

**Cycle view of the study programme**

	B1	Or	Th	Pr	Au	Cr
<b>Compulsory courses (B1 : 60Cr, B2 : 48Cr, B3 : 48Cr)</b>						
MATH0073-1		Q1	30	30	[+]	7
<i>Elementary mathematics</i> - Julien LEROY - [15h Mon. WS]						
MATH0069-1		Q1	30	25	-	7
<i>Matrix calculation</i> - Michel RIGO						
MATH0071-1		Q1	45	30	-	8
<i>Fundamental analysis, part 1</i> - Samuel NICOLAY						
PHYS1985-1		Q1	40	40	-	7
<i>General physics I</i> - John MARTIN, Nicolas VANDEWALLE - Suppl : Maxime HUBERT						
LANG2967-2		Q1	30	-	-	2
<i>English: introduction</i> (english language) - Clara BRERETON, Véronique DOPPAGNE, Caroline VAN LINTHOUT						
MATH0070-1		Q2	30	25	-	6
<i>Linear algebra</i> - Michel RIGO						
MATH0072-1		Q2	45	30	-	7
<i>Fundamental analysis, part 2</i> - Samuel NICOLAY						
MATH1203-1		Q2				7
<i>Geometry I</i>						
- <i>Elements of affine and Euclidian geometry</i> - Pierre MATHONET						
- <i>Additional affine and Euclidian geometry</i> - Pierre MATHONET						
MATH1472-1		Q2	25	15	[+]	5
<i>Descriptive statistics and data analysis</i> - Arnout VAN MESSEM - [10h Mon. WS]						
MATH2010-1		Q2	15	30	-	4
<i>Mathematical software</i> - Emilie CHARLIER						
MATH0080-1		Q1	30	30	-	7
<i>Differential calculus</i> - N...						
<b>Prerequisite :</b>						
MATH0071-1 - Analyse fondamentale, partie 1						
<b>Corequisite :</b>						
MATH2011-1 - Compléments d'algèbre linéaire						
MATH2011-1		Q1	30	20	-	5
<i>Linear algebra supplements</i> - Laurent LOOSVELDT						
<b>Prerequisite :</b>						
MATH0069-1 - Calcul matriciel						
MATH0070-1 - Algèbre linéaire						
MATH0503-1		Q1	20	-	[+]	4
<i>Logic and mathematical approach of programming</i> - Michel RIGO - [30h Mon. WS]						
<b>Prerequisite :</b>						
MATH2010-1 - Logiciels mathématiques						
MATH0499-1		Q1	25	20	-	4
<i>Graph theory</i> - Michel RIGO						
<b>Prerequisite :</b>						
MATH0070-1 - Algèbre linéaire						
MATH0246-2		Q1	30	30	-	7
<i>Algebraic structures</i> - Julien LEROY						
MATH0248-1		Q2	30	30	-	7
<i>Geometry II</i> - Pierre MATHONET						
<b>Prerequisite :</b>						
MATH0070-1 - Algèbre linéaire						
MATH1203-1 - Géométrie I						
<b>Corequisite :</b>						
MATH0080-1 - Calcul différentiel						
MATH2006-2		Q2	30	30	-	7
<i>Introduction to numerical analysis</i> - Laurent LOOSVELDT						
<b>Prerequisite :</b>						
MATH0071-1 - Analyse fondamentale, partie 1						
MATH0072-1 - Analyse fondamentale, partie 2						
<b>Corequisite :</b>						
MATH0503-1 - Logique et approche mathématique de la programmation						
MATH0081-1		Q2	30	30	-	7
<i>Integral calculation</i> - Samuel NICOLAY						
<b>Prerequisite :</b>						
MATH0071-1 - Analyse fondamentale, partie 1						
MATH0072-1 - Analyse fondamentale, partie 2						
<b>Corequisite :</b>						

	MATH0080-1 - Calcul différentiel								
MATH0510-1	<i>Additional analysis</i> - N... <b>Prerequisite :</b> MATH2006-2 - Introduction à l'analyse numérique MATH0080-1 - Calcul différentiel	B3	Q1	30	30	-			<b>6</b>
MATH0256-2	<i>Differential Geometry I</i> - Pierre MATHONET <b>Prerequisite :</b> MATH0248-1 - Géométrie II	B3	Q1	30	20	-			<b>5</b>
MATH7372-1	<i>Probabilities</i> - Céline ESSER, Laurent LOOSVELDT <b>Prerequisite :</b> MATH0081-1 - Calcul intégral	B3	Q1	30	30	-			<b>6</b>
MATH2023-1	<i>Theory of formal languages</i> - Julien LEROY	B3	Q2	30	20	-			<b>5</b>
MATH2250-1	<i>Galois theory</i> - Emilie CHARLIER <b>Prerequisite :</b> MATH0246-2 - Structures algébriques	B3	Q2	30	20	-			<b>5</b>
MATH0474-1	<i>Statistics</i> - Gentiane HAESBROECK - [10h Mon. WS] <b>Prerequisite :</b> MATH0081-1 - Calcul intégral MATH0080-1 - Calcul différentiel <b>Corequisite :</b> MATH7372-1 - Probabilités	B3	Q2	25	15	[+]			<b>5</b>
MATH0511-1	<i>Introduction to harmonic analysis</i> - Françoise BASTIN <b>Prerequisite :</b> MATH0081-1 - Calcul intégral MATH0080-1 - Calcul différentiel	B3	Q2	30	30	-			<b>6</b>
DURA0005-2	<i>Durabilité et transition</i> - Sylvie GOBERT, Catherine HENRIST - [16h Mon. WS]	B3	Q2	12	-	[+]			<b>2</b>
DOCU0044-1	<i>Techniques of documentation and communication, integrated project</i> - Part 1: <i>Techniques of documentation and communication</i> - Fabienne PROSMANS - Part 2: <i>Integrated project</i> - Laurent LOOSVELDT <b>Prerequisite :</b> MATH0081-1 - Calcul intégral MATH0248-1 - Géométrie II MATH0499-1 - Théorie des graphes MATH0246-2 - Structures algébriques <b>Corequisite :</b> MATH7372-1 - Probabilités	B3	TA	30	-	-			<b>8</b>

**Optional courses (B2 : 12Cr, B3 : 12Cr)**

In agreement with the Jury, choose courses for a total of 12 credits from the courses offered below: (B2 : 12Cr)

**Mathematics applied to economics and management**

ECON0323-1	<i>First principles of economics</i> - HenryJean GATHON	B2	Q1	26	-	-			<b>3</b>
GEST0832-4	<i>Financial Markets</i> - Georges HÜBNER	B2	Q2	40	15	-			<b>5</b>
GEST0029-1	<i>General Corporate Accounting (Night classes)</i> - Anne BILS	B2	Q2	30	15	-			<b>4</b>

**Physics**

MECA0201-1	<i>Analytical Mechanics I</i> - Pierre DAUBY	B2	Q1	30	30	-			<b>6</b>
PHYS1986-1	<i>General physics II, Part A</i> - Ngoc Duy NGUYEN	B2	Q2	35	25	-			<b>6</b>

**Computer science**

INFO2009-2	<i>Introduction to computer science</i> - Bernard BOIGELOT <b>Corequisite :</b> MATH0503-1 - Logique et approche mathématique de la programmation	B2	Q1	24	14	-			<b>4</b>
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INFO0061-4	<i>Computers organization</i> - Bernard BOIGELOT <b>Corequisite :</b> MATH0503-1 - Logique et approche mathématique de la programmation	B2	Q2	15	15	-	<b>3</b>
INFO0062-1	<i>Object-oriented programming</i> (english language) - Bernard BOIGELOT - [20h Proj.] <b>Corequisite :</b> MATH0503-1 - Logique et approche mathématique de la programmation	B2	Q2	25	20	[+]	<b>5</b>

In agreement with the Jury, choose courses for a total of 12 credits from the courses offered below or from the elective courses not already chosen in block 2: (B3 : 12Cr)

