KURSPLANSUNDERLAG COURSE SYLLABUS

Grundläggande Mjukvaruutveckling

Basic Software Engineering

7.5 credits (7.5 högskolepoäng)

**Course code:** **PA1489**

**Main field of study:  
Disciplinary domain:**

**Education level:**

**Specialization:**

**Language of instruction:**

**Applies from:**

**Approved:**

**Discontinued:**

Only xx should be replaced with other text.

# **Decision**

# **Entry requirements**

Basic eligibility

# **Objective and content 3.1. Objective xxx**

**Modern software development makes use of several techniques and tools. Software engineers are expected to be able to use different types of development environmetns, test environments, and production environments in order to develop, debug, and deploy a software application. Development in teams introduce additional requiremetns and expectations to be able to share the software as well as deployments within the team, and to be able to create different configurations of the software and deployment for different development situations.**

**The intention with this course is to provide a basic understanding of a selection tools and techniques that are used in a modern software development enviroment in order to develop, debug, and deploy a software application. The course also offers a basic introduction to configuration management in order to enable collaboration in development teams.**

# **3.2. Content xxx**

**The course consist of the following**

**\* Basic confifuration management**

**\* Key components in a successful development environment**

**\* Introduction to interpreted and compiled programming languages and their influence on the development process**

**\* Program execution, and troubleshooting with a debugger**

**\* Introduction to testing as a support for software development**

**\* Intoduction to modular container-based software development**

**\* Source code documentation**

# **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:

# **In writing exhibit basic knowledge in modern software development and container-based software development through documentation of experiences and observations from exercises and projects.**

# **4.2. Competence and skills**

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

# **Based on a specification develop, document, and present a software project that executes on a small number of communicating containers.**

# **Debug a software program with the help of test code and a debugger.**

# **Collaborate around a shared development project with the help of configuration management tools.**

# **Work with the tools and development environments used in the development and troubleshooting of container-based software**

# **4.3. Judgement and approach**

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

# **In writing reflect on their solutions and usage of development tools.**

# **Learning activities**

**Teaching consists of lectures and lab sessions. The lectures cover central concepts, techniques, and methods within object oriented design and programming. The lab sessions intend to offer understanding of how concepts, techniques, and methods can be applied in practice.**

# **Assessment and grading** Modes of examinations for the course

# The names of the examination components are to comply with BTH’s approved document (located at the bottom of the page). If the examination step needs to be clarified, this can be done under the heading “5. Learning activities ".

|  |  |  |  |
| --- | --- | --- | --- |
| Code | Module | Credit | Grade |
| XXX | sv. **xx**  eng. **Written Assignment 1** | **2.5** credits | **A-F** |
| XXX | sv. **xx**  eng. **Written Assignment 2** | **2.5** credits | **A-F** |
| XXX | sv. **xx**  eng. **Written Assignment 3** | **2.5** credits | **A-F** |
| XXX | sv. **xx**  eng. **xx** | **x** credits | **A-F** or **G-U** |
| XXX | sv. **xx**  eng. **xx** | **x** credits | **A-F** or **G-U** |

Information about modules and grading can be specified here xx (can be excluded)

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

To get a passing grade for the course, all modules must be approved. The final grade for the course is calculated as the weighted average of the grades for all the modes of examination.

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.

# **Course evaluation** The course evaluation should be carried out in line with BTH:s course evaluation template and process.

# **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. *Or* The course cannot be included in the degree.

# **Course literature and other materials of instruction**

**D. Thomas, A. Hunt, The Pragmatic Programmer, 20th Anniversary Edition, 2020. ISBN-10: 0-13-595705-2**

**Language of instruction**\*

Select one of the options below and delete the other option.

The language of instruction is English.

# **Additional information**

xx (can be excluded)

\* If learning materials or parts thereof may be in a language other than the stated language of instruction

it must be stated under the heading Additional information **or under the heading Learning activities**. The same applies if a guest lecture in a language other than the stated language of instruction may occur.

Kursplansunderlaget skickas till [institutionsstod@bth.se](mailto:institutionsstod@bth.se)

Former för bedömning och examinerande moment/Modes of Assessment and Assessed Components

Angivna examinationsmoment är de som ska användas i BTH:s kursplaner enligt beslut D364/21, BTH-4.6.4.1-0876-2021. The specified modes of assessment are those to be used in BTH's syllabuses according to decision D364/21, BTH-4.6.4.1-0876-2021.

Svensk benämning/In Swedish Engelsk benämning/In English

Basgruppsarbete PBL Group Work

Bebyggelseanalys Building Analysis

Flerfasexamination Multiphase Summative Assessment

Hemtentamen Take-home Examination

Inlämningsuppgift Written assignment

Klinisk examination Clinical Summative Assessment

Laboration Laboratory Session

Läkemedelsberäkning Pharmaceutical calculation

Muntlig tentamen Oral examination

Nationellt prov- del 1 - del 2 - praktiskt prov National examination Part 1, Part 2; Practical

Examination

Opposition Public Discussion and Examination

Portfölj Portfolio

Praktiskt moment Practical Component

Presentation Presentation

Projekt Project

Projektförslag Project Proposal

Projektplan Project Plan

Projektuppgift Project Assignment

Rapport Report

Salstentamen On-campus Examination

Seminarium Seminar

Självständigt arbete (examensarbete) Independent Project (Degree Project) Undersökning Investigation

Uppsats Essay/Thesis[1](#_bookmark0)

Verksamhetsförlagd utbildning (VFU) Placement

Workshop Workshop

Försvar Defence

Metod Method

Teori Theory

1 Essay: first-cycle; Thesis: second-cycle