

CLIM2M

2016 - 2017

Master [120] in Geography : Climatology

At Louvain-la-Neuve - 120 credits - 2 years - Day schedule - In frenchDissertation/Graduation Project : **YES** - Internship : **optional**Activities in English: **YES** - Activities in other languages : **NO**Activities on other sites : **YES**Main study domain : **Sciences**Organized by: **Faculté des sciences (SC)**Programme code: **clim2m** - Francophone Certification Framework: 7**Table of contents**

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CLIM2M - Introduction

Introduction

CLIM2M - Teaching profile

Learning outcomes

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Programme structure

The programme comprises core subjects of 60 credits, 30 credits for the focus and 30 credits for optional subjects.

For a programme-type, and regardless of the focus, options/or elective courses selected, this master will carry a minimum of 120 credits divided over two annual units, corresponding to 60 credits each.

> [Tronc commun](#) [en-prog-2016-clim2m-lclim100t.html]

> [Research focus](#) [en-prog-2016-clim2m-lclim200a]

> [Cours facultatif : Ingénieurs Sud](#) [en-prog-2016-clim2m-lsst100o.html]

CLIM2M Detailed programme

Programme by subject

CORE COURSES [90.0]

○ Mandatory

△ Courses not taught during 2016-2017

⊕ Periodic courses taught during 2016-2017

⊗ Optional

⊙ Periodic courses not taught during 2016-2017

■ Activity with requisites

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

| | | | | | | Year | |
|----------------------------------|--|---|---------|-----------|----|------|---|
| | | | | | | 1 | 2 |
| ○ LGEO2110 | Mondialisation, développement et environnement | Eric.Lambin | 30h+30h | 5 Credits | 1q | x | x |
| ○ LGEO2210 | Shaping sustainable urban spaces | Marie-Laurence.Dekeersmaecker Yves.Hanin | 30h | 3 Credits | 1q | x | x |
| ○ LGEO2120 | Applied geomorphology | Bas.Vanwesemael | 30h+30h | 5 Credits | 1q | x | x |
| ○ LGEO2240 | Tectonic geomorphology | Veerle.Vanacker | 30h+30h | 5 Credits | 1q | x | x |
| ○ LGEO2230 | Géographie médicale et de la santé | Sophie.Vanwambeke | 30h+30h | 5 Credits | 1q | x | x |
| ○ LGEO2140 | Advanced physical geography | Kristof.Vanoost (coord.) Veerle.Vanacker | 30h+30h | 5 Credits | 2q | x | x |
| ○ Philosophie (2 credits) | | | | | | | |
| ⊗ LSC2001 | Introduction to contemporary philosophy | Delia.Popa | 30h | 2 Credits | 2q | x | x |
| ⊗ LSC2220 | Philosophy of science | Alexandre.Guay | 30h | 2 Credits | 2q | x | x |

Year

1 2

| | | | | | | | |
|--------------|---|--|---------|-----------|----|---|---|
| ⊗ LFIL02003E | Ethics in the Sciences and technics (sem) | Herve.Jeanmart NOBODY Rene.Rezsohazy | 15h+15h | 2 Credits | 2q | x | x |
|--------------|---|--|---------|-----------|----|---|---|

o Mémoire (30 credits)

| | | | | | | | |
|-------------|------------------------------------|------------------------------------|-----|------------|----|---|---|
| ○ LCLIM2999 | Mémoire | | | 22 Credits | 2q | | x |
| ○ LGEO2997 | Séminaire d'encadrement du mémoire | Isabelle.Thomas Bas.Vanwesemael | 15h | 5 Credits | 1q | x | |
| ○ LGEO2998 | Thesis tutorial | Isabelle.Thomas Bas.Vanwesemael | 15h | 3 Credits | 2q | | x |

o Cours au choix (30 credits)

