

**SYLLABUS**

# **Advanced environmental economics 7.5 credits N7011N**

**Miljöekonomi**

**Course syllabus admitted: Autumn 2023 Sp 1 - Present**

**DECISION DATE  
2023-02-15**

# Advanced environmental economics 7.5 credits N7011N

## Miljöekonomi

### Second cycle, N7011N

Education level	Grade scale	Subject	Subject group (SCB)
Second cycle	U G VG *	Nationalekonomi	Economics

## Entry requirements

Bachelor degree or completed courses of 180 credits, of which at least 90 credits should be in Economics, with progression, with the grade Pass. The following courses should be included: Introductory Microeconomics (N0008N) 7,5 credits, Microeconomic applications (N0040N) 7,5 credits, Microeconomics, I (N0004N) 7,5 credits and Applied mathematical economics (N0005N) 7,5 credits, or equivalent. Good knowledge in English, equivalent to English 6.

## Selection

The selection is based on 30-285 credits

## Course Aim

After completing the course, the student should be able to use the theoretical tools covered at the course to:

- Describe and critically examine the different schools of thought regarding the concept of sustainable development problem as well as different ethical perspectives on the relationship between the natural environment and the economic system.
- Identify and analyze graphically and mathematical the presence of different market failures that give rise to an inefficient use of environmental resources in a market economy.
- Identify and derive economically efficient pollution targets for different categories of pollutants.
- Use both graphical and mathematical tools to analyze the impacts and the efficiency of different environmental policy instruments such as emissions trading, environmental taxes and emission limits.
- Describe and critically evaluate different types of economic models (e.g., general equilibrium models) that can be used to analyze the economic impacts of various environmental policy instruments.
- Analyze the presence of cross-border environmental problems, and how these can – and have been – dealt with through various international agreements.
- Explain and critically evaluate the basics of methods designed to value environmental impacts and changes in economic terms as well as the limitations of such methods, and use this knowledge to conduct simple economic valuation studies.
- Explain and critically evaluate the basics of methods designed to assess the societal costs and benefits of various projects and investments, so-called cost-benefit analysis.
- In written form as well as orally summarize, discuss and critically evaluate different works of science within the field

## Contents

- The sustainability problem
- Ethics, economics and the environment
- Welfare economics and market failures in the environmental field
- Pollution control: targets
- Pollution control: instruments
- Economic models to analyze economy-wide impacts of policies
- International environmental problems and agreements
- Valuation of the environment in theory and practice
- Cost-benefit analysis

## Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

Lectures and seminars. The course is, if necessary, given in English.

## Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided.

The examination of the course consist of a final written exam (3,0 ECTS). This exam tests goals a-f above. Furthermore, there is an oral examination on environmental valuation methods (1,5 ECTS), and this tests goals g and i above. At a mandatory seminar, 1,5 Hp, the basics of cost-benefit analysis is discussed, and this seminar tests goals h and i above. Finally, students are also required to finalize a written report on the use of different types of environmental policy instruments (1,5 ECTS), and this tests goals d, e and h above.

For VG at the entire course the student must get VG corresponding to a total of at least 3,0 ECTS.

## Unauthorized aids during exams and assessments

If a student, by using unauthorized aids, tries to mislead during an exam or when a study performance is to be assessed, disciplinary measures may be taken. The term "unauthorized aids" refers to aids that the teacher has not previously specified as permissible aids and that may assist in solving the examination task. This means that all aids not specified as permissible are prohibited. The Swedish version has interpretative precedence in the event of a conflict.

## Remarks

Students must register for the courses themselves, or contact ETKS educational administration [eduetks@ltu.se](mailto:eduetks@ltu.se), not later than three days after the quarter commences. Failure to do so can result in the place being lost. This rule also applies to students with a guaranteed place.

This course can not be included in any degree in combination with N0024N Environmental Economics I or N7008N Advanced Environmental and Natural Resource Economics.

## Overlap

The course N7011N is equal to N7008N, N0024N

## Course offered by

Department of Social Sciences, Technology and Arts

## Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0002	Oral exam	U G VG *	1.5	Mandatory	A16	
0003	Written report	U G VG *	1.5	Mandatory	A16	
0004	Written exam	U G VG *	3	Mandatory	A22	
0005	Seminar cost-benefit-analysis	U G#	1.5	Mandatory	A22	

## Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

## Last revised

by Director of Undergraduate Studies Daniel Örtqvist, Department of Business Administration, Technology and Social Sciences 2023-02-15

## Syllabus established

by Director of Undergraduate Studies Bo Jonsson, Department of Business Administration, Technology and Social Sciences 2016-02-15