

#### Cycle view of the study programme

B1 Or Th Pr Au Cr

#### Compulsory courses (B1 : 44Cr, B2 : 36Cr)

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

GEOG0650-2	<i>Impact studies</i> - Guénaël DEVILLET	B1	Q2	10	20	-	3
CLIM0026-1	<i>Global warming and natural risks</i> (english language) - Xavier FETTWEIS	B1	Q2	10	20	-	3
GEOG2028-1	<i>Introduction to spatial planning</i> - JeanMarie HALLEUX - [1d FW]	B1	Q1	15	15	[+]	3
GEOG0057-1	<i>Spatial analysis</i> - François JONARD	B1	Q2	30	30	-	5
SSTG0061-1	<i>Internship</i> - COLLÉGIALITÉ - [6w Internship]	B2	TA	-	-	[+]	6
SMEM0043-1	<i>Final thesis</i> - COLLÉGIALITÉ	B2	TA	-	-	-	20

##### Courses specific to the Study Path

GEOG0037-1	<i>Global Navigation Satellite Systems</i> - René WARNANT	B1	Q1	40	15	-	5
GEOG0626-1	<i>Observation Theory</i> (english language) - Roland BILLEN	B1	Q1	20	30	-	5
GEOG0060-1	<i>Remote sensing</i> - François JONARD	B1	Q1	25	25	-	5
GEOG0053-1	<i>Topography</i> (english language) - Part A - Part B - [1d FW]	B1	Q1	20 10	10 5	- [+]	5
GEOG0059-1	<i>Infrastructures of spatial data</i> - Roland BILLEN, JeanPaul KASPRZYK	B1	Q1	30	30	-	5
GEOG0062-1	<i>Geovisualization</i> - Pierre HALLOT	B1	Q2	30	30	-	5
GEOG0063-1	<i>3D data acquisition and processing</i> (english language) - [2d FW]	B2	Q1	10	40	[+]	5
GEOG0038-1	<i>GNSS data processing</i> - René WARNANT	B2	Q1	25	30	-	5

Students from the Bachelor in Geography: general, who have already followed some of the courses, may, with the Jury's agreement, follow alternative courses in the Université of Liège course programme for the same number of credits.

#### Optional courses (B1 : 16Cr, B2 : 24Cr)

##### Courses specific to the Study Path

In agreement with the jury, chose courses for a total of 10 credits from among: (B2 : 10Cr)

GCIV0184-5	<i>Building Materials</i> - Luc COURARD, Anne HABRAKEN - [0,5d FW, 12h Labo., 12h Proj.]	B2	Q2	36	16	[+]	5
GEOG0066-1	<i>GNSS project</i> - René WARNANT - [60h Proj.]	B2	Q2	5	10	[+]	5
GEOG0067-1	<i>Remote sensing project</i> - Philippe LEJEUNE - [80h Proj.]	B2	Q2	-	-	[+]	5
GEOG0618-1	<i>Urban and territorial economy: real estate markets</i> - JeanMarie HALLEUX	B2	Q2	15	10	-	3
SPOL2209-3	<i>Environmental and land policies</i> - Sophie HANSON	B2	Q1	30	-	-	2
INFO8010-1	<i>Deep learning</i> (english language) - Gilles LOUPPE - [60h Proj.]	B2	Q2	30	-	[+]	5

[...] the courses programme from other study fields of the Faculty of Sciences, from other faculties or from other universities

#### Choose one focus from the following : (B1 : 16Cr, B2 : 14Cr)

##### Professional focus in land surveyor (B1 : 16Cr, B2 : 14Cr)

DROI8041-3	<i>Property law</i> - <i>Founding principles</i> - Pascale LECOCQ - <i>Practical case</i> - Pascale LECOCQ - Suppl : Noémie GOFFLOT	B1	Q2	32 13	- -	- -	5
GCIV0620-2	<i>Introduction to geotechnics, Part A</i> - Bertrand FRANÇOIS - [1d	B1	Q1	20	10	[+]	3

	FW]								
GCIV0621-1	<i>Urban and environmental hydraulics</i> - Pierre ARCHAMBEAU, Michel PIROTON	B1	Q2	25	15	-			<b>3</b>
GEOG2038-1	<i>Roadway and diverse networks</i> - Pierre ARCHAMBEAU, Roland BILLEN, Frédéric COLLIN - [40h Proj.]	B1	Q2	5	15	[+]			<b>5</b>
GEOG0068-1	<i>Integrated project, "Land surveyor"</i> - Nicolas SARTON - [6d FW]	B2	Q1	20	5	[+]			<b>8</b>
GEOG0645-1	<i>Professional practices : the geometrist</i> - Roland BILLEN	B2	Q2	20	10	-			<b>3</b>
GEOG0267-1	<i>Land Administration</i> - Roland BILLEN, JeanMarie HALLEUX - [1d FW]	B2	Q2	15	15	[+]			<b>3</b>

#### Professional focus in geodata expert (B1 : 16Cr, B2 : 14Cr)

INFO0009-2	<i>Database (general organisation)</i> - Christophe DEBRUYNE - [25h Proj.]	B1	Q2	26	26	[+]			<b>5</b>
INFO0902-1	<i>Data structures and algorithms</i> - Pierre GEURTS - [40h Proj.]	B1	Q2	26	20	[+]			<b>6</b>
INFO0062-1	<i>Object-oriented programming (english language)</i> - Bernard BOIGELOT - [20h Proj.]	B1	Q2	25	20	[+]			<b>5</b>
ELEN0062-1	<i>Introduction to machine learning (english language)</i> - Pierre GEURTS, Louis WEHENKEL - [40h Proj.]	B2	Q1	30	5	[+]			<b>5</b>
GEOG0069-1	<i>Advanced GIS</i> - Roland BILLEN	B2	Q1	30	30	-			<b>4</b>
GEOG0070-1	<i>GIS project</i> - Roland BILLEN - [80h Proj.]	B2	Q2	-	-	[+]			<b>5</b>

Students who have already taken certain courses shall choose alternative courses in the University of Liège's course programme, with the jury's approval, for the same number of credits.

## Additional ECTS Master in geography: geomatics (120 ECTS)

#### Optional courses (B0 : 60Cr)

Depending on the student's prior education and with the agreement of the Jury, choose, if necessary, courses for a maximum of 60 credits from the list below, the Bachelor in Geographic Sciences programme, general, or the programme of another field of study at ULiège. (B0 : 60Cr)

INFO0201-1	<i>Introduction to computer programming</i> - Peter SCHLAGHECK	B0	Q2	20	40	-			<b>5</b>
MATH0509-1	<i>General mathematics I</i> - Arnout VAN MESSEM	B0	Q1	25	30	-			<b>6</b>
MATH0009-6	<i>General mathematics II</i> - Françoise BASTIN	B0	Q2	15	15	-			<b>3</b>
STAT0807-1	<i>Descriptive statistics</i> - Arnout VAN MESSEM	B0	Q1	10	10	-			<b>2</b>
STAT0808-1	<i>Inferential statistics</i> - Samuel NICOLAY	B0	Q1	20	20	-			<b>4</b>
STAT0750-1	<i>Multivariate statistical analysis (software R)</i> - Arnout VAN MESSEM	B0	Q2	10	10	-			<b>2</b>
PHYS0985-1	<i>General physics I</i> - Philippe GHOSEZ	B0	Q2	45	40	-			<b>8</b>
PHYS0986-1	<i>General physics II</i> - Alejandro SILHANEK	B0	Q1	45	35	-			<b>6</b>
[...]	Bachelor in geography: general courses								
[...]	course from a programme in another field of education								