# EL115X Degree Project in Electrical Engineering, First Cycle 15.0 credits

## Examensarbete inom elektroteknik, grundnivå

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

## Establishment

Course syllabus for EL115X valid from Spring 2017

## Grading scale

P, F

## Education cycle

First cycle

## Main field of study

Technology

## Specific prerequisites

Eligibility for the course Degree Project in Electrical Engineering, first cycle 15.0 credits: eligibility for studies in school year 3 in the Engineering Programme in Electrical Engineering or completion of 120 credits compulsory courses according to the programme syllabus before the beginning of this course.

## Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

## Intended learning outcomes

On completion of the course, the student should be able to:

1. describe basic concepts in at least one application field of electrical engineering

2. identify where there is a need for additional knowledge; take responsibility for own development of knowledge; independently plan and carry out simple projects which require interaction with others to achieve an agreed-upon goal

3. Solve larger problems at first cycle level within one application field of electrical engineering, as well as independently analyse and discuss questÃons and issues involved

4. show awareness of social and ethical aspects including economic, social and ecologically sustainable development

5. reflect on, evaluate and critically review own and others' technical and scientific results

6. document and present, orally as well as in writing, one's project work, using acceptable structure, formalities and language

## Course contents

- Individual supervised work involving solution of a technical or scientific problem, oral and written communication of the work, as well as evaluation and critical review of own and others' results
- Seminar series addressing set-up of a work plan, information retrieval and source evaluation, reference management, written and oral presentation, as well as written and oral review of others' reports.
- Group assignment with focus on putting the results of project in a larger context, including a summary, a written reflection over the ethical importance of the project for a sustainable society and a popular description.

## Disposition

The main content is work on a supervised project with solution of a technical or scientific problem related to a larger context which is common to several project groups; oral and written communication, as well as evaluation and critical review of own and others' results in the same context. As support for this process, there is a seminar series addressing project organisation, information retrieval, reference management, oral and written presentation, as well as a written analysis of the importance of the context for a sustainable society and the engineer's ethical responsibility.

## Course literature

Course syllabus and hand-out material from the seminar series, as well as independently obtained technical or scientific information in each context.

## Examination

- XUPP - Degree project, 15.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Examination takes place continuously during the course through a number of different course components. All course components give credit. To pass the course at least 1 credit must be obtained for each course component and the total sum of all credits must be at least 12 of 20 possible credits.

Should 0 credits be earned on any course component and/or the sum of credit is between 9 and 11 credits, it is possible to submit supplementary make-up work. The supplementary make-up work will always be significantly more extensive than the regular assignment. All supplementary make-up work must be submitted no later than 3 weeks after the project presentation. The next opportunity to submit compementary work will be when the course is given the following year.

## Other requirements for final grade

1. Attendance at seminars

2. Work plan

3. Passed session in reference management

4. Implementation of the project

5. Summary of context

6. Report- contents

7. Report- language & structure

8. Report- layout

9. Written and oral feedback

10. Oral presentation

## Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.