



Faculty of Health, Science and Technology
Environmental and Energy Systems

Syllabus

Energy and Environmental Technology: Degree Project

Course Code: EMGC17

Course Title: Energy and Environmental Technology: Degree Project
Examensarbete för högskoleingenjörsexamen i energi- och miljöteknik med internationell inriktning

Credits: 30

Degree Level: Undergraduate level

Progressive Specialisation: First cycle, has at least 60 credits in first-cycle course/s as entry requirements, contains degree proj. for B.A./B.Sc. (G2E)

Major Field of Study:

MEI (Environmental and Energy Systems)

Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2024-01-29, and is valid from the Autumn semester 2024 at Karlstad University.

Prerequisites

120 ECTS credits completed in the Bachelor programme in Energy and Environmental Engineering, or equivalent

Learning Outcomes

The aim of the degree project is for students to develop and demonstrate the knowledge and skills required for independent international work as a Bachelor of Engineering.

Upon completion of the course, students should be able to:

Knowledge and understanding

- demonstrate in-depth knowledge in the chosen technological area.
- describe how the work relates to social and ethical issues in the country in which the degree project was carried out.

Competence and skills

- demonstrate the ability to identify, formulate, and deal with engineering problems, critically, independently and creatively,
- demonstrate the ability to plan and carry out tasks within specified time limits using the appropriate engineering methods,
- demonstrate the ability to integrate knowledge acquired in the programme, critically and systematically,
- demonstrate the ability to clearly present and discuss their results and the knowledge and arguments on which these are based, orally and in writing,
- demonstrate the ability to discuss how their results could contribute to sustainable development, orally and in writing,
- perform information searches and independently identify relevant information, and
- write a report conforming to standard practice in science as regards disposition, formal aspects, and correct referencing.

Judgement and approach

- assess degree projects or equivalent in terms of relevant scientific and ethical aspects, and
- assess how the results of a research study can contribute to sustainable development, from ecological, social, and economic perspectives.

Content

The purpose, aim, method, and time plan of the degree project must be approved by the examiner before the work is begun. Students are then assigned a supervisor.

The course includes an extensive period of study abroad, where the main part of the material for the degree project is collected. Students are required to conduct, manage, perform, and present their projects and their study abroad independently. Students are responsible for the process and the result.

Instruction is in the form of supervision and seminars.

If two students collaborate on a project, their individual research questions must be clearly indicated from the start. If two students co-write a project report, submissions for assessment must clearly indicate individual contributions.

Reading List

See separate document.

Examination

Assessment is based on

- problem formulation,
- implementation,
- written report,
- oral presentation and
- performance as a peer reviewer.

On the first notification of a Fail grade after the end of the course period, students can no longer claim the right to supervision. The number of examination opportunities for the course is limited to five.

If students have a decision from Karlstad University entitling them to Targeted Study Support due to a documented disability, the examiner has the right to give such students an adapted examination or to examine them in a different manner.

Grades

One of the grades Fail (U), Pass (G), or Distinction (VG) is awarded in the examination of the course.

Quality Assurance

Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course in order to ensure continuous improvement. Course evaluation is partly based on student views and experiences obtained in accordance with current regulations and partly on other data and documentation. Students will be informed of the result of the evaluation and of any measures to be taken.

Course Certificate

A course certificate will be provided upon request.

Additional information

The local regulations for studies at the Bachelor and Master levels at Karlstad University stipulate the obligations and rights of students and staff.