Introduction to Programming

Programme course

8 credits

Programmering, grundkurs

TDDD11

Valid from: 2017 Spring semester

Determined by
Board of Studies for Industrial Engineering and Logistics

Date determined
2017-01-21

Offered for the last time
Spring semester 2023

Replaced by
TDDE67

Main field of study
Computer Science and Engineering

Course level
First cycle

Advancement level
G1X

Course offered for
- Industrial Engineering and Management, M Sc in Engineering
- Physics and Nanotechnology
- Chemical Analysis Engineering, B Sc in Engineering
- Industrial Engineering and Management - International, 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 shall give the student deeper understanding of the programming and program development and an overview of how computers and computer systems works, both hardware and software parts, in technical problem areas. Some understanding for some tools used within programming implementation. Some understanding of how it is to work in a small programming project and an overview of some problems in a project.

Course content
- Using the computer system and computer science - Introduction to the window system which are used, UNIX, the editor Emacs. Introduktion in handling workstations and lineprinters.
- Programming - Introduction to programming and discussions about different programming languages. Handling of system software like compilers and linkers.
- Specific in Ada: the language elements, types, deklarations, expressions, statements, subprograms, I/O, how to structure programs. Packages. Data structures like arrays, records, files, pointers. A small programming project.
- Introduction to the MATLAB tool and a small problem solving assignement.

Teaching and working methods

In the first period - The lectures presents the programming language Ada. The laboratory work consists of exercises in using IDA:s computer system. The exercises in programming are the big part of the laboratory work. The lessons in the course consists of exersices and are introductional to the laboratory work.
In the second period -Lectures, lessons and laboratory work are used for a small programming project. The course needs a large amount of the students home time.
The course runs over the entire spring semester

Examination

LABA	Laboratory work	6 credits	U, G
DAT1	Computer examination	2 credits	U, 3, 4, 5

Grades

Four-grade scale, LiU, U, 3, 4, 5

Department

Institutionen för datavetenskap

Director of Studies or equivalent

Ahmed Rezine

Examiner

Torbjörn Jonsson

Education components

Preliminary scheduled hours: 80 h
Recommended self-study hours: 133 h

Course literature

Programmering i Ada 95 - för nybörjare och erfarna. Studentlitteratur. ISBN: 91-44-03989-1. Författare: Torbjörn Jonsson. Laborations- och projektmaterial finns på kurshemsidorna: http://www.ida.liu.se/~TDDD11

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.