

Software Testing

Course Structure

Learning Outcomes

To pass the course you need to demonstrate that you have achieved the learning outcomes:

1. Analyze requirements to determine appropriate testing strategies
2. Design and implement comprehensive test plans with instrumented code
3. Apply a wide variety of testing techniques and compute test coverage and yield according to a variety of criteria
4. Evaluate the limitations of a given testing process, using statistical methods where appropriate, and summarise outcomes
5. Conduct reviews and inspections and design and implement automated testing processes

Course Structure

The course is structured by the learning outcomes into two-week chunks:

- Week 1: Introduction
- LO 1 - weeks 2 and 3: requirements and tests
- LO 2 - weeks 4 and 5: planning analysis and test
- LO 3 weeks 6 and 7: techniques and methods
- LO 4 weeks 8 and 9: methods - their evaluation and limitations
- LO 5 weeks 10 and 11 : reviews, inspections and test automation

Structure of two-week chunks

- **Lecture material:** The whole class lecture sessions are based on the course book slides. There are two such sessions per week. They will be recorded.
- There is **one tutorial session per two-week chunk** that takes place in the second week of the chunk. There is a tutorial sheet for each chunk comprising:
 - A description of some preparatory work you should try to complete before the tutorial.
 - A description of an activity that focusses on what needs to be done to build the part of your coursework portfolio that demonstrates you have achieved the learning outcome.
- **Reading:** the relevant chapters of the course book will be specified and selected parts of the standard ISO/IEC/IEEE 29119 parts 1-4, 6 and 11.
- We may add some guest lectures on relevant topics

Other Support

- We have published a project written in JavaScript that provides a basis for further testing and development. This may be used to provide examples in the Lecture slots.
- The Piazza has different folders for the different Learning Outcomes; you should try to use these to partition queries on the Piazza into concerns about the particular sections of the course. Please use Piazza because your questions there benefit everyone.
- My office hour is available online to book on my booking page. There will be slots on Tuesday morning and Thursday afternoon. You can access this via this link: [Book time with Stuart Anderson](#)