

# POSTGRADUATE STUDIES IN WEATHER AND CLIMATE MODELING

33 ECTS CREDITS - LANGUAGE: ENGLISH

## WHAT

The study of weather and climate is intrinsically linked. Climate on the one hand can be considered as average weather, and on the other hand, if the climate changes, the impact will be primarily felt through extreme weather cases. Scientific progress in these fields heavily depends on the development and the use of numerical atmospheric models. Additionally, the focus in climate science is shifting from global climate change to the study of regional climate impact, which demands the development of high-resolution numerical models. The same type of modeling techniques are used to develop models for climate studies as the ones for weather applications. The aim of this postgraduate programme is to prepare scientists in the most efficient way to become active as a researcher in the modern discipline of atmospheric modeling for weather and climate applications. The content of the program is deeply rooted in the current scientific challenges encountered within the international ACCORD consortium. This consortium develops and maintains the European ALADIN system that is used for making numerical weather predictions and climate studies. This postgraduate is organised in cooperation with the RMI (Royal Meteorological Institute). To be in touch with the current research, the courses are given by (international) specialists working at the RMI, Belgocontrol, VITO, BIRA, SCK-CEN and other national meteorological institutes ...

## STRUCTURE

In the first semester the programme provides the necessary basic training in meteorology, climatology and numerical analysis, that forms the basis for the atmospheric sciences. In the second semester, the postgraduate builds further on this basis to introduce the students to atmospheric modeling, data assimilation, predictability, remote sensing and chemical air pollution models. The weekly course sessions are concentrated on Monday and Tuesday.

## LABOUR MARKET

The Postgraduate Studies in Weather and Climate Modeling offers the essential courses needed to start research in meteorology, climatology and atmospheric modelling. Graduates are prepared for research in an international context at universities, other research institutions (RMI, VITO, etc.) and companies.

# POSTGRADUATE STUDIES IN WEATHER AND CLIMATE MODELING

33 ECTS CREDITS - LANGUAGE: ENGLISH

## TOELATINGSVOORWAARDEN VOOR HOUDERS VAN EEN VLAAMS DIPLOMA

### 1 Rechtstreeks:

#### a opleidingen nieuwe structuur:

- Een diploma van een opleiding 'Master of Bioscience Engineering' leidend tot de titel van 'bio-ingenieur'
- Een diploma van een opleiding 'Master of Science in de bio-ingenieurswetenschappen' leidend tot de titel van 'bio-ingenieur'
- Een diploma van een opleiding 'Master of Science in de ingenieurswetenschappen' leidend tot de titel van 'burgerlijk ingenieur' (met uitzondering van architectuur)
- Een diploma van een opleiding 'Master of Science in Engineering' leidend tot de titel van 'burgerlijk ingenieur' (met uitzondering van Architecture)
- Master in de aardobservatie
- Master in de chemie
- Master in de fysica
- Master in de fysica en de sterrenkunde
- Master in de geografie
- Master in de geografie en de geomatica
- Master in de geologie
- Master in de geomatica en de landmeetkunde
- Master in de informatica
- Master in de ingenieurswetenschappen: architectuur
- Master in de statistiek
- Master in de sterrenkunde
- Master in de wiskunde
- Master in de wiskundige informatica
- Master of Architectural Engineering
- Master of Chemistry
- Master of Statistical Data Analysis

#### b opleidingen oude structuur:

- Burgerlijk ingenieur-architect
- Een diploma van 'Bio-ingenieur'
- Een diploma van 'Burgerlijk Ingenieur' (met uitzondering van 'Burgerlijk Ingenieur-Architect')
- Licentiaat in de geografie
- Licentiaat in de geologie
- Licentiaat in de informatica
- Licentiaat in de natuurkunde
- Licentiaat in de scheikunde
- Licentiaat in de wiskunde

### Additional Information on Admission (Flemish Degree)

Holders of a master's degree following a bachelor's degree that is not mentioned above, and holders of another diploma of a second cycle academic programme or of another diploma of the second cycle of a two-cycle college education, may also qualify

for admission to this postgraduate study after assessment of the candidate's suitability and ability to follow the programme.

## ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

The postgraduate course requires a solid physical and mathematical background from the students. A scientific degree on bachelor or master level is recommended. Send a motivated request to [Steven Caluwaerts](#). When your diplomas and background are judged positively, an admission letter will be written for you.

Information on admission requirements and the administrative procedure for admission on the basis of a diploma obtained abroad, can be found on the following page: [www.ugent.be/prospect/en/administration/enrolment-or-registration](http://www.ugent.be/prospect/en/administration/enrolment-or-registration).

## LANGUAGE REQUIREMENTS

Language requirements Dutch: no language requirements  
English: CEFR level B2

## PRACTICAL INFORMATION

### Study programme

[studiekiezer.ugent.be/postgraduate-studies-in-weather-and-climate-modeling-en/programma](http://studiekiezer.ugent.be/postgraduate-studies-in-weather-and-climate-modeling-en/programma)

### Information sessions

#### Graduation Fair

[afstudeerbeurs.gent/en/students/further-studies](http://afstudeerbeurs.gent/en/students/further-studies)

### Enrolling institution

Information on enrolment at Ghent University.

### Application Deadline (for International degree students)

Before the application can be started up, you need to be pre-academically selected by the programme coordinator.

# POSTGRADUATE STUDIES IN WEATHER AND CLIMATE MODELING

33 ECTS CREDITS - LANGUAGE: ENGLISH

## Tuition fee

More information is to be found on: [www.ugent.be/tuitionfee](http://www.ugent.be/tuitionfee)

## Contact

Faculty of Sciences  
Department of Physics and Astronomy  
Campus Sterre  
Krijgslaan 281 (S9)  
B-9000 Gent  
Prof. dr. Steven Caluwaerts  
[steven.caluwaerts@ugent.be](mailto:steven.caluwaerts@ugent.be)

[www.wcm.ugent.be](http://www.wcm.ugent.be)