Sustainable City Development

Programme course

6 credits

Hållbar stadsutveckling

TKMJ48

Valid from: 2017 Spring semester

Determined by
Board of Studies for Mechanical Engineering and Design

Date determined
2017-01-25

Main field of study
Energy and Environmental Engineering

Course level
Second cycle

Advancement level
A1X

Course offered for
- Energy-Environment-Management

Entry requirements
Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Prerequisites
Environmental Technology, Sustainable Energy Systems, industrial Ecology

Intended learning outcomes
After taking this course, the student should be able to:

- Explain what characterizes resource efficient technical systems
- Reflect and problematize the significance of technical systems in sustainable city development with main focus on environmental impact and resource efficiency.
- Explain how technical systems have developed in society over time.
- Identify and characterize the roles of different actors for sustainable city development.
- Have a general understanding of how spatial planning processes affect the possibilities to develop resource efficient technical systems.
- Translate the theoretical knowledge into practice in a case study that analyze and evaluate different alternative technical systems' solutions from a sustainability perspective.

Course content

This course explores the contribution and role of technical systems to sustainable city development by analyzing the challenges and opportunities that are connected to technical systems in this context. A precondition for sustainable city development is to have a holistic view and integrated approach, not only regarding the technical systems but also with respect to the processes and actors involved. This course will give the students an understanding of how technical systems have and are continuously developed and what processes and actors that have been and are important for a sustainable city development. Lectures, a study project, and seminars will together create a deeper theoretical understanding for sustainable city development. The accumulated theoretical knowledge will be translated into practice in an applied case study project and in a reflective individual assignment.

Teaching and working methods

The teaching methods used in this course are lectures, literature seminars, site visit, group assignment and individual assignment.

Examination

UPG3	Essay	2 credits	U, 3, 4, 5
UPG2	Project assignment	3 credits	U, G
UPG1	Active seminar participation	1 credits	U, G

Grades

Four-grade scale, LiU, U, 3, 4, 5

Department

Institutionen för ekonomisk och industriell utveckling

Director of Studies or equivalent

Carina Sundberg

Examiner

Stefan Anderberg

Course website and other links

Education components

Preliminary scheduled hours: 48 h
Recommended self-study hours: 112 h

Course literature

Vetenskapliga rapporter/artiklar.

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.