Mathematics Project

Programme course

4 credits

Matematikprojekt

TANA81

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
Mathematics, Applied Mathematics

Course level
First cycle

Advancement level
G1X

Course offered for
- Mathematics, Bachelor´s Programme

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.

Prerequisites
Calculus and Linear Algebra.

Intended learning outcomes
The course shall give the students a perspective on scientific work in the field of mathematics. It shall also introduce the basic methods for project management. After the examination of the course, and participation in the project work, the student should be able to:

- give concrete examples where mathematical methods are used for solving technically relevant problems
- work in a project according to a project model
- present the results obtained in the project both orally and in a written report
- plan the work within a project according to given requirements, and create a project plan
- find knowledge of relevance and solve the tasks relevant to the project.

Course content

Lectures: Project descriptions. The LIPS project model. Information search. Oral and written communication. Introduction to programing with Matlab.

Project work: Contents according to the specific project task. Work according to the project model LIPS. Writing a project plan. Administration and documentation of the ongoing project work. Documentation and presentation of the results. Reflections on the finished work.

Teaching and working methods

The course consists of a series of lectures and a project. The lectures aim to prepare the students for project work by bringing up topics such as project models, oral communication, and information search. Also give the students insight into their future role as mathematicians.
The project work is documented in a written report and also presented orally. The course ends with a small conference where the students present their work.

Examination

UPG2	Project work	3 credits	U, G
UPG1	Lectures and project conference	1 credits	U, G

Grades

Two-grade scale, U, G

Department

Matematiska institutionen

Director of Studies or equivalent

Ingegerd Skoglund

Examiner

Fredrik Berntsson

Course website and other links

http://courses.mai.liu.se/GU/TANA81

Education components

Preliminary scheduled hours: 38 h
Recommended self-study hours: 69 h

Course literature

Projektmodellen LIPS ver 1.2 (T. Svensson, C. Krysander), Bokakademin.
Kursdirektiv.

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.