AE1501 Environmental System Analysis for Built Environment 7.5 credits

Miljösystemanalys för samhällsbyggnad

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for AE1501 valid from Autumn 2015

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Completed and documented upper secondary education together with AE1105 Environmental Soil Chemistry or equivalent.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After completing the course, the student should be able to:

- Identify basic concepts within environmental systems analysis

- Explain basic theory of environmental systems analysis

- Describe the development of environmental systems analysis

- Describe and apply a selection of environmental systems analysis tools and use these in different decision situations

- Relate environmental systems analysis and environmental objectives - Swedish and international examples

- Reflect upon environmental systems analysis in the achievement of a sustainable development

- Describe and analyse different mitigation measures for avoiding or minimising environmental impact and thereby contribute to a sustainable development.

Course contents

The course consists of lectures, exercises, a project and seminars.

The course focuses on environmental systems analytical tools and include basic theory and concepts within environmental systems analysis and systems analysis. A selection of different environmental systems analysis tools are considered, that can be applied on different decision situations within e.g. policy, planning, projects, management and technologies from a sustainability perspective, with a systems analytical approach. Examples of tools that will be discussed are environmental impact assessment, strategic environmetal assessment and integrated assessment, multi criteria decision aid, geographic information systems, life cycle analysis, material flow analysis, environmental management systems, cost-benefit analysis and position analysis. The relation of the tools to different system borders, decision situations and actors will be considered, together with their range of appliation and limitations.

Course literature

Meddelas före kursstart.

Examination

- PRO1 - Project, 2.0 credits, grading scale: A, B, C, D, E, FX, F

- TENA - Written Exam, 4.0 credits, grading scale: A, B, C, D, E, FX, F
- ÖVNA - Computer Laboration, 1.5 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.