

Block view of the study programme

Or Th Pr Au Cr

Block 1

Compulsory course

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

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

Optional 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)

Block 2

Compulsory course

SMEM0012-1 *Final thesis* - COLLÉGIALITÉ TA - - - 18

Optional 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

Choose one focus from the following :

Research Focus

In agreement with the Jury, choose complementary courses not already selected for a total of 30 credits from the study programmes of the ULiège.

[...] courses for a total of 30 credits

Teaching focus

AESS0246-1 *Analysis of scholastic institutions and educational policies* - Annelise VOISIN Q2 15 - - 1

AESS0248-1 *Elements of sociology of education* - JeanFrançois GUILLAUME Q2 10 - - 1

AESS0140-1 *Professional ethics and training to neutrality and citizenship* - Q2 25 - - 2

ERLA							
AESS0202-1	<i>General didactics: course and exercises ; observation placements ; reflexive practices</i> - Annick FAGNANT - [10h Internship]	TA	30	10	[+]		4
AESS0004-1	<i>Media education</i> - Jérémy HAMERS	Q1	15	-	-		1
AESS0249-1	<i>Interdisciplinary seminar</i> - Annick FAGNANT	Q2	15	-	-		1
AESS0143-1	<i>Educational Psychology of adolescents and young adults</i> - Annick FAGNANT	Q1	15	-	-		2
AESS0339-1	<i>Understand and manage the diversity of public schools</i> - Ariane BAYE	TA	10	15	-		3
AESS1214-1	<i>Special didactics in mathematics : course and exercises (1st part)</i> - Kevin BALHAN	TA	40	-	-		3
AESS1215-1	<i>Special didactics in mathematics : placements (1st part)</i> - <i>Observation placements</i> - Kevin BALHAN - [10h Internship] - <i>Teaching placements</i> - Kevin BALHAN - [20h Internship] - <i>Reflexive practical work</i> - Kevin BALHAN	TA				[+] [+] -	3
AESS2214-1	<i>Special didactics in mathematics : course and exercises (2nd part)</i> - Kevin BALHAN	TA	35	-	-		4
AESS2215-1	<i>Special didactics in mathematics : placements (2nd part)</i> - <i>Teaching placements</i> - Kevin BALHAN - [20h Internship] - <i>Reflexive practical work</i> - Kevin BALHAN - <i>Extra-scholar teaching activities</i> - Kevin BALHAN	TA				[+] - -	5

Professional focus in Statistics

Only accessible to students who have chosen this focus before the academic year 2019-2020.

Bloc d'aménagement du programme de l'année

Additional ECTS Master in mathematics (120 ECTS)

[...] 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</i> - Françoise BASTIN (Odd years)	Q2	25	15	-		4
MATH0257-2	<i>Complex analysis</i> - JeanPierre SCHNEIDERS	Q1	30	30	-		6
MATH0220-2	<i>Complements to complex analysis</i> - JeanPierre SCHNEIDERS - [20h Mon. WS] (Odd years)	Q2	30	10	[+]		8
Prerequisite : MATH0257-2 - Analyse complexe							
Corequisite : MATH0074-1 - Théorie des distributions							
MATH0463-1	<i>Functional analysis</i> - Céline ESSER - [20h Mon. WS] (Even years)	Q1	30	10	[+]		8
MATH0512-1	<i>Functional spaces and representational families</i> - Céline ESSER, Samuel NICOLAY - [20h Mon. WS] (Even years)	Q1	30	10	[+]		8
MATH0513-1	<i>Functional spaces relating to measurement theory</i> - Samuel NICOLAY - [20h Mon. WS] (Even years)	Q2	30	10	[+]		8
MATH0209-3	<i>Measure Theory</i> - Samuel NICOLAY - [20h Mon. WS] (Odd years)	Q1	30	10	[+]		8
MATH0082-1	<i>Research problems in analysis</i> (english language) - Françoise BASTIN, Céline ESSER, Samuel NICOLAY, JeanPierre SCHNEIDERS - [20h Mon. WS]	TA	30	10	[+]		10

Discrete mathematics

MATH0075-1	<i>Discrete mathematics</i> - Emilie CHARLIER (Even years)	Q1	30	20	-	8
MATH0076-1	<i>Discrete mathematics project</i> - Emilie CHARLIER, Julien LEROY, Michel RIGO (Even years) Corequisite : MATH0075-1 - Mathématiques discrètes MATH0083-1 - Théorie ergodique	TA	-	-	-	4
MATH0083-1	<i>Ergodic theory</i> - Julien LEROY (Even years)	Q1	30	20	-	8
INFO0212-2	<i>Algorithmics and computability</i> - Emilie CHARLIER (Odd years)	Q1	30	20	-	8
MATH0470-1	<i>Combinatorics on words</i> (english language) - Julien LEROY (Odd years)	Q1	30	20	-	8
MATH0077-1	<i>Project on combinations</i> - Emilie CHARLIER, Julien LEROY, Michel RIGO (Odd years) Corequisite : INFO0212-2 - Algorithmique et calculabilité MATH0470-1 - Combinatorics on words	TA	-	-	-	4
MATH0078-1	<i>Research problems in discrete mathematics</i> - Emilie CHARLIER, Julien LEROY, Michel RIGO - [20h Mon. WS] Corequisite : MATH0077-1 - Projet de combinatoire MATH0076-1 - Projet de mathématiques discrètes	TA	30	10	[+]	10

