



Faculty of Health, Science and Technology
Computer Science

Syllabus

Introduction to Computer Science

Course Code:	DVGA14
Course Title:	Introduction to Computer Science <i>Datavetenskapens grunder</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 2019-02-18, and is valid from the Autumn semester 2019 at Karlstad University.

Prerequisites

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

Learning Outcomes

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

- give an account of basic concepts and subject areas in the field of computer science,
- describe the history of the computer and the structure and function of modern computers,
- give an account of different numeric systems and be able to convert numbers between different numeric systems,
- give an account of the basic structure and function of operating systems,

- use the shell programs and the primary tools of operating systems,
- use revision control systems,
- give a brief account of positive and negative social and environmental aspects of the computerisation of society,
- give an account of the basics of writing academic reports, and
- give a brief account of gender equality efforts on the IT labour market.

Content

The course covers:

- Basic concepts and subject areas in the field of computer science
- The history of the computer and the structure and function of modern computer systems
- Numerical systems and data representation in computers
- Introduction to the operating systems with a focus on using shell programs
- Introduction to revision control systems and their use
- Introduction to the tool Make for automatisisation of compilation and links
- Computer use in society
- A study visit to, or a visit by a guest lecturer from, a local IT business
- Report writing

Instruction is in the form of lectures, exercises, and laboratory sessions.

Reading List

See separate document.

Examination

Assessment is based on mandatory hand-in assignments and a final written exam.

Grades

One of the grades Distinction (VG), Pass (G), or Fail (U) is awarded in the examination of the course. For students registered in an Engineering programme, one of the grades 5 (Pass with Distinction), 4 (Pass with Merit), 3 (Pass), or U (Fail) 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.