compulsory courses

ELEN0062-1	<i>Introduction to machine learning</i> (anglais) - Pierre GEURTS, Louis WEHENKEL - [40h Proj.] Corequis : MATH0462-1 - Discrete optimization	Q1	30	5	[+]	5
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Choose 25 credits in the following list :

ELEN0016-2	<i>Computer vision</i> (anglais) - Marc VAN DROOGENBROECK - [50h Proj.]	Q1	30	10	[+]	5
INFO0948-2	<i>Introduction to intelligent robotics</i> (anglais) - Renaud DETRY, Louis WEHENKEL - [80h Proj.] Corequis : ELEN0062-1 - Introduction to machine learning ELEN0016-2 - Computer vision	Q2	30	4	[+]	5
INFO0049-1	<i>Knowledge representation</i> (anglais) - Pascal GRIBOMONT - [50h Proj.] Corequis : INFO0051-1 - Logic	Q2	30	25	[+]	5
INFO2049-1	<i>Web and Text Analytics</i> (anglais) - Ashwin ITTOO Corequis : ELEN0062-1 - Introduction to machine learning	Q1	30	-	-	5
INFO2046-2	<i>Computational geometry</i> (anglais) - Eric BÉCHET - [95h Proj.]	Q1	25	-	[+]	5
GBIO0002-1	<i>Genetics and bioinformatics</i> (anglais) - Franck DEQUIEDT, Kristel VAN STEEN - [15h Proj.]	Q1	30	15	[+]	5

Professional focus on "Management"

Students choosing this focus shall select, in addition to 27 credits of compulsory courses, 38 credits of elective courses inside or outside the focus. One of the 3 language courses belonging to the focus must necessarily be chosen as an option in either block 1 or block 2, for 3 credits. The regulation allows students to choose elective courses during the block of their choice, in accordance with the prerequisites and co-requisites. Students must also be attentive to schedule constraints.

FINA0001-1	<i>Analyse des états financiers et financement de l'entreprise</i> - Jacques BERWART	Q2	45	-	-	5
ECON2259-1	<i>Microéconomie et économie industrielle</i> - Axel GAUTIER, Bernard THIRY	Q2	40	15	-	5
LOGI0010-1	<i>Supply Chain Management</i> (anglais) - Yasemin ARDA	Q2	45	-	-	5
ERAS0011-1	<i>Business Simulation</i> (anglais) - Anne CHANTEUX - [50h TD]	Q1	-	-	[+]	2

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GRHO0001-4	<i>Gestion stratégique des ressources humaines</i> - François PICHULT - Suppl : Frédéric NAEDENOEN	Q1	45	-	-	5
DROI0174-2	<i>Droit commercial</i> - Frédéric DAERDEN, Laurent STAS DE RICHELLE	Q2	45	-	-	5
Choose one of the three following courses :						
LANG1936-1	<i>Néerlandais élémentaire 1</i> - Doris DE LAET	TA	30	-	-	3
LANG1933-1	<i>Allemand élémentaire 1</i> - Marie MAWHIN	Q2	30	-	-	3
LANG1934-1	<i>Espagnol élémentaire 1</i> - Alexis ALVAREZ BARBOSA	Q2	30	-	-	3

Research focus

À destination des étudiants qui ont suivi cette finalité en 2015-2016.

Bloc 2

Depending on your track record or your professional/research focus, some prerequisites/corequisites of your first year program might appear in bloc 2. You are therefore invited to go through the list of courses suggested in bloc 2 even if you enroll for the first time in this master program.

Compulsory courses

ATFE0002-1	<i>Master thesis</i> (anglais) - COLLÉGIALITÉ, Laurent MATHY - [750h Proj.]	TA	-	-	[+]	25
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Optional courses

Choose remaining credits in the lists below :

The following courses are corequisite to some compulsory courses of the master program. They must be taken as a priority, unless they were already taken as part of the bachelor in computer science, or unless the corresponding knowledge and skills have been acquired previously (Are involved in these courses bachelors in "Informatique de gestion" and "Informatique et systèmes who must take these courses during the block 1").

