Blekinge Institute of Technology
Department of Software Engineering

COURSE SYLLABUS

Adaptiv Lean Programvarutestning

Adaptive Lean Software Testing

7,5 ECTS credit points (7,5 högskolepoäng)

1 Course title and credit points
The course is titled Adaptive Lean Software Testing/Adaptiv Lean Programvarutestning and awards 7,5 ECTS credits. One credit point (högskolepoäng) corresponds to one credit point in the European Credit Transfer System (ECTS).

2 Decision and approval
This course is established by 2015-10-23. The course syllabus was revised by Head of Department of Software Engineering and applies from 2017-08-28.
Reg.no: BTH-4.1.1-0548-2015

3 Objectives
The focus of this course is testing in adaptive and lean software development processes. The objective is to equip professional test engineers with an understanding of the organizational and technical principles of such processes, and how these principles can be supported by appropriate testing techniques and tools.

4 Content
The course is organized into 5 themes:
1. Principles, Processes, and People
2. Supporting Development
3. Evaluating Business Qualities
4. Supporting Continuous Engineering
5. Evaluating Technical Qualities
Theme 1 introduces the principles of adaptive and lean development processes, and the role of testing and the test engineer in these processes.
Themes 2 to 5 consider, from an adaptive and lean perspective, testing techniques in contexts that are distinguished by the nature of qualities that are evaluated and how the testing supports the software engineering process

5 Aims and learning outcomes
On completion of the course the student will be able to:

Knowledge and understanding
• discuss the roles and contributions of a test engineer in adaptive and lean environments
• describe testing techniques that support the principles of adaptive and lean methodologies
Competence and skills
• apply test techniques relevant to the course themes and interpret the results provided by these techniques
• identify and use suitable tools to facilitate these testing techniques
Values and Attitudes
• reflect on the benefits, assumptions, and limitations of testing techniques
• critically analyse research from academia and industry on adaptive and lean testing

6 Learning and teaching
This course supports learning at a distance. Teaching material is provided online such as video lectures, interviews, research articles etc. These learning activities are supported by discussion with and feedback from lecturers.
A short formative assessment provides feedback on the student's understanding of each theme ("assignments" module).
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A short formative assessment provides feedback on the student's understanding of each theme ("assignments" module).
As a summative assessment ("project" module), students propose how adaptive and lean testing could be applied in a real-world context, and undertake a case study that applies relevant testing techniques in this context.
English

7 Assessment and grading

Examination of the course

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Code Module              Credit      Grade
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1710 Assignments         2.5 ECTS    G-U
1720 Project Assignment  5 ECTS      G-U
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The course will be graded G Pass, UX Fail, supplementation required, U Fail.

8 Course evaluation

The course coordinator is responsible for systematically gathering feedback from the students in course evaluations and making sure that the results of these feed back into the development of the course.

9 Prerequisites

At least 120 credits in a technical subject and a minimum of 2 years professional experience in software development (shown by, for example, a work certificate from an employer).

10 Field of education and subject area

The course is part of the field of education and is included in the subject area Computer Science and the subject area Software Engineering.

11 Restrictions regarding degree

The course cannot form part of a degree with another course, the content of which completely or partly corresponds with the contents of this course.

12 Course literature and other teaching material

A compendium of videos, research articles and other course material is provided via a virtual learning environment, and recommendations for further reading.

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