**Mathematics applied to economics and management**

MQGE0001-6	<i>Operations Research</i> (english language) - Jérôme DE BOECK	B3	Q1	45	-	-	<b>6</b>
FINA0053-1	<i>Investments and Portfolio Management</i> (english language) - Georges HÜBNER, Patrick SCHWARZ <b>Prerequisite :</b> GEST0832-4 - Marchés financiers	B3	Q2	30	-	-	<b>6</b>

**Physics**

MECA0523-1	<i>Analytical mechanics II</i> - Part A - Pierre DAUBY - Part B - Pierre DAUBY	B3	Q1	12	15	-	<b>6</b>
MECA0523-2	<i>Analytical mechanics II, Part A</i> - Pierre DAUBY	B3	Q1	12	15	-	<b>3</b>
SPAT0065-1	<i>Introduction to Astronomy</i> - Grégor RAUW	B3	Q1	20	10	-	<b>3</b>
PHYS3030-2	<i>Electromagnetism</i> - Partim A - John MARTIN - Partim B - John MARTIN	B3	Q2	30	15	-	<b>6</b>
				-	5	-	

**Computer science**

MATH0461-2	<i>Introduction to numerical optimization</i> (english language) - Quentin LOUVEAUX - [25h Proj.]	B3	Q1	30	20	[+]	<b>6</b>
INFO0054-1	<i>Functional programming</i> - Christophe DEBRUYNE - [20h Proj.]	B3	Q1	24	24	[+]	<b>6</b>
MATH1222-3	<i>Introduction to stochastic processes</i> - Céline ESSER, Pierre GEURTS - [10h Mon. WS] <b>Prerequisite :</b> INFO0062-1 - Object-oriented programming INFO2009-2 - Introduction à l'informatique <b>Corequisite :</b> MATH0474-1 - Statistique MATH7372-1 - Probabilités	B3	Q2	20	10	[+]	<b>4</b>

**Mathematics**

MATH0257-2	<i>Complex analysis</i> - N... <b>Prerequisite :</b> MATH0081-1 - Calcul intégral MATH0080-1 - Calcul différentiel	B3	Q1	30	30	-	<b>6</b>
MATH0212-2	<i>General topology</i> - Céline ESSER - [10h Mon. WS]	B3	Q2	30	20	[+]	<b>6</b>

[...] elective courses not already chosen in block 2

**Optional free courses (B2 : 4Cr)**

OCEA0053-1	<i>Study of Oceans and Coastal Management</i> - Sylvie GOBERT	B2	Q2	-	40	-	<b>4</b>
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**Learning support activities (B1 : 1Cr)**

**Aimed at students who have acquired less than 30 credits.**

## Cross-disciplinary activities

AREM0007-1	<i>Remedial "Computer Science"</i> - Bernard BOIGELOT - [10h REM]	B1	Q2	-	-	[+]	-
AREM0008-1	<i>Help to succeed in "Computer Science"</i> - Bernard BOIGELOT - [10h REM]	B1	Q1	-	-	[+]	-
IREM0010-1	<i>Bien recommencer son année</i> - AnneFrance LANOTTE, Serena LEINER - [2h REM]	B1	Q1	-	-	[+]	-
IREM0018-1	<i>Maintaining or rediscovering your motivation if you have to repeat a year (Q1)</i> - Céline MATHY, Sandrine WUIDART - [2h REM]	B1	Q1	-	-	[+]	-
LREM0010-1	<i>Taking stock of your skills in French (Q1)</i> - Samia HAMMAMI, Frédéric SAENEN - [15h REM]	B1	Q1	-	-	[+]	-

**Aimed at students with reduced hours (art. 150)**

- To consult the list of courses, click on this link: <https://www.student.uliege.be/student/remediations-allegement150>
- To add these courses to your SAP, please contact the student affairs office

**Aimed at all students in block 1.**

- To consult the list of courses, click on this link: <https://www.student.uliege.be/student/remediations-toutpublic>
- To add these courses to your SAP, please contact the student affairs office