FIM3001 Materials for Energy 3.0 credits

Material för energitillämpningar

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for FIM3001 valid from Autumn 2011

Grading scale

G

Education cycle

Third cycle

Specific prerequisites

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

The main aim of the course is to give an overview of materials and materials research, which have applications in energy production with focus on renewable energy sources. In addition, the course aims to give the student experience in cooperation with students with different backgrounds and nationalities.

Course contents

The course gives an overview of materials and materials research in the areas nuclear energy, fuel cells, supercapacitors, thermoelectrics, solar cells, solar heat and other renewable energy sources. Furthermore, the course will give the student insight into materials with applications in energy transmission, a possible future hydrogen society, nanotechnology in energy research and advanced synchrotron and neutronbased materials characterization methods.

Disposition

The course is an intensive course, which take place at Green hotel i Tällberg, Dalarna during one week in October 2011 (9-14 October). The course is arranged by the material platform at KTH and CLUSTER (Consortium Linking Universities of Science and Technology for Education and Research). CLUSTER is a consortium of 12 elite European Universities in Science and Engineering (and architecture) with associate members from around the world.

Course literature

Lecture notes, Internet-sites and scientific journals.

Examination

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Group assignments, which are presented orally during the course and individual assignment, which is handed in after the course ends.

Grading scale: Pass / Fail

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.