



TUS

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

Ollscoil Teicneolaíochta na Sionainne:
Lár Tíre Iarthar Láir

www.tus.ie

Dámh na nEolaíochtaí Feidhmeacha agus na
Teicneolaíochta
Faculty of Applied Sciences and Technology

Report of Peer Review Panel

Programmatic Review

of the

Department of Information Technology

1.0 INTRODUCTION

This report outlines, in summary form, the proceedings of the External Panel visit to TUS for the Programmatic Review of the Department of Information Technology, and the findings and conclusions of the External Panel.

Breakout room 1:

Higher Diploma in Software Development

Bachelor of Science (Honours) Software Development

Bachelor of Science Software Development

Higher Certificate Software Development

Bachelor of Science (Honours) in Games Design and Development

Bachelor of Science in Games Design and Development

Higher Certificate in Games Design and Development

Master of Science in Computing (Computer Science for Teachers)

Postgraduate Diploma Computer Science for Teachers

Postgraduate Certificate Computer Science for Teachers

Special Purpose Award - Coding & Computational Thinking (Level 9)

Special Purpose Award - Coding for Embedded Systems (Level 9)

Breakout room 2:

Bachelor of Science (Honours) in Immersive Digital Media

Bachelor of Science in Immersive Digital Media

Higher Certificate in Immersive Digital Media

Bachelor of Science (Honours) in Mobile and Web Computing

Bachelor of Science in Mobile and Web Computing

Higher Certificate in Mobile and Web Computing

Bachelor of Science (Honours) Computer Networks and Systems Management

Bachelor of Science Computer Networks and Systems Management

Higher Certificate Computer Networks and Systems Management

Master of Science in Applied Computer Networks and Security

Postgraduate Diploma Computer Networks and Security

Postgraduate Certificate Computer Networks and Security

The Programmatic Review visit was undertaken in accordance with Section 3 of the LIT document 'Academic Council Regulations and Procedures for Taught Programmes (ACRP): Academic Year 2021/2022'. The ACRP is published on the TUS website. An external Panel makes an impartial judgement on the Critical Self Study and programme changes proposed within the Programmatic Review.

2. GENERAL INFORMATION

2.1 Higher Education Provider

Institute: TUS: Midlands Midwest
Faculty/School: Faculty of Applied Sciences and Technology
Department: Information Technology
Date of Visit: 15th March 2022

2.2 Programmes Evaluated

Department of Information Technology

2.3 External Programmatic Review Panel of Expert Assessors Dr Dermot Douglas - (Chairperson)

Dr Bryan Duggan - TU Dublin
Dr John Whelan – TCD
Prof. Nuno Rodruigez – IP Leiria
Mr. Kevin Kennedy – FISERV
Ms. Mary Kennedy – ActionPoint
Mr. Joe English - PDST
Mr. Alex Mann – EX
Mr. Johan Postema – NHL Stenden
Ms. Niamh Vaughan - Redfaire
Ms. Jenna Barry – Student Representative
Mr. Ranjan Emani - Student Representative

2.4 TUS Midwest Staff

Prof. Vincent Cunnane, TUS President
Dr Terry Twomey, Vice President Academic Affairs & Registrar
Dr Maura Clancy, Dean of Faculty of Applied Sciences and Technology
Dr Janice O'Connell, Head of Department of Information Technology

Department of the Built Environment – Lecturing Staff

2.5 Selected Stakeholders

2.5.1 Employers/Industry & Alumni Representatives

(GDD) Sylvester Szwed
(CS4T) Natalie Noone - Staidens
(CNSM) Garry Cunnigham
(ACN) Damian Kowalik – Protonmail
(SD) Brendan Wall - Kianda
(IDM) Nicole Mason
(ISD) Gearoid Lynch

2.5.2 Current Students

(HDip) Helen
Biggs (GDD)
Merri Modgridge
(SD) Saoirse Deely
(CS4T) Miryam Winters
(ISD) Adam
Moroney (ISD)
Ze Min Lim
(CNSM) Edwin
O'Mara
(IDM) Dawid Polit

2.6 Documentation:

2.6.1 Department of the Information Technology, Programmatic Review document

2.6.2 Critical Self-Study, Faculty of Engineering and Technology

2.6.3 Programme Documents:

Bachelor of Science (Honours) Software Development
Bachelor of Science Software Development
Higher Certificate Software Development

Higher Diploma in Software Development

Bachelor of Science (Honours) in Games Design and Development
Bachelor of Science in Games Design and Development
Higher Certificate in Games Design and Development

Master of Science in Computing (Computer Science for Teachers)
Postgraduate Diploma Computer Science for Teachers
Postgraduate Certificate Computer Science for Teachers
Special Purpose Award - Coding & Computational Thinking (Level 9)
Special Purpose Award - Coding for Embedded Systems (Level 9)

Bachelor of Science (Honours) in Immersive Digital Media
Bachelor of Science in Immersive Digital Media
Higher Certificate in Immersive Digital Media

Bachelor of Science (Honours) in Mobile and Web Computing
Bachelor of Science in Mobile and Web Computing
Higher Certificate in Mobile and Web Computing

Bachelor of Science (Honours) Computer Networks and Systems Management
Bachelor of Science Computer Networks and Systems Management
Higher Certificate Computer Networks and Systems Management

Master of Science in Applied Computer Networks and Security
Postgraduate Diploma Computer Networks and Security
Postgraduate Certificate Computer Networks and Security

3.0 FINDINGS AND RECOMMENDATIONS OF EXTERNAL PROGRAMMATIC REVIEW PANEL

3.1 MAIN FINDINGS

The External Validation Panel of Assessors recommends the on-going approval and revalidation for a further five years of the submitted programmes and associated amendments in the Department of Information Technology, subject to the following recommendations.

