

Vue cycle du programme des cours

B1 Or Th Pr Au Cr

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 (B1 : 30Cr, B2 : 25Cr)

INFO0085-1	<i>Compilers</i> (anglais) - Pierre GEURTS - [75h Proj.] Corequis : INFO0016-1 - Introduction to the theory of computation INFO2050-1 - Programmation avancée INFO0012-2 - Computation structures INFO0940-1 - Operating systems	B1	Q2	25	-	[+]	5
INFO0051-1	<i>Logic</i> (anglais) - Pascal GRIBOMONT - [10h Proj.]	B1	Q1	30	25	[+]	5
INFO0016-1	<i>Introduction to the theory of computation</i> (anglais) - Pierre WOLPER	B1	Q1	30	30	-	5
MATH0462-1	<i>Discrete optimization</i> (anglais) - Quentin LOUVEAUX - [25h Proj.] Corequis : MATH0500-1 - Introduction à l'algorithmique numérique	B1	Q1	30	20	[+]	5
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.] Corequis : INFO0010-4 - Introduction to computer networking INFO0063-1 - Object-oriented software engineering	B1	TA	10	-	[+]	10
ATFE0002-1	<i>Master thesis</i> (anglais) - COLLÉGIALITÉ, Laurent MATHY - [750h Proj.]	B2	TA	-	-	[+]	25

Optional courses (B1 : 30Cr, B2 : 35Cr)

Choose one focus among the three below : (B1 : 30Cr)

Professional focus on "Computer systems and networks" (B1 : 30Cr)

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.] Corequis : INFO0010-4 - Introduction to computer networking	B1	Q1	35	-	[+]	5
INFO0045-3	<i>Introduction to computer security</i> (anglais) - Benoît DONNET - [8h Labo., 30h Proj.]	B1	Q2	30	10	[+]	5

Choose 20 credits in the following list : (B1 : 20Cr)

INFO0064-2	<i>Embedded systems</i> (anglais) - Bernard BOIGELOT	B1	Q1	25	20	-	3
INFO2055-1	<i>Embedded systems project</i> (anglais) - Bernard BOIGELOT - [60h Proj.] Corequis : INFO0064-2 - Embedded systems	B1	Q2	-	-	[+]	2
INFO0941-1	<i>Network measurement and monitoring</i> (anglais) - Benoît DONNET - [60h Proj.] Corequis : INFO0031-1 - Computer network architectures and multimedia	B1	Q2	20	-	[+]	5
INFO2051-1	<i>Object-oriented programming on mobile devices</i> (anglais) - Laurent MATHY - [90h Proj.]	B1	Q2	15	10	[+]	5

INFO0056-1	<i>Managing and securing computer networks</i> (anglais) - Guy LEDUC - [12h Labo., 55h Proj.]	B1	Q2	30	-	[+]	5
	Corequis : INFO0045-3 - Introduction to computer security						
ELEN0002-2	<i>Introduction to audio and video techniques</i> (anglais) - JeanJacques EMBRECHTS - [8h Labo.]	B1	Q1	30	22	[+]	5
INFO0939-1	<i>High performance scientific computing</i> (anglais) - Christophe GEUZAINÉ - [20h Proj.]	B1	Q1	30	15	[+]	5

Professional focus on "Intelligent Systems" (B1 : 30Cr)

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.]	B1	Q1	30	5	[+]	5
	Corequis : MATH0462-1 - Discrete optimization						

Choose 25 credits in the following list : (B1 : 25Cr)

ELEN0016-2	<i>Computer vision</i> (anglais) - Marc VAN DROOGENBROECK - [50h Proj.]	B1	Q1	30	10	[+]	5
INFO0948-2	<i>Introduction to intelligent robotics</i> (anglais) - Renaud DETRY, Louis WEHENKEL - [80h Proj.]	B1	Q2	30	4	[+]	5
	Corequis : ELEN0062-1 - Introduction to machine learning ELEN0016-2 - Computer vision						
INFO0049-1	<i>Knowledge representation</i> (anglais) - Pascal GRIBOMONT - [50h Proj.]	B1	Q2	30	25	[+]	5
	Corequis : INFO0051-1 - Logic						
INFO2049-1	<i>Web and Text Analytics</i> (anglais) - Ashwin ITTOO	B1	Q1	30	-	-	5
	Corequis : ELEN0062-1 - Introduction to machine learning						
INFO2046-2	<i>Computational geometry</i> (anglais) - Eric BÉCHET - [95h Proj.]	B1	Q1	25	-	[+]	5
GBIO0002-1	<i>Genetics and bioinformatics</i> (anglais) - Franck DEQUIEDT, Kristel VAN STEEN - [15h Proj.]	B1	Q1	30	15	[+]	5