MATH0500-1	<i>Introduction à l'algorithmique numérique</i> - Quentin LOUVEAUX - [6h Labo., 45h Proj.]	Q1	24	14	[+]	5
INFO2050-1	<i>Programmation avancée</i> - Pierre GEURTS - [40h Proj.]	Q1	25	20	[+]	5
INFO0010-4	<i>Introduction to computer networking</i> (anglais) - Guy LEDUC - [12h Labo., 40h Proj.]	Q2	35	2	[+]	5
INFO0012-2	<i>Computation structures</i> (anglais) - Pierre WOLPER - [40h Proj.]	Q1	30	25	[+]	5
INFO0940-1	<i>Operating systems</i> (anglais) - Laurent MATHY - [80h Proj.]	Q2	30	6	[+]	5
INFO0063-1	<i>Object-oriented software engineering</i> (anglais) - Bernard BOIGELOT - [30h Proj.]	Q1	30	24	[+]	5

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

Computer systems and networks

INFO0031-1	<i>Computer network architectures and multimedia</i> (anglais) - Guy LEDUC - [10h Labo., 25h Proj.]	Q1	35	-	[+]	5
INFO0045-3	<i>Introduction to computer security</i> (anglais) - Benoît DONNET - [8h Labo., 30h Proj.]	Q2	30	10	[+]	5
INFO0941-1	<i>Network measurement and monitoring</i> (anglais) - Benoît DONNET - [60h Proj.]	Q2	20	-	[+]	5
Corequis :						
INFO0031-1 - Computer network architectures and multimedia						
INFO2051-1	<i>Object-oriented programming on mobile devices</i> (anglais) - Laurent MATHY - [90h Proj.]	Q2	15	10	[+]	5
INFO0056-1	<i>Managing and securing computer networks</i> (anglais) - Guy LEDUC - [12h Labo., 55h Proj.]	Q2	30	-	[+]	5
Corequis :						

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	INFO0045-3 - Introduction to computer security							
ELEN0002-2	<i>Introduction to audio and video techniques</i> (anglais) - JeanJacques EMBRECHTS - [8h Labo.]	Q1	30	22	[+]			5
INFO0939-1	<i>High performance scientific computing</i> (anglais) - Christophe GEUZAINÉ - [20h Proj.]	Q1	30	15	[+]			5
Intelligent Systems								
ELEN0062-1	<i>Introduction to machine learning</i> (anglais) - Pierre GEURTS, Louis WEHENKEL - [40h Proj.] Corequis : MATH0462-1 - Discrete optimization	Q1	30	5	[+]			5
ELEN0016-2	<i>Computer vision</i> (anglais) - Marc VAN DROOGENBROECK - [50h Proj.]	Q1	30	10	[+]			5
INFO0948-2	<i>Introduction to intelligent robotics</i> (anglais) - Renaud DETRY, Louis WEHENKEL - [80h Proj.] Corequis : ELEN0062-1 - Introduction to machine learning ELEN0016-2 - Computer vision	Q2	30	4	[+]			5
INFO0049-1	<i>Knowledge representation</i> (anglais) - Pascal GRIBOMONT - [50h Proj.] Corequis : INFO0051-1 - Logic	Q2	30	25	[+]			5
INFO2046-2	<i>Computational geometry</i> (anglais) - Eric BÉCHET - [95h Proj.]	Q1	25	-	[+]			5
INFO2049-1	<i>Web and Text Analytics</i> (anglais) - Ashwin ITTOO Corequis : ELEN0062-1 - Introduction to machine learning	Q1	30	-	-			5
GBIO0002-1	<i>Genetics and bioinformatics</i> (anglais) - Franck DEQUIEDT, Kristel VAN STEEN - [15h Proj.]	Q1	30	15	[+]			5
Other optional courses								
INFO0064-2	<i>Embedded systems</i> (anglais) - Bernard BOIGELOT	Q1	25	20	-			3
INFO2055-1	<i>Embedded systems project</i> (anglais) - Bernard BOIGELOT - [60h Proj.] Corequis : INFO0064-2 - Embedded systems	Q2	-	-	[+]			2
INFO0050-1	<i>Constraint programming projects</i> (anglais) - Pascal GRIBOMONT - [80h Proj.] Corequis : INFO0049-1 - Knowledge representation	TA	15	10	[+]			5
INFO0060-1	<i>Concurrent system verification and temporal logic</i> (anglais) - Bernard BOIGELOT, Pascal GRIBOMONT, Pierre WOLPER - [20h Proj.] Préquis : INFO0016-1 - Introduction to the theory of computation INFO0051-1 - Logic	Q2	30	10	[+]			5
INFO0026-3	<i>Computer graphics</i> (anglais) - Eric BÉCHET - [45h Proj.]	Q2	24	24	[+]			5
GBIO0009-1	<i>Topics in bioinformatics</i> (anglais) - Kristel VAN STEEN - [35h Proj.] Préquis : GBIO0002-1 - Genetics and bioinformatics	Q1	25	15	[+]			5
ELEN0019-2	<i>Audio signal processing : principles and experiments</i> (anglais) - JeanJacques EMBRECHTS - [24h Labo., 30h Proj.]	Q1	5	-	[+]			5
MATH0461-2	<i>Introduction to numerical optimization</i> (anglais) - Quentin LOUVEAUX - [25h Proj.]	Q1	30	20	[+]			5
GBIO0030-1	<i>Computational approaches to statistical genetics</i> (anglais) - Kristel VAN STEEN - [35h Proj.] Préquis : GBIO0002-1 - Genetics and bioinformatics	Q2	25	15	[+]			5

