



TUS

**Technological University of the Shannon:
Midlands Midwest**

Ollscoil Teicneolaíochta na Sionainne:
Lár Tíre Iarthar Láir

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Dámh na hEolaíochta Feidhmí agus na Teicneolaíochta

Faculty of Applied Science and Technology

Roinn Teicneolaíochta Faisnéise

Department of Information Technology

Report of External Validation Panel

External Validation Panel, 10/04/2025

for the

Higher Certificate in Software Testing (Apprenticeship)

1.0 INTRODUCTION

This report outlines, in summary form, the proceedings and findings of the external validation visit for the proposed:

Higher Certificate in Software Testing (Apprenticeship)

held on 10th April 2025. The external validation visit was undertaken in accordance with TUS Academic Regulations for the development of taught programmes. An external validation panel makes an independent impartial judgement on a programme proposal.

2.0 GENERAL INFORMATION

2.1 Higher Education Provider

Provider	TUS: Midlands Midwest
Faculty	Applied Sciences and Technology
Department	Information Technology
Date of Panel	20 th April 2025

2.2 Programme Evaluated

Programme Title	Higher Certificate in Software Testing (Apprenticeship)
Award Title	Higher Certificate
NFQ Level	6
ECTS Credits	120
Award Class	Level 6
Delivery Mode	Full-time
Duration	1 year
Proposed Starting Date	September 2025
Contact	Dr. Janice O'Connell

2.3 External Validation Panel of Expert Assessors

Name	Affiliation
Mr. John Vickery - Chairperson	IT Tallaght
Mr. Paul Donnellan	IT Consultant
Dr. Damien Meere	BT
Dr. Lubna Luxmi Dhirani	UL
Mr James Wright	TU Dublin
Mr. Patrick Davis	Student Representative

Secretary to Panel: Dr. Sarah O'Toole, TUS.

Support to Secretary/Panel: Ms. Claire Frawley, TUS

2.4 TU Staff

Name	Affiliation
Dr. Maura Clancy	Dean of Faculty of Applied Sciences and Technology
Dr. Janice O'Connell	Head of Department of Information Technology
Programme Coordinator: Dr.Ken Oakley, Programme Team: Niall Corcoran, Mark Curtin, Tom Davis, Maureen Falvey, James Fennell, Oliver Hyde, Marian Lynch, Caroline McAlister, Kelly OBrien Pamela OBrien, Carol Rainsford, Fiona Gilchrist, Wassim Dergeuch, PJ O'Connell.	

3.0 FINDINGS AND RECOMMENDATIONS OF EXTERNAL VALIDATION PANEL

3.1 Main Findings

The External Validation Panel of Assessors recommends approval of the proposed **Higher Certificate in Software Testing (Apprenticeship)**

3.2 Condition

There are no conditions

3.3 Recommendations

- 1) Consider how the consortium will put in place a process for managing the intake of apprentices across the consortium partners.
- 2) Consider the process for reviewing applicants' Entry Requirements and how this is to be managed across consortium partners and TUS.
- 3) Consider the suitability of the English language entry requirements of IELTS score of 4 which appears to be set at a very low level.
- 4) Develop an apprenticeship handbook and review the programme documentation to better reflect the nature of an apprenticeship programme.
- 5) Review Programme Learning Outcomes and ensure these are mapped to the Occupational Profile.
- 6) Review the references throughout all modules to ensure recent and relevant literature is included.
- 7) Review the SOLAS requirements with regard to applications for advanced entry to ensure whether this is accepted within the apprenticeship programme.
- 8) Review the module learning outcomes in a small number of modules to ensure that they conform with Bloom's Taxonomy.
- 9) Review the teaching and learning strategy across all modules to ensure there is more reference to the on-the-job learning that is taking place throughout the documentation.
- 10) Consider developing a template for the feedback and sign-off for the work based mentor/supervisor with appropriate consideration for GDPR.
- 11) Consider developing a calendar for employers for when apprentices are off the job.
- 12) Review documentation for typographical errors and consider using apprentice instead of student throughout.

- 13) Ensure that the repeat assessment strategy uses standardised wording where appropriate.

Module Specific Recommendations

Stage 1

14) Fundamentals of Testing & Front-End Testing

- Broaden the module description and the link with industry in its development.
- Revise LO1 and replace 'Understand' with a more measurable verb (this aligns better with Bloom's Taxonomy).

15) Mathematics for Computer Science

- Update the titles of the literature in the reading list.
- Consider overlap of elements with computer architecture module.

16) Introduction to Databases for Test Engineers

- Under the Teaching and Learning strategy the word 'to' should be removed.
- Consider the use of more recent literature resources.
- Revise LO1 by replacing 'Understand' with a more measurable verb (this aligns better with Bloom's Taxonomy).

17) IT Applications

- Consider how the theory and use of AI and collaborative platforms can be integrated into this module.
- Include reference to the Microsoft Industry certification achieved within this module.
- Consider the integration of reports from Consortium members as part of this module.

18) Logic and Critical Thinking

- Revise LO1 by replacing 'Understand' with a more measurable verb (this aligns better with Bloom's Taxonomy).
- Update the section in the document under Teaching and Learning Strategy, Assessment Strategy and Repeat Assessment Strategy.

19) Learning Portfolio 1

- Review the description within indicative syllabus to be more comprehensive and provide more details of the process.

- Review the delivery hours assigned to this module.
- Consider GDPR implications in the Personal Professional Profile Document.
- Update the Delivery Mode section for the Portfolio Development & Professional Development Plan, from Flat Classroom to Virtual Classroom.

20) Agile Development and Testing

- Update LO 5 and correct typographical error in the word 'development'.

Stage 2

21) Software Test Project Based Learning Portfolio

- Review the module descriptor to reference the link to Industry led projects.

22) Statistical Data Analysis

- Reword line 3 in the module descriptor.

23) Software Operations and Test Management

- Update and include text under the Teaching & Learning Strategy, Assessment Strategy, Repeat Assessment Strategy and Required Reading sections.

24) Embedded Systems and IoT

- Revise LO3 by replacing the word 'Understand' with a more measurable verb (this aligns better with Bloom's Taxonomy).

25) Security Fundamentals and Testing

- Review and amend the typo in line 3 in the descriptor.
- Update the Teaching and Learning Strategy to reference online delivery and link it into what is being learnt onsite.

26) Test Reporting

- Update the text in the Repeat Assessment Strategy.
- Review the wording in the Teaching and Learning Strategy to reference online delivery.

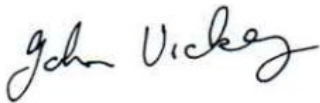
27) Test Data Management

- Consider including reference to Data Governance Frameworks within the module.

3.4 Commendations and Observations

The Panel Commends:

- 1) The Department, Faculty and University for their visionary work in developing the new Level 6 apprenticeship in Software Testing on the NFQ. This forward-thinking apprenticeship addresses a clear industry need, equipping apprentices with critical in-demand skills and creating a structured pathway into the tech sector.
- 2) The CSG and the Department in their collaborative approach in the development of the apprenticeship.
- 3) The team for the comprehensive documentation and interesting, indicative syllabi.
- 4) The proposed links with industry in the apprenticeship programme and the multi-disciplinary nature of the apprenticeship.
- 5) The team for their active and enthusiastic engagement with the panel.



Signature

Date: 8/05/2025