



## GEOG2M - Introduction

### Introduction

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## GEOG2M - Teaching profile

### Learning outcomes

The organization of the space in which we live results from the impact of man on his natural surroundings. It comes from a great many decisions, taken long ago or recently, which have shaped our environment by adapting it to our needs, for better and for worse. These decisions have stimulated development and also created imbalances : more productive world agriculture, industrial concentrations, urbanization, trade at every level, increase in average well-being, but also delocalization, pollution, damage to land, deforestation, erosion of biodiversity or climate change. Geography studies the mechanisms which have led to all these effects, in order to control them better.

The objective of the training with a **research focus** is an introduction to the three fundamental aspects of the work of a geographer:

- to observe and describe the environment, especially with computerized databases and advanced satellite observation technology and monitoring the state of the environment through different kinds of measurements ;
- to understand and explain the processes that have been observed, especially by building models which enable them to be simulated;
- to manage resources through land development.

Students will develop skills in the field of geography and especially in the study of the interactions between human activities, geographical space and the natural environment. This is done from the perspective of both human and physical geography: it is important to bring them together. The training also provides students with the geographical techniques necessary for the study of this.

The **research focus** prepares students for a range of different jobs in the public and private sector or in the voluntary field as well as for being a researcher.

The **teaching focus** is a specially adapted programme which focuses on teaching at the higher levels of secondary education.

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

1. Analyser les questions environnementales sous l'angle du développement durable, d'un territoire jusqu'au système Terre:
  - 1.1 Décrire les composantes physiques, biologiques, humaines du territoire jusqu'au système Terre.
  - 1.2 Décrire les interactions entre ces composantes et leurs dynamiques spatiales.
  - 1.3 Passer de la description à la formalisation.
    - 1.3.1 Identifier les processus sous-jacents sur base des schémas d'organisation spatiale.
    - 1.3.2 Formaliser la compréhension des mécanismes qui expliquent les relations spatiales observées via des modèles spatiaux statistiques et de simulation, et grâce à des théories géographiques.
  - 1.4 Passer de la formalisation à la prospective et à l'évaluation des politiques d'intervention:
    - 1.4.1 Être capable d'explorer, entre autres via des modèles, l'effet de la modification de certaines variables sur le territoire jusqu'au système Terre;
    - 1.4.2 Être capable de proposer des interventions (politiques de planification, de gestion, d'aménagement du territoire, etc.) sur base de simulations et scénarios.
2. Maitriser les outils de collecte, visualisation et analyse des données spatiales:
  1. 2.1 Maitriser des techniques de mesure sur le terrain et en laboratoire
  2. 2.2 Maitriser les techniques et méthodes de la cartographie
  3. 2.3 Interpréter et analyser des données de télédétection
  4. 2.4 Traiter des données avec des logiciels d'information géographique
  5. 2.5 Traiter les données avec des outils d'analyse statistique appropriés
  6. 2.6 Automatiser et programmer de procédures d'analyse spatiale
  7. 2.7 Exploiter des banques de données spatiales
  8. 2.8 Porter un regard critique sur les techniques utilisées
3. Savoir mettre en Œuvre les outils et compétences d'intégration et d'analyse spatiale pour contribuer à la gestion des territoires
  1. 3.1 h8488 ales sous l'angle du développement durable, i1999c99699 1 va 1et do 1 0a 278rg1834tographie

3. 4.3 Evaluer la pertinence et fiabilité des sources d'information, en prenant compte l'existence des épistémologies constructivistes et des approches critiques (critical geography, radical geography...) afin de mieux naviguer à travers les différents discours ambiants sur la transition.

## 5. Aborder la vie professionnelle comme citoyen responsable

Le monde professionnel contemporain nécessite, outre des compétences techniques, de pouvoir travailler de façon efficace dans des contextes variés et dynamiques. Outre la capacité d'apprentissage, les compétences dites douces ("soft skills") suivantes feront l'objet d'une attention particulière:

### 5.1 Communication:

- Communiquer oralement et par écrit en français et en anglais (niveau C1) les résultats d'un travail à des acteurs scientifiques et des acteurs de terrain, en s'adaptant à l'audience.
- Assembler, synthétiser et communiquer de manière synthétique et critique l'état des connaissances dans un domaine donné, en documentant les sources selon les conventions établies.
- Communiquer et discuter des données, des méthodes et des résultats.
- Réaliser des supports de communication visuelle pertinents et compréhensibles tels que cartes, schémas et graphiques.

