



TUS

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

Ollscoil Teicneolaíochta na Sionainne:
Lár Tíre Iarthar Láir

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**Dámh na hInnealtóireachta agus na Faisnéisíochta
Faculty of Engineering and Informatics**

Department of Computer and Software Engineering

Report of External Validation Panel

External Validation Visit, 8th June 2023

for the

Master of Science in Software Design;

Postgraduate Diploma in Software Design with Cloud Native Computing;

Postgraduate Diploma in Software Design with Artificial Intelligence;

Postgraduate Diploma in Software Design with Cybersecurity - Stage 1;

Postgraduate Certificate in Software Design;

Postgraduate Certificate in Software Design with Cloud Native Computing;

Postgraduate Certificate in Software Design with Artificial Intelligence;

Postgraduate Certificate in Software Design with Cybersecurity;

Master of Science in Software Design (International);

Postgraduate Diploma in Software Design with Cloud Native Computing - Stage 1;

Postgraduate Certificate in Software Design;

Postgraduate Certificate in Software Design with Cloud Native Computing;

Bachelor of Science (Hons) in Software Design (International) Level 8 Ab-initio;

Bachelor of Science in Software Design (International) Level 7 Ab-initio;

Higher Certificate Science in Software Design Level 6;

Bachelor of Science (Hons) in Software Design (International) Level 8 Add-on;

Bachelor of Science in Software Design (International) Level 7 Add-on.

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1.0 INTRODUCTION

This report outlines in summary form, the proceedings and findings of the External Validation Panel Visit for the proposed:

Master of Science in Software Design;
Postgraduate Diploma in Software Design with Cloud Native Computing;
Postgraduate Diploma in Software Design with Artificial Intelligence;
Postgraduate Diploma in Software Design with Cybersecurity - Stage 1;
Postgraduate Certificate in Software Design;
Postgraduate Certificate in Software Design with Cloud Native Computing;
Postgraduate Certificate in Software Design with Artificial Intelligence;
Postgraduate Certificate in Software Design with Cybersecurity;

Master of Science in Software Design (International);
Postgraduate Diploma in Software Design with Cloud Native Computing - Stage 1;
Postgraduate Certificate in Software Design;
Postgraduate Certificate in Software Design with Cloud Native Computing;

Bachelor of Science (Hons) in Software Design (International) Level 8 Ab-initio;
Bachelor of Science in Software Design (International) Level 7 Ab-initio;
Higher Certificate Science in Software Design Level 6;

Bachelor of Science (Hons) in Software Design (International) Level 8 Add-on;
Bachelor of Science in Software Design (International) Level 7 Add-on.

held on the 8th of June 2023. 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.

2.1 GENERAL INFORMATION

2.2 Higher Education Provider

Provider	TUS: Midlands Midwest
Faculty	Faculty of Engineering and Informatics
Department	Department of Computer and Software Engineering
Date of Visit	8th June 2023

2.3 Programmes Evaluated

Programme Title	Master of Science in Software Design
Award Title	Master of Science
Code	AL_ESFTW_9
NFQ Level	9
ECTS Credits	90
Award Class	Level 9
Delivery Mode	Full-time
Duration	2 years
Proposed Starting Date	September 2023
Contact	Dr. Enda Fallon/Dr. Mary Giblin/Mr Declan Byrne

Programme Title	Postgraduate Diploma in Software Design with Cloud Native Computing
Award Title	Postgraduate Diploma in Science
NFQ Level	9
ECTS Credits	60
Award Class	Level 9
Delivery Mode	Full-time
Duration	1.5 years
Proposed Starting Date	September 2023
Contact	Dr. Enda Fallon/Dr. Mary Giblin/Mr Declan Byrne

