



MESS41, Energy and Sustainability, 7.5 credits

Energi och hållbarhet, 7,5 högskolepoäng

Second Cycle / Avancerad nivå

Details of approval

The syllabus was approved by The Board of the Lund University Centre for Sustainability Studies on 2013-11-19 to be valid from 2014-08-31, autumn semester 2014.

General Information

The main field of study is *Environmental Studies and Sustainability Science*. The course constitutes a 3rd term elective (non-compulsory) course at LUMES, Lund University International Master's Programme in Environmental Studies and Sustainability Science.

Language of instruction: English

Main field of studies

Environmental Studies and Sustainability Science

Depth of study relative to the degree requirements

A1F, Second cycle, has second-cycle course/s as entry requirements

Learning outcomes

On completion of the course, the student shall demonstrate

- an understanding of the main physical, technical and societal factors and sustainability challenges related to energy systems from global to local levels
- the ability to analyse the societal and environment impacts from different energy systems especially from a systems perspective, and
- profound insights into the complex factors influencing governance strategies and choices, including possible rebound effects, in the implementation of more sustainable energy systems.

Course content

The course discusses fundamental energy concepts covering the physical, scientific, technological properties and societal priorities of energy systems. The major challenges in the areas of the environment, society development, security and the economy are also covered largely through the assessment of one or more of these domains. Opportunities in energy demand, energy efficiency and materials efficiency, energy end-use technology status and potential, economic viability and energy scenarios for example are examined and scrutinized.

The course also addresses generation supply and demand options with focus on energy technologies (e.g. wind, solar, biofuel, CCS) and other strategies (e.g. energy efficiency) to decrease the environmental and social impacts of generation systems in both industrialized countries and the Global South. Finally, the course covers a variety of (governance) strategies for the intervention and transformation of energy systems down more sustainable pathways.

Course design

The course is comprised of lectures, seminars, class excursions, group discussions, and may include student presentations, and individual assignments/papers.

Consistent, regular class attendance and fully engaged participation is expected from all students in LUMES. Attendance at the sessions where graded course activities take place is compulsory to pass the course.

Assessment

For a passing grade the student must (a) have an overall passing mark on the individual assignments; (b) have an overall pass on combined group work and individual assignments; (c) have participated in the mandatory sessions;

Students who fail a test have the right to re-examination. An opportunity for re-examination will be offered after the end of the course. If necessary, a second re-examination will be arranged at a later date. A student who has taken two examinations in a course or a part of a course without obtaining a pass grade is entitled to the nomination of another examiner, unless there are special reasons to the contrary. Students getting pass mark cannot re-take an exam or re-submit a paper to get a higher grade.

Subcourses that are part of this course can be found in an appendix at the end of this document.

Grades

Marking scale: Fail, Three, Four, Five.

The grades awarded in examinations are 5 - 4 - 3 - Fail. The highest grade is 5 and the lowest passing grade is 3. The grade for a non-passing result is Fail. The student's performance is assessed with reference to the learning outcomes of the course. The grade "5" denotes outstanding performance in *all* learning outcomes. The grade "4" signifies very good performance in *all* learning outcomes. To receive the grade of "3", the student must obtain minimum criteria in fulfilling *all* course learning objectives. The grade of Fail signifies that the student has not fulfilled the learning outcomes of the course, or that additional work is required before the credit can be awarded.

Entry requirements

To be eligible for the course the student must have fulfilled course requirements of at least 40 credits in the LUMES programme.

Further information

This course cannot be included in a degree together with MESS09.

The syllabus was adopted by the Board of the Faculty of Social Sciences, Lund University, on December 13, 2012.

Subcourses in MESS41, Energy and Sustainability

Applies from H14

1201 Energy and Sustainability, 7,5 hp
Grading scale: Fail, Three, Four, Five