



AL2182 Applied Environmental Systems Analysis 7.5 credits

Tillämpad miljösystemanalys

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

Establishment

Course syllabus for AL2182 valid from Spring 2016

Grading scale

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

Education cycle

Second cycle

Main field of study

Environmental Engineering

Specific prerequisites

Course AL2181 Environmental Systems Analysis and Decision Making or corresponding knowledge

Language of instruction

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

Intended learning outcomes

After the course, the student shall be able to:

- Describe the most important environmental systems analysis methods (e.g. Material and Substance Flow Analysis, Life Cycle Assessment, Ecological Footprint, Environmental Impact Assessment, Strategic Environmental Assessment and Integrated Sustainability Assessment)
- Carry out either (i) a Material Flow Analysis or (ii) a Life Cycle Assessment by use of a corresponding computer-based tool (e.g. STAN, SimaPro/Gabi/openLCA)
- Demonstrate an ability to judge between good and bad data and information to be selected and used for environmental systems analysis

Course contents

- Applied Environmental Systems Analysis – basic concepts and application
- Material Flow Analysis – methodology and application
- Life Cycle Assessment – demonstration of a computer-based LCA tool and application
- Data generation, data quality and uncertainty in Applied Environmental Systems Analysis
- Usage of a specific environmental systems analysis tool

Disposition

- NÄR1 – Active Participation in Lecture, Seminar and Group Task, 2.0 credits, grade scale: P, F
- PRO1 – Group Project Work, 4.0 credits, grade scale: A-F
- LAB1 – Computer Lab exercises, 1.0 credit, grade scale: P, F
- INL1 – Individual assignment, 0.5 credits, grade scale: A-F

Course literature

Selected scientific articles and reports

Examination

- INL1 - Assignment 1, 0.5 credits, grading scale: A, B, C, D, E, FX, F
- PRO1 - Project 1, 4.0 credits, grading scale: A, B, C, D, E, FX, F
- NÄR1 - Attendance 1, 2.0 credits, grading scale: P, F
- LAB1 - Computer Lab 1, 1.0 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.

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

Other requirements for final grade

- The examination is based on active participation in the course and on the quality of the group task report according to the following:
NÄR1: Active participation in lectures, seminars and group task work: 2 credits
PRO1: Approved group task report: 4 credits
LAB1: Approved computer lab exercises: 1.0 credits
INL1: Approved individual assignment: 0.5 credits

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.