ID120V Basic C-programming 7.5 credits

C-programmering, grundkurs

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

Establishment

Course syllabus for ID120V valid from Autumn 2010

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Language of instruction

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

Intended learning outcomes

This course will provide students with basic knowledge of the various phases of software development as a basis for future programming courses. This course will provide an overview of the programming language C.
After completing the course the participants should be able

- Analyze simple problems and describe them in terms of structural diagrams and translate them to C programs using sequence, selection and recurrent elements.
- Edit, compile, link, execute and debug simple C program.
- Use C-functions using variables, fields and data structures as parameters and return values.
- Read and write data records to text and binary.
- For higher grades the student must also be
- Implement your own format or by a self-defined data type which is then processed through the input, stripping, sorting, calculating, file management, etc..
- Dynamic memory management of data items
- Put together programs using header files and C files

Course contents

The course consists of software development including problem analysis, structuring, editing the source code, compiling, linking, execution, debugging.
C programming with

- Data types basic types, fields, pointers, structures.
- Operators for arithmetic, assignment, bithantering
- Preprocessor usage for soursecode such as inclusion of standard libraries and headers
- File Management
- Function calls

Disposition

Lectures, exercises, presentations and assignments are alternated on each other.

Course literature

Vägen till C av Ulf Bilting och Jan Skansholm ISBN 91-44-01468-6

Equipment

Preferably a laptop of your own.

Examination

- PROJ - Programming Project, 0.0 credits, grading scale: A, B, C, D, E, FX, F
- INL1 - Hand in Theory 1, 1.0 credits, grading scale: P, F
- INL2 - Hand in Theory 2, 1.0 credits, grading scale: P, F
- LAB3 - Files, 2.0 credits, grading scale: P, F
- LAB2 - Parameter - Passing, 2.0 credits, grading scale: P, F
- LAB1 - Basic Programming, 1.5 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.

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

Examination is carried out gradually in the form of theory questions and exercises and, if approved, leads to a basic grade.
For higher grades a certain amount of increased depth in theory needs to be shown in the form of a small individual project work.

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.