

Block view of the study programme

Or Th Pr Au Cr

Block 1

Core curriculum compulsory course

MATH0112-1 *Preparation for the final thesis* - Emilie CHARLIER, COLLÉGIALITÉ TA - - - 4

Notice : this course can be taken either in block 1 or block 2.

Common core courses

En accord avec le Jury, choisir des cours non déjà suivis pour un total de 56 crédits dans les listes ci-dessous, un minimum de 44 crédits de la liste Mathématique devant être acquis sur l'ensemble du cycle :

Mathematics

[...] at least 44 credits from the courses of Mathematics

Other disciplines

[...] maximum 12 credits from the courses of other disciplines (B1)

Notice : compatibility of the timetable with the courses in the Mathematics list cannot be guaranteed.

Other courses

[...] a maximum of 10 credits in the curriculum of the University of Liège or another institution (B1)

Only accessible to students enrolled in the Master's programme before the 2025-2026 academic year.

Block 2

Core curriculum compulsory course

SMEM0012-1 *Final thesis* - Emilie CHARLIER, COLLÉGIALITÉ TA - - - 18

Common core courses

En accord avec le Jury, choisir des cours non déjà suivis pour un total de 12 crédits dans les listes ci-dessous, un minimum de 44 crédits de la liste Mathématique devant être acquis sur l'ensemble du cycle :

Mathematics

[...] at least 44 credits from the courses of Mathematics

[...] the remainder of the courses not chosen from the 'Mathematics' list

Other disciplines

Notice : compatibility of the timetable with the courses in the Mathematics list cannot be guaranteed.

[...] the remainder of the courses not chosen from the 'Other subjects' list

Other courses

[...] The course programme at the University of Liège or another institution

Only accessible to students enrolled in the Master's programme before the 2025-2026 academic year.

Focus compulsory courses

AESS0246-1	<i>Analysis of scholastic institutions and educational policies</i>	Q2	15	-	-	1
AESS0248-1	<i>Elements of sociology of education</i> - JeanFrançois GUILLAUME	Q2	10	-	-	1
AESS0140-1	<i>Professional ethics and training to neutrality and citizenship</i> - Anne HERLA	Q2	25	-	-	2
AESS0202-1	<i>General didactics: course and exercises ; observation placements ; reflexive practices</i> - Margaux NOIZET - [10h Internship]	TA	30	10	[+]	4
AESS0004-1	<i>Media education</i>	Q2	15	-	-	1
AESS0249-1	<i>Interdisciplinary seminar</i>	Q2	15	-	-	1

AESS0143-1	<i>Educational Psychology of adolescents and young adults</i>	Q1	15	-	-	2
AESS0339-1	<i>Understand and manage the diversity of public schools</i>	TA	10	15	-	3
AESS1214-1	<i>Special didactics in mathematics : course and exercises (1st part) - Kevin BALHAN</i>	TA	40	-	-	3
AESS1215-1	<i>Special didactics in mathematics : placements (1st part)</i>	TA				3
	- <i>Observation placements - Kevin BALHAN - [10h Internship]</i>		-	-	[+]	
	- <i>Teaching placements - Kevin BALHAN - [20h Internship]</i>		-	-	[+]	
	- <i>Reflexive practical work - Kevin BALHAN</i>		-	5	-	
AESS2214-1	<i>Special didactics in mathematics : course and exercises (2nd part) - Kevin BALHAN</i>	TA	35	-	-	4
AESS2215-1	<i>Special didactics in mathematics : placements (2nd part)</i>	TA				5
	- <i>Teaching placements - Kevin BALHAN - [20h Internship]</i>		-	-	[+]	
	- <i>Reflexive practical work - Kevin BALHAN</i>		-	5	-	
	- <i>Extra-scholar teaching activities - Kevin BALHAN</i>		-	10	-	

Bloc d'aménagement du programme de l'année

Bridging courses Master in mathematics (120 credits)

[...] The update course, worth a maximum of 60 credits, will be determined based on students' prior training.

Mathematics

Mathematical analysis

MATH0074-1	<i>Theory of distributions - Françoise BASTIN (Odd years)</i>	Q1	25	15	-	4
MATH0257-2	<i>Complex analysis - N...</i>	Q1	30	30	-	6
MATH0463-1	<i>Functional analysis - Céline ESSER - [20h Mon. WS]</i>	Q1	30	10	[+]	8
MATH0512-1	<i>Functional spaces and representational families - Françoise BASTIN, Samuel NICOLAY - [20h Mon. WS] (Even years)</i>	Q1	30	10	[+]	8
MATH0513-1	<i>Functional spaces relating to measurement theory - Samuel NICOLAY - [20h Mon. WS] (Even years)</i>	Q2	30	10	[+]	8
MATH0209-3	<i>Measure Theory - Samuel NICOLAY - [20h Mon. WS] (Odd years)</i>	Q1	30	10	[+]	8
MATH0082-1	<i>Research problems in analysis (english language) - Françoise BASTIN, Céline ESSER, N..., Samuel NICOLAY - [20h Mon. WS]</i>	TA	30	10	[+]	10

