

Cycle view of the study programme

B1 Or Th Pr Au Cr

Compulsory courses (B1 : 8Cr, B2 : 18Cr)

MATH0483-2	<i>History of mathematics</i> - Georges HANSOUL - [20h Mon. WS]	B1	Q2	20	-	[+]	4
MATH0112-1	<i>Preparation for the final thesis</i> - COLLÉGIALITÉ	B1	Q2	-	-	-	4
SMEM0012-1	<i>Final thesis</i> - COLLÉGIALITÉ	B2	TA	-	-	-	18

Optional courses (B1 : 52Cr, B2 : 42Cr)

In agreement with the Jury, choose courses not already attended for a total of 64 ECTS from the two lists below or from the programme of other masters : (B1 : 52Cr, B2 : 12Cr)

Mathematics

[...] Maximum 36 credits from the courses of Mathematics (B1)

[...] maximum 12 ECTS from the courses of Mathematics (B2)

Other disciplines

[...] Maximum 16 credits from courses of other disciplines (B1)

[...] Maximum 12 credits from courses of other disciplines (B2)

Other masters

[...] Maximum 8 credits from the courses programme of other masters (B1)

[...] Maximum 12 credits from the courses programme of other masters (B2)

Mathematics

STAT0725-2	<i>Bayesian statistics</i> - Philippe LAMBERT - [20h Mon. WS] (Even years)	-	Q2	30	10	[+]	8
STAT0723-2	<i>Linear models</i> - Catherine TIMMERMANS - [20h Mon. WS] (Even years)	-	Q2	30	10	[+]	8
INFO0213-2	<i>Automata and formal languages</i> - Michel RIGO - Suppl : Julien LEROY (Even years)	-	Q1	30	20	-	8
MATH0075-1	<i>Discrete mathematics</i> - Emilie CHARLIER, Michel RIGO (Even years)	-	Q2	30	20	-	8
MATH0076-1	<i>Discrete mathematics project</i> - Emilie CHARLIER, Julien LEROY, Michel RIGO (Even years) Corequisite : INFO0213-2 - Automates et langages formels MATH0075-1 - Mathématiques discrètes	-	TA	-	-	-	4
MATH0465-1	<i>Algebraic Topology</i> - JeanPierre SCHNEIDERS - [20h Mon. WS] (Even years)	-	Q1	30	10	[+]	8
MATH0463-1	<i>Functional Analysis I</i> - JeanPierre SCHNEIDERS - [20h Mon. WS] (Even years)	-	Q1	30	10	[+]	8
STAT0201-3	<i>Multivariate statistics</i> - Gentiane HAESBROECK - [20h Mon. WS] (Odd years)	-	Q1	30	10	[+]	8
MATH0065-1	<i>Probability and statistics IV</i> (english language) - Yvik SWAN - [20h Mon. WS] (Odd years)	-	Q2	30	10	[+]	8
STAT0078-1	<i>Practice of statistical consultancy</i> - Gentiane HAESBROECK - [20h Mon. WS] (Odd years) Corequisite : STAT0201-3 - Statistique multivariée MATH0065-1 - Probability and statistics IV	-	Q1	20	-	[+]	4
INFO0212-2	<i>Algorithmics and computability</i> - Emilie CHARLIER (Odd years)	-	Q1	30	20	-	8
MATH0470-1	<i>Combinatorics on words</i> (english language) - Emilie CHARLIER,	-	Q2	30	20	-	8

Study programmes 2016-2017

Faculty of Sciences

Master in mathematics (120 ECTS)

Michel RIGO (Odd years)

MATH0077-1	<i>Project on combinations</i> - Emilie CHARLIER, N..., Michel RIGO (Odd years) Corequisite : INFO0212-2 - Algorithmique et calculabilité MATH0470-1 - Combinatorics on words	-	TA	-	-	-	-	4
MATH0489-1	<i>Lie algebra</i> - [20h Mon. WS] (Odd years)	-	Q2	30	10	[+]	8	
MATH0220-2	<i>Functions of complex variables</i> - JeanPierre SCHNEIDERS - [20h Mon. WS] (Odd years) Corequisite : MATH0074-1 - Théorie des distributions	-	Q2	30	10	[+]	8	
MATH0209-3	<i>Measure Theory</i> - Samuel NICOLAY - [20h Mon. WS] (Odd years)	-	Q1	30	10	[+]	8	
MATH0464-1	<i>Differential geometry II</i> - Pierre LECOMTE - [20h Mon. WS]	-	Q1	30	10	[+]	8	
MATH0074-1	<i>Theory of distributions</i> - Françoise BASTIN	-	Q2	25	15	-	4	
MATH0017-3	<i>Mathematical Logic and Set Theory</i> - Georges HANSOUL - [20h Mon. WS]	-	Q1	30	10	[+]	8	
STAT0079-1	<i>SAS certification</i> (english language) - Michael SCHYNS - [25h Mon. WS]	-	Q2	15	-	[+]	4	

