



Faculty of Health, Science and Technology
Computer Science

Syllabus

Fundamentals of Software Engineering

Course Code:	DVGB20
Course Title:	Fundamentals of Software Engineering <i>Grunderna till Software Engineering</i>
Credits:	7.5
Degree Level:	Undergraduate level
Progressive Specialisation:	First cycle, has less than 60 credits in first-cycle course/s as entry requirements (G1F)

Major Field of Study:
DVA (Computer Science)

Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2024-08-27, and is valid from the Spring semester 2025 at Karlstad University.

Prerequisites

Data structures and algorithms, 7.5 ECTS credits, or equivalent

Learning Outcomes

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

- give an account of basic theories and concepts of software development and how these theories are applied at different stages of major programming projects,
- handle project and code changes in teams of several developers working in major programming projects,
- demonstrate skills in communication, planning, accountability, and meeting procedure, and
- give an account of the ethics of software development.

Content

The course comprises three components: (1) a series of lectures and laboratory sessions

focused on theories and concepts relevant to software technology and software management; (2) a group project in which students apply their knowledge of software development in practice through developing and modifying existing software and codebase; and (3) written reports and oral presentations in which students present the project activities and results.

Reading List

See separate document.

Examination

Assessment is based on individual digital tests (quiz) and written laboratory reports and hand-in assignments completed in groups. Assessment is also based on weekly reports, an oral presentation, and a final report.

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 (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.