Probability and statistics

STAT0725-2	<i>Bayesian statistics</i> - Philippe LAMBERT - [20h Mon. WS] (Even years)	Q2	30	10	[+]	8
STAT0723-2	<i>Linear models</i> - Gentiane HAESBROECK - [20h Mon. WS] (Even years)	Q2	30	10	[+]	8
STAT0082-1	<i>Complement to multivariate statistics</i> - Gentiane HAESBROECK - [10h Mon. WS] (Odd years) Corequisite : MATH2021-1 - High-dimensional statistics	Q1	20	10	[+]	4
INFO2048-1	<i>Business Analytics</i> (english language) - Michael SCHYNS	Q2	30	-	-	5
STAT0078-1	<i>Practice of statistical consultancy</i> - Marie ERNST - [20h Mon. WS] (Odd years) Corequisite : MATH2022-2 - Monte Carlo methods in statistics	Q2	20	-	[+]	4
MATH2022-2	<i>Monte Carlo methods in statistics, General course</i> (english language) - Arnout VAN MESSEM - [10h Proj.]	Q2	24	12	[+]	8
STAT0727-2	<i>Non-parametric statistics</i> - Amir ABOUBACAR - [20h Mon. WS] (Even years)	Q1	30	10	[+]	8
MATH0079-1	<i>Stochastic process</i> - Céline ESSER - [20h Proj.] (Odd years)	Q2	30	10	[+]	8
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) - Amir ABOUBACAR, Céline ESSER, Gentiane HAESBROECK, 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]	Q2	30	10	[+]	8
MATH0212-2	<i>General topology</i> - Céline ESSER - [10h Mon. WS]	Q2	30	20	[+]	6
MATH0465-1	<i>Algebraic Topology</i> - JeanPierre SCHNEIDERS - [20h Mon. WS] (Even years)	Q2	30	10	[+]	8
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</i> - Kevin BALHAN, Pierre MATHONET, Naim ZENAÏDI	Q2	25	20	-	4

Other disciplines

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 (english language)</i> - <i>Algorithmics</i> - Laurent MATHY - [40h Proj.] - <i>Software patterns</i> - Laurent MATHY - [30h Proj.]	Q2	14 10	14 10	[+] [+]	6
INFO0054-1	<i>Functional programming</i> - Christophe DEBRUYNE - [15h Proj.]	Q1	28	24	[+]	6
INFO0062-1	<i>Object-oriented programming (english language)</i> - Bernard BOIGELOT - [20h Proj.]	Q2	25	20	[+]	5
INFO0085-1	<i>Compilers (english language)</i> - Pascal FONTAINE - [75h Proj.]	Q2	25	-	[+]	6
MATH0462-1	<i>Discrete optimization (english language)</i> - Quentin LOUVEAUX - [25h Proj.]	Q2	30	20	[+]	6
INFO8006-1	<i>Introduction to artificial intelligence (english language)</i> - Gilles LOUPPE - [45h Proj.]	Q1	25	20	[+]	6
MATH0461-2	<i>Introduction to numerical optimization (english language)</i> - 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	(pas organisé en 2022-2023) <i>General relativity, Part 1: Introduction</i> - N...	Q1	20	-	-	2
SPAT0012-2	(pas organisé en 2022-2023) <i>General relativity, Part 2: Mathematics methods</i> - N...	Q1	20	-	-	3
Corequisite : SPAT0012-1 - Relativité générale						
SPAT0012-3	(pas organisé en 2022-2023) <i>General relativity, Part 3: supplement</i> - N...	Q2	20	-	-	3
Corequisite : SPAT0012-2 - Relativité générale						
SPAT0044-1	<i>Stellar structure and evolution I (english language)</i> - MarcAntoine DUPRET	Q1	35	-	-	4
SPAT0045-1	<i>Stellar structure and evolution II (english language)</i> - MarcAntoine DUPRET	Q2	20	20	-	4

Finance and management

GEST0832-4	<i>Financial Markets</i> - Georges HÜBNER	Q1	40	15	-	5
FINA0053-1	<i>Investments and Portfolio Management (english language)</i> - Georges HÜBNER - Suppl : Laurent BODSON	Q2	30	-	-	5
Corequisite : GEST0832-4 - Marchés financiers						
MQGE0001-6	<i>Operations Research (english language)</i> - Yves CRAMA	Q1	45	-	-	5
LOGI0010-1	<i>Supply Chain Management (english language)</i> - Yasemin ARDA	Q2	45	-	-	5
Corequisite : MQGE0001-6 - Operations Research						
MQGE0007-1	<i>Financial Mathematics and Stochastic Calculus (english language)</i> - Célia PAQUAY	Q2	30	-	-	5
Corequisite : GEST0832-4 - Marchés financiers						
LOGI0012-1	<i>Logistics and Transportation (english language)</i> - Sabine LIMBOURG	Q2	30	-	-	5
LOGI0013-1	<i>Operation Planning (english language)</i> - Yasemin ARDA	Q2	30	-	-	5
Corequisite : LOGI0010-1 - Supply Chain Management						

FINA0052-1	<i>Financial Derivatives</i> (english language) - Julien HAMBUCKERS - Suppl : Fabien BONIVER Corequisite : GEST0832-4 - Marchés financiers	Q2	30	-	-	5
FINA0064-1	<i>Financial Risk Modeling</i> (english language) - Julien HAMBUCKERS Corequisite : FINA0053-1 - Investments and Portfolio Management MQGE0007-1 - Financial Mathematics and Stochastic Calculus	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

MECA0203-3	<i>Continuum Mechanics</i> - Pierre DAUBY - [20h Mon. WS]	Q1	30	10	[+]	8
PHYS0212-2	<i>Statistical physics</i> - Nicolas VANDEWALLE	Q2	30	30	-	8
PHYS0205-2	<i>Complement of physical statistics</i> - Nicolas VANDEWALLE - [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