Programme Title	Postgraduate Diploma in Software Design with Artificial Intelligence
Award Title	Postgraduate Diploma in Science
NFQ Level	9
ECTS Credits	60
Award Class	Level 9
Delivery Mode	Full-time
Duration	1.5 years
Proposed Starting Date	September 2023
Contact	Dr. Enda Fallon/Dr. Mary Giblin/Mr Declan Byrne

Programme Title	Postgraduate Diploma in Software Design with Cybersecurity - Stage 1
Award Title	Postgraduate Diploma in Science
NFQ Level	9
ECTS Credits	60
Award Class	Level 9
Delivery Mode	Full-time
Duration	1.5 years
Proposed Starting Date	September 2023
Contact	Dr. Enda Fallon/Dr. Mary Giblin/Mr Declan Byrne

Programme Title	Postgraduate Certificate in Software Design, Postgraduate Certificate in Software Design with Cloud Native Computing, Postgraduate Certificate in Software Design with Artificial Intelligence, Postgraduate Certificate in Software Design with Cybersecurity
Award Title	Postgraduate Certificate
NFQ Level	9
ECTS Credits	30
Award Class	Level 9
Delivery Mode	Full-time
Duration	1 year
Proposed Starting Date	September 2023
Contact	Dr. Enda Fallon/Dr. Mary Giblin/Mr Declan Byrne

Programme Title	Master of Science in Software Design (International)
Award Title	Master of Science
Code	AL_KSDIN_9
NFQ Level	9
ECTS Credits	90
Award Class	Level 9
Delivery Mode	Full-time
Duration	2 years
Proposed Starting Date	September 2023
Contact	Dr. Enda Fallon/Dr. Mary Giblin/Mr Declan Byrne

Programme Title	Postgraduate Certificate in Software Design, Postgraduate Certificate in Software Design with Cloud Native Computing
Award Title	Postgraduate Certificate
NFQ Level	9
ECTS Credits	30
Award Class	Level 9
Delivery Mode	Full-time
Duration	1 year
Proposed Starting Date	September 2023
Contact	Dr. Enda Fallon/Dr. Mary Giblin/Mr Declan Byrne

Programme Title	Bachelor of Science (Hons) in Software Design (International) Ab-initio
Award Title	Bachelor of Science
Code	AL_KSDIN_8
NFQ Level	8
ECTS Credits	240
Award Class	Level 8
Delivery Mode	Full-time
Duration	4 years
Proposed Starting Date	September 2023
Contact	Dr. Enda Fallon/Dr. Mary Giblin/Mr Declan Byrne

Programme Title	Bachelor of Science in Software Design (International) Ab-initio
Award Title	Bachelor of Science
Code	AL_KSDIN_7
NFQ Level	7
ECTS Credits	180
Award Class	Level 7
Delivery Mode	Full-time
Duration	3 years
Proposed Starting Date	September 2023
Contact	Dr. Enda Fallon/Dr. Mary Giblin/Mr Declan Byrne

Programme Title	Higher Certificate Science in Software Design
Award Title	Higher Certificate in Science
NFQ Level	6
ECTS Credits	120
Award Class	Level 6
Delivery Mode	Full-time
Duration	2 years
Proposed Starting Date	September 2023
Contact	Dr. Enda Fallon/Dr. Mary Giblin/Mr Declan Byrne

Programme Title	Bachelor of Science (Hons) in Software Design (International) Add-on
Award Title	Bachelor of Science
Code	AL_KSDIA_8
NFQ Level	8
ECTS Credits	60
Award Class	Level 8
Delivery Mode	Full-time
Duration	1 years
Proposed Starting Date	September 2023
Contact	Dr. Enda Fallon/Dr. Mary Giblin/Mr Declan Byrne

Programme Title	Bachelor of Science in Software Design (International) Add-on
Award Title	Bachelor of Science
Code	AL_KSDIA_7
NFQ Level	7
ECTS Credits	60
Award Class	Level 7
Delivery Mode	Full-time
Duration	1 years
Proposed Starting Date	September 2023
Contact	Dr. Enda Fallon/Dr. Mary Giblin/Mr Declan Byrne

2.4 External Validation Panel of Expert Assessors

Name	Affiliation
Dr. Andrew Power	IADT (Chairperson)
Mr Robert O'Connor	SETU
Prof. Kevin Curran	University of Ulster
Ms. Lakshmiprabha Vallopilli	J&B Engineering
Mr. Robbie Quinn	Helix Ireland
Mr. Ciaran Murphy	Ericsson

Secretary to Panel: Dr. Pat Donohue.

