



**TUS**

**Technological University of the Shannon:  
Midlands Midwest**  
Ollscoil Teicneolaíochta na Sionainne:  
Lár Tíre Iarthar Láir

**[www.tus.ie](http://www.tus.ie)**

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**Dámh an Ghnó agus Fáilteachais  
Faculty of Engineering and Informatics**

**Report of Peer Review Panel**

**Programmatic Review**

**of the**

**Faculty of Engineering and Informatics  
Department of Computer and Software Engineering**

**External Validation Visit, 29<sup>th</sup> May 2023**

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## 1.0 INTRODUCTION

This report outlines, in summary form, the proceedings of the Programmatic Review Panel for the Faculty of Engineering and Informatics, and the findings and conclusions of the External Validation Panel conducted on 29<sup>th</sup> May 2023. The external validation visit was undertaken in accordance with TUS Academic Regulations. A Programmatic Review Panel external validation panel makes an independent impartial judgement on a programme proposal.

## 2.1 GENERAL INFORMATION

### 2.2 Higher Education Provider

Provider	Technological University of the Shannon: Midlands Midwest
Faculty	Engineering and Informatics
Department	Computer and Software Engineering
Date of Visit	29 <sup>th</sup> May 2023

### 2.3 External Re-Validation Panel of Expert Assessors

Name	Affiliation
Huw Lewis	Former Dean of Graduate Studies, University of Limerick
Dr Willie Donnelly	IT Consultant (Former President of WIT)
Pat McCormick	Head of Department of Engineering Trades and Civil Engineering, Dundalk Institute of Technology
Dr Kieran Flanagan	Research Director, Circana
Ken O Neill	Agile Line Manager, Ericsson
Sean McDermott	Owner - LoughTec Cybersecurity
Dr Nick Timmons	Director of WiSAR Research Laboratory
Dr Enda Barrett	Lecturer, Dept of Computer Science, University of Galway
Dr Mamona Asghar	Lecturer, Dept of Computer Science, University of Galway

Secretary to Panel: Sarah O'Toole, TUS

## 2.4 TUS Staff

Name	Role
Dr Sean Lyons	Dean of Faculty of Engineering and Informatics
Dr Enda Fallon	Head of Department of Computer and Software Engineering
<u>Department Staff:</u> Tom Bennett, Declan Byrne, Mary Pidgeon, Shelia Fallon, John Barrett, Mary Giblin, Mark Daly, Joe Keogh, Denis McCarthy, Karol Fitzgerald, Conor Keighrey, Martina Curran, Mairead Seery, Eoin McLoughlin, Sean Kennedy, Enda Farrell, Michael Russell, Marcus Rahilly, Peter Vargovcik, Thiago Braga, Adrielle Moraes, Ashley Cahill, Jackie Stewart, Seamus Ryan, Michael Thornton, Paul Jacob, Ronan Flynn, Yuhang Ye, Chanda Hirway, Jeremiah Scully, Guilherme Gomes, Robert Stewart, Frank Doheny, Amit Hirway	

## 2.5 Employers/Industry & Alumni Representatives

Representative	Affiliation
Jason Carey	Errigal Contracts
Joseph McNamara	Ericsson
Jeremiah Scully	Research - TUS Midlands
Kshitij Malvankar	Consultant
Peter Lenehan	Ericsson
Paul Connolly	Circana
Samantha O Sullivan	Alumni
Pierce Treacy	Zinkworks
Kelley Keogh	Sidero
Paul Hourican	Ericsson

## 2.6 Current Student Representatives

Conor Earley	Raphael Salaja
Willie Byrne	

### 3.1 FINDINGS AND RECOMMENDATIONS OF EXTERNAL VALIDATION PANEL

#### 3.2 Main Findings

The External Validation Panel of Assessors recommends reapproval of the following programmes in the Department of *Computer and Software Engineering* subject to the conditions recommendations as specified in Sections 3.2 and 3.3.

