



ID1013 Programming Methodology 7.5 credits

Programmeringsmetodik

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

Establishment

Course syllabus for ID1013 valid from Autumn 2008

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

After taking this course the student should be able to:

- * describe how and why you translate source code written in a higher level programming language to machine code.
- * construct an algorithm that solves a programming problem.
- * implement an algorithm in Java.
- * compile a Java program and correct possibly syntactical errors.
- * execute a Java program and correct possibly logical errors.
- * construct an executable objectoriented program from a conceptual model (for example in UML).
- * use classes and methods from a class library.
- * interpret program code written in Java and realize what's going to happen when the program is executed.
- * explain and correctly use basic programming concepts (e.g. data types, variable, selection, iteration, subroutine).
- * explain and correctly use basic concepts in objectoriented programming (e.g. class, object, encapsulation, inheritance, polymorphism).

Course contents

- * Data types, variable, expression, assignment.
- * Sequence, selection, iteration.
- * Collections.
- * Abstraction (methods and classes).
- * Method calls and parameter passing.
- * Class, object, instance, references.
- * Encapsulation, inheritance, polymorphism.
- * Interface.
- * Exception handling.
- * Library components.

Disposition

Lectures and assignments.

Course literature

Java Software Solutions, John Lewis & William Loftus

Upplaga: 5 Förlag: Addison Wesley År: 2007

ISBN: 0-321-37337-5

Examination

- INL1 - Assignment, 1.5 credits, grading scale: P, F
- INL2 - Assignment, 3.0 credits, grading scale: P, F
- TEN1 - Written exam, 3.0 credits, grading scale: A, B, C, D, E, FX, 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.

Other requirements for final grade

The examination is divided into three partitions:

Assignment 1 (1.5 hp).

Assignment 2 (3 hp).

Written exam (3 hp).

The grades in assignment 1 and 2 are P/F.

The grades in the written exam are A/B/C/D/E/Fx/F.

The grade of the written exam decides the grade for the whole course.

Students with the passing grade of Fx on the written exam will be given the opportunity to solve an extra assignment and thereby get the grade E. These students will be informed at the same time as the results of the written exam is published. The student have three weeks time to solve the extra assignment.

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.