KTH-Sustainability
Education Day

Göran Finnveden
Vice-president for Sustainable Development
Welcome to the 1st KTH-Sustainability Education Day!

Background:
At the conference Engineering Education for Sustainable Development in Cambridge 2013 there were 8 presentations made by 11 teachers from KTH.

"Why don’t we make an event at KTH with these wonderful papers and others?"
KTH has ambitions

• KTH shall be one of the leading technical universities in Europe also regarding sustainable development. (KTH Development Plan, 2013-2016)
• KTH’s identity and trademark shall be associated with sustainable development. (KTH Development Plan, 2013-2016)
• KTH shall be ready for certification according to ISO 14000 by the end of 2014. The environmental management system includes education, research and cooperation.
KTH has a double track strategy

- Integration
  Sustainable development should be integrated in education, research, cooperation with society and administration

- Specialisation
  Sustainable development should be a topic on its own in education, research, cooperation with society and administration
KTH is raising its sustainability profile

• 2010 - A broad revision of sustainability issues at KTH
• 2011 – A Vice-president for sustainable development appointed (Göran Finnveden)
• 2011 – An environmental manager hired (Birgitta Westin)
• 2011 – KTH-Sustainability (a project and a council) established.
• KTH - Sustainability should develop KTH’s education, research and external contacts regarding sustainability. Broad interpretation of sustainability.
• 2011- The environmental group within the University administration established. Drives the development of environmental management system and supports KTH-Sustainability.
Focus in the environmental work

- Education
- Research
- Collaboration

- Waste
- Significant environmental aspects
- Use of energy

- Procurement and use of goods and services
- Use of chemicals
- Transportation
Goals for education (2012-2015)

Increase the knowledge and engagement for sustainable development among teachers and students.

All engineering and architectural programs should be able to describe how the learning outcomes in the ordinance of higher education related to sustainable development are fulfilled and further developed.
Overall learning outcomes on SD (Swedish Ordinance for Higher Education)

For the MSc in engineering, students are required (outcomes 7 and 11) to:

“demonstrate the ability to develop and design products, processes and systems while taking into account the circumstances and needs of individuals and the targets for economically, socially and ecologically sustainable development set by the community”

“demonstrate insight into the possibilities and limitations of technology, its role in society and the responsibility of the individual for how it is used, including both social and economic aspects and also environmental and occupational health and safety considerations.”
Specification of overall learning outcomes

- For many, the overall learning outcomes are too general.
- A list of 10 specifications was first presented in 2012.
- Can be used for developing programs and courses.
- Can used as a checklist for program evaluation.
- Endorsed by the faculty council as a guidance.
- Will be further developed during 2014.
Integration of sustainable development in education programs

- 2012 – All programs made a self-evaluation
- 2013 – A dialogue between all schools and KTH Sustainability
- 2013 – All schools made actions plans for integration of sustainable development in their programs
- 2014 – All schools should work with their actions plans
- 2015 – A new evaluation will be made

- Current status: three groups of programs.
- Many activities in many schools.
Examples of activities

- Mapping of courses and programs
- Development of several new courses
- New pedagogical course for teachers on education for sustainable development
- Networking meetings, seminars.
- Development of a web-based tool-box
- Development of a course module on Sustainability and Business Development. Currently implemented in one program. Will be further developed.
- Development of a course module on social aspects of sustainable development
- Support to some research on ESD
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PhD education on SD

- PhD Forum for Sustainable Development
- Stockholm PhD Dialogue
- Mapping of PhD courses (available on the web)
- Support to PhD courses

- The PhD course "Communicating Research outside the Academy", 5 credits given by the ECE school, starts early April.
Specialisation on Sustainable Development

- New 5 year program (Bachelor plus Master) on Energy and Environment started 2010.
- Approximately 10 Master’s programs on SD
- More than 200 courses that have integrated SD in their learning outcomes.
KTH-Sustainability – a project and a council

The aim is to develop KTH’s sustainability related education, research and cooperation with society and support activities within and across the schools.

Members of the council:
Göran Finnveden (chair)
Fredrik Gröndahl, ABE
Gen Larsson, BIO
Mattias Höjer, ABE/CSC
(Anders Karlström, ABE)
Gunnar Malm, ICT
Björn Palm, ITM
Catharina Silfwerbrand Lindh, CHE
David Sandelin, Student
Omar Shafqat, PhD student
Contacts

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The web-based tool box: Annica Carlsson

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