



Faculty of Health, Science and Technology
Computer Science

Syllabus

Introduction to programming and data processing

Course Code:	DVGA24
Course Title:	Introduction to programming and data processing <i>Introduktion till programmering och databehandling</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 2021-02-17, and is valid from the Autumn semester 2021 at Karlstad University.

Prerequisites

General admission requirements and upper secondary level Mathematics 3/C, or equivalent

Learning Outcomes

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

- analyse a problem description and divide it into smaller problems,
- implement and test programs step by step in a high-level programming language,
- create programs for processing and modifying data from an external source,
- interpret, troubleshoot, improve, and complement an existing program written in a high-level programming language,
- present data in graphs, and
- explain and document basic programs in writing.

Content

- Problem analysis and algorithms
- Basic syntax and semantics
- Basic programming constructions such as data types, variables, expressions and operators, selection and iteration
- Functions and modular programming
- Lists and sequences
- Existing libraries in the language in question
- File management
- Error handling, troubleshooting, and testing
- Data processing and presentation
- Documentation

Reading List

See separate document.

Examination

Assessment is based on mandatory laboratory exercises and hand-in assignments, oral seminars, and a written exam.

If students have a decision from Karlstad University entitling them to Targeted Study Support due to a documented disability, the examiner has the right to give such students an adapted examination or to examine them in a different manner.

Grades

One of the grades 5 (Pass with Distinction), 4 (Pass with Some Distinction), 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.