Discrete mathematics

MATH0075-1	<i>Discrete mathematics - Manon STIPULANTI (Even years)</i>	Q1	30	20	-	8
MATH0076-1	<i>Discrete mathematics project - Emilie CHARLIER, Julien LEROY, Michel RIGO, Manon STIPULANTI (Even years)</i>	TA	-	-	-	4
	Corequisite :					
	MATH0083-1 - Théorie ergodique					
	MATH0075-1 - Mathématiques discrètes					
MATH0083-1	<i>Ergodic theory - Julien LEROY (Even years)</i>	Q1	30	20	-	8
INFO0212-2	<i>Algorithmics and computability - Emilie CHARLIER (Odd years)</i>	Q1	30	20	-	8
MATH0470-1	<i>Combinatorics on words (english language) - Manon STIPULANTI (Odd years)</i>	Q1	30	20	-	8
MATH0077-1	<i>Project on combinations - Emilie CHARLIER, Julien LEROY, Michel RIGO, Manon STIPULANTI (Odd years)</i>	TA	-	-	-	4
	Corequisite :					
	MATH0470-1 - Combinatorics on words					

INFO0212-2 - Algorithmique et calculabilité

MATH0078-1	<i>Research problems in discrete mathematics</i> - Emilie CHARLIER, Julien LEROY, Michel RIGO, Manon STIPULANTI - [20h Mon. WS]	TA	30	10	[+]	10
	Corequisite : MATH0076-1 - Projet de mathématiques discrètes MATH0077-1 - Projet de combinatoire					

Probability and statistics

STAT0725-2	<i>Bayesian statistics</i> - [20h Mon. WS] (Even years)	Q2	30	10	[+]	8
STAT0727-2	<i>Non-parametric statistics</i> - Gentiane HAESBROECK - [20h Mon. WS] (Even years)	Q1	30	10	[+]	8
MATH2022-1	<i>Monte Carlo methods in statistics</i> (english language) - Arnout VAN MESSEM - [40h Proj.] (Even years)	Q2	24	12	[+]	8
MATH0514-1	<i>Stochastic analysis</i> - Laurent LOOSVELDT - [20h Proj.] (Even years)	Q2	30	10	[+]	8
MATH0079-1	<i>Stochastic process</i> - Laurent LOOSVELDT - [20h Proj.] (Odd years)	Q2	30	10	[+]	8
STAT0078-1	<i>Practice of statistical consultancy</i> - Marie ERNST - [20h Mon. WS] (Odd years)	Q2	20	-	[+]	4
	Corequisite : STAT0082-1 - Statistique multivariée MATH2022-1 - Monte Carlo methods in statistics					
STAT0082-1	<i>Multivariate statistics</i> - Gentiane HAESBROECK - [20h Mon. WS] (Odd years)	Q1	30	10	[+]	8
	Corequisite : MATH2021-1 - High-dimensional statistics					
INFO2048-1	<i>Business Analytics</i> (english language) - Michael SCHYNS	Q2	30	-	-	5
ELEN0062-1	<i>Introduction to machine learning</i> (english language) - Pierre GEURTS, Louis WEHENKEL - [40h Proj.]	Q1	30	5	[+]	8
MATH0084-1	<i>Research problems in probability and statistics</i> (english language) - Céline ESSER, Gentiane HAESBROECK, Laurent LOOSVELDT, Arnout VAN MESSEM - [20h Mon. WS]	TA	30	10	[+]	10

Other fields

MATH0017-3	<i>Mathematical Logic and Set Theory</i> - Julien LEROY - [20h Mon. WS] (Odd years)	Q2	30	10	[+]	8
MATH0212-2	<i>General topology</i> - Céline ESSER - [10h Mon. WS]	Q2	30	20	[+]	6
MATH0464-1	<i>Differential geometry II</i> - Pierre MATHONET - [20h Mon. WS] (Even years)	Q1	30	10	[+]	8
MATH0489-1	<i>Lie algebra</i> - Pierre MATHONET - [20h Mon. WS]	Q2	30	10	[+]	8
MATH2483-1	<i>History of mathematics, Part 1: History of mathematics</i> - Kevin BALHAN, Pierre MATHONET, Naïm ZENAÏDI	Q2	25	20	-	4

Other disciplines

SSTG2037-1	<i>Internship in a company</i> - COLLÉGIALITÉ, Michel RIGO - [120h Proj.]	TA	-	-	[+]	10
PHYS0999-1	<i>Digital creation in sciences</i> - Roland BILLEN, Valentin FISCHER, JeanChristophe MONBALIU, Eric PARMENTIER, Michel RIGO, Nicolas VANDEWALLE - [30h Proj.]	TA	10	-	[+]	4

