



Course syllabus

Faculty of Technology

Department of Built Environment and Energy Technology

4ER100 Innovativa tekniska lösningar för hållbar utveckling –
globalt och lokalt, 3 högskolepoäng

Innovative Technical Solutions for Sustainable Development –
Global and Local, 3 credits

Main field of study

Energy Technology

Subject

Energy Technology

Level

Second cycle

Progression

A1N

Date of Ratification

Approved 2025-12-08.

Revised 2026-05-20. Prerequisites are revised.

The course syllabus is valid from autumn semester 2026.

Prerequisites

60 credits in energy engineering, construction engineering, environmental engineering, mechanical engineering, electrical engineering, computer engineering, mathematics, sustainable development or equivalent. You also need English 6 or English, level 2.

Objectives

After completing the course, the student should be able to:

- Analyze and critically evaluate how sustainable development can be integrated into solutions for complex problems, considering global goals and local

conditions.

- Design an innovative solution to an internationally relevant problem by applying sustainability principles in an interdisciplinary collaborative environment.
- Communicate and justify the proposed solution in a scientific and interdisciplinary manner, both orally and in writing, focusing on sustainability aspects and practical feasibility.

Content

Principles of renewable energy and their role in sustainable development.

Circular use of materials and strategies to reduce resource consumption and waste.

International perspectives on sustainability challenges and methods for adapting solutions to local conditions.

Group-based work to step-wise develop an innovative solution to a complex problem related to sustainable development.

Type of Instruction

- Introductory lectures and seminars.
- Group work in international teams.
- Study visits.
- Workshops for idea development and problem-solving.
- Presentations and discussions.

Examination

The course is assessed with the grades Fail (U) or Pass (G).

Written report (group): Description and justification of the proposed solution. 2hp
Pass/Fail

Oral presentation (group): Presentation of the solution to course participants and instructors. 0.5 hp
Pass/Fail

Individual reflection: Short text on lessons learned and personal contribution to the project. 0.5 hp
Pass/Fail

Resit examination is offered in accordance with Linnaeus University's Local regulations for courses and examination at the first- and second-cycle levels. In the event that a student with a disability is entitled to special study support, the examiner will decide on adapted or alternative examination arrangements.

Course Evaluation

A course evaluation should be conducted during the course or in connection with its conclusion. The results and analysis of the completed course evaluation should be promptly communicated to students who have completed the course. Students participating in the next course instance should be informed of the results of the previous course evaluation and any improvements that have been made, no later than at the start of the course.

Other Information

Participation in the course may involve costs that the student will have to cover personally.

Required Reading and Additional Study Material

Material provided by the department.