### 5.2 Interactions dans le cadre du travail en équipe:

- Répartir les tâches d'un travail de groupe en éléments cohérents et équilibrés.
- Organiser la communication des membres du groupe.
- Pouvoir formuler et recevoir du feedback constructif sur son propre travail et celui des autres.

### 5.3 Organisation:

- Identifier les étapes intermédiaires d'un travail conséquent, les planifier, les exécuter et les adapter aux besoins.

### 5.4 Flexibilité:



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## LIST OF FOCUSES

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Given the importance of the reform of the Master of Geographical Sciences program, from 2024-25 onwards, the full program for students choosing the didactic option will be a transitional program.

> [Research Focus](#) [ en-prog-2024-geog2m-lgeog200a ]

> [Teaching Focus](#) [ en-prog-2024-geog2m-lgeog200d ]

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## RESEARCH FOCUS [30.0]

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- 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, ...)

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

Year

## TEACHING FOCUS [30.0]

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**IMPORTANT NOTE:** In accordance with article 138 para. 4 of the decree of 7 November 2013 concerning higher education and the academic organisation of studies, teaching practice placements will not be assessed in the September session. Students are required to make every effort to successfully complete the teaching practice in the June session, subject to having to retake the year.

- 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
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Year

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### o Content:

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				Year	
				1	2
⊗ LSPRI2020	Relations internationales contemporaines	Simon Desplanque Michel Liegeois	FR [q1] [30h+15h] [5 Credits] 🌐	x	x

### ⊗ Autres cours au choix

Sous réserve de l'accord du jury, l'étudiant.e peut intégrer à son programme des cours de 2ème ou 3ème bloc annuel de bachelier qui n'auraient pas été suivis durant le bachelier, ainsi que des cours dispensés dans d'autres universités. L'étudiant.e s'assurera auprès du titulaire du ou des cours choisi(s) qu'il est autorisé à le(s) suivre.

⊗ LGEO2400	Internship in a professional setting	Sophie Vanwambeke (coord.)	FR [q1 or q2] [15h] [4 Credits] 🌐	x	x
⊗ LPHYS2162	Introduction to the physics of the climate system and its modelling	Hugues Goosse Francesco Ragone	FR [q1] [22.5h+22.5h] [5 Credits] 🌐 > French-friendly	x	x
⊗ LENVI2005	Climate change: impacts and solutions		FR [q2] [30h] [3 Credits] 🌐	x	x

### ⊗ Cours au choix complémentaires pour la finalité didactique

⊗ LGEO2170	Field Excursion	Eric Lambin	FR [q2] [60h+30h] [4 Credits] 🌐	x	x
⊗ LAGRE2221	Learning and teaching with new technologies	Sandrine Decamps	FR [q1] [15h+15h] [2 Credits] 🌐	x	x
⊗ LAGRE2310	Micro-teaching exercises	Marc Blondeau Pascalia Papadimitriou	FR [q1 or q2] [15h] [2 Credits] 🌐	x	x

### ⊗ Optional courses :

These credits are not counted within the 120 rev1m [(These credits n94 | 491. 0 | t] 0 d 2 w 0 | 197.425003 3998 0 | 127.55997 250.744995 | 11.338 25

## Supplementary classes

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**To access this Master, students must have a good command of certain subjects. If this is not the case, in the first annual block of their Masters programme, students must take supplementary classes chosen by the faculty to satisfy course prerequisites.**

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### ○ Enseignements supplémentaires

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## Course prerequisites

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There are no prerequisites between course units (CUs) for this programme, i.e. the programme activity (course unit, CU) whose learning outcomes are to be certified and the corresponding credits awarded by the jury before registration in another CU.

