School of Economics and Management

EKHE44, Economic History: Climate Crises and Energy Transitions -Past and Present, 7.5 credits

Ekonomisk historia: Klimatkriser och energitransitioner förr och nu, 7,5 högskolepoäng

First Cycle / Grundnivå

Details of approval

The syllabus was approved by The Board of the Department of Economic History on 2023-06-13 to be valid from 2023-06-30, autumn semester 2023.

General Information

The course can be studied during the first semester of Economic History at the undergraduate level. It can be included as an optional course in several Bachelor programmes and it can be studied as a single-subject course.

Language of instruction: English

Main field of studies	*Depth of study relative to the degree requirements*
Economic History	G1N, First cycle, has only upper-secondary level entry requirements

Learning outcomes

After having passed the course students are expected to have attained:

Knowledge and understanding

- Basic understanding of the complex interrelations of climate and energy in the past and present.
- Good understanding of the power and land constraints of pre-industrial economies as well as of the land constraint's significance for the renewable energy transition of today.
- Knowledge of the expansion of energy use with the exploitation of fossil fuels during the industrial revolution and how this broke the growth constraints but also caused carbon dioxide emissions.
- Knowledge of how crises such as the oil crises of the 1970s and the gas and

electricity crises in Europe during the Russian war on Ukraine impact energy transitions
- Knowledge of present policies to combat climate change, especially in the EU, with the EU Emission Trading System and the EU Carbon Border Adjustment mechanism.
- Basic knowledge of the innovation trajectories of renewables and nuclear power

Competence and skills
- Ability to identify, formulate and solve problems autonomously and critically and to complete tasks within predetermined time frames .
- Ability to present and discuss information, problems and solutions in written and oral form.
- Competence to manage and work in multicultural teams.
- Skills required to work autonomously in the main field of study .
- Skills to create suitable Excel graphs of emissions and energy and to make basic decomposition calculations of the driving factors behind carbon dioxide emission changes.

Judgement and approach
- Understanding of why the problem of climate change is difficult to solve and what might be the best solutions.
- Understanding of how a series of industrial revolutions formed around core technologies have shaped our world and what it means for the future.
- Familiarity of the arguments from technology optimists as well as degrowth proponents and to facilitate for the student to form an individual standpoint.

Course content

It is an established fact that the industrial revolution and its exploitation of fossil fuels have caused severe climate change, but it is less well known that the climate also affected the energy use and energy transitions already back in the Little Ice Age, starting in the 17th century. The interlinkages of energy use, innovations and climate change today and historically is the topic of this course. The prospects for a sustainable energy transition that can save the climate in the age of Anthropocene will be addressed. Technology optimism will meet degrowth proponents. Outsourcing arguments via international trade will be scrutinized, as well as the ICT (Information and Communication Technology) revolution and the impact of the oil crises of the 1970s and the gas and electricity crisis of the Russian war on Ukraine.

The focus of the course will be on the present economic and political challenges to mitigate climate change, like climate negotiations, carbon taxation and climate clubs and the EU ETS (Emission Trading Scheme) and EU CBAM (Carbon Border Adjustment Mechanism). It will also cover the physical and geographical aspects, like land limitations, efficiency development of harnessing solar energy, and local conflicts such as the ‘not in my backyard’ argument raised against wind power plants.

Course design

The course is designed as a series of lectures, student presentations and group excercises.

Assessment

Grading is based on individual performance in written assignments/exams as well as group activities and individual presentations . Examination may draw on teaching as well as the course literature.

The University views plagiarism very seriously and will take disciplinary actions against students for any kind of attempted malpractice in examinations and assessments. The penalty that may be imposed for this, and other unfair practice in examinations or assessments, includes suspension from the University.

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.

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

Grades

Marking scale: Fail, E, D, C, B, A.
At the School of Economics and Management grades are awarded in accordance with a criterion-based grading scale UA:

A: Excellent

B: Very good
C: Good

D: Satisfactory
E: Sufficient

U: Fail

Grade (Definition). Characteristic

A (Excellent). A distinguished result that is excellent with regard to theoretical depth, practical relevance, analytical ability and independent thought.

B (Very good). A very good result with regard to theoretical depth, practical relevance, analytical ability and independent thought.

C (Good). The result is of a good standard with regard to theoretical depth, practical relevance, analytical ability and independent thought and lives up to expectations.

D (Satisfactory). The result is of a satisfactory standard with regard to theoretical depth, practical relevance, analytical ability and independent thought.

E (Sufficient). The result satisfies the minimum requirements with regard to theoretical depth, practical relevance, analytical ability and independent thought, but not more.

U (Fail). The result does not meet the minimum requirements with regard to theoretical depth, practical relevance, analytical ability and independent thought.

To pass the course, the students must have been awarded the grade of E or higher.

Students who do not obtain grades A-E on their written class room exam will be offered opportunities to retake the exam in which case the student will be assessed according to regular procedure. In the case of home exams that are handed in after the set deadline the teacher can: a) hand out a new exam which will be assessed

according to regular procedure, b) penalize the student by handing out a lower grade on the assignment in question unless the student can demonstrate special circumstances for the delay.

Entry requirements

General requirements for university studies in Sweden

Subcourses in EKHE44, Economic History: Climate Crises and Energy Transitions -Past and Present

Applies from H23

2301 Climate Crises and Energy Transitions -Past and Present, 7,5 hp
Grading scale: Fail, E, D, C, B, A