

## Block view of the study programme

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### Bloc 1 du programme de l'année

#### Compulsory courses

##### Core courses common to the study paths

GEOG0238-1	<i>Geographical Information Systems</i> - JeanPaul DONNAY	Q2	30	30	-	<b>6</b>
GEOG0650-2	<i>Impact studies</i> - Guénaël DEVILLET	Q2	10	20	-	<b>3</b>
SPOL2209-3	<i>Environmental and land policies</i> - Sophie HANSON	Q1	30	-	-	<b>2</b>
GEOG2028-1	<i>Spatial planning</i> - JeanMarie HALLEUX - [1d FW]	Q1	15	15	[+]	<b>3</b>
GEOG0622-1	<i>Project management</i> - JeanPaul DONNAY	Q2	10	10	-	<b>2</b>

##### Courses specific to the Study Path

CLIM0019-1	<i>Climate Changes : Criticisms</i> - Michel ERPICUM	Q1	10	10	-	<b>2</b>
CLIM0014-1	<i>Programming in service of climatology (part 1)</i> - Xavier FETTWEIS	Q1	15	30	-	<b>3</b>
MATH0221-4	<i>Analysis of time series</i> - Pierre MAGAIN, Guy MUNHOVEN	Q2	15	15	-	<b>3</b>
OCEA0014-1	<i>Mathematical analysis and modelling methods applied to the environment</i> - Eric DELHEZ	Q1	20	20	-	<b>3</b>
PHYS0209-2	<i>Numerical methods in physics</i> - Alejandro SILHANEK	Q1	15	20	-	<b>3</b>
GEOG0605-1	<i>Regional geography and geomorphology</i> - François PETIT - [4d FW]	Q2	20	-	[+]	<b>3</b>
GEOG0630-5	<i>Climatic geomorphology</i> - Aurelia HUBERT - [4d FW]	Q1	15	5	[+]	<b>3</b>

Notice : Students who have already taken the cours Numerical methods in physics and must choose, with the approval of the Jury, courses totaling 3 ECTS not already taken in the 3rd year of Bachelor or in one of the programmes of Master in Geography.

#### Optional courses

In agreement with the jury, choose two teaching (and learning) units from the following :

ENVT3056-1	<i>Agrometeorology (Even years)</i> - <i>Agrometeorology Basis</i> - Bernard TYCHON - <i>Applied Agrometeorology</i> - Bernard TYCHON - [1d FW]	Q2				<b>10</b>
			15	15	-	
			45	15	[+]	
CLIM0020-1	<i>Atmosphere and Oceans (Odd years)</i> - <i>Greenhouse Gas and Climate Changes Fight</i> - Emmanuel MAHIEU - [3d FW] - <i>Teledetection applied to Climatology</i> - Nicolas CLERBAUX - <i>Introduction to Physical Oceanography and Marine Meteorology</i> - JeanMarie BECKERS	Q1				<b>10</b>
			30	-	[+]	
			20	10	-	
			30	15	-	
CLIM0021-1	<i>Topoclimatology</i> - <i>Topoclimatology</i> - Michel ERPICUM - [3d FW] - <i>Urban Climatology</i> - Michel ERPICUM - <i>Zonal Climatology</i> - Michel ERPICUM	Q2				<b>10</b>
			15	15	[+]	
			20	15	-	
			15	30	-	
GEOG2029-1	<i>Geomorphology Modelling</i> - <i>Geomatics applied to Geomorphology</i> - Yves CORNET - <i>Introduction to Geomorphology Modelling</i> - Aurelia HUBERT - <i>Introduction to hydrological modelling</i> - Eric HALLOT	Q1				<b>10</b>
			10	10	-	
			20	20	-	
			10	20	-	

Notice : a maximum of 2 teaching (and learning) units in "geomorphology" will be chosen on the cycle.

