Responding to Global Climate Change

Programme course

6 credits

Den globala klimatförändringen

TGTU59

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, Environmental Science

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.

Intended learning outcomes
The aim of the course is to advance students understandings of the principal ways to respond to global climate change at global, national and local levels as well as in key sectors for mitigation and adaptation. After completion of the course, the student should be able to:

- understand the basics of the global climate system to enable a critical reflection on its scientific representations;
- critically evaluate the complex interactions that influence mitigation responses to global climate change and the ability to change future climate pathways;
- understand and critically reflect on drivers and barriers for climate adaptation;
- through insights of the diversity in contexts and applications be able to critically reflect on how government agencies and private actors respond to climate change within key sectors such as transportation, urban planning, water management, and energy infrastructure.

Course content

Global climate change is one of the most profound challenges facing humanity. Being tightly connected to energy supply, development and justice, responses to climate change virtually concern everybody. Over the last years, more and more actors have started to develop, design and implement responses to the challenges brought about by climate change, often presented as two categories of responses: mitigation and adaptation. Climate mitigation concerns measures that affect the greenhouse gas emissions balance whereas adaptation concerns adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects.

The course falls into the following phases: (i) How do we know what we know about global climate change? (ii) What are the consequences of climate change? (iii) How can we respond to climate change. Blocks (ii) and (iii) will be focused around two cases, one for climate mitigation and one for climate adaptation.

Teaching and working methods

The teaching on the course in based on lectures, seminars, lessons, cases, and a study visit.

Examination

UPG2	Active participation in seminars, lessons and study visits	1 credits	U, G
UPG1	An individual case reflection	1 credits	U, G
TEN1	Written examination	4 credits	U, 3, 4, 5

Grades

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

Department

Institutionen för Tema

Director of Studies or equivalent

Veronica Gyberg-Brodén

Examiner

Mattias Hjerpe

Course website and other links

Education components

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

Course literature

Fastställs senare

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.