##### List of programmes presented for review:

- BSc (Hons) in Software Design with Virtual Reality and Gaming (ab initio) Level 8

Embedded/Related Programmes:

- HC in Science in Software Design
  - BSc in Software Design with Virtual Reality and Gaming (ab initio) Level 7
  - BSc in Software Design with Virtual Reality and Gaming add-on Level 7
  - BSc (Hons) in Software Design with Virtual Reality and Gaming add-on Level 8
- BSc (Hons) in Software Design with Artificial Intelligence for Cloud Computing (ab initio) Level 8

Embedded/Related Programmes:

- HC in Science in Software Design
- BSc in Software Design with Artificial Intelligence for Cloud Computing (ab initio) Level 7
- BSc in Software Design with Artificial Intelligence for Cloud Computing add-on Level 7
- BSc (Hons) in Software Design with Artificial Intelligence for Cloud Computing add-on Level 8

- BSc (Hons) in Software Design with Digitalisation (ab initio) Level 8

Embedded/Related Programmes:

- HC in Science in Software Design
  - BSc in Software Design with Digitalisation (ab initio) Level 7
  - BSc in Software Design with Digitalisation add-on Level 7
  - BSc (Hons) in Software Design with Digitalisation add-on Level 8
- MSc in Software Design with Artificial Intelligence (full time and part time)

Embedded/Related Programmes:

- PG Diploma in Science in Software Design with Artificial Intelligence

- PG Cert in Computing in Software Design with Artificial Intelligence
- PG Cert in Software Design
- MSc in Software Design with Cloud Native Computing (Full time and Part time)

Embedded/Related Programmes:

- PG Diploma in Science in Software Design with Cloud Native Computing
- PG Cert in Computing in Cloud Native Computing
- PG Cert in Software Design
- MSc in Software Design with Cybersecurity

Embedded/Related Programmes:

- PG Diploma in Science in Software Design with Cyber Security
- PG Cert in Software Design with Cyber Security
- PG Cert in Software Design
- MSc in Software Engineering (Full time)
- MSc in Software Engineering (Part time)
- MSc in Applied Software Engineering
- Higher Diploma in Agile Software Design

### **3.3 Conditions**

No conditions apply.

### **3.4 Recommendations**

1. Review the programmes to ensure there is a balance between academic and industry requirements going forward.
2. Ensure that when available, the TUS programmatic review and quality processes are utilised.
3. Where appropriate the programme developers should seek relevant professional accreditation.
4. If possible streamline the resources allocation across the programmes.
5. Placement systems within both undergraduate and postgraduate programmes should be reviewed to include a non-placement module, with a consistent assessment/appeals mechanism clearly shown for all placements/non-placements.
6. An IP policy for placements should be developed (both undergraduate and postgraduate).

7. Industrial supervisors/mentors for placement should be given adequate information and training as required before placement begins. This should be augmented to include the relevant learning outcomes at both undergraduate and postgraduate levels.
8. Formalise the feedback and evaluation requirements between the placement partners and TUS to ensure the suitability of the student's placement within the company.
9. Ensure that there are adequate supports in place within the Department for managing industry placement for students across the different programmes.
10. Continuously review technology requirements to ensure programmes are up to date with industry.
11. Ensure all text and required reading references are up to date.
12. Develop innovative approaches to ensure the academic integrity of assessments, especially in regard to plagiarism and the use of AI.
13. Review problem-based learning opportunities for students across the programmes.

### **Group 1 Programmes**

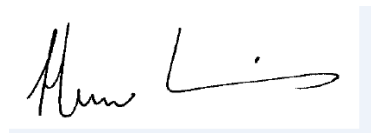
1. The ability to switch programme streams at undergraduate level should be made visible to students so they are aware of their options.
2. Review the numbers of students getting first class honours.

### **Group 2 Programmes**

1. Clearly define the criteria and the methods of transfer between dissertation and placement at Masters level to ensure the equality of the evaluation process and hence the mapping of learning outcomes.
2. Consider the additional training and support, above those indicated earlier that needs to be given to the industry mentors at master's level to ensure they are clear on the learning requirements for students on placement.
3. Review and update the descriptors on the MSc in Software Engineering and the MSc in Applied Software Engineering
4. Further develop student teamwork approaches and agile development methodology to ensure students are familiar with these approaches.

### 3.5 Commendations and Observations

1. The panel commends the team for completing the review at this time under the existing regulations.
2. For the established links with industry that TUS have developed.
3. For the comprehensive documentation collated for the programmes.
4. For their international engagement.
5. The integrated role of placement.
6. The panel commends the positive and collegiate engagement of the programme team during the validation visit.
7. The work being done on the growth of research in the undergraduate programmes and the PhD programmes in general.

A handwritten signature in black ink, appearing to read 'H. L.', is positioned above a light blue horizontal line. To the right of the signature, there is a vertical light blue bar.

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Signature of Chairperson and Date

Date: 12/06/2023