



HÖGSKOLAN I GÄVLE

Programming Methodology 7.5 cr

Programmeringsmetodik 7,5 hp

Set by Faculty of Engineering and Sustainable Development

Version

Set at

Valid from

2/20/13

HT2013

Level	G1N
Education level	First cycle
Course identifier	DVG002
Credits	7.5 cr
Main field of study	Computer Science
Subject group	Computer Technology
Disciplinary domain	Technology 100.0 %

Learning outcomes

After completing the course the student shall be able to:

1. Use programming languages to independently solve programming problems.
2. Perform basic modeling of classes, objects, data, and flows using the Unified Modeling Language (UML).
3. Use recognized standards and methods for software development and documentation.

Course content

Introduction to programming with a low-level language.
Formulation of algorithms.
Managing input and output.
Programming with high level languages.
Program flow, statements, expressions, variables, control structures.
Object Oriented Programming.
Classes, objects, references, methods and attributes.
Standard libraries for I/O and graphical interfaces.
Programming style, program structure, and program quality.
Modeling with UML.
Methodology for debugging and error handling.
Software testing.

Teaching	Classroom-bound lectures, tutorials and laboratory sessions.		
Prerequisites	General entry requirements.		
Examination	Written examination, written report and written and oral presentation. In addition, the students apply and deepen their knowledge by conducting assignments individually or in pairs.		
Grade	A, B, C, D, E, Fx, F		
Limitations	A few weeks after the ordinary exam, a reexam will be offered. Additionally, a reexamination is offered in August.		
	Unless the practical elements are approved within the timeframe determined by the examiner, the reexamination can take place earliest when the course is given the next time.		
Other regulations	Grading criteria are provided by the course coordinator in connection with the course introduction.		
Sustainable environment	Content with sustainable development is not relevant to this course.		
Module			
	0010 Assignments	2.5 cr	Grade: AF
	0020 Written Examination	5 cr	Grade: AF