



## DEPARTMENT OF BIOLOGICAL AND ENVIRONMENTAL SCIENCES

### **ES2618 Nature based solutions - potential, pitfalls and goal conflicts, 7.5 credits**

Naturbaserade lösningar - potential, fallgropar och målkonflikter, 7,5 högskolepoäng  
*Second Cycle*

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#### **Confirmation**

This course syllabus was confirmed by Department of Biological and Environmental Sciences on 2024-01-30 to be valid from 2024-01-30, spring semester of 2024.

*Field of education:* Science 100%

*Department:* Department of Biological and Environmental Sciences

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

The course is a compulsory course within the two Master's programs: Environmental science (N2MVN) and Atmospheric science, climate and ecosystems (N2ACE) during the first semester. The course can also be read as a freestanding course.

The course can be part of the following programmes: 1) Atmosphere, Climate and Ecosystems, Master's Programme (N2ACE) and 2) Environmental Sciences (N2MVN)

#### *Main field of studies*

Environmental Science with  
Specialization in Atmospheric Science,  
Climate and Ecosystems

Environmental Science

#### *Specialization*

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

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#### **Entry requirements**

120 HEC out of which at least 90 HEC are in natural science (biology, chemistry, earth science, environmental science with emphasis on natural science, physics) and at least 15 HEC in environmental science. Students with equivalent education can be allowed to enter the course.

Applicants must prove their knowledge of English corresponding to English 6/English B

from Swedish Upper Secondary School. For more information, see English language requirements on [Universityadmissions.se](http://Universityadmissions.se)

## Learning outcomes

### *Knowledge and understanding*

On successful completion of the course, the second-cycle student should have good knowledge about:

- The concept and definition of nature-based solutions (NBS) and how it can be used to mitigate the triple planetary crises of climate change, pollution and biodiversity loss
- How NBSs are used in different contexts, from policy making (e.g. IPCC, IPBES, EU regulations etc) to local applications
- Goal conflicts that might arise when using NBS approaches without thorough consideration of multiple environmental issues
- Where to find relevant policy decisions and guiding documents when planning for NBS at different levels (e.g. main regulating/guiding documents at national and international levels)
- Different NBS strategies that can be used in forestry, urban planning, and landscape management

### *Competence and skills*

The student is expected to have obtained practical experience of:

- evaluating actions in forestry, urban planning, and landscape management and how they can contribute to NBS
- identifying NBS with multiple environmental and social benefits
- finding documentation and policies on national and international level to guide the work with NBS and utilize this information during NBS action planning

### *Judgement and approach*

The student is expected to have practiced her/his critical approach by:

- judging the benefit of different types of NBS efficiency (e.g. in forestry, urban planning, or in landscape management)
- participating in seminars and discussions where NBS are examined from different perspectives, including the views of different actors
- interpreting and reflecting on different NBS approaches through exercises

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 will give advanced knowledge on the definition, importance, pitfalls, and uses of different NBS to tackle environmental and societal problems. The course will first give a broad background about different types of NBS and then focus on a few of them to provide deeper knowledge, including examples from forestry, urban environments and landscape management. The course will treat NBS from an international perspective (e.g., IPCC, IPBES and the EU commission) but will also look at how the concept is used at the national level, including different local examples.

### **Form of teaching**

The teaching is conducted in the form of lectures, seminars, exercises, and field trips. During the course several written reports from seminars and exercises are to be handed in and presented orally. The course has an active learning focus, meaning that students are expected to engage in discussions, group work and seminars. Except lectures, all course components are compulsory since they develop the skills and approaches that are included in the learning objectives in a way that is not possible through self-study. The course consists of 4.5 weeks of full-time studies and gives 7.5 credits.

*Language of instruction:* English

### **Assessment**

The course is examined by seminar discussions, exercises, group work, presentations and report writing.

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 internships 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).

To pass (G) the course the student needs to take part in compulsory course components and substantially contribute during the activities, including seminar discussions, exercises, group work, presentations and report writing. Contribution to seminar discussions, group work and presentations will be assessed as Pass or Fail and will be monitored by teachers/assistants. Written reports will be assessed as Pass or Fail and will be run through plagiarism checks.

To achieve the grade Pass with distinction (VG), motivated students can hand in an extra written report on a given subject, that will be run through plagiarism checks and then the responsible teacher will read and assess the work to see if it meets the requirements for Pass with distinction (VG) at the second cycle educational level.

### **Course evaluation**

A written and an oral course evaluation is offered at the end of course. The results of and possible changes to the course will be shared with students who participated in the evaluation and students who are starting the course.