



Course syllabus

Elektronikprojekt Project in Electronics

BMEF01, 5 credits, G2 (First Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED BME

Date of Decision: 2023-04-13

General Information

Main field: Technology.

Compulsory for: E3

Language of instruction: The course will be given in Swedish

Aim

To conclude the first three years of the programme the students carry out a project course. The course provides the overview of electrical engineering as an engineer needs and self-confidence to use their accumulated knowledge of project work that incorporates both the design and analysis. The course will provide training in planning, problem solving, team work in projects, oral presentations and report writing.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

- have a holistic view of Electrical Engineering, input areas and their interrelations.
- have a deep understanding of at least one specific electrotechnical application
- have knowledge of project methodology

Competences and skills

For a passing grade the student must

- be able to apply the teachings of other mandatory electrical engineering courses through the implementation of a design task in project form
- be able to troubleshoot and analyze an electrical system
- have good skills to search, compile and evaluate information
- be able to write a project report, in which the content should be structured into sections, describe the background to the project, explain the purpose of the project, explain and justify the choice of materials and methods, selecting relevant forms for reporting the results, interpret and discuss the results, formulate conclusions and present evidence for these and report the references in an academic honesty. Be able to give constructive feedback on project report under the above criteria.
- Be able to plan and implement an oral presentation of the project where the content, arrangement, language and performance are adapted to the purpose of the context and audience.
- have received training in planning and collaborate with others in a project.

Judgement and approach

For a passing grade the student must

- have received training in searching and assimilate information about a hitherto unknown area both from the internet and from printed sources.
- have confidence in analyzing an electric system or a device from several electrotechnical aspects.

Contents

At the beginning of the study period 1 formed project groups of 4-5 students each. Each group is assigned a project that you will work with during the semester. During 1p 1 education will take place around the project methodology, and other substances that are important for the project. During the reading period, will each project group make a project plan where their project is broken down into smaller tasks which will be planned with respect to time, budget and resources available. The project plan will be developed together with the supervisor. The project group will also provide constructive feedback to a project plan from another project group, as well as receiving feedback from another group. After the plan I approved, ordering of components can start and the construction can commence.

During the study period 2 implements the group the actual design task, which presents orally and demonstrates practically. To conclude the course, a major technical report is submitted. In addition to the background and technical solutions must the report provide information and reflections on the project methodology used withing the group.

Examination details

Grading scale: UG - (U,G) - (Fail, Pass)

Assessment: Approved written project plan, peer review of another group's project plan, project report and oral and practical presentation of the project.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Admission

The number of participants is limited to: No

The course overlaps following course/s: ESS081, ESSF05

Reading list

- G. Persson, G. Olsson, M. Alakula: Teknisk rapportskrivning.
- M. Eriksson, J. Lilliesköld: Handbok för mindre projekt. Liber, 2005, ISBN: 9789147052707.

Contact and other information

Course coordinator: Andreas Lenshof, andreas.lenshof@bme.lth.se

Course homepage: <http://bme.lth.se/course-pages/elektronikprojekt/elektronikprojekt/>