

## Block view of the study programme

Or Th Pr Au Cr

### Bloc 1 du programme de l'année

#### Compulsory Courses

INFO0085-1	<i>Compilers</i> - Pierre GEURTS - [75h Proj.] <b>Corequisite :</b> INFO0016-1 - Introduction to the theory of computation	Q2	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
MATH0462-1	<i>Discrete optimization</i> (english language) - Quentin LOUVEAUX - [25h Proj.]	Q1	30	20	[+]	5
INFO0051-1	<i>Logic</i> (english language) - Pascal GRIBOMONT - [10h Proj.]	Q1	30	25	[+]	5
ELEN0060-2	<i>Information and coding theory</i> (english language) - Louis WEHENKEL - [30h Proj.]	Q2	30	15	[+]	5
GEST3162-1	<i>Principles of management</i> (english language) - Michael GHILISSEN, François PICHULT, Thierry PIRONET, Didier VAN CAILLIE	Q1	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.] <b>Corequisite :</b> INFO0063-1 - Object-oriented software engineering	TA	10	-	[+]	10

#### Optional courses

##### Choose one orientation below :

##### Computer systems and networks

##### 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

##### Optional courses

Choose 5 credits in the following list :

INFO0064-2	<i>Embedded systems</i> (english language) - Bernard BOIGELOT	Q1	25	20	-	3
INFO2055-1	<i>Embedded systems project</i> (english language) - Bernard BOIGELOT - [60h Proj.] <b>Corequisite :</b> INFO0064-2 - Embedded systems	Q2	-	-	[+]	2
INFO0941-1	<i>Network measurement and monitoring</i> (english language) - Benoît DONNET - [60h Proj.] <b>Corequisite :</b> INFO0031-1 - Computer network architectures and multimedia	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.] <b>Corequisite :</b> INFO0045-3 - Introduction to computer security	Q2	30	-	[+]	5
ELEN0062-1	<i>Applied Inductive Learning</i> (english language) - Pierre GEURTS, Louis WEHENKEL - [40h Proj.]	Q1	30	5	[+]	5

**Intelligent systems**

**Compulsory Courses**

ELEN0062-1	<i>Applied Inductive Learning</i> (english language) - Pierre GEURTS, Louis WEHENKEL - [40h Proj.]	Q1	30	5	[+]	<b>5</b>
	<b>Corequisite :</b> MATH0462-1 - Discrete optimization					

**Optional courses**

Choose 5 credits in the following list :

INFO0064-2	<i>Embedded systems</i> (english language) - Bernard BOIGELOT	Q1	25	20	-	<b>3</b>
INFO2055-1	<i>Embedded systems project</i> (english language) - Bernard BOIGELOT - [60h Proj.]	Q2	-	-	[+]	<b>2</b>
	<b>Corequisite :</b> INFO0064-2 - Embedded systems					
ELEN0016-2	<i>Computer vision</i> (english language) - Marc VAN DROOGENBROECK - [50h Proj.]	Q1	30	10	[+]	<b>5</b>
INFO0948-2	<i>Introduction to intelligent robotics</i> (english language) - Renaud DETRY - [80h Proj.]	Q2	30	4	[+]	<b>5</b>
	<b>Corequisite :</b> ELEN0062-1 - Applied inductive learning ELEN0016-2 - Computer vision					
INFO0049-1	<i>Knowledge representation</i> (english language) - Pascal GRIBOMONT - [50h Proj.]	Q2	30	25	[+]	<b>5</b>
	<b>Corequisite :</b> INFO0051-1 - Logic					
INFO2049-1	<i>Web and Text Analytics</i> (english language) - Ashwin ITTOO	Q2	30	-	-	<b>5</b>
	<b>Corequisite :</b> ELEN0062-1 - Applied inductive learning					
INFO2046-2	<i>Computational geometry</i> (english language) - Eric BÉCHET - [95h Proj.]	Q1	25	-	[+]	<b>5</b>
MECA0031-2	<i>Kinematics and dynamics of mechanisms</i> (english language) - Olivier BRULS - [40h Proj.]	Q2	30	20	[+]	<b>5</b>
GBIO0002-1	<i>Genetics and Bioinformatics</i> (english language) - Franck DEQUIEDT, Kristel VAN STEEN	Q1	30	30	-	<b>5</b>

**Bloc 2 du programme de l'année**

**Compulsory Courses**

ATFE0015-1	<i>Master thesis</i> (english language) - COLLÉGIALITÉ - [750h Proj.]	TA	-	-	[+]	<b>25</b>
------------	---	----	---	---	-----	-----------

**Optional courses**

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

**Single focus**

**Research focus**

**Students will carry on with their chosen option :**

**Computer systems and networks**

Choose 10 credits in the following list :

