APPLIES TO ACADEMIC YEAR 2014/2015

ELE 3760 Economics and the Environment

Programme
Elective

Responsible for the course
Tom-Reiel Heggedal

Department
Department of Economics

Term
According to study plan

ECTS Credits
7,5

Language of instruction
Norwegian

Introduction

Human activities can cause environmental problems through resource usage and pollutant emissions. Some environmental problems are global, such as emissions of greenhouse gases and the greenhouse effect. Other problems are more local , such as particulate matter and noise in the city, over-fishing in a salmon river, or the discharge of heavy metals in a fjord .

Environmental problems reduce the usefulness the nature by changing both production capabilities and leisure value. Local problems can lead to increased mortality, while global problems can cause us to change our habitual lifestyle.
This course provides an introduction to environmental economics . Environmental economics deals with how to use economic models and reasoning to understand the relationships between consumption and pollutions, production and the environment. The main focus is on what policies can and should be implemented to reduce the human impact on the environment. In addition, the course deals with the optimal exploitation of non-renewable (oil / coal) and renewable resources (forests/wind/water).

Learning outcome

Acquired Knowledge

On completion of the course students should have:

- Learned to analyze environmental problems using economic methods, with particular emphasis on microeconomic theory.
- Developed understanding of the welfare effects of environmental problems and the use of policy instruments to achieve socially optimal pollution levels.
- Acquired knowledge about how different types of instruments can be designed, and how the effects of environmental policies can be measured.

Acquired Skills

On completion of the course students will be able to:

- Explain the key national and international environmental issues.
- Explain how phenomena such as external effects , public goods , and missing markets may give rise to inefficiencies in the societies.
- Identify objectives and propose effective measures for communities, organizations and businesses.
- Explain the principles of socially optimal extraction of resources.
- Contribute to companies and organizations with environmental strategies and environmental management systems.
- Analyze environmental economic problems using graphical and mathematical presentations.

Reflection

Students will develop an understanding of the trade-off between the benefits and the costs of production and consumption of resources.

Prerequisites

Introductory course in Microeconomics.

Compulsory reading

Books:
Tietenberg, Tom and Lynne Lewis. 2015. Environmental & natural resource economics. 10th ed. Pearson

Recommended reading

Course outline
- Pollution and the environment
- Welfare (public) economics and market failures
- Pollution targets and implementation
- Direct versus indirect regulation
- Emissions trading
- Choice of policy instruments
- Climate change and international agreements
- Exploration of natural resources
- Valuation of environmental goods

Computer-based tools
No specified computer-based tools are required

Learning process and workload
The course will consist of a combination of lectures and work assignments through Itslearning that will be reviewed in plenary sessions.

Reccomended use of hours:

Activity	**Hours**
Lectures	36
Assignments	11
Curriculum and self-study	150
Exam	3
Recommended use of hours total	**200**

Use of hours

Examination
A three-hour individual written exam concludes the course.

Examination code(s)
ELE 37601 - Written exam, counts 100 % towards final grade in ELE 3760 Economics and the Environment, 7.5 credits.

Examination support materials
No support materials are allowed.

Re-sit examination
A re-sit examination is offered in connection with next scheduled course.

Additional information