



## DEPARTMENT OF EARTH SCIENCES

### **GE6000 Urban Climate and Urban Climate Planning, 7.5 credits**

Stadsklimat och klimatplanering, 7,5 högskolepoäng

*Second Cycle*

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#### **Confirmation**

This course syllabus was confirmed by Department of Earth Sciences on 2011-09-27 and was last revised on 2023-05-19 to be valid from 2023-08-28, autumn semester of 2023.

*Field of education:* Science 100%

*Department:* Department of Earth Sciences

#### **Position in the educational system**

The course includes 7.5 credits at Master's level and is part of the Master's programme in geography with specialisation in Climatology/Physical Geography. The course is also offered as an elective course subject to availability.

The course can be part of the following programmes: 1) Master's Programme in Geography (N2GEO), 2) Bachelor's Programme in Earth Sciences (N1GVS), 3) Environmental Sciences (N2MVN), 4) Bachelor of Science in Environmental Science (N1MVN), 5) Bachelor's Programme in Geography (N1GEO), 6) Master's Programme in Earth Sciences (N2GVS) and 7) Atmospheric Science, Master's Programme (N2ATM)

#### *Main field of studies*

Geography

Earth Sciences

#### *Specialization*

A1N, Second cycle, has only first-cycle course/s as entry requirements

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#### **Entry requirements**

For admission to the course, at least 120 credits are required from completed courses in the different main fields within Natural Sciences of which 75% with the grade lowest approved. Furthermore, students with equivalent number of credits in Human

Geography and Architecture can be admitted to the course. Applicants with equivalent qualifications may be admitted to the course after review and approval.

### **Learning outcomes**

On successful completion of the course the student will be able to:

#### *Knowledge and understanding*

- describe the radiation, air temperature, air humidity and wind patterns within cities and explain the process behind them.
- describe the socio-economic and health impact of urban climate.
- list and evaluate the effectiveness of different strategies to modify local climate conditions.

#### *Competence and skills*

- search, read, critically assess and discuss research articles.
- plan and accomplish assignments within a given time frame.
- collect, process, analyse and reflect on meteorological data.
- present and discuss, in writing and orally, research topics in urban climatology/meteorology, human biometeorology and/or climate sensitive design.

#### *Judgement and approach*

- critically evaluate and judge the quality of data and conclusions in scientific papers on urban climate, thermal comfort and climate planning.

The course is sustainability-focused, which means that at least one of the learning outcomes clearly shows that the course content meets at least one of the University of Gothenburg's confirmed sustainability criteria. The content also constitutes the course's main focus.

### **Course content**

The course includes theoretical and practical components on how:

- the urban settlement influences different elements of local climate
- human energy balance and thermal comfort depend on outdoor environment and affect our health, well-being and use of outdoor spaces
- climate knowledge can be applied in urban planning and design

### **Form of teaching**

The teaching consists of lectures, exercises (computer labs), seminars related to lectures and exercises, an urban climate walk, field measurements, and a literature seminar.

Attendance on field measurements and the literature seminar is mandatory. In case a student cannot attend the literature seminar or measurements, they will be asked to complete an alternative task.

*Language of instruction:* English

### **Assessment**

Component 1: Written exam, 4 credits: Fail/Pass/Pass with Distinction

Component 2: Exercises assignments, 2 credits: Fail/Pass

Component 3: Literature assignment, 1.5 credits: Fail/Pass/Pass with Distinction

If a student who has twice received a failing grade for the same examination component wishes to change examiner ahead of the next examination session, such a request should be made to the department in writing and should be approved by the department unless there are special reasons to the contrary (Chapter 6 Section 22 of the Higher Education Ordinance).

If a student has received a recommendation from the University of Gothenburg for study support for students with disabilities, the examiner may, where it is compatible with the learning outcomes of the course and provided that no unreasonable resources are required, decide to allow the student to sit an adjusted exam or alternative form of assessment.

In the event that a course has ceased or undergone major changes, students are to be guaranteed at least three examination sessions (including the ordinary examination session) over a period of at least one year, but no more than two years after the course has ceased/been changed. The same applies to internship and professional placements (VFU), although this is restricted to just one additional examination session.

### **Grades**

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U).

The final grade of the course is only given if all components are passed. For a passing grade (G) for the entire course, all three components must be passed. On the written exam, a score of 60% is required to pass the course, while 80% is required to pass with distinction (VG). For a 'Pass with Distinction' (VG) grade, both the exam and the literature assignment need to be passed with distinction (VG).

**Course evaluation**

At the end of the course, students will be given the opportunity and encouraged to make an anonymous written evaluation of the course. The course evaluation is a helpful document in order to improve the course.

The results of and possible changes to the course will be shared with the students who participated in the evaluation and students who are starting the course.