

# International Energy Markets

Programme course

6 credits

Internationella energimarknader

TMES51

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, Industrial Engineering and Management

## Course level

Second cycle

## Advancement level

A1X

## Course offered for

- Energy-Environment-Management
- Mechanical Engineering, M Sc in Engineering
- Industrial Engineering and Management, Master's programme
- Sustainability Engineering and Management, Master's programme

## 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

Bachelor of science in mechanical engineering or corresponding. Courses in Energy Systems

## Intended learning outcomes

The aim is to give the student profound knowledge of how energy is traded. Large scale trading on the world market is in focus here. Hence, the procedures for how energy in the forms of oil, coal and natural gas changes owners are described in detail. Normally, commodities of these kinds are bought and sold on the world market at places called an exchange. There are many exchanges around the world and at such spots contracts in the form of options, futures and forwards are dealt with. Green certificates, carbon dioxide allowances and other financial instruments are also sold and traded at some exchanges. When passed the exam the students will:

- understand financial instruments for energy trading on an in depth level.
- understand how different energy sources are utilized on a large scale level.
- know how oil, coal, natural gas and other fossil fuels, in the form of commodities, are dealt with, as well as electricity is traded.
- understand the trade with green certificates et c.
- be able to “dummy” trade with real contracts

## Course content

The course includes lectures on how to trade oil, coal, natural gas and other energy commodities. The corresponding financial instruments such as forwards, futures are dealt with in depth but also options are included. Electricity trade at Nasdaq OMX Commodities and other such market places is studied as well as the trade with green certificates and carbon dioxide allowances. White certificates are also discussed albeit they are not in common use yet. The course also includes details on how to find new resources for energy such as seismic surveying for oil and gas fields, the transportation systems and the environmental hazards when producing fossil fuels, uranium and electricity.

## Teaching and working methods

Some parts of this course is dealt with by use of the Internet, such as the dummy trade programs. Normal lectures are therefore less frequent than in corresponding courses.

## Examination

TEN1	Written examination	6 credits	U, 3, 4, 5
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## Grades

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

## Department

Institutionen för ekonomisk och industriell utveckling

## Director of Studies or equivalent

Shahnaz Amiri

## Examiner

Bahram Moshfegh

## Course website and other links

## Education components

Preliminary scheduled hours: 20 h

Recommended self-study hours: 140 h

## Course literature

Till föreläsningarna hör ett omfattande kursmaterial som finns gratis tillgängligt på Internet.

## 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://stydokument.liu.se/Regelsamling/Innehall/Utbildning\\_pa\\_grund-\\_och\\_avancerad\\_niva](http://stydokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva).