

GEOG1BA - Introduction

Introduction

GEOG1BA - Teaching profile

Learning outcomes

The future graduate will be preparing for the masters level training in geographic science, general orientation, or climate orientation. They will approach geographic questions at various scale and be trained in multidisciplinary approaches and spatial analysis techniques.

The bachelor student will learn to use both theoretical and practical knowledge. They acquire competence in analyses, modeling and communication. They are able to monitor and describe the environment, to understand and explain the spatial organizations of natural phenomena, human activity and how they interact, and of using well-defined geographic techniques.

At the end of its training in the Faculty of Sciences, the student will have acquired the disciplinary and transversal knowledge and competence necessary to be a relevant and useful professional. Their capacity to model and understand geographic phenomena in-depth and their taste for research and for scientific rigor are sought after not only in scientific employment (research, development, education) but also more broadly in today's and tomorrow's society.

On successful completion of this programme, each student is able to :

1. 1. Master and apply the main concepts of fundamental and human sciences and the foundations of geographic sciences needed to understand geographic questions.
 1. Master and apply basic concepts in fundamental sciences in the following disciplines : mathematics, chemistry, physics, animal biology, plant biology and geology.
 2. Identify and use the basic concepts in human sciences in the following disciplines : political economy, demography, geopolitics, development science, philosophy.
 3. Integrate and use the foundations of geographic sciences : In physical geography : geomorphology and biogeography; In human geography : urban geography, transport geography, rural geography, geography of health and economic geography ; In climatology : bioclimatology and meteorology.
2. 2. Monitoring and describe the environment and its evolution
 1. Describe the landscape and use templates for analysis in the context of field-based observation in Belgium.
 2. Analyse aerial pictures, topographic maps and thematic maps.
 3. Synthesize the organisation of the land using satellite Earth observation.
 4. Use a diversity of spatial data bases
3. Analyze the behavior of natural systems and human systems and their interactions.
 1. Identify the characteristics of spatial organization, their physical and human components how they interact.
 2. Formulate hypotheses and assumptions.
 3. Carry out a literature search on the topic in French and in English and synthesize the information collected.
 4. Collect and assemble the relevant data.
 5. Apply an identified data analysis method.
 6. Demonstrate rigorous attitude, precision and critical mind.
4. 4. Describe quantitatively the behavior of natural and human systems using numerical models
 - Master statistical analysis methods.
 - Interpret and analyze remotely sensed data.
 - Make thematic maps.
 - Use Geographic Information Systems.
5. 5. Use appropriate digital tools to process and analyze data
 - Write computer code and carry out statistical analysis using R.
 - Use remote sensing image processing software.
 - Use appropriate digital tools to process and analyze data.
6. 6. Participate in integrated, well-defined geography projects, as part of a team
 - Link various aspects of geography, accounting for natural and human dimensions.
 - Take part in a project on a well-defined question, using a methodological guidance.
 - Analyse and synthesize results.
 - Collaborate in a team and develop relational qualities.
7. 7. Communicate results and methods efficiently to a diversity of stakeholders
 - Communicate orally and in writing in French and in English (B1 level)
 - Communicate results to peers.
 - Communicate using maps, synthesis sketches and graphs.
 - Master the digital tools and techniques needed for communication.

Programme structure

The bachelor's programme begins with the acquisition of basic knowledge in the sciences (Mathematics, Physics, Chemistry, Biology,...) and in the subjects connected with geography (Earth Sciences, Geology, Meteorology, Economics...).

The study programme in Geography, which is integrated and developed in a progressive way, revolves around three main subject areas. Firstly, Physical Geography which includes the study of the functioning and changes of the climate, the forms of relief and vegetation. Secondly, Human Geography which analyses how and why human activities are developed in certain places and how these decisions collectively lead to spatial structures. Thirdly, the Geographical Analysis Techniques which include cartography, geographical information and the methods used for processing and interpreting spatial data, notably via satellites.

The courses include practical work, field trips and a project which will help the student to witness concrete problems first hand and to gain experience in finding appropriate solutions.

In accordance with his personal ambitions and in concertation with the Study Advisor, the student may envisage completing his training in Geography by choosing additional options, for a total of 180 credits, or by opting for a minor to be chosen from the University programme.

Principal Subjects

Foundation courses (57 credits)

- Mathematics, Statistics (16 credits)
- Physics (20 credits)
- Chemistry (10 credits)
- Biology (11 credits)

Related subjects (25 credits)

- Earth Sciences (17 credits)
- Economics (8 credits)

Geography (57 credits)

- Human Geography (16 credits)
- Physical Geography (17 credits)
- Techniques (20 credits)
- Project (4 credits)

Languages

				Year		
				1	2	3
○ LBIO1283	Statistical principles and biological data analysis	Nicolas Schtickzelle	EN [q2] [30h+40h] [4 Credits] 		x	
○ LBIR1271						

⌘ LSST1002M	Information and critical thinking - MOOC	Anne Bauwens (compensates Jean- François Rees)
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List of available minors

The students can choose a minor from the list below or can opt for another minor on the University programme, based on a project to be elaborated together with the study advisor.

