

## One-year master program (60 ECTS)

### Compulsory courses

SMEM0011-1 *Final thesis* - COLLÉGIALITÉ - - - **20**

### Optional courses

With the agreement of the council of studies in mathematical sciences choose course for 40 credits in the two lists below and, possibly, in the program of other Master's degrees :

#### First list

[...] At least 30 course from "Première liste"

MATH0463-1	<i>Functional Analysis I</i> - Jochen WENGENROTH - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0209-3	<i>Measure Theory</i> - Jochen WENGENROTH - [20h Mon. WS]	30	10	[+]	<b>10</b>
INFO0213-2	<i>Automata and formal languages theory</i> - Michel RIGO - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0220-2	<i>Functions of complex variables</i> - Jean-Pierre SCHNEIDERS - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0464-1	<i>Differential geometry II</i> - Pierre LECOMTE - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0017-3	<i>Mathematical Logic and Set Theory</i> - Georges HANSOUL - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0465-1	<i>Algebraic Topology</i> - Jean-Pierre SCHNEIDERS - [20h Mon. WS]	30	10	[+]	<b>10</b>

#### The second list

[...] At least 10 credits from courses from "Deuxième liste"

STAT0723-2	<i>statistical linear models</i> - Paul GÉRARD - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0221-3	<i>Analysis of time series</i> - Paul GÉRARD - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0222-3	<i>Introduction to stochastic processes</i> - Gentiane HAESBROECK - [20h Mon. WS]	30	10	[+]	<b>10</b>
STAT0201-3	<i>Multivariate statistics</i> - Adelin ALBERT - [20h Mon. WS]	30	10	[+]	<b>10</b>
ASTR0201-4	<i>Astronomy</i> - Marc-Antoine DUPRET	30	30	-	<b>10</b>
PHYS0243-2	<i>Quantum Physics I</i> - Thierry BASTIN - [20h Mon. WS]	30	10	[+]	<b>10</b>
PHYS0203-2	<i>Statistical physics</i> - Nicolas VANDEWALLE - [20h Mon. WS]	30	10	[+]	<b>10</b>
MECA0204-2	<i>General Relativity and Cosmology</i> - Yves DE ROP - [20h Mon. WS]	30	10	[+]	<b>10</b>
SPAT0045-1	<i>Star evolution</i> - Marc-Antoine DUPRET	20	20	-	<b>5</b>
SPAT0044-1	<i>Star structures</i> - Marc-Antoine DUPRET	20	20	-	<b>5</b>
MECA0203-3	<i>Continuum Mechanics</i> - Pierre DAUBY - [20h Mon. WS]	30	10	[+]	<b>10</b>

#### Programme of courses for other masters degrees

[...] At least 10 credits from courses of the University of Liège

## Two-Year Master Program (120 ECTS)

### First Year

#### Optional courses

With the agreement of the council of studies in mathematical sciences choose course for 60 credits in the two lists below and, possibly, in the program of other Master's degrees

#### First list

[...] At least 40 course from "Première liste"

MATH0463-1	<i>Functional Analysis I</i> - Jochen WENGENROTH - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0209-3	<i>Measure Theory</i> - Jochen WENGENROTH - [20h Mon. WS]	30	10	[+]	<b>10</b>
INFO0213-2	<i>Automata and formal languages theory</i> - Michel RIGO - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0220-2	<i>Functions of complex variables</i> - Jean-Pierre SCHNEIDERS - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0464-1	<i>Differential geometry II</i> - Pierre LECOMTE - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0017-3	<i>Mathematical Logic and Set Theory</i> - Georges HANSOUL - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0465-1	<i>Algebraic Topology</i> - Jean-Pierre SCHNEIDERS - [20h Mon. WS]	30	10	[+]	<b>10</b>

#### The second list

[...] At least 20 credits from courses from "Deuxième liste"

STAT0723-2	<i>statistical linear models</i> - Paul GÉRARD - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0221-3	<i>Analysis of time series</i> - Paul GÉRARD - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0222-3	<i>Introduction to stochastic processes</i> - Gentiane HAESBROECK - [20h Mon. WS]	30	10	[+]	<b>10</b>

