Blekinge Institute of Technology
Department of Software Engineering

Revision: 1
Reg.no: BTH-4.1.14-0830-2021

COURSE SYLLABUS

Programvaruutveckling
Software Development
6 credits (6 högskolepoäng)

Course code: PA1473
Main field of study: Software Engineering
Disciplinary domain: Technology
Education level: First cycle
Specialization: G1F - First cycle, has less than 60 credits in first cycle course/s as entry requirements

Language of instruction: English
Applies from: 2022-01-17
Approved: 2021-09-01

1. Decision
This course is established by Dean 2021-02-22. The course syllabus is approved by Head of Department of Software Engineering 2021-09-01 and applies from 2022-01-17.

2. Entry requirements
For admission to the course 8 credits taken in Introduction to Engineering in different areas and 6 credits taken in programming are required.

3. Objective and content

3.1 Objective
The aim of the course is to give the student basic knowledge about how the development of large software systems takes place. The purpose is also to give the student such knowledge about the development process, requirements management, testing, project planning and project follow-up, that he / she can participate in the planning of a small project. The course aims at theoretical knowledge acquisition and practical application.

3.2 Content
The course introduces system development methods and their background, application and development overtime. In addition, ethical aspects and professional practices are discussed from the perspective of software-intensive product development. The course includes the following elements:
• Software development methods being used in software industry, their strengths and weaknesses.
• Main phases of software development and their connection to different development models.
• Software project planning, execution, monitoring and follow up along with the associated documentation.

4. Learning outcomes
The following learning outcomes are examined in the course:

4.1 Knowledge and understanding
On completion of the course, the student will be able to:
• Account for different development methods in software development, as well as explain their strengths and weaknesses.
• Account for the main phases of software-intensive product development and how they relate to each other.

4.2 Competence and skills
On completion of the course, the student will be able to:
• Plan and follow up a software development project in practice in accordance with the chosen development methodology.

4.3 Judgement and approach
On completion of the course, the student will be able to:
• Argue the advantages and disadvantages of different development methods for a given project from a project management perspective with adequate terminology.
• Present and argue for ethical positions regarding current trends and products in society, and professional practices.

5. Learning activities

The course is based on lectures, seminars, prepared debates, presentations, and group assignments. Students are expected to study both individually and in groups the literature studies, information retrieval and preparatory work for seminars and debates.

6. Assessment and grading

Modes of examinations of the course

Code	Module	Credits	Grade
2205	Project Plan	1 credits	AF
2215	Project Assignment	3 credits	AF
2225	Written examination	2 credits	AF

The course will be graded A Excellent, B Very good, C Good, D Satisfactory, E Sufficient, FX Fail, supplementation required, F Fail.

To get a passing grade for the course, all modules must be approved. The course final grade is calculated as the weighted average of the grades in the modules.

The information before a course occasion states the assessment criteria and make explicit in which modes of examination that the learning outcomes are assessed.

An examiner can, after consulting the Disability Advisor at BTH, decide on a customized examination form for a student with a long-term disability to be provided with an examination equivalent to one given to a student who is not disabled.

7. Course evaluation

The course evaluation should be carried out in line with BTH:s course evaluation template and process.

8. Restrictions regarding degree

The course can form part of a degree but not together with another course the content of which completely or partly corresponds with the contents of this course.

9. Course literature and other materials of instruction

• Software Engineering, Global edition, Ian Sommerville, ISBN-13: 9781292096131, 2015, Pearson Education, 10th Edition or later.

Reference literature:

• Engineering Software Products, An Introduction to Modern Software Engineering. Global Edition, Ian Sommerville, ISBN-10: 1292376341, 2021, Pearson, 1st Edition or later

• SWEBOK, https://www.computer.org/web/swebok/v3

• R.E. Fairley, Managing and Leading Software Projects, Wiley-IEEE Computer Society Press, 2009.

10. Additional information

This course replaces the course PA1450