o Choix parmi les cours de géographie

| | | | | | | | |
|-------------|---|---|-----------------|-----------|------------|---|---|
| ⊗ LCLIM2270 | Terrain II en climatologie | Bas.Vanwesemael | 60h+30h | 3 Credits | 2q ⊕ | x | x |
| ⊗ LECON2314 | Economic Geography | Florian.Mayneris | 30h | 5 Credits | 2q | x | x |
| ⊗ LGEO1242 | Mathematical Geography | Jean- Pascal.Vanypersele | 30h+15h | 4 Credits | 2q | x | x |
| ⊗ LGEO1321 | Human and Economic geography 1 | Sophie.Vanwambeke | 25h+25h | 4 Credits | 2q | x | x |
| ⊗ LGEO1322 | Human and economic geography 2 | Marie- Laurence.Dekeersmaecker Isabelle.Thomas | 25h+25h | 4 Credits | 2q | x | x |
| ⊗ LGEO1323 | Human and economic geography (3) | Marie- Laurence.Dekeersmaecker Isabelle.Thomas | 25h+25h | 4 Credits | 2q | x | x |
| ⊗ LGEO1331 | Geomorphology | Bas.Vanwesemael | 30h+30h | 5 Credits | 2q | x | x |
| ⊗ LGEO1332 | Biogeography | Christiane.Lefevre (compensates Renate Wesselingh) Caroline.Nieberding Caroline.Nieberding (compensates Renate Wesselingh) Renate.Wesselingh | 45h+24h | 5 Credits | 2q | x | x |
| ⊗ LGEO2185 | Advanced geo-processing | Kristof.Vanoost | 30h+30h | 5 Credits | 2q | x | x |
| ⊗ LGEO2211 | Advanced statistical methods in geography | Christian.Hafner | 30h+30h | 5 Credits | 1q | x | x |
| ⊗ LGEO2250 | Mesures de terrain en géographie | Kristof.Vanoost | 30h+30h | 5 Credits | 2q | x | x |
| ⊗ LGEO2400 | Stage d'insertion professionnelle | Michel.Crucifix Sophie.Vanwambeke | 15h | 4 Credits | 1 ou 2q | x | x |
| ⊗ LPHY1365 | Meteorology | Michel.Crucifix Thierry.Fichet | 37.5h +22.5h | 5 Credits | 2q | x | x |

o Climatologie et sciences de la terre (10 credits)

| | | | | | | | |
|-------------|---|---|---------------|-----------|----|---|---|
| ⊗ LENVI2005 | Changements climatiques: impacts et solutions | Philippe.Marbaix Jean- Pascal.Vanypersele (coord.) | 30h | 3 Credits | 2q | x | x |
| ⊗ LPHY2160 | Internal Geophysics of the Earth and planets | Nicolas.Bergeot Veronique.Dehant (coord.) | 30h | 5 Credits | 1q | x | x |
| ⊗ LPHY2161 | Geodesy and GNSS (Global Navigation Satellite System) | Nicolas.Bergeot Veronique.Dehant | 30h | 5 Credits | 2q | x | x |
| ⊗ LPHY2162 | Physics of the upper atmosphere and space | Viviane.Pierrard | 22.5h | 4 Credits | 1q | x | x |
| ⊗ LPHY2253 | Remote sensing of climate change | Didier.Fussen | 22.5h +15h | 5 Credits | 2q | x | x |
| ⊗ LULBG2400 | Le système Terre et ses interactions (ULB) | | | 4 Credits | | x | x |
| ⊗ LULBG2408 | Modélisation en géographie physique (ULB) | | | 2 Credits | | x | x |

| | | | | | | Year | |
|-------------|---|--------------------------|--|-----------|----|------|---|
| | | | | | | 1 | 2 |
| ☒ LULBG2410 | Les changements climatiques des derniers 100000 ans (ULB) | | | 6 Credits | | x | x |
| ☒ LCLIM2280 | Forecasting techniques | Michel.Crucifix (coord.) | | 8 Credits | 2q | x | x |

RESEARCH FOCUS [30.0]

○ Mandatory

△ Courses not taught during 2016-2017

⊕ Periodic courses taught during 2016-2017

☒ Optional

⊖ Periodic courses not taught during 2016-2017

■ Activity with requisites

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

| | | | | | | Year | |
|-------------|--|---|----------|-----------|----|------|---|
| | | | | | | 1 | 2 |
| ○ LCLIM2170 | Terrain I en climatologie | Veerle.Vanacker | 60h+30h | 3 Credits | ⊖ | x | x |
| ○ LPHY2150 | Physique et dynamique de l'atmosphère et de l'océan I | Michel.Crucifix Thierry.Fichet | 45h+9h | 6 Credits | 1q | x | |
| ○ LPHY2151 | Physique et dynamique de l'atmosphère et de l'océan II | Michel.Crucifix Thierry.Fichet | 30h | 5 Credits | 2q | x | x |
| ○ LGEO2290 | Travaux dirigés de modélisation climatique | Pierre-Yves.Bariat Hugues.Goosse | 15h | 2 Credits | 1q | x | |
| ○ LPHY2153 | Introduction to the physics of the climate system and its modeling | Hugues.Goosse Jean-Pascal.Vanypersele | 30h+15h | 5 Credits | 1q | x | |
| ○ LPHY2252 | Supplements in climate system modeling | Michel.Crucifix Thierry.Fichet Hugues.Goosse Qiuzhen.Yin | 45h+7.5h | 6 Credits | 2q | x | x |