#### Single focus :

##### Research Focus

CLIM0001-1	<i>Applied climatology</i> - Michel ERPICUM - [1d FW]	Q2	20	10	[+]	<b>3</b>
CLIM0002-1	<i>Climate models : principles and applications</i> - Louis FRANÇOIS	Q2	45	15	-	<b>6</b>

**Corequisite :**

CLIM0014-1 - Programmation au service de la climatologie (partim 1)

CLIM0003-3 *Climate changes and impacts* - Louis FRANÇOIS, Guy MUNHOVEN TA 15 45 - 5

**Bloc 2 du programme de l'année**

**Compulsory courses**

**Core courses common to the study paths**

GEOG0025-1 *Introduction to research* - JeanPaul DONNAY Q1 10 10 - 2  
SMEM0033-1 *Final thesis* - COLLÉGIALITÉ TA - - - 22

**Optional courses**

**Courses specific to the Study Path**

In agreement with the jury, choose two teaching (and learning) units from the following :

ENVT3056-1	<i>Agrometeorology</i> - <i>Agrometeorology Basis</i> - Bernard TYCHON - <i>Applied Agrometeorology</i> - Bernard TYCHON - [1d FW]	Q2				<b>10</b>
			15	15	-	
			45	15	[+]	
CLIM0020-1	<i>Atmosphere and Oceans</i> - <i>Greenhouse Gas and Climate Changes Fight</i> - Emmanuel MAHIEU - [3d FW] - <i>Teledetection applied to Climatology</i> - Nicolas CLERBAUX - <i>Introduction to Physical Oceanography and Marine Meteorology</i> - JeanMarie BECKERS	Q1				<b>10</b>
			30	-	[+]	
			20	10	-	
			30	15	-	
CLIM0021-1	<i>Topoclimatology</i> - <i>Topoclimatology</i> - Michel ERPICUM - [3d FW] - <i>Urban Climatology</i> - Michel ERPICUM - <i>Zonal Climatology</i> - Michel ERPICUM	Q2				<b>10</b>
			15	15	[+]	
			20	15	-	
			15	30	-	
GEOG2029-1	<i>Geomorphology Modelling</i> - <i>Geomatics applied to Geomorphology</i> - Yves CORNET - <i>Introduction to Geomorphology Modelling</i> - Aurelia HUBERT - <i>Introduction to hydrological modelling</i> - Eric HALLOT	Q1				<b>10</b>
			10	10	-	
			20	20	-	
			10	20	-	
GEOG2030-1	<i>Hydrology</i> - <i>River Dynamics</i> - François PETIT - [2d FW] - <i>Applied Hydrology</i> - François PETIT - [3d FW] - <i>Hydrogeology</i> - Alain DASSARGUES	Q1				<b>10</b>
			15	15	[+]	
			10	15	[+]	
			20	20	-	
GEOG2031-1	<i>Geomorphology Data Acquisition</i> - <i>Geomorphological Survey</i> - COLLÉGIALITÉ, Geoffrey HOUBRECHTS, Aurelia HUBERT - [4d FW] - <i>Geomorphological Dynamic</i> - COLLÉGIALITÉ, Eric HALLOT, Geoffrey HOUBRECHTS, François PETIT - [1d FW]	Q1				<b>10</b>
			-	15	[+]	
			15	15	[+]	
GEOG2032-1	<i>Surfacial Process</i> - <i>Soils Mechanics and Geotechnology</i> - Robert CHARLIER, Frédéric COLLIN - <i>Side Process</i> - Aurelia HUBERT - [1d FW] - <i>Morphotectonics and Volcanism</i> - Alain DEMOULIN - [2d FW]	Q1				<b>10</b>
			24	24	-	
			10	-	[+]	
			25	15	[+]	

Notice : a maximum of 2 teaching (and learning) units in "geomorphology" will be chosen on the cycle.

