MJ273X Degree Project in Industrial Ecology, Second Cycle 30.0 credits

Examensarbete inom industriell ekologi, avancerad nivå

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 MJ273X valid from Autumn 2007

Grading scale

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

Education cycle

Second cycle

Main field of study

Environmental Engineering,Mechanical Engineering

Specific prerequisites

The thesis work is a course comprising 30 ECTS credits on an advanced level. This means that the prerequisites required for making the thesis at Industrial Ecology, are that the general requirements of thesis work at KTH are fulfilled as well as the student having obtained 6 ECTS credits, in a course on advanced level, in the area of Industrial Ecology relevant for the

thesis work to be done. The fulfillments of the prerequisites are decided on by the examiner together with the supervisor.

Language of instruction

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

Intended learning outcomes

The aim of the Master's Project in Industrial Ecology is to develop the students ability to independently and under realistic circumstances plan, structure and carry through a specific project in a scientific approach and present this project both in writing and orally.

After finished course the student shall be able to:

- Apply the knowledge achieved in Industrial Ecology on a given problem.
- Within a specific topic, sometimes with limited information, independently analyze and discuss complex questions as well as handle larger problems at an advanced level within the topic of Industrial Ecology.
- Analyze the need for scientific information, carry out information research as well as make reflections, evaluate and critically review both own and others scientific results.
- Document and present the project to a specified target group in a written report, with highly set demands on contents, structure and treatment of language.
- Refer to reference sources, figures, tables and formulas in a scientific way.
- Carry out oral presentations with respect to time limits and clearness in language, presentation and illustrations.
- Review and oppose another person's Master's project as well as be able to receive and discuss the comments on the own Master's Project.
- Identify the need for additional knowledge and continuously develop the own competence/ability.

Course contents

Industrial Ecology is a modern multi-scientific view of the environmental problems of today. The starting point is the insight that a sustainable development on Planet Earth is achieved first when technical, economical and social development meet within the frames of the eco-systems long-term carrying capacity. The role of technology and its application for a resourceful efficient and environmentally friendly development of society is central for our activities. Topics for Master's Project (strategies, tools and methodology) within Industrial Ecology are particularly focused on areas such as; environmental systems analyses, risk management, environmental management, environmental consequences, environmental technology as well as applications for sustainable development on technical development and technical systems.

Proposals for Thesis Projects are to found at the division's web pages. Proposals for Master's Projects can be formulated by student, company or sometimes by teacher. The proposal shall

describe the background and the planned working task (project) on one (A4) page. In order for the project to be accepted as a Master's Project, defined interesting aspects within the topic have to be included. Priority is given to topics within the division's own research areas.

The Master's Project has to contain literature studies, descriptions of theory and methodology used in the project, investigations/evaluations from experiments and theoretical evaluation as well as analysis of the results. The allowed period of time of a Master's Project should not exceed 20 working weeks of full time studies. Together the student and supervisor have to work out a project plan with the stated aim and work load. A preliminary project plan and time schedule have to be discussed and planned. After the Examiner and the division's Director of Studies have approved the project plan the student is to be registered for the Master's Project Course.

The Master's Project shall result in a report that mirrors a scientific method. The Master's Project shall be presented orally at a seminar. At the seminar the examiner and opponents will be present with as well as invited guests.

Examination

- XUPP - Examination Question, 30.0 credits, grading scale: A, B, C, D, E, FX, 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.