STAT0201-3	<i>Multivariate statistics</i> - Adelin ALBERT - [20h Mon. WS]	30	10	[+]	<b>10</b>
ASTR0201-4	<i>Astronomy</i> - Marc-Antoine DUPRET	30	30	-	<b>10</b>
PHYS0243-2	<i>Quantum Physics I</i> - Thierry BASTIN - [20h Mon. WS]	30	10	[+]	<b>10</b>
PHYS0203-2	<i>Statistical physics</i> - Nicolas VANDEWALLE - [20h Mon. WS]	30	10	[+]	<b>10</b>
MECA0204-2	<i>General Relativity and Cosmology</i> - Yves DE ROP - [20h Mon. WS]	30	10	[+]	<b>10</b>
SPAT0045-1	<i>Star evolution</i> - Marc-Antoine DUPRET	20	20	-	<b>5</b>
SPAT0044-1	<i>Star structures</i> - Marc-Antoine DUPRET	20	20	-	<b>5</b>
MECA0203-3	<i>Continuum Mechanics</i> - Pierre DAUBY - [20h Mon. WS]	30	10	[+]	<b>10</b>
PHYS0204-3	<i>Quantum Physics II</i> - Thierry BASTIN - [20h Mon. WS]	30	10	[+]	<b>10</b>
PHYS0205-2	<i>Further Physical Statistics</i> - Nicolas VANDEWALLE - [20h Mon. WS]	30	10	[+]	<b>10</b>

#### Programme of courses for other masters degrees

[...] At least 10 credits from courses of the University of Liège

#### Optional free courses

AESS0252-1	<i>Introduction to mathematics didactics</i> - Marguerite GILOT	10	10	-	<b>2</b>
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## Second year

#### Compulsory courses

SMEM0012-1	<i>Final thesis</i> - COLLÉGIALITÉ	-	-	-	<b>20</b>
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#### Optional courses

With the agreement of the council of studies in mathematical sciences choose course for 10 credits among the following :

[...] The remaining courses not taken on the first list

MATH0463-1	<i>Functional Analysis I</i> - Jochen WENGENROTH - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0209-3	<i>Measure Theory</i> - Jochen WENGENROTH - [20h Mon. WS]	30	10	[+]	<b>10</b>
INFO0213-2	<i>Automata and formal languages theory</i> - Michel RIGO - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0220-2	<i>Functions of complex variables</i> - Jean-Pierre SCHNEIDERS - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0464-1	<i>Differential geometry II</i> - Pierre LECOMTE - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0017-3	<i>Mathematical Logic and Set Theory</i> - Georges HANSOUL - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0465-1	<i>Algebraic Topology</i> - Jean-Pierre SCHNEIDERS - [20h Mon. WS]	30	10	[+]	<b>10</b>

[...] the remaining courses not taken on the second list

STAT0723-2	<i>statistical linear models</i> - Paul GÉRARD - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0221-3	<i>Analysis of time series</i> - Paul GÉRARD - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0222-3	<i>Introduction to stochastic processes</i> - Gentiane HAESBROECK - [20h Mon. WS]	30	10	[+]	<b>10</b>
STAT0201-3	<i>Multivariate statistics</i> - Adelin ALBERT - [20h Mon. WS]	30	10	[+]	<b>10</b>
ASTR0201-4	<i>Astronomy</i> - Marc-Antoine DUPRET	30	30	-	<b>10</b>
PHYS0243-2	<i>Quantum Physics I</i> - Thierry BASTIN - [20h Mon. WS]	30	10	[+]	<b>10</b>
PHYS0203-2	<i>Statistical physics</i> - Nicolas VANDEWALLE - [20h Mon. WS]	30	10	[+]	<b>10</b>
MECA0204-2	<i>General Relativity and Cosmology</i> - Yves DE ROP - [20h Mon. WS]	30	10	[+]	<b>10</b>
SPAT0045-1	<i>Star evolution</i> - Marc-Antoine DUPRET	20	20	-	<b>5</b>
SPAT0044-1	<i>Star structures</i> - Marc-Antoine DUPRET	20	20	-	<b>5</b>
MECA0203-3	<i>Continuum Mechanics</i> - Pierre DAUBY - [20h Mon. WS]	30	10	[+]	<b>10</b>
PHYS0204-3	<i>Quantum Physics II</i> - Thierry BASTIN - [20h Mon. WS]	30	10	[+]	<b>10</b>
PHYS0205-2	<i>Further Physical Statistics</i> - Nicolas VANDEWALLE - [20h Mon. WS]	30	10	[+]	<b>10</b>

[...] The programme of courses for other Masters.

