

Module Details	
Module Title	Software Verification and Testing
Module Code	COS6027-B
Academic Year	2020/1
Credits	20
School	Department of Computer Science
Subject Area	Computer Science
FHEQ Level	FHEQ Level 6
Pre-requisites	N/A
Co-requisites	N/A

Contact Hours	
Type	Hours
Tutorials	12
Directed Study	188

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 2

Module Aims
To examine the role of validation methods in software engineering and provide a detailed study of widely used software verification and testing methods and their application to specify, verify and validate requirements of software systems and programmes.

Outline Syllabus
- Unit testing using basic methods such as code coverage, condition coverage. - Testing methods: regression, input data partitioning, mutation; system testing. - Formal specification languages and their use in system requirements. - Model checking for automatic verification of reactive systems. - Programme verification for analysing and checking the correctness of programmes.

Learning Outcomes	
Outcome Number	Description
01	Demonstrate the ability to use testing methods appropriate in finding errors in different stages of the software development life cycle.
02	Specify and verify requirements of software systems; analyse the correctness of reactive systems and programmes.
03	Compare and evaluate different formal verification techniques according to their applicability to different systems.

Learning, Teaching and Assessment Strategy
The delivery of the module will consist of drop-in sessions to help students understand theoretical concepts and solve practical problems. The coursework assesses students' understanding of the theoretical concepts and their technical and practical skills.

Mode of Assessment				
Type	Method	Description	Length	Weighting
Summative	Coursework	Analysing a case study	N/A	100%

Reading List
To access the reading list for this module, please visit https://bradford.rl.talis.com/index.html

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.

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