Linnæus University

Course syllabus

Faculty of Technology
Department of Computer Science

2DV610 Mjukvarutestning, 7,5 högskolepoäng
Software Testing, 7.5 credits

Main field of study
Computer Science

Subject Group
Informatics/Computer and Systems Sciences

Level of classification
First Level

Progression
G1F

Date of Ratification
Approved 2014-10-03
Revised 2015-12-22 by Faculty of Technology. Prerequisites and course evaluation.
The course syllabus is valid from autumn semester 2016

Prerequisites
60 credits in Computer Science including Object Oriented Analysis and Design using
UML (1DV607), 7.5 credits and Iterative software development (1DV604), 7.5 credits
or 1DV506 Problem Solving and Programming, 7.5 credits and 1DV507 Programming
and Data Structures, 7.5 crdits or equivalent.

Objectives

The aim of the course is to provide students with basic knowledge in software testing.

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

- define fundamental concepts such as requirement, error, quality, traceability,
  reproducibility, exit criteria and failure rate
- describe and explain fundamental principles in software testing
- describe and explain software testing in a software development process context
- describe and explain the relationship between software quality and software
  testing
- individually explain, apply, automate and document common software testing
  methods and techniques
- individually present and explain a specific study area within software testing and
  demonstrate theoretical insights in that area
- individually or in a group plan, document, and execute software testing for a small
  software product
- critically evaluate literature and other information sources in the field.

Content

Content
Course contents:

- Introduction to Software Quality
- Testing terminology
- Testing standards
- Testing methods and techniques
- Testing in the software development process
- Unit testing
- Integration testing
- System testing
- Regression testing
- Acceptance testing
- Testing tools
- Analysis, communication, and documentation of software tests and test results

Type of Instruction
Teaching consists of lectures, seminars and practical work. Practical work is carried out individually or in groups. Some activities are mandatory.

Examination
The course is assessed with the grades A, B, C, D, E, Fx or F.
The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail (i.e. received the grade F).

The examination consists of written tests or oral examination or a number of mandatory assignments. The examination is decided upon when the course starts.

Students who do not pass the regular examination will be offered a second examination close to the regular examination.

Course Evaluation
During the course or in close connection to the course, a course evaluation is to be carried out. The result and analysis of the course evaluation are to be communicated to the students who have taken the course and to the students who are to participate in the course the next time it is offered. The course evaluation is carried out anonymously. The compiled report will be filed at the Faculty.

Credit Overlap
The course cannot be included in a degree along with the following course/courses of which the content fully, or partly, corresponds to the content of this course:2DV110 Software testing, 7.5 credits

Other
Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

Required Reading and Additional Study Material
Reading list
Paul Ammann och Jeff Offutt, "Introduction to software testing", Cambridge University Press (2008). ISBN: 9780521880381, 344 pages

Aditya P. Mathur, "Foundations of Software Testing", Prentice Hall, (2008) ISBN:9788131716601, 689 pages