



Faculty of Health, Science and Technology
Computer Science

Syllabus

Programming Techniques

Course Code:	DVGA01
Course Title:	Programming Techniques <i>Programmeringsteknik</i>
Credits:	7.5
Degree Level:	Undergraduate level
Progressive Specialisation:	First cycle, has only upper-secondary level entry requirements (G1N)

Major Field of Study:
DVA (Computer Science)

Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2017-02-09, and is valid from the Autumn semester 2017 at Karlstad University.

Prerequisites

General admission requirements plus upper secondary level Mathematics D, or equivalent.
General admission requirements plus upper secondary level Mathematics 3c, or equivalent

Learning Outcomes

Upon completion of the course, the students should be able to:

- give an account of the structure and function of a computer,
- use a programming environment to compile and run simple programs,
- independently construct simple programs in a high-level language,
- explain and document simple programs

Content

The course covers basic problem solving in a high-level language.

The course comprises the following components:

- the structure and function of the computer
- basic syntax and semantics
- sequence, selection and iteration
- data types and references
- operators and expression
- error search and testing
- functions
- algorithms
- sorting and searching
- memory management
- recursion

- file management
- documentation techniques

Reading List

See separate document.

Examination

Assessment is based on mandatory assignments and lab reports and a final written exam.

Grades

One of the grades 5 (Pass with Distinction), 4 (Pass with Some Distinction), 3 (Pass), or U (Fail), or one of the grades Distinction (VG), Pass (G) or Fail (U) is awarded in the examination of the course.

Quality Assurance

Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course in order to ensure continuous improvement. Course evaluation is partly based on student views and experiences obtained in accordance with current regulations and partly on other data and documentation. Students will be informed of the result of the evaluation and of any measures to be taken.

Course Certificate

A course certificate will be provided upon request.

Additional information

The local regulations for studies at the Bachelor and Master levels at Karlstad University stipulate the obligations and rights of students and staff.