Bachelor of Science (Honours) Software Development
Bachelor of Science Software Development
Higher Certificate Software Development

Higher Diploma in Software Development

Bachelor of Science (Honours) in Games Design and Development
Bachelor of Science in Games Design and Development
Higher Certificate in Games Design and Development

Master of Science in Computing (Computer Science for Teachers)
Postgraduate Diploma Computer Science for Teachers
Postgraduate Certificate Computer Science for Teachers
Special Purpose Award - Coding & Computational Thinking (Level 9)
Special Purpose Award - Coding for Embedded Systems (Level 9)

Bachelor of Science (Honours) in Immersive Digital Media
Bachelor of Science in Immersive Digital Media
Higher Certificate in Immersive Digital Media

Bachelor of Science (Honours) in Mobile and Web Computing
Bachelor of Science in Mobile and Web Computing
Higher Certificate in Mobile and Web Computing

Bachelor of Science (Honours) Computer Networks and Systems Management
Bachelor of Science Computer Networks and Systems Management
Higher Certificate Computer Networks and Systems Management

Master of Science in Applied Computer Networks and Security
Postgraduate Diploma Computer Networks and Security
Postgraduate Certificate Computer Networks and Security

3.2 CONDITIONS

1. No conditions apply

3.3 RECOMMENDATIONS

General

1. Continue to invest in facilities to provide more specialised and purpose-built spaces. The panel noted the opportunities the Coonagh Campus will provide in this context.
2. Continue to review and look at opportunities for students to complete their work placement abroad building on existing networks that are in place such as the RUN-EU network.
3. Continue to review research opportunities (including regional and national initiatives such as Enterprise Ireland) for Staff to further develop their research skills including applied research skills.
4. Consider introducing a recommendation for employers who agree to take on students for work placement that students would be paid (either a stipend to cover the cost of living away from home or a minimum rate in line with the national minimum wage).
5. Continue to look at opportunities for the integration professional certification into the programmes where it aligns with the syllabus.
6. Consider theoretical strategies and approaches for PBL to ensure the use of PBL is underpinned with pedagogical theory.
7. Consider how learnings and positive aspects of the experience from the Covid-19 period in teaching, learning and assessment can be mainstreamed in the post pandemic context.
8. Review the delivery of programmes from a flexible/blended and/or part-time perspective to identify suitable opportunities going forward including opportunities of single subject certification.
9. Review how the pedagogical approaches that are integrated into the curricula align to the discipline of computer science to further support students in their learning. (*Computer Science for Teachers (MSc, Postgrad, Cert, SPA)*)
10. Consider adding an elective module in 4th year around AR/VR/Meta verse (Games Design and Development)

11. Consider embedding components of the Technical Writing and Research Skills curricula that currently exists within the Computer Networks and Systems Management programme, across into other modules/programmes.
12. Page 14, review and adjust total credits, currently counting 3 Electives instead of 1 for *Bachelor of Science (Honours) Computer Networks and Systems Management*
13. Review the student's assessment schedule and workload and explore where there are opportunities for cross-modular assessment.
14. Review the volume of summative assessment given in 4th year.
15. Ensure students are aware of the communication process for gathering student feedback, reporting issues.
16. Provide information to online students about the additional supports and services (Library, Learning Support Unit etc) available to students across TUS.
17. Review the hardware that is currently in the labs for students to ensure it is suitable for them to complete lab work and projects. (e.g., students studying virtualisation their labs should have 2 monitors per computer and double the RAM)
18. Review the use of groupwork in 4th year and consider giving an individual and group mark rather than just a group mark.
19. Review the mix between formative and summative assessment and where these are integrated across the programme.
20. Provide Interview Skills training and support to students on how to prepare for and develop their Interview Skills. In particular support for completing different types of interviews such as technical and coding interviews.
21. Consider introducing students to different approaches for working in programming teams including SCRUM meetings and using GIT Hub for their projects for student portfolios
22. Review participants for further panels to ensure appropriate representation. The meeting with Industry and Alumni no Industry representative that had a link with TUS Midwest students present in that meeting.
23. Consider completing a mapping of the coding languages, software and hardware needs within industry and the sectoral requirements that ensures it is responsive to trends across the sector.

3.4 COMMENDATIONS AND OBSERVATIONS

1. The Panel commended the pastoral care afforded to TUS Students and noted how valuable this was during Covid-19.
2. The Panel commends the level of cooperation and commitment that TUS Midwest has shown with the RUN-EU partner
3. The Panel commends the programme on the retention and completion rates for the programmes.
4. The Panel commends the programme teams on the quality of the programme documentation which has been developed to a high standard.
5. The Panel notes and commends the CA Schedule for Software Development programme.
6. The Panel notes and commends the degree of work conducted by the Department during the Programmatic Review and notes the extensive stakeholder consultation in particular.
7. The Panel commends the Stage long Work Placement which is beneficial to both Students and Employers.
8. The Panel commends the Technical Writing Skills and Research Skills elements in the Computer Networks and Systems Management programme suite.

Additional Observations

1. The panel would have benefitted from more time to meet with the programme teams to discuss and review the programmes in more detail.

 24/03/2022
Signature of Chairperson and Date

