Engineering Project

Programme course

6 credits

Ingenjörsprojekt

TFYY51

Valid from: 2017 Spring semester

Determined by
Board of Studies for Electrical
Engineering, Physics and Mathematics

Date determined
2017-01-25

Main field of study
Electrical Engineering, Applied Physics

Course level
First cycle

Advancement level
G1X

Course offered for
- Biomedical Engineering, M Sc in Engineering
- Applied Physics and Electrical Engineering - International, M Sc in Engineering
- Applied Physics and Electrical Engineering, M Sc in Engineering

Entry requirements
Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Intended learning outcomes
The course should give the students a perspective on engineering and the future role as an engineer. In specific, the course should introduce basic methods for project work. During the course a project will be performed on a topic of relevance for the Applied Physics and Electrical Engineering programme. After the examination of this course the students should know how to:

- work in a project according to a project model
- plan a project work from a given specification
- make and modify a project plan
- find knowledge of relevance to solve the project tasks
- relate basic concepts in physics and electronics to engineering work
- collaborate to make the work in a project group successful
- administrate and document an ongoing project work
- present the results from the project work both orally and in a written report
- reflect on the finished work and suggest improvements

Course content

Lectures - Introductory lecture, CDIO, project descriptions, situating the engineering profession, group dynamics when working together, model for project work at LiTH, communication. Industry related guest lectures. The engineers role as a communicator. Analysis of and adaptation to receivers. Written presentation. Linguistic and formal aspects of technical documents: instructions, reports and descriptions. How to prepare and execute an oral presentation.

- Project work - Contents according to the specific task (all projects are described in brief on the course webpage). Work according to the project model LIPS. Writing of project plan. Administration and documentation of the ongoing work. Demonstration and presentation of results. Writing of report. Reflections on the finished work.

Teaching and working methods

The lectures aim to prepare the students for the project work bringing up topics on project models, group work, written and oral communication and information search as well as to give the students an insight in their future role as engineers by inviting guest lecturers graduated from the Applied Physics and Electrical Engineering programme. The lectures on information search are given for smaller groups at the library.

The project work is done in groups of 5-6 students. The groups are put together by the course management. Each group is assigned to a specific project task and a teacher acting as a customer. The customer presents a specification of the project task to the project group. From this specification the group will make a project plan and perform a project work according to the project model LIPS. Each group has frequent meetings with a teacher acting as a mentor/supervisor. The work is documented in a written report and presented orally to the customer. At the end of the course the work is also presented for the other students at a project conference.
The course runs over the entire autumn semester.

Examination

UPG2	Project	4.5 credits	U, G
UPG1	Seminars	1.5 credits	U, G

Grades are given as ‘Fail’ or ‘Pass’.

Grades

Two-grade scale, U, G

Department
Institutionen för fysik, kemi och biologi

Director of Studies or equivalent
Magnus Johansson

Examiner
Urban Forsberg

Course website and other links
http://www.ifm.liu.se/undergrad/fysikgtu/coursepage.html?selection=all&sort=kk

Education components
Preliminary scheduled hours: 108 h
Recommended self-study hours: 52 h

Course literature

Additional literature

Books

T. Svensson, C. Krysander, *Projektmodellen LIPS ver 1.2*

Other

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.