



Faculty of Economic Sciences, Communication and IT
Computer Science

Syllabus

Course Approval

The syllabus was approved by the Faculty Board of Economic Sciences, Communication and IT on 8 March 2012, and is valid from the Autumn semester of 2012 at Karlstad University.

Course Code: DVGC22

Software Engineering, 7.5 ECTS Credits

(Software Engineering, 7.5 Swedish credit points)

Degree Level: Bachelor

Progressive Specialisation: G2F (First cycle, has at least 60 credits in first-cycle course/s as entry requirements)

Language of Instruction

English or Swedish

Prerequisites

Computer Science 60 ECTS cr

Major Field of Study

DVA (Computer Science)

Learning Outcomes

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

- give an account of and apply basic concepts in development processes for software based on agile principles, such as Scrum and eXtreme Programming,
- give an account of and apply basic techniques and procedures in software designs based on agile principles, such as TDD (Test-driven development) programming and continuous integration,
- give an account of and apply basic patterns and principles in software designs based on agile principles, such as SOLID-principles and basic architect and design patterns,
- perform iteration-based project development with planning sessions, deliverable iteration results, customer demonstrations and retrospective self-evaluation, and
- apply engineering design and architecture principles professionally.

Content and Form of Instruction

The course consists of three parts: a series of lectures and workshops introducing relevant concepts, techniques and principles in software design, a continuous, practical part in which students apply course material in the form of an agile development project, and thirdly a written report, which students present and discuss course content in relation to their projects. The course concludes with oral project presentations in groups.

Reading List

See separate document.

Examination

Assessment is based on a written exam, weekly reports, final report and an oral presentation. All course components must be completed satisfactorily for a Pass grade.

Grades

One of the grades Pass with Distinction (5), Pass not without Distinction (4), Pass (3) 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 assessment is based on student views and experiences as reported in written course evaluations and/or group discussions. Students will be informed of the result of the evaluation and of the measures to be taken.

Course Certificate

A course certificate will be provided upon request.

Additional Information

Students who enrolled before 1 July 2007 will complete their studies in accordance with the requirements of the earlier admission. Upon completion students may request degree and course certificates to be issued under the current ordinance if they meet its requirements.

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

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