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GBIO0031-1	<i>Learning from genomic data</i> (anglais) - Kristel VAN STEEN - [150h Proj.]	Q2	-	-	[+]	5
	Prérequis : GBIO0002-1 - Genetics and bioinformatics					
INGE0012-1	<i>Scientific research in engineering and its impact on innovation</i> (anglais) - Rodolphe SEPULCHRE	Q2	30	30	-	5
Internships and projects (maximum 15 credits)						
ASTG9005-1	<i>Research Internship</i> (anglais) - Benoît DONNET - [300h Proj.]	TA	-	-	[+]	10
ASTG0021-1	<i>Technical company internship</i> (anglais) - Laurent MATHY - [300h Proj.]	TA	-	-	[+]	10
	<i>Remarque :</i> the two company internships are mutually exclusive					
PROJ0011-1	<i>Personal student project</i> (anglais) - Bernard BOIGELOT, COLLÉGIALITÉ - [150h Proj.]	TA	-	-	[+]	5

Bloc d'aménagement du programme de l'année

Crédits supplémentaires Master en sciences informatiques (pour les étudiants qui n'ont pas obtenu un Bachelier en sciences informatiques)

Students that are admitted to the "master 120" in Computer Science without having obtained a degree of bachelor in computer science (which includes bachelors in "Informatique de gestion" and "Informatique et Systèmes") must add to their programme the following list of courses, to be taken in the first year of the master.

Compulsory courses

MATH0499-1	<i>Théorie des graphes</i> - Michel RIGO	Q1	25	20	-	4
INFO0062-1	<i>Object-oriented programming</i> (anglais) - Bernard BOIGELOT - [20h Proj.]	Q2	30	24	[+]	5
INFO0054-1	<i>Programmation fonctionnelle</i> - Pascal GRIBOMONT - [15h Proj.]	Q2	30	25	[+]	5
MATH0491-1	<i>Mathématiques pour l'informatique</i> - Georges HANSOUL	Q1	25	25	-	5
INFO0058-1	<i>Introduction à la programmation récursive</i> - Pascal GRIBOMONT	Q1	15	15	-	3
INFO0027-2	<i>Programming techniques</i> (anglais) - Laurent MATHY - [70h Proj.]	Q2	30	24	[+]	5

Optional courses

Choose one of the courses below :

LANG0310-2	<i>Computing English</i> (anglais) - Christine FILOT, ISLV, Adnan VESSEUR	Q1	3	27	-	3
	<i>Remarque :</i> les étudiants qui réussiront le test d'entrée pourront remplacer LANG0310-2 par le cours plus avancé LANG0988-1 "Advanced English for ICT studies"					
LANG0988-1	<i>Advanced English for ICT studies</i> (anglais) - Christine FILOT, ISLV, Adnan VESSEUR	Q1	5	25	-	3