Professional focus on "Management" (B1 : 30Cr)

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	B1	Q2	45	-	-	5
ECON2259-1	<i>Microéconomie et économie industrielle</i> - Axel GAUTIER, Bernard THIRY	B1	Q2	40	15	-	5
LOGI0010-1	<i>Supply Chain Management</i> (anglais) - Yasemin ARDA	B1	Q2	45	-	-	5
ERAS0011-1	<i>Business Simulation</i> (anglais) - Anne CHANTEUX - [50h TD]	B1	Q1	-	-	[+]	2
GRHO0001-4	<i>Gestion stratégique des ressources humaines</i> -	B1	Q1	45	-	-	5

Programme des cours 2016-2017

Faculté des Sciences Appliquées

Master en sciences informatiques, à finalité

ICHAULT - Suppl : Frédéric NAEDENOEN

DROI0174-2	<i>Droit commercial</i> - Frédéric DAERDEN, Laurent STAS DE RICHELLE	B1	Q2	45	-	-	5
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Choose one of the three following courses : (B1 : 3Cr)

LANG1936-1	<i>Néerlandais élémentaire 1</i> - Doris DE LAET	B1	TA	30	-	-	3
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LANG1933-1	<i>Allemand élémentaire 1</i> - Marie MAWHIN	B1	Q2	30	-	-	3
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LANG1934-1	<i>Espagnol élémentaire 1</i> - Alexis ALVAREZ BARBOSA	B1	Q2	30	-	-	3
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Research focus (B1 : 30Cr)

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

Choose remaining credits in the lists below (35Cr) : (B2 : 35Cr)

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.]	B2	Q1	24	14	[+]	5
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INFO2050-1	<i>Programmation avancée</i> - Pierre GEURTS - [40h Proj.]	B2	Q1	25	20	[+]	5
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INFO0010-4	<i>Introduction to computer networking</i> (anglais) - Guy LEDUC - [12h Labo., 40h Proj.]	B2	Q2	35	2	[+]	5
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INFO0012-2	<i>Computation structures</i> (anglais) - Pierre WOLPER - [40h Proj.]	B2	Q1	30	25	[+]	5
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INFO0940-1	<i>Operating systems</i> (anglais) - Laurent MATHY - [80h Proj.]	B2	Q2	30	6	[+]	5
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INFO0063-1	<i>Object-oriented software engineering</i> (anglais) - Bernard BOIGELOT - [30h Proj.]	B2	Q1	30	24	[+]	5
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[...] 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.]	B2	Q1	35	-	[+]	5
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INFO0045-3	<i>Introduction to computer security</i> (anglais) - Benoît DONNET - [8h Labo., 30h Proj.]	B2	Q2	30	10	[+]	5
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INFO0941-1	<i>Network measurement and monitoring</i> (anglais) - Benoît DONNET - [60h Proj.]	B2	Q2	20	-	[+]	5
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Corequis :

INFO0031-1 - Computer network architectures and multimedia

INFO2051-1	<i>Object-oriented programming on mobile devices</i> (anglais) - Laurent MATHY - [90h Proj.]	B2	Q2	15	10	[+]	5
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INFO0056-1	<i>Managing and securing computer networks</i> (anglais) - Guy LEDUC - [12h Labo., 55h Proj.]	B2	Q2	30	-	[+]	5
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Corequis :

INFO0045-3 - Introduction to computer security

ELEN0002-2	<i>Introduction to audio and video techniques</i> (anglais) - JeanJacques EMBRECHTS - [8h Labo.]	B2	Q1	30	22	[+]	5
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INFO0939-1	<i>High performance scientific computing</i> (anglais) - Christophe GEUZAINÉ - [20h Proj.]	B2	Q1	30	15	[+]	5
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Intelligent Systems

ELEN0062-1	<i>Introduction to machine learning</i> (anglais) - Pierre GEURTS, Louis WEHENKEL - [40h Proj.]	B2	Q1	30	5	[+]	5
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Programme des cours 2016-2017
Faculté des Sciences Appliquées
Master en sciences informatiques, à finalité

