



Faculty of Health, Science and Technology  
Environmental and Energy Systems

## Syllabus

### Degree Project for Master of Science in Engineering, Environmental and Energy Engineering

<b>Course Code:</b>	EMAE16
<b>Course Title:</b>	Degree Project for Master of Science in Engineering, Environmental and Energy Engineering <i>Examensarbete för civilingenjörsexamen i energi- och miljöteknik</i>
<b>Credits:</b>	30
<b>Degree Level:</b>	Master's level
<b>Progressive Specialisation:</b>	Second cycle, contains degree project for Master of Arts/Master of Science (120 credits) (A2E)

**Major Field of Study:**  
MEI (Environmental and Energy Systems)

#### Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2020-09-15, and is valid from the Spring semester 2021 at Karlstad University.

#### Prerequisites

The course is open to students who have completed all but 15 of the ECTS credits for semesters 1-8 of the Master of Science programme in Energy and Environmental Engineering, plus upper secondary level Swedish 3 or Swedish as a second language 3 and English 6, or equivalent

#### Learning Outcomes

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

### Knowledge and understanding

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

- demonstrate in-depth knowledge in the chosen area of engineering.

### Competence and skills

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

- demonstrate the ability to identify, formulate, and deal with engineering problems, critically, independently, and creatively,
- demonstrate the ability to participate in research or development work and thereby contribute to knowledge development,
- demonstrate the ability to plan and carry out tasks within specified time limits using engineering and research methods,
- demonstrate the ability to critically and systematically integrate knowledge acquired in courses included in the programme,
- demonstrate the ability to clearly present and discuss their results and the knowledge and arguments on which these are based, 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

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

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

### **Content**

The purpose, aim, method and time plan of the degree project must be approved by the examiner before the work begins. Students are then assigned a 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 project problem 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 the following components: 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.