- > [Additional module in Geography : global change and transition management](#) [*en-prog-2024-appgeo*]
- > [Minor in Culture and Creation](#) [*en-prog-2024-mincucrea*]
- > [Minor in Scientific Culture](#) [*en-prog-2024-mincults*]
- > [Minor : Issues of Transition and Sustainable Development \(*\)](#) [*en-prog-2024-mindd*]
- > [Minor in Gender Studies](#) [*en-prog-2024-mingenre*]
- > [Minor in Economics \(open\)](#) [*en-prog-2024-minoeco*]
- > [Minor in Physics](#) [*en-prog-2024-minphys*]

Course prerequisites

The **table** below lists the activities (course units, or CUs) for which there are one or more prerequisites within the programme, i.e. the programme CU for which the learning outcomes must be certified and the corresponding credits awarded by the jury before registering for that CU.

These activities are also identified **in the detailed programme**: their title is followed by a yellow square.

Prerequisites and student's annual programme

As the prerequisite is for CU registration purposes only, there are no prerequisites within a programme year. Prerequisites are defined between CUs of different years and therefore influence the order in which the student will be able to register for the programme's CUs.

o Formation scientifique générale

o LANG1861	English: reading and listening comprehension of scientific texts	Catherine Avery (coord.) Fanny Desterbecq Amandine Dumont (coord.) Hila Peer Marc Piwnik	ES [q2] [10h] [2 Credits]
o LECGE1115	Political Economics	Rigas Oikonomou Gonzague Vannoorenberghe	ES [q1] [45h +15h] [5 Credits]

GEOG1BA - 2ND ANNUAL UNIT

- Mandatory
- ⊗ Optional
- △ Not offered in 2024-2025
- ⊖ Not offered in 2024-2025 but offered the following year
- ⊕ Offered in 2024-2025 but not the following year
- △ ⊕ Not offered in 2024-2025 or the following year
- Activity with requisites
- 🌐 Open to incoming exchange students
- 🚫 Not open to incoming exchange students
- (FR) Teaching language (FR, EN, ES, NL, DE, ...)

Click on the course title to see detailed informations (objectives, methods, evaluation...)

o Majeure**o Sciences fondamentales**

○ LCHM1112	General Chemistry	Yaroslav Filinchuk	(FR) [q1] [30h] +22.5h] [5 Credits] 🌐
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o Thématiques géographiques

○ LGEO1231	Physical geography	Veerle Vanacker	(FR) [q1] [30h] +30h] [5 Credits] 🌐
○ LGEO1321	Geography of rural areas: land use, environment, nature ■	Patrick Meyfroidt	(FR) [q2] [30h] +15h] [5 Credits] 🌐 > English-friendly

o Techniques et compétences géographiques

○ LGEO1342	Geographical Information Systems (GIS)	Sophie Vanwambeke	(FR) [q1] [30h] +30h] [5 Credits] 🌐
○ LGEO1242	Cartographic projections and geodesy	Michel Crucifix	(FR) [q2] [30h] +15h] [5 Credits] 🌐
○ LBIO1282	Management and exploration of biological data	Renate Wesselingh	(FR) [q1] [20h] +15h] [2 Credits] 🌐
○ LBIO1283	Statistical principles and biological data analysis	Nicolas Schtickzelle	(FR) [q2] [30h] +40h] [4 Credits] 🌐

o Activités transversales et d'intégration

○ LGEO1232	The climate and its changes	Michel Crucifix (compensates Francesco Ragone) Qiuzhen Yin (compensates Kristof Van Oost)	(FR) [q2] [30h] [5 Credits] 🌐
○ LGEO1251	Earth's history ■	Veerle Vanacker	(FR) [q2] [30h] +60h] [6 Credits] 🌐 > English-friendly

o Formation scientifique générale

o LANG1862	English: reading and listening comprehension of scientific texts	Ahmed Adriouche (coord.) Catherine Avery Ariane Halleux (coord.) Adrien Kefer (compensates) Amandine Dumont	[q1] [30h] [3 Credits]
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o Minor or additional module

L'étudiant-e complète sa formation en choisissant un approfondissement ou une mineure dans la liste proposée pour le Bachelier en sciences géographiques, orientation générale. Il ou elle répartit les unités d'enseignement dans le 2e et le 3e bloc annuel, de manière à ce que son programme annuel totalise 60 crédits.

GEOG1BA - 3RD ANNUAL UNIT

- Mandatory
- ⊗ Optional
- △ Not offered in 2024-2025
- ⊙ Not offered in 2024-2025 but offered the following year
- ⊕ Offered in 2024-2025 but not the following year
- △ ⊕ Not offered in 2024-2025 or the following year
- Activity with requisites
- 🌐 Open to incoming exchange students
- 🌐 Not open to incoming exchange students
- 🗣️ Teaching language (FR, EN, ES, NL, DE, ...)

[Click on the course title to see detailed informations \(objectives, methods, evaluation...\)](#)

○ **Majeure**

○ **Sciences fondamentales**

● LSC1120A

Philosophy

GEOG1BA - Information

Access Requirements

Decree of 7 November 2013 defining the landscape of higher education and the academic organization of studies.

