



Faculty of Health, Science and Technology
Environmental and Energy Systems

Syllabus

Energy and Environmental Technology: Degree Project

Course Code: EMGC15

Course Title: Energy and Environmental Technology: Degree Project
Examensarbete för kandidatexamen i miljö- och energisystem

Credits: 15

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 2021-08-31, and is valid from the Spring semester 2022 at Karlstad University.

Prerequisites

Students registered for a Master of Science in Energy and Environmental Engineering (300 ECTS credits) or a Bachelor of Science in Energy and Environmental Engineering (180 ECTS credits) are required to have 60 ECTS credits completed in Environmental and Energy Systems, including at least 15 ECTS credits earned at G1F level or higher and at least 15 ECTS credits completed at G2F level or higher.

If the course is taken as a freestanding course, students are required to have 60 ECTS credits completed in Environmental and Energy Systems, including Energy and Environmental Systems Analysis (30 ECTS credits), with at least 15 ECTS credits earned at

G1F level or higher and at least 15 ECTS credits completed at G2F level or higher.

Learning Outcomes

The aim of the degree project is for students to develop and demonstrate the knowledge and skills required for independent work on issues related to environmental and energy systems.

Knowledge and understanding

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

- demonstrate in-depth knowledge in the chosen area of environmental and energy systems.

Competence and skills

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

- demonstrate the ability to handle a set engineering problem critically and independently ,
- demonstrate the ability to plan and carry out the task within a given time limit using the recommended method,
- demonstrate the ability to integrate knowledge acquired in the main field of study,
- 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 present ways in which their project results could contribute to sustainable development,
- perform information searches and independently identify relevant information,
- write a report conforming to standard practice in science as regards outline, formal aspects and correct referencing

Judgement and approach

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

- assess another student's degree project or equivalent in terms of relevant scientific and ethical aspects

Content

The purpose, aim, and method of the project are set by the examiner or supervisor.

If two students collaborate on a project, their individual problem formulations must be clearly indicated from the start. The students are required to submit separate reports.

Students are required to conduct, manage, perform, and present the research problem and the results of the project independently.

Students are responsible for the process and the result. Instruction is in the form of supervision and seminars.

Reading List

See separate document.

Examination

Assessment is based on project implementation, written report, oral presentation, and performance as a peer reviewer.

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.

After the end of the course, students who receive a grade of Fail (U) are no longer eligible for supervision. Supervision is only provided for the course duration. The number of assessment opportunities is limited to five.