



DEPARTMENT OF EARTH SCIENCES

NG0210 Field Course in the Subarctic - Physical Geography and Ecology, 15 credits

Fältkurs i Subarktis - naturgeografi och ekologi, 15 högskolepoäng

First Cycle

Confirmation

This course syllabus was confirmed by Department of Earth Sciences on 2009-09-28 and was last revised on 2019-06-10 to be valid from 2019-06-10, autumn semester of 2019.

Field of education: Science 100%

Department: Department of Earth Sciences

Position in the educational system

The course is part of the Bachelor programme in Earth Sciences specializing in Physical Geography/Climatology (N1GVS). The course is also given as an elective course.

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) Bachelor's Programme in Geography (N1GEO) and 4) Master's Programme in Earth Sciences (N2GVS)

Main field of studies

Earth Sciences

Geography

Specialization

G2F, First cycle, has at least 60 credits in first-cycle course/s as entry requirements

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Entry requirements

Qualifications corresponding to 60 higher educational credits in Earth Sciences, Geography, Environmental Sciences or Biology.

Learning outcomes

After completion of the course the student is expected to be able to:

Knowledge and understanding

- describe climate change and landscape change in the subarctic.
- explain subarctic exposure and resistance to various disturbances.
- describe feedback mechanisms in the Arctic system.

Competence and skills

- use modern methods in physical geography and ecology.
- identify landscape features that have been formed through different geomorphological processes.
- differentiate the major vegetation patterns of the Scandinavian mountains.

Judgement and approach

- objectively argue about the effects of climate change in the subarctic.

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, which requires full time studies, consists of 3 subcourses. The course includes lectures, obligatory field excursions and seminars, and a group project, which is to be reported both as an oral presentation and in writing.

Subcourse 1 Theory (5 hec): This part of the course is based on lectures combined with seminars and aims at deepening the knowledge of the changes occurring in the Arctic, with a focus on the subarctic, and potential feedbacks to the global climate. The course covers a wide range of topics that are covered in lectures (High-Latitude climates – Arctic climate change and feedbacks – Biogeochemical processes in the Arctic – Glaciology – Subarctic landscapes – Vegetation of the Arctic) to provide a broad understanding of climate change in the subarctic, past and present. Additionally, the students will learn how resilient this region is against various disturbances. Grading scale: Fail (U), Pass (G), Pass with Distinction (VG).

Subcourse 2 Field studies (5 hec): The teaching will be conducted in field in the Swedish mountains during a two week excursion. Student will learn about alpine vegetation

zonation and plants characterizing alpine and arctic environments, define characteristic landscape features, and acquire practical experience in methods used to interpret changes in the landscape and climate. Grading scale: Fail (U) and Pass (G).

Subcourse 3 Group project (5 hec): Students will work in small groups on projects falling within the subjects Physical Geography and Ecology. The projects build on data collected during the field studies and will give the students an opportunity to specialize in a topic related to subarctic climate change. Results will be orally presented at a seminar as well as in form of a written report. Grading scale: Fail (U) and Pass (G).

Form of teaching

This course comprises a full-time study in the Department of Earth Sciences, including 3 sections: a written exam, project/groupwork, and a field excursion.

Teaching is given in the form of lectures, obligatory lab work and obligatory seminars, group work, that is presented both orally and written, as well as a circa 2 week obligatory field trip, during which teaching occurs directly in the field.

Language of instruction: English

Assessment

For grading of the complete course all subcourses, including the compulsory section, needs to be approved.

Subcourse 1 Theory (5 hec): Written exam, (U/G/VG).

Subcourse 2 Field studies (5 hec): Active attendance in field activity and a self-reflective written report, (U/G).

Subcourse 3 Group project (5 hec): Written report and short oral presentation, (U/G).

Compulsory laborations, seminars and field study is included in the course.

Under outstanding circumstances, the examiner may authorize a different form of examination than is listed in the course plan for a specific section of the course.

In order to pass the course or an individual course section a complementary assignment can be offered after an assessment and decision by the examiner.

A student that has failed the same examination twice is entitled to have another examination appointed, if it is possible. The application shall be in writing and sent to the department.

In cases in which the course has been discontinued or major changes have been made a student should be guaranteed at least three examinations to complete the course (including the regularly scheduled examination) during a time period of at least one year from the last given course.

Grades

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U). For a passing grade (G) for the entire course, a passing grade is required for all graded sections. To receive the grade passed with distinction (VG) for the final grade, the grade passed with distinction for the Theory section (examination) as well as at least passed for all other sections is required.

Course evaluation

The result and any changes in the course structure will be communicated to both the students who completed the evaluation and to the students who will begin the course.

Additional information

The language of instruction is English. The course requires two weeks in the field. Travel, part of accommodation and meals are paid for by the participants. Students in the program have possibility of applying for a stipend to subsidize travel expenses either the spring before or retroactively the spring after the course. Students on NIGVS have priority to the course.