Topic outline

Welcome to COMP23420 Software Engineering (First Semester)

This site contains information about the first semester of the 2nd year course on Software Engineering, including coursework instructions and learning activities. You'll also find tools here for communicating with staff and other students taking the course.

- News and Announcements
- Student Question and Answer Forum
- About this Course Unit in Semester 1
- Course unit syllabus

1 Coursework

Information about the team and individual coursework will appear here throughout the course of the semester.

- Team Coursework 1: Dealing with Small Scale Issues

2 Week 1: Introduction to the Course Unit

In this first week, you will attend a 1 hour introductory lecture (the only lecture of the semester!) and a 2 hour workshop to get an introduction to the topics covered in the course unit, how it will be organised, and how it will be assessed.

Introductory Lecture: Tuesday, 27th September 2016, at 1.00pm, in University Place Theatre B

Workshop location: Collab 1

Team study locations (Thursday only): Collab, G102, LF5, LF6, KB1.8

- Lecture Slides: Introduction to the Course Unit
- Workshop Handout: Greenfield vs Brownfield Development
- Thursday Team Study: Check Your GitLab Access
- Local wiki pages containing information on our local GitLab server
- How to Write a Git Commit Message, by Chris Beams
- Off-line Study: A Brief Guide to the JUnit Testing Tool
- Coffee Time: We're Software Engineers and We've Got This Under Control

3 Week 2: Building and Testing an Open Source System

This week, things start to get technical as we begin to build our skills for working with large software systems written by other people.

In the workshops, you'll be learning how to acquire, build and test the open source system that we are using as the basis for the course.

Workshop location: G23

In the team study sessions, you'll be meeting with your team and beginning to work on team coursework exercise 1.

Team study locations: Collab, G102, LF5, KB1.8, and (on Tuesday only) LF31

LF6 is being used to store Open Day resources this week, and so is not available to us.

Tuesday Team Study: When and Where to Meet Your Team
Thursday Team Study Session: Getting Started With Stendhal
Coffee Time: The 500-Mile E-Mail Bug

4 Week 3: Understanding Large Software Systems Through Tests

This week, we will be looking at techniques for comprehending large bodies of code written by other people.

In the workshops, you'll be looking at the code base of our open source software system, and learning how to zoom in on the details you need for the task in hand, and to ignore everything else! We'll see how tests play a vital role in the code comprehension process.

Workshop location: G23

Team study session location: Collab (Tuesday only), G102, LF5, LF6 and KB1.8.

Unfortunately, Collab 1 & 2 are in use for a Careers workshop on the Thursday of this week, and are not available to us on that day.

5 Week 4: Cost Estimation for Software Engineering

How should you plan a software project? How should you plan development work within a project? This week discusses the factors that you need to take into account when planning software development.

Workshop location: Collab

In the team study sessions for this week, you'll work with your team to complete your submission for team coursework exercise 1.

Team study locations: Collab, G102, LF5, LF6, KB1.8

Deadline for team-based coursework this week: Friday, 5.00pm.

Wikipedia Entry on Work Breakdown Structures

6 Week 5: Git Workflows for Software Quality

In the workshop this week we will be looking at some popular workflows that teams use with Git, to maintain and manage the quality of the software that their users and customers see.

Workshop location: G23

In the team study sessions, your teams will be interviewed by TAs, as part of the marking process for team exercise 1.

When you are not being marked, you'll be meeting your industrial mentors for the first time.

Team study locations: Collab, G102, LF5, LF6, KB1.8

7 Not available

8 Week 7: Design Patterns and Offensive and Defensive Coding

We will introduce the topic of design patterns: frequently occurring code patterns that can help us steer clear of common mistakes, and build safe routes for software change into our code.

Workshop location: G23

In the team study sessions, you'll be working on the implementation and testing of the features you selected for implementation for team coursework exercise 2.

Team study locations: Collab, G102, LF5, LF6, KB1.8

9 Week 8: Design for Testability

This week we delve into the relationship between software testing and software design.

Workshop location: G23

In the team study sessions, you'll be working to finish your last commits and documentation for team coursework exercise 2.

Team study locations: Collab, G102, LF5, LF6, KB1.8

Deadline for team-based coursework this week: Friday, 5.00pm.

10 Week 9: Safely Migrating Software Functionality

This week we look at how we can make larger scale changes to existing bodies of software safely, with particular reference to the third coursework exercise. During the workshops, you'll work in your team to explore the options for change, with guidance from staff and TAs.

Workshop location: G23

In the team study sessions this week, we're holding interviews to mark your work for team coursework exercise 2. When you're not being marked, you'll meet your industry mentor.

Team study locations: Collab, G102, LF5, LF6, KB1.8

11 Week 10: Software Architecture

In the workshops this week, we take a step back from the code to look at patterns of high-level code organisation, and how these patterns can help us make larger scale changes safely,

Workshop location: G23

In the team study sessions, you'll continue work on the final piece of team-based coursework.

Team study locations: Collab, G102, LF5, LF6, KB1.8

Wikipedia Page on Non-Functional Requirements

12 Week 11: Risk Management for Software Teams/Exam

This week we recap the core concepts covered so far in the course unit, and show how they help us manage risk in software projects.

You will also have the opportunity to take the practice exam paper and we will go through the answers together.

Workshop location: G23

In the team study sessions, you'll be finishing the implementation and testing of the increment of functionality you have chosen to deliver for this final coursework deadline.

Team study locations: G102, LF5, LF6, KB1.8 - note that Collab is unavailable this week, due to 1st year project presentations.

Deadline for team-based coursework this week: Friday, 5.00pm.

13 Week 12: Working With Open Source Software

In the workshops in this final week, we will run a special session where you will work with a real open source software system. Who can make it through to a pull request by the end of the workshop?

Workshop location: G23

In the team study sessions, you'll be interviewed by TAs as part of the marking process for team coursework 3.

Team study locations: Collab