2024 / 25

School of Science and Computing
+353 (0)51 302037
Eleanor.Reade@setu.ie
www.wit.ie/schools/science_computing

Ollscoil Teicneolaíochta an Oirdheiscirt

South East Technological University

Module Descriptor

Agile Software Practice (Computing and Mathematics)

Agile Software Practice (A14886)

Short Title: Agile Software Practice
Department: Computing and Mathematics
Credits: 5 **Level:** Advanced

Description of Module / Aims

This module examines the agile processes and tools used to deliver software applications for dynamic environments. Students, working in teams, will use an integrated toolchain to automate and accelerate the various stages of the agile process, from source control to delivery. This will be used to deliver a small software application and to explore the typical activities of modern agile practices.

Programmes

		stage/semester/status
COMP-0608	BSc (Hons) in Software Engineering (WD_KDEVP_BI)	4 / 7 / M
COMP-0608	BSc (Hons) in Software Systems Development (WD_KCSDV_B)	4 / 1 / M
COMP-0608	BSc (Hons) in Software Systems Development (WD_KDEVP_B)	4 / 7 / M
COMP-0608	BSc (Hons) in Software Systems Practice (WD_KSOFP_B)	1 / 1 / M

Indicative Content

- Agile project management processes and quality assurance
- Collaborative source control
- Project scaffolding tools
- Automated project build and testing
- Code refactoring techniques
- Continuous integration tools
- Continuous deployment

Learning Outcomes

On successful completion of this module, a student will be able to:

1. Assess agile software development methodologies for collaborative, change-driven projects.
2. Integrate collaborative workflow tools into the development lifecycle.
3. Compose an appropriate test driven strategy for a software development project.
4. Automate project build and test processes and generate appropriate quality reports) (domain appropriate, leave the same)
5. Create a Continuous Integration(CI) practice in collaborative software projects.
6. Justify the Continuous Delivery(CD) approach in the modern application economy.

Learning and Teaching Methods

- Combination of lectures and lab-based practicals.
- The lectures will cover the theory and supporting technologies behind modern agile approaches to software systems development.
- The lab-based practicals, building on the theoretical knowledge from lectures, provide exposure to the automation tools and practical skills required to support an agile project lifecycle.
- The practical content will use industry standard technologies, tools and techniques.
- Student will be encouraged to enhance their lab work and assessment submissions using self-directed research into state-of-the-art of agile software engineering processes.

Learning Modes

Learning Type	F/T Hours	P/T Hours
Lecture	12	
Practical	36	
Independent Learning	87	

Assessment Methods

	Weighting	Outcomes Assessed
Continuous Assessment	100%	
Assignment	50%	1,2,3
Assignment	50%	4,5,6

Assessment Criteria

<40%: Inability to apply agile method to develop a software artifact.

40%–49%: Ability to apply key agile concepts. Evidence of appropriate tools used to create a software artifact.

50%–59%: All the above and in addition, strong evidence of appropriate tools and techniques used at various stages of the project lifecycle. Can explain the quality, reliability, and efficiency improvements afforded using agile methods and associated tools.

60%–69%: All the above and in addition, evidence of continuous integration and appropriate reporting. Knowledge and ability to incorporate requirement alterations and changes.

70%–100%: All the above to an excellent level. Can incorporate features from self-directed learning into state of the art in agile software practices. Demonstrates a comprehensive, maintainable software solution from design to delivery using agile practices and tools.

Supplementary Material(s)

- "Thoughtworks - Continuous Delivery." https://www.thoughtworks.com/continuous-delivery

Requested Resources

- Room Type: Computer Lab