Computer science

INFO2009-2	<i>Introduction to computer science</i> - Bernard BOIGELOT	Q1	24	14	-	4
INFO0061-4	<i>Computers organization</i> - Bernard BOIGELOT	Q2	15	15	-	3
INFO0009-2	<i>Database (general organisation)</i> - Christophe DEBRUYNE - [25h Proj.]	Q2	26	26	[+]	6
INFO0902-1	<i>Data structures and algorithms</i> - Pierre GEURTS - [40h Proj.]	Q2	26	20	[+]	6
INFO0027-2	<i>Programming techniques</i> (english language)	Q2				6

	- <i>Algorithmics</i> - Laurent MATHY - [40h Proj.]		14	14	[+]	
	- <i>Software patterns</i> - Laurent MATHY - [30h Proj.]		10	10	[+]	
INFO0054-1	<i>Functional programming</i> - Christophe DEBRUYNE - [20h Proj.]	Q1	24	24	[+]	6
INFO0062-1	<i>Object-oriented programming</i> (english language) - Bernard BOIGELOT - [20h Proj.]	Q2	25	20	[+]	5
INFO0085-1	<i>Compilers</i> (english language) - Pascal FONTAINE - [75h Proj.]	Q2	25	-	[+]	6
MATH0462-1	<i>Discrete optimization</i> (english language) - Quentin LOUVEAUX - [25h Proj.]	Q2	30	20	[+]	6
INFO8006-1	<i>Introduction to artificial intelligence</i> (english language) - Gilles LOUPPE - [45h Proj.]	Q1	25	20	[+]	6
MATH0461-2	<i>Introduction to numerical optimization</i> (english language) - Quentin LOUVEAUX - [25h Proj.]	Q1	30	20	[+]	6
Astrophysics and astronomy						
ASTR0204-2	<i>Astrophysics and geophysics</i> - MarcAntoine DUPRET, Valérie VAN GROOTEL	Q1	30	30	-	8
SPAT0012-1	<i>General relativity</i> (english language) - Guillaume MAHLER	Q1	30	10	-	4
SPAT0044-1	<i>Stellar structure and evolution I</i> (english language) - MarcAntoine DUPRET	Q1	35	-	-	4
SPAT0045-1	<i>Stellar structure and evolution II</i> (english language) - MarcAntoine DUPRET	Q2	20	20	-	4
Finance and management						
GEST0832-4	<i>Financial Markets</i> - Georges HÜBNER	Q2	40	15	-	5
FINA0053-1	<i>Investments and Portfolio Management</i> (english language) - Georges HÜBNER, Patrick SCHWARZ Corequisite : GEST0832-4 - Marchés financiers	Q2	30	-	-	5
MQGE0001-6	<i>Operations Research</i> (english language) - Jérôme DE BOECK	Q1	45	-	-	5
LOGI0010-1	<i>Supply Chain Management</i> (english language) - Yasemin ARDA Corequisite : MQGE0001-6 - Operations Research	Q2	45	-	-	5
MQGE0007-1	<i>Financial Mathematics and Stochastic Calculus</i> (english language) - Elise VANDOMME Corequisite : GEST0832-4 - Marchés financiers	Q2	30	-	-	5
LOGI0012-1	<i>Logistics and Transportation</i> (english language) - Sabine LIMBOURG	Q2	30	-	-	5
LOGI0013-1	<i>Operations Planning</i> (english language) - Yasemin ARDA Corequisite : LOGI0010-1 - Supply Chain Management	Q2	30	-	-	5
FINA0052-1	<i>Financial Derivatives</i> (english language) - Patrick SCHWARZ Corequisite : GEST0832-4 - Marchés financiers	Q2	30	-	-	5
FINA0064-1	<i>Financial Risk Modeling</i> (english language) - Julien HAMBUECKERS Corequisite : MQGE0007-1 - Financial Mathematics and Stochastic Calculus FINA0053-1 - Investments and Portfolio Management	Q1	30	-	-	5
FINA0051-1	<i>Banking and Insurance</i> (english language) - Fabien BONIVER, Georges HÜBNER Corequisite : GEST0832-4 - Marchés financiers	Q2	30	-	-	5
Physics						
PHYS0212-2	<i>Statistical physics</i> - Nicolas VANDEWALLE - Suppl : Maxime HUBERT	Q2	30	30	-	8
PHYS0205-2	<i>Complement of physical statistics</i> - Nicolas VANDEWALLE - Suppl : Maxime HUBERT - [20h Mon. WS]	Q2	30	10	[+]	8

PHYS3033-1	<i>Quantum physics I</i> - Thierry BASTIN	Q1	35	25	-	8
PHYS3034-1	<i>Quantum physics II</i> - Thierry BASTIN	Q2	20	10	-	4