	Corequis : MATH0462-1 - Discrete optimization								
ELEN0016-2	<i>Computer vision</i> (anglais) - Marc VAN DROOGENBROECK - [50h Proj.]	B2	Q1	30	10	[+]			5
INFO0948-2	<i>Introduction to intelligent robotics</i> (anglais) - Renaud DETRY, Louis WEHENKEL - [80h Proj.]	B2	Q2	30	4	[+]			5
	Corequis : ELEN0062-1 - Introduction to machine learning ELEN0016-2 - Computer vision								
INFO0049-1	<i>Knowledge representation</i> (anglais) - Pascal GRIBOMONT - [50h Proj.]	B2	Q2	30	25	[+]			5
	Corequis : INFO0051-1 - Logic								
INFO2046-2	<i>Computational geometry</i> (anglais) - Eric BÉCHET - [95h Proj.]	B2	Q1	25	-	[+]			5
INFO2049-1	<i>Web and Text Analytics</i> (anglais) - Ashwin ITTOO	B2	Q1	30	-	-			5
	Corequis : ELEN0062-1 - Introduction to machine learning								
GBIO0002-1	<i>Genetics and bioinformatics</i> (anglais) - Franck DEQUIEDT, Kristel VAN STEEN - [15h Proj.]	B2	Q1	30	15	[+]			5
Other optional courses									
INFO0064-2	<i>Embedded systems</i> (anglais) - Bernard BOIGELOT	B2	Q1	25	20	-			3
INFO2055-1	<i>Embedded systems project</i> (anglais) - Bernard BOIGELOT - [60h Proj.]	B2	Q2	-	-	[+]			2
	Corequis : INFO0064-2 - Embedded systems								
INFO0050-1	<i>Constraint programming projects</i> (anglais) - Pascal GRIBOMONT - [80h Proj.]	B2	TA	15	10	[+]			5
	Corequis : INFO0049-1 - Knowledge representation								
INFO0060-1	<i>Concurrent system verification and temporal logic</i> (anglais) - Bernard BOIGELOT, Pascal GRIBOMONT, Pierre WOLPER - [20h Proj.]	B2	Q2	30	10	[+]			5
	Prérequis : INFO0016-1 - Introduction to the theory of computation INFO0051-1 - Logic								
INFO0026-3	<i>Computer graphics</i> (anglais) - Eric BÉCHET - [45h Proj.]	B2	Q2	24	24	[+]			5
GBIO0009-1	<i>Topics in bioinformatics</i> (anglais) - Kristel VAN STEEN - [35h Proj.]	B2	Q1	25	15	[+]			5
	Prérequis : GBIO0002-1 - Genetics and bioinformatics								
ELEN0019-2	<i>Audio signal processing : principles and experiments</i> (anglais) - JeanJacques EMBRECHTS - [24h Labo., 30h Proj.]	B2	Q1	5	-	[+]			5
MATH0461-2	<i>Introduction to numerical optimization</i> (anglais) - Quentin LOUVEAUX - [25h Proj.]	B2	Q1	30	20	[+]			5
GBIO0030-1	<i>Computational approaches to statistical genetics</i> (anglais) - Kristel VAN STEEN - [35h Proj.]	B2	Q2	25	15	[+]			5
	Prérequis : GBIO0002-1 - Genetics and bioinformatics								
GBIO0031-1	<i>Learning from genomic data</i> (anglais) - Kristel VAN STEEN - [150h Proj.]	B2	Q2	-	-	[+]			5
	Prérequis : GBIO0002-1 - Genetics and bioinformatics								
INGE0012-1	<i>Scientific research in engineering and its impact on innovation</i> (anglais) - Rodolphe SEPULCHRE	B2	Q2	30	30	-			5

Internships and projects (maximum 15 credits)

ASTG9005-1	<i>Research Internship</i> (anglais) - Benoît DONNET - [300h Proj.]	B2	TA	-	-	[+]	10
ASTG0021-1	<i>Technical company internship</i> (anglais) - Laurent MATHY - [300h Proj.]	B2	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.]	B2	TA	-	-	[+]	5

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 (B0 : 27Cr)

MATH0499-1	<i>Théorie des graphes</i> - Michel RIGO	B0	Q1	25	20	-	4
INFO0062-1	<i>Object-oriented programming</i> (anglais) - Bernard BOIGELOT - [20h Proj.]	B0	Q2	30	24	[+]	5
INFO0054-1	<i>Programmation fonctionnelle</i> - Pascal GRIBOMONT - [15h Proj.]	B0	Q2	30	25	[+]	5
MATH0491-1	<i>Mathématiques pour l'informatique</i> - Georges HANSOUL	B0	Q1	25	25	-	5
INFO0058-1	<i>Introduction à la programmation récursive</i> - Pascal GRIBOMONT	B0	Q1	15	15	-	3
INFO0027-2	<i>Programming techniques</i> (anglais) - Laurent MATHY - [70h Proj.]	B0	Q2	30	24	[+]	5

Optional courses (B0 : 3Cr)

Choose one of the courses below : (B0 : 3Cr)

LANG0310-2	<i>Computing English</i> (anglais) - Christine FILOT, ISLV, Adnan VESSEUR	B0	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	B0	Q1	5	25	-	3