2.5 TU STAFF

Name	Affiliation
Dr. Sean Lyons	Dean of Faculty of Engineering and Informatics
Dr. Enda Fallon	Head of Department of Computer and Software Engineering
Dr. Mary Giblin, Mr Declan Byrne	MSc & BSc Programme Coordinators
Programme Team: MSc- Mark Daly, Mary Giblin, Sharon Gurry, Brian Lee, Cormac MacGiollaEain, Mary Pidgeon; Karl Turley, Yuhang Ye	
Programme Team: BSc- Tom Bennett, Thiago Braga, Ashley Cahill, Martina Curran, Mark Daly, Enda Farrell, Karol Fitzgerald, Conor Keighrey, Sean Kennedy, Paul Jacob, Joe Keogh, Denis McCarthy, Eoin McLoughlin, Adrielle Moraes, Mary Pidgeon, Michael Russell, Mairead Seery, Jackie Stewart, Karl Turley, Peter Vargovcik, Yuhang Ye	

3.1 FINDINGS AND RECOMMENDATIONS OF EXTERNAL VALIDATION PANEL

3.2 Main Findings

The External Validation Panel of Assessors recommends approval of the proposed programmes and associated embedded awards:

Master of Science in Software Design;

Postgraduate Diploma in Software Design with Cloud Native Computing;

Postgraduate Diploma in Software Design with Artificial Intelligence;

Postgraduate Diploma in Software Design with Cybersecurity - Stage 1;

Postgraduate Certificate in Software Design;

Postgraduate Certificate in Software Design with Cloud Native Computing;

Postgraduate Certificate in Software Design with Artificial Intelligence;

Postgraduate Certificate in Software Design with Cybersecurity;

Master of Science in Software Design (International);

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Bachelor of Science (Hons) in Software Design (International) Level 8 Ab-initio;

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Bachelor of Science in Software Design (International) Level 7 Add-on.

3.3 Conditions

No conditions apply.

3.4 Recommendations

- 1) Ensure the placement team play an active role in supporting students in securing their industry/international placement.

- 2) Ensure resources are in place to facilitate international work placement.
- 3) Explore opportunities to develop communications skills within the module content – Organisational Change Theory.
- 4) Consider including increased content on Generative AI.
- 5) Consider including an appropriate level of *Cloud Native Computing* content in the BSc, to enhance the challenge for students.
- 6) Ensure resources are in place to develop and leverage the Alumni network.
- 7) Consider using generic technology module descriptors, for example, the use of appropriate current languages.
- 8) Review Level 9 Module Learning Outcomes to ensure they reflect the level of the programme, e.g., Applied Scripting and Object-Oriented Programming I.
- 9) Review the following modules with a view to updating their reading lists and indicative content:
 - a. Masters Level:
 - i. The AR/VR pathway
 - b. Undergraduate Level:
 - i. Distributed Systems (iv)
- 10) Ensure that those students on the Masters Programmes that select the Dissertation route are adequately prepared with a research methods approach.

3.5 Commendations and Observations

- 1) The panel would like to commend the team for their active and enthusiastic engagement with the panel and their constructive and comprehensive response to our questions.
- 2) The panel commends the team for providing a varied structure at Level 9 with a range of technological pathways.
- 3) The panel commends the team for the re-introduction of a number of language options within the undergraduate offerings.



Signature of Chairperson

Date: 20/06/202

