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 by Faculty of Technology 2014-10-03
The course syllabus is valid from autumn semester 2015

Prerequisites
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

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
A course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The result of the course evaluation will be filed at the department.

Credit Overlap
This course cannot be part of a degree in combination with another course in which the content fully or partly correspond 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