

Course Syllabus

Degree Thesis for 60-Credits Master in Solar Engineering 15 Credits*, Second Cycle Level 1

Learning Outcomes

The goal of the thesis project is for students to be able to apply in depth knowledge within the field of solar energy engineering by performing industrial development or research oriented work. More specifically, upon completion of the course, the student shall be able to.

- demonstrate the ability to independently identify and formulate issues, and to plan and carry out, using suitable methods, demanding tasks within the given timeframe
- demonstrate knowledge and understanding in the main subject, including both an overview of the field and deeper knowledge of certain parts of the field as well as insight into current research and development in the field
- demonstrate advanced methodological awareness in the main subject of the programme
- demonstrate an ability to integrate knowledge and to analyze, evaluate and deal with complex phenomena, issues and situations even with limited information
- demonstrate the ability to identify his or her own need of further knowledge and to take responsibility for the development of his or her own knowledge
- demonstrate an ability to, both orally and in writing, present and discuss conclusions and the knowledge and arguments on which these are based in dialogue with different groups
- demonstrate the skills required to take part in research and development work

Course Content

An independent engineering project, which is built on knowledge gained throughout the student's education. An independent engineering project denotes that the student shall, by means of critical thinking, analyze different situations and solve problems with regards to the overall situation within a given time frame. The thesis project can be performed either as a national or international industrial or academic project. An industrial project should be performed in cooperation with an external industry or organization. An academic project should be carried out at an academic institution. The work includes formulating the goal and purpose of the project. Thereafter, the student carries out studies of literature followed by project work. The results of the project should then be analyzed and evaluated. The project should be concluded in a written report and defended at a seminar.

Assessment

Oral and written report of project proposal at a seminar.

Individually written thesis, oral presentation and opposition on the project presentation by a fellow student, 15 credits.

Forms of Study

Introduction lecture. Individual project work supervised by personnel from the subject Energy Technology at Dalarna University or by another person external to the subject if approved by the Energy Technology group. Discussions with the contact people and supervisor must be carried out on a regular basis and on the initiative of the student. If the thesis project is carried out by two students, it has to be clear in the report which part of the work has been done by which student in order for an individual grade to be set.

The course is taught in English.

Grades

The Swedish grades U, 3, 4, 5.

Prerequisites

Degree of bachelor of science in engineering (mechanical, electrical, energy, engineering physics) or equivalent of at least 180 credits. Courses of at least 30 credits in total in the 60 credits master program in Solar Energy Engineering should be completed.

Other Information

Replaces MÖ3031

Subject:

Energy Technology

Group of Subjects:

Energy Technology

Disciplinary Domain:

Technology, 100%

This course can be included in the following main field(s) of study:

1. Energy Technology
2. Solar Energy Engineering

Progression Indicator within (each) main field of study:

1. A1E
2. A1E



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Approved:

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