○ Un cours à choisir parmi les suivants: (3 credits)

| | | | | | | | |
|-------------|---|---|---------|-----------|------|---|---|
| ☒ LCLIM2270 | Terrain II en climatologie | Bas.Vanwesemael | 60h+30h | 3 Credits | 2q ⊕ | x | x |
| ☒ LENV12005 | Changements climatiques: impacts et solutions | Philippe.Marbaix Jean-Pascal.Vanypersele (coord.) | 30h | 3 Credits | 2q | x | x |

Cours facultatif : Ingénieurs Sud

● Mandatory

△ Courses not taught during 2016-2017

⊕ Periodic courses taught during 2016-2017

⊗ Optional

⊖ Periodic courses not taught during 2016-2017

■ Activity with requisites

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

| | | | | | | Year | |
|------------|---------------|--------------------|---------|-----------|----|------|---|
| | | | | | | 1 | 2 |
| ⊗ LSST1001 | IngénieursSud | Jean-Pierre.Raskin | 15h+45h | 5 Credits | 2q | x | x |

Course prerequisites

A document entitled [en-prerequis-2016-clim2m.pdf](#) specifies the activities (course units - CU) with one or more pre-requisite(s) within the study programme, that is the CU whose learning outcomes must have been certified and for which the credits must have been granted by the jury before the student is authorised to sign up for that activity.

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

As the prerequisites are a requirement of enrolment, there are none within a year of a course.

The prerequisites are defined for the CUs for different years and therefore influence the order in which the student can enrol in the programme's CUs.

In addition, when the panel validates a student's individual programme at the beginning of the year, it ensures the consistency of the individual programme:

- It can change a prerequisite into a corequisite within a single year (to allow studies to be continued with an adequate annual load);
- It can require the student to combine enrolment in two separate CUs it considers necessary for educational purposes.

For more information, please consult [regulation of studies and exams](#).

The programme's courses and learning outcomes

For each UCL training programme, a [reference framework of learning outcomes](#) specifies the competences expected of every graduate on completion of the programme. You can see the contribution of each teaching unit to the programme's reference framework of learning outcomes in the document "In which teaching units are the competences and learning outcomes in the programme's reference framework developed and mastered by the student?"

The document is available by clicking [this link](#) after being authenticated with UCL account.

CLIM2M - Information

Admission

General and specific admission requirements for this program must be satisfied at the time of enrolling at the university..

- [University Bachelors](#)
- [Non university Bachelors](#)
- [Holders of a 2nd cycle University degree](#)
- [Holders of a non-University 2nd cycle degree](#)
- [Adults taking up their university training](#)
- [Personalized access](#)

University Bachelors

| Diploma | Special Requirements | Access | Remarks |
|---|----------------------|---------------------------------|---------|
| UCL Bachelors | | | |
| | | Direct access | |
| | | Access with additional training | |
| | | Access with additional training | |
| Others Bachelors of the French speaking Community of Belgium | | | |
| Tous les bacheliers de la CfB | | Access with additional training | |
| Bachelors of the Dutch speaking Community of Belgium | | | |
| | | Direct access | |
| Foreign Bachelors | | | |
| | | Direct access | |

Non university Bachelors

| Diploma | Access | Remarks |
|---|---|------------|
| > Find out more about links to the university | | |
| > BA en sciences agronomiques - type long | Accès au master moyennant ajout de maximum 60 crédits d'enseignements supplémentaires obligatoires au programme. Voir 'Module complémentaire' | Type long |
| > BA en agronomie | Accès au master moyennant ajout de maximum 60 crédits d'enseignements supplémentaires obligatoires au programme. Voir 'Module complémentaire' | Type court |

Holders of a 2nd cycle University degree

| Diploma | Special Requirements | Access | Remarks |
|--------------------|----------------------|--------|---------|
| "Licenciés" | | | |

| | | | |
|-----------------------------------|--|---------------|--|
| Licence en sciences géographiques | | Direct access | Ces étudiants ont directement accès à la deuxième année de master avec éventuellement un programme adapté. |
|-----------------------------------|--|---------------|--|

Masters

| | | | |
|------------------|--|---------------------------------|--|
| Tous les masters | | Access with additional training | |
|------------------|--|---------------------------------|--|

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Holders of a non-University 2nd cycle degree

| Diploma | Access | Remarks |
|---------|--------|---------|
|---------|--------|---------|

> Find out more about [links](#) to the university

| | | |
|--|---|-----------|
| > MA en sciences agronomiques > MA en sciences de l'ingénieur industriel en agronomie | Accès direct au master moyennant ajout éventuel de 15 crédits max | Type long |
|--|---|-----------|

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Adults taking up their university training

> See the website [Valorisation des acquis de l'expérience](#)

It is possible to gain admission to all masters courses via the validation of professional experience procedure.