INFO0064-2	<i>Embedded systems</i> (english language) - Bernard BOIGELOT	Q1	25	20	-	<b>3</b>
INFO2055-1	<i>Embedded systems project</i> (english language) - Bernard BOIGELOT - [60h Proj.]	Q2	-	-	[+]	<b>2</b>

	<b>Corequisite :</b> INFO0064-2 - Embedded systems							
INFO0941-1	<i>Network measurement and monitoring</i> (english language) - Benoît DONNET - [60h Proj.]	Q2	20	-	[+]	5		
	<b>Corequisite :</b> INFO0031-1 - Computer network architectures and multimedia							
INFO2051-1	<i>Object-oriented programming on mobile devices</i> (english language) - Laurent MATHY - [90h Proj.]	Q2	15	10	[+]	5		
ELEN0062-1	<i>Applied Inductive Learning</i> (english language) - Pierre GEURTS, Louis WEHENKEL - [40h Proj.]	Q1	30	5	[+]	5		
INFO0056-1	<i>Managing and securing computer networks</i> (english language) - Guy LEDUC - [12h Labo., 55h Proj.]	Q2	30	-	[+]	5		
	<b>Corequisite :</b> INFO0045-3 - Introduction to computer security							
ELEN0002-2	<i>Introduction to audio and video techniques</i> (english language) - JeanJacques EMBRECHTS - [8h Labo.]	Q1	30	22	[+]	5		
SYST0003-1	<i>Linear control systems</i> (english language) - Guillaume DRION - [6h Labo.]	Q1	30	30	[+]	5		

#### Intelligent systems

SYST0003-1	<i>Linear control systems</i> (english language) - Guillaume DRION - [6h Labo.]	Q1	30	30	[+]	5		
------------	--	----	----	----	-----	---	--	--

Choose 5 credits in the following list :

INFO0064-2	<i>Embedded systems</i> (english language) - Bernard BOIGELOT	Q1	25	20	-	3		
INFO2055-1	<i>Embedded systems project</i> (english language) - Bernard BOIGELOT - [60h Proj.]	Q2	-	-	[+]	2		
	<b>Corequisite :</b> INFO0064-2 - Embedded systems							
ELEN0016-2	<i>Computer vision</i> (english language) - Marc VAN DROOGENBROECK - [50h Proj.]	Q1	30	10	[+]	5		
INFO0948-2	<i>Introduction to intelligent robotics</i> (english language) - Renaud DETRY - [80h Proj.]	Q2	30	4	[+]	5		
	<b>Corequisite :</b> ELEN0016-2 - Computer vision ELEN0062-1 - Applied inductive learning							
INFO0049-1	<i>Knowledge representation</i> (english language) - Pascal GRIBOMONT - [50h Proj.]	Q2	30	25	[+]	5		
	<b>Prerequisite :</b> INFO0051-1 - Logic							
INFO0939-1	<i>High performance scientific computing</i> (english language) - Christophe GEUZAINÉ - [20h Proj.]	Q1	30	15	[+]	5		
INFO2046-2	<i>Computational geometry</i> (english language) - Eric BÉCHET - [95h Proj.]	Q1	25	-	[+]	5		
INFO2049-1	<i>Web and Text Analytics</i> (english language) - Ashwin ITTOO	Q2	30	-	-	5		
	<b>Corequisite :</b> ELEN0062-1 - Applied inductive learning							
MECA0031-2	<i>Kinematics and dynamics of mechanisms</i> (english language) - Olivier BRULS - [40h Proj.]	Q2	30	20	[+]	5		
GBIO0002-1	<i>Genetics and Bioinformatics</i> (english language) - Franck DEQUIEDT, Kristel VAN STEEN	Q1	30	30	-	5		

[...] Choose 20 credits in your option, in the other option or in the list below :

#### Computer science

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
INFO0026-3	<i>Computer graphics</i> (english language) - Eric BÉCHET - [45h Proj.]	Q2	24	24	[+]	5
INFO0027-2	<i>Programming techniques</i> (english language) - Laurent MATHY - [70h Proj.]	Q2	30	24	[+]	5
INFO0050-1	<i>Constraint programming projects</i> (english language) - Pascal GRIBOMONT - [80h Proj.] <b>Corequisite :</b> INFO0049-1 - Knowledge representation	TA	15	10	[+]	5
INFO0060-1	<i>Concurrent system verification and temporal logic</i> (english language) - Bernard BOIGELOT, Pascal GRIBOMONT, Pierre WOLPER - [20h Proj.] <b>Prerequisite :</b> INFO0016-1 - Introduction to the theory of computation INFO0051-1 - Logic	Q2	30	10	[+]	5

