



COURSE SYLLABUS

Värddeddriven mjukvaruutveckling Value-Driven Software Engineering 7.5 credits (7,5 högskolepoäng)

Course code: PA2571
Main field of study: Software Engineering
Disciplinary domain: Technology
Education level: Second cycle
Specialization: AIN - Second cycle, has only first cycle course/s as entry requirements

Language of instruction: English
Applies from: 2023-01-16
Approved: 2022-09-01

1. Decision

This course is established by Dean 2018-05-22. The course syllabus is approved by Head of Department of Software Engineering 2022-09-01 and applies from 2023-01-16.

2. Entry requirements

Admission to the course requires at least 6 credits completed in the Industrial Economics area and at least 6 credits completed in Requirements Engineering, as well as completing a course in Software Development of at least 6 credits.

3. Objective and content

3.1 Objective

The aim of the course is to enable students to develop an understanding of the different concepts within value-driven software engineering and to apply these concepts in real-world settings. This course will focus on studies in software management and -economics and the value-based software engineering paradigm.

3.2 Content

The course covers the following areas:

- Introduction of value-based software engineering (VBSE) in comparison with value-neutral software engineering
- Value-based monitoring and control
- VBSE key practices and ethical considerations
- Stakeholder value propositions and reconciliation
- Risk management in the context of VBSE
- Software cost and -effort estimation techniques and their role in project planning

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:

- Understand and discuss the research and trends in VBSE
- Understand and discuss major concepts and techniques of VBSE, and how these concepts apply to the current and emerging software challenges
- Explain the fundamental concepts of software management and -economics

4.2 Competence and skills

On completion of the course, the student will be able to:

- Apply decision analysis models and techniques in software engineering to support the value-based paradigm

4.3 Judgement and approach

On completion of the course, the student will be able to:

- Reflect on the appropriateness of decision analysis models and techniques in software engineering considering the value-driven concepts

5. Learning activities

The course is structured through lectures, mandatory seminars, and assignments. The assignments may involve group work. The students are expected to participate actively during the lectures and seminars. During the course, the feedback and communication with the teachers will take place through the course's online learning platform.

6. Assessment and grading

Modes of examinations of the course

Code	Module	Credits	Grade
2305	Seminar	2.5 credits	GU
2315	Written assignment 1	2.5 credits	AF
2325	Written assignment 2	2.5 credits	AF

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

The final grade for the course will be based on the average of the grades in the written assignments 1 and 2.

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

- Biffi, S., Aurum, A., Boehm, B., Erdogmus, H. and Grünbacher, P. eds., 2006. Value-based software engineering (Vol. 1). Springer-Verlag Berlin Heidelberg.

The course literature also includes recent published scientific literature on value-driven software engineering. The list of scientific articles will be shared on the course page.