#### Choose one of the following focus :

##### Research Focus

#### Compulsory courses

MATH0466-1	<i>Seminars</i> - COLLÉGIALITÉ - [75h SEM]	-	-	[+]	<b>12</b>
SMEM0037-1	<i>Thesis complement</i> - COLLÉGIALITÉ	-	-	-	<b>8</b>

#### Optional courses

With the agreement of the council of studies, choose 1 among the following :

MATH0467-1	<i>Functional Analysis</i> - Françoise BASTIN - [20h Mon. WS]	30	10	[+]	<b>10</b>
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MATH0468-1	<i>Algebraic Analysis</i> - Jean-Pierre SCHNEIDERS - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0469-1	<i>Differential geometry III</i> - Pierre LECOMTE - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0234-2	<i>Boolean Topology and Boolean Algebra</i> - Georges HANSOUL - [20h Mon. WS]	30	10	[+]	<b>10</b>
MATH0470-1	<i>Combinatorics on words</i> - Michel RIGO - [20h Mon. WS]	30	10	[+]	<b>10</b>

#### Teaching focus

##### Compulsory courses

AESS0246-1	<i>Analysis of scholastic institutions and key-players, educational policies</i> - Jacqueline BECKERS	15	-	-	<b>1</b>
AESS0247-1	<i>Views on cultural diversity</i> - Jérôme JAMIN	10	-	-	<b>1</b>
AESS0248-1	<i>Elements of sociology of education</i> - Jean-François GUILLAUME	10	-	-	<b>1</b>
AESS0140-1	<i>Professional ethics and training to neutrality and citizenship</i> - Véronique DORTU	25	-	-	<b>2</b>
AESS0202-1	<i>General didactics: courses and exercises; observation placements; reflexive practices</i> - Jean-Luc GILLES - [10h Internship]	30	10	[+]	<b>4</b>
AESS0004-1	<i>Media education</i> - Geneviève VAN CAUWENBERGE	15	-	-	<b>1</b>
AESS0249-1	<i>Interdisciplinary seminar</i> - Nicolas LECLERCQ	15	-	-	<b>1</b>
AESS0143-1	<i>Educational Psychology of adolescents and young adults</i> - Dieudonné LECLERCQ	15	-	-	<b>2</b>
AESS0142-1	<i>Seminar on prevention and management of difficult scholastic situations</i> - Jocelyne ROBERT	15	-	-	<b>2</b>
AESS0214-1	<i>Special didactics in mathematics (part I)</i>				<b>6</b>
	- Course and exercises - Marguerite GILOT	40	-	-	
	- Observation placements - Marguerite GILOT - [10h Internship]	-	-	[+]	
	- Teaching placements - Marguerite GILOT - [20h Internship]	-	-	[+]	
	- Reflexive practical work - Marguerite GILOT	-	5	-	
AESS0232-1	<i>Special didactics in mathematics (part II)</i>				<b>9</b>
	- Course and exercises - Marguerite GILOT	35	-	-	
	- Teaching placements - Marguerite GILOT - [20h Internship]	-	-	[+]	
	- Reflexive practical work - Marguerite GILOT	-	5	-	
	- School practical outside lectures - Marguerite GILOT	-	10	-	

#### Professional Focus

##### Compulsory courses

GEST3000-1	<i>First steps in an enterprise</i> - Robert NONDONFAZ, Bernard SURLEMONT	0,5	-	-	<b>2</b>
GEST3001-1	<i>Organization analysis</i> - Annie CORNET	-	-	-	<b>3</b>
GEST3002-1	<i>Human Resources Management</i> - Jocelyne ROBERT	16	-	-	<b>3</b>
GEST3003-1	<i>Competitive Strategy in the Marketplace</i> (english) - Michael GHILISSEN	16	-	-	<b>3</b>
GEST3004-1	<i>Marketing (operations and management)</i> (english) - Michael GHILISSEN	16	-	-	<b>3</b>
GEST3005-1	<i>Accountancy and Finance</i> - Jacques BERWART	24	-	-	<b>4</b>
GEST3006-1	<i>Production (Supply chain management)</i> (english) - Yasemin ARDA	45	-	-	<b>3</b>
GSTG3001-1	<i>Internship</i> - COLLÉGIALITÉ	-	-	-	<b>6</b>

##### Optional courses

With the agreement of the council of studies choose a course among the following :

GEST3010-1	<i>Production 2 (Supply Chain Management 2nd part)</i> (english) - Robert NONDONFAZ	-	-	-	<b>3</b>
GEST3011-1	<i>ICT in the service of the company</i> - Alain DUBOIS	30	-	-	<b>3</b>
GEST3012-1	<i>Financial and actuarial modelling tools</i> - Louis ESCH	16	-	-	<b>3</b>