UNIVERSITY of NICOSIA

Course Syllabus

Course Code	Course Title	ECTS Credits
COMP-118	Software Development Lab II	6
Prerequisites	**Department**	**Semester**
None	Computer Science	Spring
Type of Course	**Field**	**Language of Instruction**
Required	Computer Science	English
Level of Course	**Lecturer(s)**	**Year of Study**
1st Cycle	Dr Harald Gjermundrød	1st
Mode of Delivery	**Work Placement**	**Corequisites**
Face-to-face	N/A	COMP-113

Course Objectives:

The main objectives of the course are to:

- introduce and provide experience in using tools for source code version management
- familiarize students with tools for software bug tracking in order to gain experience in using such tools
- cover in detail the full life-cycle of software development: commit code, test and submit bug reports, provide patches and patch the source code
- introduce and use tools for builds and installers for various platforms and/or architecture
- Introduce and use tools to develop and run unit tests.

Learning Outcomes:

After completion of the course students are expected to be able to:

1. use source code version management tools
2. use bug-tracking tools for application development
3. apply the full cycle of software (source code) development
4. create builds and installers for a software product
5. develop and run unit tests as part of the development cycle.

Course Content:

1. Introduction to source code version management tools.
2. How to create, check-in, check-out, source code from a version management tool and compare different source code versions.
3. Introduction to source code bug tracking tools.
4. How to report bugs, report feature requests, accept bug reports, browse current reports and amend them.
5. How to create patches (using the development environment), attach them to current bug reports (using the bug tracking tool), apply and verify patches, and check in the patched code (using the version management tool).
6. Introduction to build and release systems.
7. How to tag a version (using version management tool), use a build tool to create binaries for various platforms and/or architectures.
8. How to wrap up the builds and encapsulate them into installers.
9. How to develop unit tests and integrate them into the software development lifecycle.

Learning Activities and Teaching Methods:

Lectures, Lab Tutorials, Practical Exercises, and Assignments

Assessment Methods:

Final Exam, Assignments, and Quizzes

Required Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Introduction to Programming with C++, 3rd Ed.	Daniel Liang	Pearson	2013	0-13-325281-7
Software Development Lifecycle: Lecture Notes	Dr. Harald Gjermundrød	Available on course page		

Recommended Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Practical Development Environment	Matthew B. Doar	O'Reilly	2005	0-596-00796-5
Version Control with Subversion, 2nd Ed.	Pilato, Collins-Sussman, Fitzpatrick	O'Reilly	2008	0-596-51033-6