#### Signal processing

ELEN0019-2	<i>Audio signal processing : principles and experiments</i> (english language) - JeanJacques EMBRECHTS - [24h Labo., 30h Proj.]	Q1	5	-	[+]	5
ELEN0071-1	<i>Digital Signal Processing</i> (english language) - Jacques VERLY - [40h Proj.]	Q2	45	15	[+]	5

#### Biomedical engineering and bioinformatics

GBIO0008-2	<i>Medical imaging</i> (english language) - Christophe PHILLIPS - [8h Labo., 1d FW]	Q2	33	12	[+]	5
GBIO0009-1	<i>Topics in bioinformatics</i> (english language) - Kristel VAN STEEN - [35h Proj.] <b>Prerequisite :</b> GBIO0002-1 - Genetics and bioinformatics	Q1	25	15	[+]	5
GBIO0029-1	<i>Bioelectronics</i> (english language) - Michael KRAFT - [20h Labo., 20h Proj.]	Q1	30	15	[+]	5
GBIO0030-1	<i>Computational approaches to statistical generics</i> (english language) - Kristel VAN STEEN - [35h Proj.] <b>Prerequisite :</b> GBIO0002-1 - Genetics and bioinformatics	Q2	25	15	[+]	5
GBIO0031-1	<i>Learning from genomic data</i> (english language) - Kristel VAN STEEN - [150h Proj.] <b>Prerequisite :</b> GBIO0002-1 - Genetics and bioinformatics	Q2	-	-	[+]	5

#### Applied mathematics and modelling

MATH0461-2	<i>Introduction to numerical optimization</i> (english language) - Quentin LOUVEAUX - [25h Proj.]	Q1	30	20	[+]	5
------------	---	----	----	----	-----	---

#### Electronics

ELEN0078-2	<i>Acoustics and electroacoustics</i> (english language) - JeanJacques EMBRECHTS - [8h Labo.]	Q2	30	22	[+]	5
ELEN0037-1	<i>Microelectronics and IC design</i> (english language) - Michael KRAFT - [40h Proj.]	Q2	30	20	[+]	5
ELEN0038-1	<i>Microsystems</i> (english language) - Michael KRAFT - [20h Labo., 40h Proj.]	Q2	30	5	[+]	5

#### Internships and projects (15 ECTS maximum)

ASTG9005-1	<i>Research Internship</i> (english language) - Benoît DONNET - [300h Proj.]	TA	-	-	[+]	<b>10</b>
ASTG0021-1	<i>Technical company internship</i> (english language) - Laurent MATHY - [300h Proj.]	TA	-	-	[+]	<b>10</b>
<i>Notice : the two internships are mutually exclusive</i>						
PROJ0011-1	<i>Personal student project</i> (english language) - Bernard BOIGELOT, COLLÉGIALITÉ - [150h Proj.]	TA	-	-	[+]	<b>5</b>

**Programme transitoire à destination des étudiants ayant réussi leur master 1 de "Master en ingénieur civil en informatique, à finalité spécialisée en gestion" en 2014-2015**

**Programme transitoire à destination des étudiants ayant réussi leur master 1 de "Master en ingénieur civil en informatique, à finalité approfondie" en 2014-2015**

**Bloc 1 du programme de l'année**

**Optional courses**

**Single focus**

**Research focus**

**Pursuit of the option :**

**Computer systems and networks**

Choose 10 credits in the following list :

INFO0064-2	<i>Embedded systems</i> (english language) - Bernard BOIGELOT	Q1	25	20	-	<b>3</b>
INFO2055-1	<i>Embedded systems project</i> (english language) - Bernard BOIGELOT - [60h Proj.]	Q2	-	-	[+]	<b>2</b>
INFO0941-1	<i>Network measurement and monitoring</i> (english language) - Benoît DONNET - [60h Proj.]	Q2	20	-	[+]	<b>5</b>
INFO2051-1	<i>Object-oriented programming on mobile devices</i> (english language) - Laurent MATHY - [90h Proj.]	Q2	15	10	[+]	<b>5</b>
ELEN0062-1	<i>Applied Inductive Learning</i> (english language) - Pierre GEURTS, Louis WEHENKEL - [40h Proj.]	Q1	30	5	[+]	<b>5</b>
INFO0056-1	<i>Managing and securing computer networks</i> (english language) - Guy LEDUC - [12h Labo., 55h Proj.]	Q2	30	-	[+]	<b>5</b>
ELEN0002-2	<i>Introduction to audio and video techniques</i> (english language) - JeanJacques EMBRECHTS - [8h Labo.]	Q1	30	22	[+]	<b>5</b>
SYST0003-1	<i>Linear control systems</i> (english language) - Guillaume DRION - [6h Labo.]	Q1	30	30	[+]	<b>5</b>

