

# 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 will be two such sessions per week. They will be recorded.
- There will be **two tutorial sessions per two week chunk:**
  - The first week the group will meet on its own without a tutor to discuss and prepare for the tutorial in the following week that will be done with a tutor.
  - The focus will be 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 0900-1000 on Tuesdays. You can meet in-person in room 3.46 of the Informatics Forum or I will be available on Teams in that time. If I am already meeting with someone in-person I will mark myself busy on Teams. If this time is inconvenient, I can arrange other times.