

Ecological Planning

Code: MK5KOR3S5TX17-EN

ECTS Credit Points: 5

Evaluation: exam

Year, Semester: 1st year, 2nd semester

Its prerequisite(s):

Further courses are built on it: No

Number of teaching hours/week (lecture + practice): 2 + 2

Topics:

This course has two main objectives. The first is to describe the basic science of ecology as well as environmental pressures and impacts. The second is to introduce and explain key ecological concepts/tools, as well as new approaches and good methods in design and planning in the field of sustainable urban development and landscape management.

Literature:

Required:

- Jari Niemäla, Urban Ecology, Patterns, Processes and Applications, Oxford University Press, 2014, ISBN 978-0-19-964395-0

Recommended:

- Perlman, D. L., Milder, Practical Ecology for Planners, Developers, and Citizens. Island Press. 2004, ISBN-10 1559637161
- Forster Ndubisi, Ecological Planning, Johns Hopkins University Press, 2002, ISBN 13: 9780801868016

Schedule

1st week Registration week

2nd week:

Lecture: Introduction of the ecological approach in planning processes. New ideas and tools.

Practice: Explaining the goals and elements of group work. Forming groups among students, case study selection.

4th week:

Lecture: Systems thinking and design thinking – the new way of planning and design.

Practice: Group work: Elaborating a conceptual model, a DPSIR model and a Leopold Matrix for the case study.

6th week:

Lecture: Sustainable building and urban development and planning – ecological approach applied in engineering.

3rd week:

Lecture: Environmental pressures and impacts.

Practice: Group work: Analysing the environmental pressures and impacts in the case study.

5th week:

Lecture: Settlement as ecosystem. The role and importance of ecosystems in urban areas. Interactions between natural and manmade environments.

Practice: Group work: Group work: Analysing the interactions and the ecosystem services in the case study.

7th week:

Lecture: Smart cities. (water, waste and energy issues),

Practice: Group work: Listing the ecological planning tools to be applied.

8th week: 1st drawing week

9th week:

Lecture: Sponge cities, green cities.

Practice: Group work: Analysing the ecological planning tools to be applied.

11th week:

Lecture: Management of point and diffuse pollution sources.

Practice: Weak solutions and good practices.

13th week:

Lecture: Integrated river basin management. The ecohydrological approach (cont.).

Practice: Finalizing group work.

15th week: 2nd drawing week: Test

Practice: Group work: Analysing the ecological planning tools to be applied.

Field trip

10th week:

Lecture: Renewable energy sources.

Practice: Weak solutions and good practices.

12th week:

Lecture: Introduction into Ecohydrology. Ecological aspects in the water management and rural planning. Engineering measures in wetlands (goals, types and impacts).

Practice: Weak solutions and good practices.

14th week:

Lecture: Integrated rural and urban development for the sustainability.

Practice: Presentation of group work.

Requirements

A, for a signature:

Participation at practice is compulsory. Students have to attend practice classes and may not miss more than three times during the semester. In case a student does so, the subject will not be signed and the student must repeat the course. Students cannot make up a practice with another group. Attendance at practice will be recorded by the practice leader. Students write a test at the end of the semester, and present the result of their group work carried out during the course.

Test:	Maximum:	50 points
Presentation:	Maximum:	50 points
Summa:	100 points	(Minimum: 60 points)

B, for a grade:

The grade of the test and the presentation defining the mid-semester grade.

The grade is given according to the following:

0 – 59: fail (1); 60 – 69 points: pass (2); 70 – 79 points: satisfactory (3); 80 – 89 points: good (4); 90 – 100 points: excellent (5)