



Faculty of Health, Science and Technology
Environmental and Energy Systems

Syllabus

Scientific method for technical development in Environmental and energy systems

Course Code:	EMGC20
Course Title:	Scientific method for technical development in Environmental and energy systems <i>Vetenskaplig metod för teknisk utveckling i Miljö- och energisystem</i>
Credits:	7.5
Degree Level:	Undergraduate level
Progressive Specialisation:	First cycle, has at least 60 credits in first-cycle course/s as entry requirements (G2F)

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

Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2018-02-13, and is valid from the Autumn semester 2018 at Karlstad University.

Prerequisites

70 ECTS credits for courses in Environmental and Energy Systems, or equivalent.

Learning Outcomes

The aim of the course is that students enhance their knowledge of research and development issues relevant to environmental and energy systems and develop ability to work independently also in areas new to the students.

Upon completion of the course, students should be able to

- conduct and document systematic literature searches and identify the work as relevant to the chosen area,
- orally and in writing clearly give an account of and discuss the literature,
- relate to and categorise the methodological choices made in the literature studied,
- independently formulate new research and development issues based on the literature and indicate a suitable method,
- draw up a time plan and present their own project within given time frames.

Content

Students work independently under supervision, and participate in seminars. The course starts with reading literature produced in the subject and in conclusion students produce a literature survey of the chosen area on environmental and energy systems.

The course comprises:

- systematic literature searches and referencing
- time planning
- academic writing and oral presentation.

Reading List

See separate document.

Examination

Assessment is based on oral presentations and hand-in assignments.

Grades

One of the grades Distinction (VG), Pass (G), or Fail (U) is awarded in the examination of the course. Engineering students are awarded one of the grades 5 (Distinction), 4 (Some Distinction), 3 (Pass), or Fail (U).

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.