Syllabus for

Academic year 2011/2012 >

PPU065 - Environmental technology and sustainable development

Syllabus adopted 2011-02-22 by Head of Programme (or corresponding)
Owner: TKDES
7,5 Credits
Grading: UG - Fail, pass
Education cycle: First-cycle
Major subject: Industrial Design Engineering
Department: 44 - PRODUCT AND PRODUCTION DEVELOPMENT

Teaching language: Swedish

Course module				Credit distribution Sp1	Sp2	Sp3	Sp4	Summer course	No Sp	Examination dates
0106	Written and oral assignments	7,5 c	Grading: UG	7,5 c						

In programs
TKDES INDUSTRIAL DESIGN ENGINEERING, Year 3 (compulsory)

Examiner:
Tekniklektor Thomas Nyström

Theme:
Environment 7,5 hec

Eligibility:
For single subject courses within Chalmers programmes the same eligibility requirements apply, as to the programme(s) that the course is part of.

Course specific prerequisites
Ergonomics TD (MTT010)
Design and human factors (MMF273) or similar courses.

Aim
The course aims for giving an understanding for the complex relations that influence environmental adaption, of products and services, seen from a cycle-of-life perspective, which includes product development, manufacturing, consumption, transport and destruction.

The course aims to introduce different methods and tools for sustainable product development.

Learning outcomes *(after completion of the course the student should be able to)*
- understand the current state of our planet, considering population growth, human needs, resources, technology systems and the limitations and problems between humans and the environment

- be aware of the complexity of human needs facing eachother in the environmental constraints, which also includes human relations such as conflicts, relations between different generations and democracy

- understand the importance of long term and ethical considerations when evaluating the sustainability of different technical systems

- understand the importance of communication across professional and disciplinary areas

- work with large comprehensive problems by identifying och delimiting them into a managable size

- perform qualified environmental analyses regarding sustainability at an adequate level

- suggest measures to be taken as a result of an environmental analysis of a product

- have shown maturity when it comes to choosing the level of difficulty and details during the written and oral presentations of the work

Content

The education is done partially through a theory section with lectures as well as practice sessions such as laboratory experiments and discussion tasks.

The course also contains a project task where the participants shall develop a product/service from the starting point of the theoretical session about environment-adapted product development and sustainable development.

Literature

Indicated at start of course.

Examination

Intermediate test as well as tasks and projects, with the grade approved, fail.