ID1219 Software Evolution and Maintenance 7.5 credits

Vidareutveckling och underhåll av programvara

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for ID1219 valid from Spring 2023

Grading scale

P, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Completed course II1302 Projects and Project Methods 7.5 credits, or IV1300 Software Engineering 7.5 credits, or both IV1303 Modern software development 6 credits and ID1003 Project IT 7.5 credits or an equivalent project course on at least 7.5 credits.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

Having passed the course, the student should be able to:

- describe the software life-cycle process and its component processes
- explain the interplay between software development and software refinement and maintenance
- apply their knowledge in software refinement by defining, follow. and follow up on software life-cycle processes and the roles that are involved in each respective process
- apply their technical knowledge to develop and maintain software systems
- handle software problems that have appeared in an existing software system and take appropriate measures
- explain current trends in managing the software life-cycle
- act in an ethical manner when developing and maintaining software systems
- work in a team when handling complex problems
- communicate their work and its results in writing

in order to

- obtain an understanding of the extent and complexity of the development and maintenance of an already existing software system.

Course contents

- Definition of the software life-cycle.
- Types of refinement and maintenance of software.
- Process models for most types of refinement and maintenance of software.
- First, second, and third lines of support.
- Testing in refinement and maintenance of software.
- Transition from development to refinement and maintenance of software (software transition).
- Aging of software.
- Phasing-out (retirement) of software.
- Revision (reengineering) of software.
- Evolvability and maintainability of software.
- Process models on organizational structures.
- Quality management and reverse engineering.
- Status in industry and research.

Examination

- ÖVNA - Exercises, 1.5 credits, grading scale: P, F
- ÖVNB - Exercises, 2.0 credits, grading scale: P, F
- ÖVNC - Ecersises, 2.0 credits, grading scale: P, F
- ÖVND - Exercises, 2.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.