Other disciplines

INFO0902-1	<i>Data structures and algorithms</i> - Pierre GEURTS - [40h Proj.]	-	Q2	30	20	[+]	8
INFO0054-1	<i>Functional programming</i> - Pascal GRIBOMONT - [15h Proj.]	-	Q2	30	25	[+]	8
ASTR0201-3	<i>Astronomy</i> - MarcAntoine DUPRET - [20h Mon. WS]	-	Q1	30	10	[+]	8
PHYS0243-2	<i>Quantum Physics I</i> - Thierry BASTIN - [20h Mon. WS]	-	Q1	30	10	[+]	8
PHYS0203-2	<i>Statistical physics</i> - Nicolas VANDEWALLE - [20h Mon. WS]	-	Q2	30	10	[+]	8
SPAT0012-1	<i>General relativity, Part 1: Introduction</i> - Yves DE ROP	-	Q1	20	-	-	2
SPAT0012-2	<i>General relativity, Part 2: Mathematics methods</i> - Yves DE ROP Corequisite : SPAT0012-1 - Relativité générale	-	Q1	20	-	-	3
SPAT0012-3	<i>General relativity, Part 3: supplement</i> - Yves DE ROP Corequisite : SPAT0012-2 - Relativité générale	-	Q2	20	-	-	3
SPAT0044-1	<i>Stellar structure and evolution I</i> (english language) - MarcAntoine DUPRET	-	Q1	20	20	-	4
SPAT0045-1	<i>Stellar structure and evolution II</i> (english language) - MarcAntoine DUPRET	-	Q2	20	20	-	4
MECA0203-3	<i>Continuum Mechanics</i> - Pierre DAUBY - [20h Mon. WS]	-	Q1	30	10	[+]	8
PHYS0204-3	<i>Complement of quantum Physics 2</i> - Thierry BASTIN - [20h Mon. WS]	-	Q2	30	10	[+]	8
PHYS0205-2	<i>Complement of physical statistics</i> - Nicolas VANDEWALLE - [20h Mon. WS]	-	Q2	30	10	[+]	8

Choose one focus from the following : (B2 : 1Nbr)

Research Focus (B2 : 30Cr)

MATH0466-1	<i>Seminars</i> - COLLÉGIALITÉ - [75h SEM]	B2	TA	-	-	[+]	12
SMEM0037-1	<i>Final thesis complement</i> - COLLÉGIALITÉ	B2	TA	-	-	-	8

Choose, in accordance with the Jury, 1 course among : (B2 : 1Nbr)

MATH0467-1	<i>Functional Analysis II</i> - Françoise BASTIN - [20h Mon. WS]	B2	Q2	30	10	[+]	10
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Study programmes 2016-2017

Faculty of Sciences

Master in mathematics (120 ECTS)

	Prerequisite : MATH0463-1 - Analyse fonctionnelle I								
MATH0468-1	<i>Algebraic Analysis</i> - JeanPierre SCHNEIDERS - [20h Mon. WS]	B2	Q2	30	10	[+]	10		
	Corequisite : MATH0465-1 - Topologie algébrique MATH0463-1 - Analyse fonctionnelle I MATH0220-2 - Fonctions de variables complexes								
MATH0061-1	<i>Complement of studies in the theory of measurement</i> - Samuel NICOLAY - [20h Mon. WS]	B2	Q2	30	10	[+]	10		
	Prerequisite : MATH0209-3 - Théorie de la mesure								
MATH0490-1	<i>Questions of differential geometry</i> - Pierre MATHONET - [20h Mon. WS]	B2	Q1	30	10	[+]	10		
	Prerequisite : MATH0464-1 - Géométrie différentielle II MATH0489-1 - Algèbres de Lie								
MATH0234-2	<i>Boolean Topology and Boolean Algebra</i> - Georges HANSOUL - [20h Mon. WS]	B2	Q2	30	10	[+]	10		
MATH0078-1	<i>Research problems in discrete mathematics</i> - Emilie CHARLIER, Julien LEROY, Michel RIGO - [20h Mon. WS]	B2	TA	30	10	[+]	10		