**Intelligent systems**

SYST0003-1	<i>Linear control systems</i> (english language) - Guillaume DRION - [6h Labo.]	Q1	30	30	[+]	<b>5</b>
------------	---	----	----	----	-----	----------

Choose 5 credits in the following list :

INFO0064-2	<i>Embedded systems</i> (english language) - Bernard BOIGELOT	Q1	25	20	-	3
INFO2055-1	<i>Embedded systems project</i> (english language) - Bernard BOIGELOT - [60h Proj.]	Q2	-	-	[+]	2
ELEN0016-2	<i>Computer vision</i> (english language) - Marc VAN DROOGENBROECK - [50h 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
INFO0939-1	<i>High performance scientific computing</i> (english language) - Christophe GEUZAIN - [20h Proj.]	Q1	30	15	[+]	5
INFO2046-2	<i>Computational geometry</i> (english language) - Eric BÉCHET - [95h Proj.]	Q1	25	-	[+]	5
INFO2049-1	<i>Web and Text Analytics</i> (english language) - Ashwin ITTOO	Q2	30	-	-	5
MECA0031-2	<i>Kinematics and dynamics of mechanisms</i> (english language) - Olivier BRULS - [40h Proj.]	Q2	30	20	[+]	5
GBIO0002-1	<i>Genetics and Bioinformatics</i> (english language) - Franck DEQUIEDT, Kristel VAN STEEN	Q1	30	30	-	5

[...] Choose 20 credits in your option, in the other option or in the list below :

#### Computer science

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
INFO0026-3	<i>Computer graphics</i> (english language) - Eric BÉCHET - [45h Proj.]	Q2	24	24	[+]	5
INFO0027-2	<i>Programming techniques</i> (english language) - Laurent MATHY - [70h Proj.]	Q2	30	24	[+]	5
INFO0050-1	<i>Constraint programming projects</i> (english language) - Pascal GRIBOMONT - [80h Proj.]	TA	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

#### Signal processing

ELEN0019-2	<i>Audio signal processing : principles and experiments</i> (english language) - JeanJacques EMBRECHTS - [24h Labo., 30h Proj.]	Q1	5	-	[+]	5
ELEN0071-1	<i>Digital Signal Processing</i> (english language) - Jacques VERLY - [40h Proj.]	Q2	45	15	[+]	5

#### Biomedical engineering and bioinformatics

GBIO0008-2	<i>Medical imaging</i> (english language) - Christophe PHILLIPS - [8h Labo., 1d FW]	Q2	33	12	[+]	5
GBIO0009-1	<i>Topics in bioinformatics</i> (english language) - Kristel VAN STEEN - [35h Proj.]	Q1	25	15	[+]	5
GBIO0029-1	<i>Bioelectronics</i> (english language) - Michael KRAFT - [20h Labo., 20h Proj.]	Q1	30	15	[+]	5
GBIO0030-1	<i>Computational approaches to statistical generics</i> (english language) - Kristel VAN STEEN - [35h Proj.]	Q2	25	15	[+]	5
GBIO0031-1	<i>Learning from genomic data</i> (english language) - Kristel VAN STEEN - [150h Proj.]	Q2	-	-	[+]	5

**Applied mathematics and modelling**

MATH0461-2 *Introduction to numerical optimization* (english language) - Quentin LOUVEAUX - [25h Proj.] Q1 30 20 [+] 5

**Electronics**

ELEN0078-2 *Acoustics and electroacoustics* (english language) - JeanJacques EMBRECHTS - [8h Labo.] Q2 30 22 [+] 5

ELEN0037-1 *Microelectronics and IC design* (english language) - Michael KRAFT - [40h Proj.] Q2 30 20 [+] 5

ELEN0038-1 *Microsystems* (english language) - Michael KRAFT - [20h Labo., 40h Proj.] Q2 30 5 [+] 5

**Internship and projects (15 ECTS maximum)**

ASTG9005-1 *Research Internship* (english language) - Benoît DONNET - [300h Proj.] TA - - [+] 10

ASTG0021-1 *Technical company internship* (english language) - Laurent MATHY - [300h Proj.] TA - - [+] 10

*Notice : the two internships are mutually exclusive*

PROJ0011-1 *Personal student project* (english language) - Bernard BOIGELOT, COLLÉGIALITÉ - [150h Proj.] TA - - [+] 5

**Compulsory Courses**

ATFE0015-1 *Master thesis* (english language) - COLLÉGIALITÉ - [750h Proj.] TA - - [+] 25

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