SOFTENG 750 / COMPSCI 732 – Course Outline

Schedule

First Semester 2018, for current timetable and rooms please refer to university timetabling system; please watch out for room changes in the first week of semester.

Assessment structure

Assessment type	Weighting	Graduate Profile Themes		
Assignments	10%	 Fosters graduate capability theme 1 (Disciplinary Knowledge and Practice) 		
Group project	50%	 Proposal (5%): Fosters theme 2 (Solution Seeking) Implementation (20%): Fosters theme 1 (Disciplinary Knowledge & Practice) and theme 2 (Solution Seeking) Presentation & demo (7%): Fosters theme 4 (Communication & Engagement) Peer reviews (3%): Fosters theme 4 (Communication & Engagement) Individual report (15%): Fosters theme 3 (Independence & Integrity) and theme 5 (Social & Environmental Responsibilities) 		
Exam	40%			

Course contents

Summary

Торіс	Details
Advanced aspects of Source Code Management (SCM)	 Understanding how SCM tools work Understanding how to apply them in a project or process
Collaboration	 Challenges in building good collaborative applications Understanding error conditions and mitigating them
Static Analysis	 Understanding the potentials of modern static analysis Understanding the formal methods behind static analysis
Cross-platform application development	 Challenges Techniques & trade-offs Tool support
Testing for cross-platform applications	 Testing on heterogenous platforms Testing automation Scripts & tool support

Learning Outcomes

After successful completion of the course, students will be able to:

- Apply advanced source code management techniques to understand and manage change in projects.
- Apply advanced techniques to make collaboration work smoothly on a technical and design level.
- Apply advanced static analysis techniques and type concepts to improve software design.
- Describe the challenges involved with developing cross-platform applications, identify solutions to those challenges, and compare & contrast those solutions.
- Develop complex cross-platform applications using their choice of language and tool suite.
- Understand the importance of application testing across a wide range of heterogeneous devices.
- Use appropriate tools to ease the process of multi-device testing.

Coursework & Deliverables

Deliverable	Worth	Due date
Project proposal	5%	Monday March 19 th , 7pm
Implementation	20%	Sunday April 29 th , 7pm
Peer reviews	3%	Monday May 7 th , 7pm
Report	15%	Sunday May 20 th , 7pm
Presentation & Demo	7%	During the second half of the semester
Assignment 1	5%	Monday March 26 th , 7pm
Assignment 2	5%	Sunday May 27 th , 7pm
Exam	40%	ТВС

Related Reading

Library and web resources will be indicated alongside online resources in Canvas.

Lecturers

- Dr Gerald Weber (gerald@cs.auckland.ac.nz) course director
- Dr Andrew Meads (<u>andrew.meads@auckland.ac.nz</u>)