

## Introduction to the Circular Economy, Economics and Management of Natural Resources (I002169)

Course size (nominal values; actual values may depend on programme)  
Credits 4.0 Study time 120 h Contact hrs 45.0 h

### Course offerings and teaching methods in academic year 2018-2019

Offering	Language	Teaching Method	Hours
A (semester 1)	English	seminar: coached	12.5 h
		exercises	
		group work	5.0 h
		lecture	20.0 h
		lecture: plenary	2.5 h
		exercises	
		excursion	5.0 h

### Lecturers in academic year 2018-2019

Speelman, Stijn LA27 lecturer-in-charge

### Offered in the following programmes in 2018-2019

Programme	crdts	offering
<a href="#">International Master of Science in Sustainable and Innovative Natural Resource Management</a>	4	A

### Teaching languages

English

### Keywords

Natural resources, environmental economics, bio-economic modeling, management models, circular economy, project appraisal

### Position of the course

Students are introduced into the circular economy. Guest lecturers from the non-academic sector illustrate how a problem arising from a resource supply risk can be turned into an economic opportunity and what the societal impacts are. Moreover, students are provided with basic knowledge about the economics and management of the exploitation of natural resources. This is a need because the optimal use of natural resources is based on economic principles. Furthermore, the negative and positive externalities of the use of natural resources are analysed and adapted rural development and environmental policies are discussed. Theoretical principles are illustrated by exercises and case studies. Besides the normal exercises, students are asked to do a group work in which the theory is applied to a specific contemporary problem concerning environmental pollution or natural resource management.

### Contents

#### I. FOUNDATIONS

An introduction to the circular economy, natural resources and environmental economics

The origins of the sustainability problem

Ethics, welfare economics and the environment

Concepts of sustainability

Welfare economics and the environment

#### II. ENVIRONMENTAL POLLUTION

Pollution control: targets

Pollution control: instruments

Pollution policy with imperfect information

#### III. PROJECT APPRAISAL

Cost benefit analysis

#### IV. NATURAL RESOURCE EXPLOITATION

Valuing the environment  
The efficient and optimal use of natural resources  
Non-renewable resources  
V. ASPECTS OF THE CIRCULAR ECONOMY

#### Initial competences

Notion of economic principles

#### Final competences

- 1 Having knowledge of used principles, models and management skills for an optimal use of natural resources
- 2 Being able to analyse and present contemporary problems of natural resource management
- 3 Being able to evaluate and propose environmental policy instruments
- 4 Being able to analyse and discuss possible solutions for pollution problems

#### Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

#### Conditions for exam contract

This course unit cannot be taken via an exam contract

#### Teaching methods

Excursion, group work, lecture, lecture: plenary exercises, seminar: coached exercises

#### Extra information on the teaching methods

Lectures provide the theoretical concepts which are deepened in exercise sessions. The course is complemented with a group work in which students need to apply the theory to a specific contemporary problem concerning environmental pollution or natural resource management. This group work is presented to and discussed with the lecturers.

#### Learning materials and price

Perman, R., Ma, Y., Common, M., Maddison D., Mcgilvray, J., (2011). Natural resource and environmental economics  
Course presentations are available on Minerva

#### References

Frank A. Ward, F.A. (2006) Environmental and natural resource economics.  
Pearson/Prentice Hall, 2006, 610 p.  
Folmer, H., Tietenberg, T. (2006) The international yearbook of environmental and resource economics 2005/2006: a survey of current issues Cheltenham: Elgar, 2005, 324 p.

#### Course content-related study coaching

Interactive support through Minerva.  
Specific coaching on appointment by assistant.

#### Evaluation methods

end-of-term evaluation and continuous assessment

#### Examination methods in case of periodic evaluation during the first examination period

Written examination

#### Examination methods in case of periodic evaluation during the second examination period

Written examination

#### Examination methods in case of permanent evaluation

Oral examination, report

#### Possibilities of retake in case of permanent evaluation

examination during the second examination period is not possible

#### Extra information on the examination methods

For the permanent evaluation, students work together to make a presentation about a contemporary topic related to the course. After the presentation their topic will be discussed with all the group members as an oral exam.

#### Calculation of the examination mark

Final score = 3/6 theory + 1/6 exercises + 2/6 group work  
Students who eschew period aligned and/or non-period aligned evaluations for this

course unit can obtain a score not higher than 9/20.