## The programme's courses and learning outcomes

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For each UCLouvain training programme, a [reference framework of learning outcomes](#) specifies the the skills expected of every graduate on completion of the programme. Course unit descriptions specify targeted learning outcomes, as well as the unit's contribution to reference framework of learning outcomes.





## Specific professional rules

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Successful completion of the master's course with **teaching focus** leads to the award of the master's degree with teaching focus and the title of secondary school education specialist.

The [Réforme des Titres et Fonctions](#) ("Titles and Functions Reform"), in force since 1 September 2016, is intended to harmonise the titles, functions and pay scales of basic and secondary education professionals in French Community of Belgium networks.

It also aims to guarantee the priority of preferred titles over minimum titles and to establish a regime for titles in short supply.

AESS holders can learn which functions they can carry out and the pay scales from which they can benefit by [clicking here](#).

The university cannot be held responsible for any problems that students may encounter at a later date with a view to a teaching appointment in the French Community of Belgium.

## Teaching method

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The teaching strategy takes its inspiration from the idea of "taking responsibility for one's own learning" and offers a wide range of learning situations. The courses are focused on problems in society: environmental changes, mobility, urbanization, globalization and developing countries. Activities such as seminars and integrated exercises are carried out in advanced areas of geographical research. Ability to use advanced methods of geographical analysis is an important objective of the training: geographical modeling, geographical information systems and satellite teledetection.

Practical work gives students the opportunity of dealing with concrete problems and finding solutions to them, often in small groups. The computer rooms with special software for geographical analysis are always open to students. In the first year of the Master, the field work consists of a week of supervised exercises in the Alps or Spain. This is compulsory in the first year of the Master. Students who choose a research focus must do a second field course in the second year.

Students doing the teaching focus may do advanced teaching in mathematics, physics or geography.

## Evaluation

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***The evaluation methods comply with the [regulations concerning studies and exams](#). More detailed explanation of the modalities specific to each learning unit are available on their description sheets under the heading "Learning outcomes evaluation method".***

Students will mainly be assessed on the basis of individual work (e.g. reading, consultation of databases and bibliographic references, writing monographs and reports, presentation of seminars, dissertation and work placement). Where necessary, students will also be assessed on how much they have learned from lectures. As far as possible, there will be continuous assessment, including regular 'open book examinations'. Certain activities will not be given a precise mark but will be officially certified. Assessment of the dissertation is in two stages : a 'progress report' at the end of the first year of the Master and the final presentation.

## Mobility and/or Internationalisation outlook

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Students are strongly encouraged to take advantage of the Erasmus or Mercator exchange schemes outside Belgium, or to study at KULeuven.

It is possible to take courses in English. Not only will this help UCL students to become better acquainted with the language, but will also enable Erasmus students from abroad to take a semester of courses in English.

Advanced courses are given by many visiting lecturers from different foreign institutions and some Belgian ones. These are mostly in English.

## Possible trainings at the end of the programme

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Quelle que soit la finalité, le master en sciences géographiques donne directement accès au doctorat en sciences.

Un étudiant peut obtenir une autre finalité du même master en 30 crédits.

## Contacts

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### Curriculum Management

#### Entity

Structure entity	SST/SC/GEOG
Denomination	(GEOG)
Faculty	Faculty of Science (SC)
Sector	Sciences and Technology (SST)
Acronym	GEOG
Postal address	Place Louis Pasteur 3 - bte L4.03.07 1348 Louvain-la-Neuve Tel: +32 (0) 10 47 28 73 - Fax: +32 (0) 10 47 28 77 <a href="https://uclouvain.be/fr/facultes/sc/geo">https://uclouvain.be/fr/facultes/sc/geo</a>
Website	

Academic supervisor: [Sophie Vanwambeke](#)

#### Jury

- President: [Thierry Fichet](#)
- Secretary: [Veerle Vanacker](#)
- Study advisor: [Patrick Meyfroidt](#)

#### Useful Contact(s)

- Administrative manager for the student's annual program: [Catherine De Roy](#)