**Single focus :**

**Research Focus**

CLIM0005-1 *Operational meteorology* - COLLÉGIALITÉ - [18d SEM] Q2 - - [+]**6**

**Prerequisite :**

CLIM0002-1 - Modèles climatiques : principes et applications

Notice : Collegiality = Royal Military School and Meteorological Wing

CLIM0015-1	<i>Programming in service of climatology (part 2)</i> - Xavier FETTWEIS <b>Prerequisite :</b> CLIM0014-1 - Programmation au service de la climatologie (partim 1)	Q1	15	30	-	<b>3</b>
CLIM0017-2	<i>Climate modelling</i> - <i>Part 1 : Atmosphere</i> - Xavier FETTWEIS - <i>Part 2 : Vegetation and carbon cycle</i> - Louis FRANÇOIS <b>Prerequisite :</b> CLIM0002-1 - Modèles climatiques : principes et applications <b>Corequisite :</b> CLIM0015-1 - Programmation au service de la climatologie (partim 2)	Q1	10 15	20 25	- -	<b>7</b>

**Bloc d'aménagement du programme de l'année**

**Additional ECTS Master in geography : climatology, research focus**

**Optional courses**

Depending on the student's previous training and with the agreement of the jury, choose, if necessary, courses for a maximum of 24 credits among the following :

SPAT0024-2	<i>Meteorology</i> - Louis FRANÇOIS	Q1	40	20	-	<b>5</b>
GEOG0630-5	<i>Climatic geomorphology</i> - Aurelia HUBERT - [4d FW]	Q1	15	5	[+]	<b>3</b>
MATH2007-1	<i>Mathematics</i> - Françoise BASTIN	Q1	30	40	-	<b>8</b>
PHYS0188-7	<i>Physics</i> - Nicolas VANDEWALLE	Q1	30	40	-	<b>8</b>

**Programme transitoire à destination des étudiants ayant réussi leur master 1 de "Master en sciences géographiques, orientation climatologie, à finalité approfondie" en 2014-2015**

**Bloc 1 du programme de l'année**

**Optional courses**

**Follow-up to the focus chosen in first year**

**Research Focus**

CLIM0005-1	<i>Operational meteorology</i> - COLLÉGIALITÉ - [18d SEM]	Q2	-	-	[+]	<b>7</b>
CLIM0001-1	<i>Applied climatology</i> - Michel ERPICUM - [1d FW]	Q2	20	10	[+]	<b>3</b>
CLIM0015-1	<i>Programming in service of climatology (part 2)</i> - Xavier FETTWEIS	Q1	15	30	-	<b>4</b>
CLIM0016-1	<i>Remote sensing applied to climatology</i> - Nicolas CLERBAUX	Q1	20	10	-	<b>3</b>
CLIM0007-2	<i>Greenhouse gases - Measures and instruments to mitigate climate change</i> - Emmanuel MAHIEU - [3d FW]	Q1	30	-	[+]	<b>3</b>

**Choose one module from :**

**Environmental and applied climatology**

GEOG0633-1	<i>Rivers dynamics</i> - François PETIT - [2d FW]	Q1	15	15	[+]	<b>3</b>
ENVT0879-2	<i>Applied agrometeorology</i> - Bernard TYCHON - [1d FW]	Q2	45	15	[+]	<b>5</b>
ENVT0881-1	<i>Environmental degradation and desertification</i> - Pierre OZER	Q2	20	-	-	<b>2</b>

**Climate modeling**

CLIM0017-2	<i>Climate modelling</i> - Part 1 : Atmosphere - Xavier FETTWEIS - Part 2 : Vegetation and carbon cycle - Louis FRANÇOIS	Q1	10	20	-	7
			15	25	-	
OCEA0075-2	<i>Introduction to physical oceanography and marine meteorology</i> - JeanMarie BECKERS	Q1	30	15	-	3

**Compulsory courses**

**Core courses common to the study paths**

GEOG0025-1	<i>Introduction to research</i> - JeanPaul DONNAY	Q1	10	10	-	2
GEOG0646-1	<i>Seminars</i> - COLLÉGIALITÉ <i>Notice</i> : Collegiality = Climatology Team	TA	-	-	-	2
GEOG0007-1	<i>Thesis supervision and seminars</i> - COLLÉGIALITÉ <i>Notice</i> : Collegiality = Climatology Team	TA	-	-	-	3
SMEM0033-1	<i>Final thesis</i> - COLLÉGIALITÉ	TA	-	-	-	20

**Courses specific to the Study Path**

CLIM0018-1	<i>Urban climatology</i> - Michel ERPICUM	Q1	20	15	-	3
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