The admission requirements must be met prior to enrolment in the University.

In the event of the divergence between the different linguistic versions of the present conditions, the French version shall prevail.

SUMMARY

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- [Specific access requirements](#)
- [Access based on validation of professional experience](#)
- [Special requirements to access some programmes](#)

General access requirements

Except as otherwise provided by other specific legal provisions, admission to undergraduate courses leading to the award of a Bachelor's degree will be granted to students with one of the following qualifications :

1. A Certificate of Upper Secondary Education issued during or after the 1993-1994 academic year by an establishment offering full-time secondary education or an adult education centre in the French Community of Belgium and, as the case may be, approved if it was issued by an educational institution before 1 January 2008 or affixed with the seal of the French Community if it was issued after this date, or an equivalent certificate awarded by the Examination Board of the French Community during or after 1994;
2. A Certificate of Upper Secondary Education issued no later than the end of the 1992-1993 academic year, along with official documentation attesting to the student's ability to pursue higher education for students applying for a full-length undergraduate degree programme;
3. A diploma awarded by a higher education institution within the French Community that confers an academic degree issued under the above-mentioned Decree, or a diploma awarded by a university or institution dispensing full-time higher education in accordance with earlier legislation;
4. A higher education certificate or diploma awarded by an adult education centre;
5. A pass certificate for one of the [entrance examinations](#) organized by higher education institutions or by an examination board of the French Community; this document gives admission to studies in the sectors, fields or programmes indicated therein;
6. A diploma, certificate of studies or other qualification similar to those mentioned above, issued by the Flemish Community of Belgium, the German Community of Belgium or the Royal Military Academy;
7. A diploma, certificate of studies or other qualification obtained abroad and deemed equivalent to the first four mentioned above by virtue of a law, decree, European directive or international convention;

Note:

Requests for equivalence must be submitted to the Equivalence department ([Service des équivalences](#)) of the Ministry of Higher Education and Scientific Research of the French Community of Belgium in compliance with the official deadline.

The following two qualifications are automatically deemed equivalent to the Certificate of Upper Secondary Education (Certificat d'enseignement secondaire supérieur – CESS):

- European Baccalaureate issued by the Board of Governors of a European School,
- International Baccalaureate issued by the International Baccalaureate Office in Geneva.

8. Official documentation attesting to a student's ability to pursue higher education (diplôme d'aptitude à accéder à l'enseignement supérieur - DAES), issued by the Examination Board of the French Community.

Specific access requirements

- Access to bachelor programmes for candidates of nationality outside the European Union who are not assimilated to Belgian nationals is subject to the following criteria:
 - not have obtained a secondary education diploma for more than 3 years maximum. Example: for an admission application for the academic year 2024-2025, you must have obtained your diploma during the academic years 2021-2022, 2022-2023 ou 2023-2024. In the French Community of Belgium, the academic year runs from September 14 to September 13
 - not already hold an undergraduate degree
- Candidates, whatever their nationality, with a secondary school diploma **from a country outside the European Union**, must have obtained an average of 13/20 minimum or, failing that, have obtained this average, have passed one year of study in Belgium (for example special Maths / sciences). A non-successful year will not be taken into consideration.

- For any secondary school diploma **from a European Union country**, the admission request must contain the equivalence of your diploma or, at the very least, proof of the filing of the equivalence request with the Wallonia-Brussels Federation (French Community of Belgium). For any information relating to obtaining an equivalence, please refer to [the following site](#).
- For any secondary school diploma **from a country outside the European Union**, the admission application must contain the [equivalence of your diploma](#) issued by the Wallonia-Brussels Federation (French Community of Belgium). If you have a restrictive equivalence for the programme of your choice, in addition of it, you **must** have either the [DAES](#) or a certificate of successful completion of the [examination giving access to 1st cycle studies](#) when you submit your application

Access based on validation of professional experience

Admission to undergraduate studies on the basis of accreditation of knowledge and skills obtained through professional or personal experience (Accreditation of Prior Experience)

Subject to the general requirements laid down by the authorities of the higher education institution, with the aim of admission to the undergraduate programme, the examination boards accredit the knowledge and skills that students have obtained through their professional or personal experience.

This experience must correspond to at least five years of documented activity, with years spent in higher education being partially taken into account: 60 credits are deemed equivalent to one year of experience, with a maximum of two years being counted. At the end of an assessment procedure organized by the authorities of the higher education institution, the Examination Board will decide whether a student has sufficient skills and knowledge to successfully pursue undergraduate studies.

After this assessment, the Examination Board will determine the additional courses and possible exemptions constituting the supplementary requirements for the student's admission.

Special requirements to access some programmes

- Admission to **undergraduate studies in engineering: civil engineering and architect**
Pass certificate for the

Teaching method

Website

<https://uclouvain.be/fr/facultes/sc/geo>

Academic supervisor: [Sophie Vanwambeke](#)

Jury

- President: [Patrick Meyfroidt](#)
- Secretary: [Veerle Vanacker](#)
- Study advisor: [Eric Lambin](#)

Useful Contact(s)

- Administrative manager for the student's annual program: [Nathalie Micha](#)

