



AL2101 Applied Industrial Ecology 6.0 credits

Tillämpad industriell ekologi

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

Establishment

Course syllabus for AL2101 valid from Autumn 2013

Grading scale

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

Education cycle

Second cycle

Main field of study

Environmental Engineering, Mechanical Engineering

Specific prerequisites

At least 150 academic credits (ECTS) in a program of engineering or natural science or the course MJ2611 Introduction to Industrial Ecology or equivalent. One year of studies in the Master program Sustainable Technology, or equivalent.

Language of instruction

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

Intended learning outcomes

The course aims to show applications of Industrial Ecology in the context of the current challenges concerning sustainable development. The course demonstrates the frontier of Industrial Ecology, through student projects that may also pose a pre-study for Master degree projects or provide practice in writing research applications. You will also practice your skills in communicating your work within Industrial Ecology to peers/stakeholders and make popular science presentations.

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

- Describe and discuss selected topics from the research frontier of Industrial Ecology with particular emphasize on the societal relevancy and Industrial Ecology methods;
- Assess a current sustainable development challenge through a systems perspective, and take into account different stakeholder perspectives and the potential normative nature of the challenge, as well as discuss perspectives from different scientific disciplines;
- Address a current societal sustainability challenge using methods and tools from Industrial Ecology;
- Collect, analyse and summarize information regarding an applied research question within Industrial Ecology and critically discuss assessment strategies and methods as well as strategies for solutions;
- Identify and formulate aims and objectives within an applied example of Industrial Ecology, taking state-of-the art knowledge, addressability and relevancy into account.
- Present a topic from the research frontier of Industrial Ecology and own project results orally as well as in written form to different stakeholders;
- Reflect upon one's own state of knowledge and identify additional information needs and skill development, and reflect upon one's own abilities, strengths and weaknesses both in science and as a professionally active person and work team member;
- On an introductory level, address the quality of one's own work and peers' work and presentations within Industrial Ecology;

Course contents

Applications of Industrial Ecology methods and tools on current sustainability challenges;

Topics from research frontier of Industrial Ecology;

Project work as team work

Making presentations in Science and/or Technology

Project formulation, with emphasis on state-of-the-art knowledge, aims and objectives formulation, and investigation/surveying strategies;

Equipment

The course uses KTH's learning management system (LMS) as an important support. PC with internet and e-mail and the possibility to use Word and Excel (Microsoft version recommended) and to read pdf- files is necessary. Other software that is needed in the course will be downloadable from the internet or from the LMS or made available on KTH computers.

Examination

- PRO1 - Project, 5.0 credits, grading scale: A, B, C, D, E, FX, F
- RED1 - Assessment, 0.5 credits, grading scale: P, F
- ATT1 - Attendance, 0.5 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.

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

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.