



LUNDS UNIVERSITET
Lunds Tekniska Högskola

Course syllabus

Avancerad energihushållning Advanced Efficient Energy Systems

MVKN30, 7,5 credits, A (Second Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED M

Date of Decision: 2023-04-11

General Information

Elective for: E5-em, F5, I5, M5-en, W5-es

Language of instruction: The course will be given in Swedish

Aim

The study course is intended to give deeper knowledge and application skills within a certain theme, demonstrated i.a. in an independently executed project report.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

- be able to plan and independently carry out a major project work within a theme of relevance to efficient energy systems.
- be able to search, find and critically examine engineering/academic reports of relevance for the actual theme

Competences and skills

For a passing grade the student must

- be able to orally and written present and defend the project report
- be able to critically examine other project reports and to defend the critics
- carry out a formal opposition on another student's project report

Judgement and approach

For a passing grade the student must

- be able to actively participate in discussions on relevant themes
- be able to independently carry out analyses and to develop critical arguments over relevant problems

Contents

The study course will give knowledge about issues within the chosen theme, specific knowledge within the theme, as well as knowledge and practice in methods for oral and written presentation of engineering results. Methods for defence of a report and methods for doing a correct opposition on another student's report.

Examination details

Grading scale: TH - (U,3,4,5) - (Fail, Three, Four, Five)

Assessment: The compulsory written project report is presented and discussed in compulsory seminars. Each seminar participant is expected to be prepared for active efforts but one of the participants is ordered the formal role as opponent. Teachers and student representatives form a grade-proposing group. Grades in the interval 2 (0,5) 6 are proposed for the project report, for the presentation/defense of the project report, and for the review (three grades). Final grades are decided by the examiner.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Admission

Admission requirements:

- FMIN20 Energy Systems Analysis: Renewable Sources of Energy or FMIN25 Energy Systems Analysis: Energy, Environment and Natural Resources or MVKN15 Energy Supply Systems or MVKN20 Energy Utilization or MVKN35 Energy Markets or MVKN95 Environmentally Friendly Power Generation or MVKP01 District Heating and Cooling

The number of participants is limited to: No

Reading list

- Literature of relevance for the theme chosen is presented by the examiner. Literature and other information sources needed for the project work are selected by the participants themselves.

Contact and other information

Course coordinator: Martin Andersson, martin.andersson@energy.lth.se

Course coordinator: Kerstin Sernhed, kerstin.sernhed@energy.lth.se

Examiner: Kerstin Sernhed, kerstin.sernhed@energy.lth.se

Course homepage: <https://www.energy.lth.se/english/education/>

Further information: The course is based on lectures, exercises in database searching, report studies and analysis, essay writing in groups (under supervision), review techniques and seminars. Participation at the course introduction is mandatory, to ensure that all students are included in the construction of mandatory student groups.