FENM010 - ENVIRONMENTAL AND ENERGY SYSTEMS ANALYSIS: ROOTS AND BRANCHES

Course credits: 7.5 hp
Previous occasions: 2007, 2010, 2013
Next occasion: 2016 March – June (preliminary)
Location: Chalmers, Göteborg
Examiner: Björn Sandén
To sign-up, send an email to bjorn.sanden@chalmers.se.

Course description
The course deals with critical problems in system studies, the historic development of systems science and examples of specific approaches within the energy and environment area including energy systems modeling, life cycle assessment and innovation systems studies. We discuss the nature of Future studies in general as well as technology assessment and assessments of system intervention (such as policy implementation and investment decisions). The transfer of results from analysis to action is elaborated and potential roles of the systems scientist in society are explored. The course focuses on socio-technical systems, that is, systems with human *and* technical components. The course spans a range from harder to softer systems approaches.

The course aims at giving the PhD student an orientation within the broad field of system science to increase the awareness of what kind of research that is done and what could be done to address problems related to society's capacity to cope with environmental problems. It also aims at making the student aware of how the student's own research is related to a historical tradition and positioned relative other approaches.

Course organisation
The course is subdivided into about seven two-day seminars. Every seminar (including the first seminar) is preceded by a period when the student have time to read recommended books and articles. Before every seminar, participants are required to hand in reading notes and, for some occasions, a minor additional assignment. The last meeting all participants present a short course paper. Each seminar includes lectures from the course leader and invited scholars, as well as discussions and short presentations by the PhD students.