

Course Syllabus

Applied Solar Energy Engineering 7.5 Credits*, Second Cycle Level 1

Learning Outcomes

On completion of the course, students shall be able to:

- Plan, design, build and test a solar energy system within a project in groups
- apply fundamental engineering and specific solar engineering knowledge in a project in a critical and systematic manner
- communicate engineering work by presenting the project results orally and in written form
- critically evaluate the results of the project.

Course Content

The first part of the course covers applied electrical and thermal engineering topics as well as applied measurement technique. The detailed topics are chosen in conjunction with the necessary knowledge that is necessary to plan, design, build and test a solar energy technology component such as a solar collector. The first part of the course also includes lectures on technical communication, plagiarism, information search and social barriers of solar energy technology. In the second part of the course the students will plan, design, build and test a solar energy technology system where the knowledge from the previous/parallel lectures and the programme courses on solar radiation, photovoltaics and solar thermal will be applied.

Assessment

- Written tests on the taught applied engineering topics and non-technical subjects 2.5 credits
- Oral presentations (seminars) and written presentations (group reports) for each of the four parts in the project (plan, design, built, test) 2 credits
- Oral presentation and final group report 1.5 credits
- Individual report, in which students reflect on the project implementation in respect to the course objectives, 1.5 credits

Forms of Study

Lectures, seminars, active information search, oral and written presentation of individual and group work, project meetings.

Grades

The Swedish grades U–VG.

Oral presentation and final group report U-G.

The overall grade is based on the individual tests, the individual reports and the reports of the four parts.

Prerequisites

B.A. in engineering (mechanical, electrical, energy) of at least 180 credits and English 6

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. Solar Energy Engineering

Progression Indicator within (each) main field of study:

1. A1N

Approved:

Approved 17 September 2015

Valid from 28 October 2015