Teaching focus (B2 : 30Cr)

AESS0246-1	<i>Analysis of scholastic institutions and key-players, educational policies</i> - Dominique LAFONTAINE - Suppl : MarieThérèse DELHOUNE	B2	Q1	15	-	-	1		
AESS0248-1	<i>Elements of sociology of education</i> - JeanFrançois GUILLAUME	B2	Q2	10	-	-	1		
AESS0140-1	<i>Professional ethics and training to neutrality and citizenship</i> - Anne HERLA	B2	Q2	25	-	-	2		
AESS0202-1	<i>General didactics: course and exercises ; observation placements ; reflexive practices</i> - Annick FAGNANT - [10h Internship]	B2	TA	30	10	[+]	4		
AESS0004-1	<i>Media education</i> - Jérémy HAMERS	B2	Q1	15	-	-	1		
AESS0249-1	<i>Interdisciplinary seminar</i> - Annick FAGNANT	B2	Q2	15	-	-	1		
AESS0143-1	<i>Educational Psychology of adolescents and young adults</i> - Annick FAGNANT	B2	Q1	15	-	-	2		
AESS0339-1	<i>Understand and manage the diversity of public schools</i> - Ariane BAYE	B2	Q2	10	15	-	3		
AESS1214-1	<i>Special didactics in mathematics : course and exercises (1st part)</i> - Marguerite GILOT, Pierre MATHONET, Michel RIGO	B2	TA	40	-	-	3		
AESS1215-1	<i>Special didactics in mathematics : placements (1st part)</i> - <i>Observation placements</i> - Marguerite GILOT, Pierre MATHONET, Michel RIGO - [10h Internship] - <i>Teaching placements</i> - Marguerite GILOT, Pierre MATHONET, Michel RIGO - [20h Internship] - <i>Reflexive practical work</i> - Marguerite GILOT, Pierre MATHONET, Michel RIGO	B2	TA			[+]	3		
AESS2214-1	<i>Special didactics in mathematics : course and exercises (2nd part)</i> - Marguerite GILOT, Pierre MATHONET, Michel RIGO	B2	TA	35	-	-	4		
AESS2215-1	<i>Special didactics in mathematics : placements (2nd part)</i> - <i>Teaching placements</i> - Marguerite GILOT, Pierre MATHONET, Michel RIGO - [20h Internship] - <i>Reflexive practical work</i> - Marguerite GILOT, Pierre MATHONET, Michel RIGO	B2	TA			[+]	5		

Study programmes 2016-2017

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Master in mathematics (120 ECTS)

- *Extra-scholar teaching activities* - Marguerite GILOT, - 10 -
Pierre MATHONET, Michel RIGO

Professional focus in finance and management (B2 : 30Cr)

In agreement with the Jury, choose six courses not already followed, among : (B2 : 6Nbr)

