COAP: Agile Software Verification

Module Title:	Agile Software Verification
Language of Instruction:	English

Credits:	5

NFQ Level:	8

Module Delivered In	1 programme(s)

Teaching & Learning Strategies:	Delivery of lectures, practicals and tutorials on specific topics combined with several project-based assessments.

Module Aim:	To give learners the ability to apply advanced practical agile verification processes, techniques and tools.

Learning Outcomes	
On successful completion of this module the learner should be able to:	
LO1	Select and use appropriate processes, tools and technologies for the agile verification of software
LO2	Reflect on agile software verification practices

Pre-requisite learning		
Module Recommendations *This is prior learning (or a practical skill) that is recommended before enrolment in this module.*		
7051	ZCOM H3201	Software Engineering for Web, Cloud and Mobile Apps
Incompatible Modules *These are modules which have learning outcomes that are too similar to the learning outcomes of this module.*		
No incompatible modules listed		
Co-requisite Modules		
No Co-requisite modules listed		
Requirements *This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.*		
No requirements listed		

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Module Content & Assessment

Indicative Content
Prerequisites 5% Review of module's prerequisites as necessary and working environment
Verification Theory 10% Fundamentals principles and definitions
Automatic Agile Software Testing 30% Black Box, White Box Process, Techniques and Tools
Agile Software Testing 10% e.g. Test Driven Development, linkage with DevOps
Website Testing 10% e.g. Selenium
Advanced Topics in Automatic Testing 15% e.g. Symbolic Execution, Model-based Testing and Mutation Testing
Static Verification Tools 15% Code Review Tools, Static Analysis Tools
Blank 5% This part of the module is left undecided and will be agreed in conversations with the students.

Assessment Breakdown	%
Project	100.00%

No Continuous Assessment

Project

Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Project	Practice and reflect on Automatic Software Testing	1,2	25.00	Week 4
Project	Use and reflect on Agile Automatic Testing e.g. using TDD, and DevOps	1,2	25.00	Week 7
Project	Deploy Website testing and Model-based testing tools and reflect on their usages	1,2	25.00	Week 10
Project	Use and reflect on static verification tools	1,2	25.00	Week 13

No Practical

No End of Module Formal Examination

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

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Module Workload

Workload: Full Time		
Workload Type	*Frequency*	*Average Weekly Learner Workload*
Tutorial	12 Weeks per Stage	2.00
Practicals	12 Weeks per Stage	2.00
Independent Learning	15 Weeks per Stage	5.13
	Total Hours	125.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_KCSOF_B	Bachelor of Science (Honours) in Software Development	7	Mandatory