



Course syllabus

Faculty of Technology

Department of Built Environment and Energy Technology

4BT310 Vetenskaplig teori och metod, 7,5 högskolepoäng

4BT310 Scientific Theories and Methods, 7.5 credits

Main field of study

Bioenergy Technology

Subject Group

Energy Technology

Level of classification

Second Level

Progression

A1N

Date of Ratification

Approved 2017-05-22

Revised 2023-11-28 by Faculty of Technology. Prerequisites are revised.

The course syllabus is valid from autumn semester 2024

Prerequisites

Bachelor's degree in technical subjects or a Bachelor's degree in Engineering (technology) or equivalent.

English 6 or equivalent.

Objectives

After the course the student is expected to:

- comprehensively explain the purpose of basic scientific concepts
- search for relevant information and literature
- identify, formulate and describe the scientific issues
- motivate by reflecting on the choice of alternative approaches for research
- comprehensively describe, compare and explain the pros and cons of different scientific methods to collect quantitative and qualitative data
- apply basic scientific methods to analyze quantitative and qualitative data
- explain different frameworks for theory building
- assess and review scientific publications within the field of bioenergy.

Content

The course covers the following topics:

- Investigation of epistemological and methodological approaches in technical science
- Collection of scientific literature
- Structuring and writing scientific articles of international standards for scientific publishing
- Presentation and discussion of relevant scientific issues in technical science

Type of Instruction

The course consists of lectures and seminars.

Examination

The course is assessed with the grades A, B, C, D, E, Fx or F.

The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail (i.e. received the grade F).

Examination takes place through written and oral presentations.

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.

Credit Overlap

The course cannot be included in a degree along with the following course/courses of which the content fully, or partly, corresponds to the content of this course: 4TS011, 7.5 credits and 4BY363, 7.5 credits

Other

Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

Required Reading and Additional Study Material

Required reading

Material provided by the department.

Scientific papers depending on orientation.