GEST0832-4	<i>Financial Markets</i> - Georges HÜBNER, Danielle SOUGNÉ - Suppl : Georges HÜBNER	B2	Q2	40	15	-	5
FINA0053-1	<i>Investments and Portfolio Management</i> (english language) - Georges HÜBNER Prerequisite : GEST0832-4 - Marchés financiers	B2	Q2	30	-	-	5
MQGE0001-6	<i>Operations Research</i> (english language) - Yves CRAMA	B2	Q1	45	-	-	5
LOGI0010-1	<i>Supply Chain Management</i> (english language) - Yasemin ARDA Corequisite : MQGE0001-6 - Operations Research	B2	Q2	45	-	-	5
MQGE0002-3	<i>Computational Optimization</i> (english language) - Yves CRAMA Corequisite : MQGE0001-6 - Operations Research	B2	Q2	30	-	-	5
MQGE0007-1	<i>Financial Mathematics and Stochastic Calculus</i> (english language) - Louis ESCH Prerequisite : GEST0832-4 - Marchés financiers	B2	Q2	30	-	-	5
LOGI0012-1	<i>Logistics and Transportation</i> (english language) - Sabine LIMBOURG	B2	Q2	30	-	-	5
LOGI0013-1	<i>Operation Planning</i> (english language) - Yasemin ARDA Prerequisite : LOGI0010-1 - Supply Chain Management	B2	Q2	30	-	-	5
FINA0052-1	<i>Financial Derivatives</i> (english language) - Aline MULLER - Suppl : Tarik BAZGOUR Prerequisite : GEST0832-4 - Marchés financiers	B2	Q2	30	-	-	5
FINA0064-1	<i>Financial Risk Modeling</i> (english language) - Fabien BONIVER, Marie LAMBERT Corequisite : FINA0053-1 - Investments and Portfolio Management MQGE0007-1 - Financial Mathematics and Stochastic Calculus	B2	Q1	30	-	-	5
FINA0051-1	<i>Banking and Insurance</i> (english language) - Fabien BONIVER, Georges HÜBNER Prerequisite : GEST0832-4 - Marchés financiers	B2	Q2	30	-	-	5

Professional focus in computer (B2 : 30Cr)

INFO0009-1 *Database (general organisation)* - Pierre WOLPER - [25h Proj.] B2 Q2 30 25 [+] 6

In agreement with the Jury, choose four courses among : (B2 : 4Nbr)

The courses INFO0902-1, INFO0054-1 and INFO0062-1 must be taken first.

INFO0902-1	<i>Data structures and algorithms</i> - Pierre GEURTS - [40h Proj.]	B2	Q2	30	20	[+]	6
INFO0054-1	<i>Functional programming</i> - Pascal GRIBOMONT - [15h Proj.]	B2	Q2	30	25	[+]	6
INFO0062-1	<i>Object-oriented programming</i> (english language) - Bernard BOIGELOT - [20h Proj.]	B2	Q2	30	24	[+]	6

If the courses INFO0902-1, INFO0054-1 and/or INFO0062-1 have already been followed, choose, in agreement with the Jury, 1 to 4 courses amongst :

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ELEN0040-1	<i>Digital electronics</i> (english language) - Michael KRAFT	B2	Q2	30	30	-	6
INFO0085-1	<i>Compilers</i> (english language) - Pierre GEURTS - [75h Proj.]	B2	Q2	25	-	[+]	6
INFO0027-2	<i>Programming techniques</i> (english language) - Laurent MATHY - [70h Proj.]	B2	Q2	30	24	[+]	6
MATH0462-1	<i>Discrete optimization</i> (english language) - Quentin LOUVEAUX - [25h Proj.]	B2	Q1	30	20	[+]	6
SYST0002-2	<i>Modelling and analysis of systems</i> - Guillaume DRION - [15h Proj.]	B2	Q1	30	30	[+]	6
INFO0049-1	<i>Knowledge representation</i> (english language) - Pascal GRIBOMONT - [50h Proj.]	B2	Q2	30	25	[+]	6

Professional focus in Statistics (B2 : 30Cr)

STAT0727-2	<i>Non-parametric statistics</i> - Gentiane HAESBROECK - [20h Mon. WS] (Even years)	B2	Q1	30	10	[+]	8
MATH0079-1	<i>Stochastic process</i> - Yvik SWAN - [20h Proj.] (Even years)	B2	Q1	20	10	[+]	6
ELEN0062-1	<i>Introduction to machine learning</i> (english language) - Pierre GEURTS, Louis WEHENKEL - [40h Proj.]	B2	Q1	30	5	[+]	8

In agreement with the Jury, choose two courses not already followed, among : (B2 : 2Nbr)

STAT0080-1	<i>Statistics and probability seminars</i> - COLLÉGIALITÉ	B2	TA	-	-	-	4
STAT0081-1	<i>Final thesis complement in statistics</i> - COLLÉGIALITÉ	B2	TA	-	-	-	4
STAT0078-1	<i>Practice of statistical consultancy</i> - Gentiane HAESBROECK - [20h Mon. WS] (Odd years)	B2	Q1	20	-	[+]	4
STAT0079-1	<i>SAS certification</i> (english language) - Michael SCHYNS - [25h Mon. WS]	B2	Q2	15	-	[+]	4