Accès selon la procédure de validation des acquis de l'expérience

Consultez le site www.uclouvain.be/vae

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Personalized access

Reminder : all Masters (apart from Advanced Masters) are also accessible on file.

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Admission and Enrolment Procedures for general registration

Supplementary classes

To enrol for this Masters, the student must have a good command of certain subjects. If this is not the case, they must add preparatory modules to their Master's programme.

● Mandatory

△ Courses not taught during 2016-2017

⊕ Periodic courses taught during 2016-2017

⊗ Optional

⊖ Periodic courses not taught during 2016-2017

■ Activity with requisites

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

| | | | | | |
|------------|---|---|---------|-----------|----|
| ● LGEO2130 | Geographic modelling | Eric.Deleersnijder Sophie.Vanwambeke | 30h+30h | 5 Credits | 2q |
| ● LGEO2160 | Integrated exercise in geography I | Isabelle.Thomas Bas.Vanwesemael | 30h+30h | 4 Credits | 1q |
| ● LGEO2185 | Advanced geo-processing | Kristof.Vanoost | 30h+30h | 5 Credits | 2q |
| ● LGEO2211 | Advanced statistical methods in geography | Christian.Hafner | 30h+30h | 5 Credits | 1q |
| ● LGEO2220 | History of geography | Eric.Lambin | 22.5h | 3 Credits | 1q |
| ● LGEO2250 | Mesures de terrain en géographie | Kristof.Vanoost | 30h+30h | 5 Credits | 2q |
| ○ | Supplementary classes | | | Credits | |

Teaching method

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 climatologist is at the centre of different scientific fields: physical modeling, teledetection, hydrology and the management of natural resources. The integration between human and physical geography is emphasized. 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 Master in Climatology is notable for the multidisciplinary background of the teaching staff. Studies will study with lecturers in geography and physics. Activities such as seminars and integrated exercises are designed so that students progressively encounter the complexity of the climatic system. Students in the last year of the Master should therefore be able to use and understand professional climatic modelling systems.

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.

Evaluation

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

La mobilité des étudiants est fortement encouragée, soit par un échange Erasmus ou Mercator hors Belgique, soit à la KULeuven. Ce séjour se fera durant le 2ème quadrimestre du premier master.

La possibilité sera donnée de suivre des cours en anglais. Ceci permettra non seulement aux étudiants de l'UCL de se familiariser mieux encore avec cette langue, mais aussi aux étudiants Erasmus venant de l'étranger de suivre un semestre de cours en anglais.

Des cours approfondis sont donnés par des professeurs visiteurs venant de diverses Institutions belges mais surtout étrangères. Ces enseignements sont parfois dispensés en anglais.

Possible trainings at the end of the programme

The Master in Geography : Climatology gives direct access to a doctorate in science.

Certificates

Contacts

Attention, you are currently reading a page of an old programme study. To get up to date contact information, please go to the [current program study](#) site.

Curriculum Management

Entite de la structure GEOG

| | |
|-------------------------|---|
| Acronyme | GEOG |
| Dénomination | Ecole de géographie |
| Adresse | Place Louis Pasteur, 3 bte L4.03.07 1348 Louvain-la-Neuve Tél 010 47 28 73 - Fax 010 47 28 77 |
| Site web | http://www.uclouvain.be/geo |
| Secteur | Secteur des sciences et technologies (SST) |
| Faculté | Faculté des sciences (SC) |
| Commission de programme | Ecole de géographie (GEOG) |

Academic Supervisor : Sophie Vanwambeke

Jury

Présidente :

Secrétaire : Bas van Wesemael

Usefull Contacts

Gestionnaire de l'admission et de l'inscription : Viviane Libois

Secrétaire de l'Ecole de géographie : Mila Mihaylova

Attention, you are currently reading a page of an old programme study. To get up to date contact information, please got to the [current program study](#) site.

