



Programme Validation Report

Master of Science in Sustainable Cloud Computing

<i>Version of Report</i>	<i>Author</i>	<i>Date</i>
1	Gráinne Hurley	04/03/2025
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<i>Approval</i>	<i>Date</i>
Programme Proposal approved by Faculty Board	21/11/2024
Programme Proposal approved by University Programmes Board	10/12/2024
Programme approved by Faculty Board	Click or tap to enter a date.
Programme approved by University Programmes Board	Click or tap to enter a date.

Section A - Programme Details

Title	Master of Science in Sustainable Cloud Computing
NFQ Level	9
ECTS Credits	90
Mode of delivery	Part-time <input checked="" type="checkbox"/> Full-time* <input checked="" type="checkbox"/>
	*The faculty envisages offering this programme in full time mode in September 2026 to both EU and non-EU students after its initial offering in part-time mode (September 2025).
Duration	Part-time: 2 Years Full-Time: 1 Year
Mode of provision	Face-to-Face <input type="checkbox"/> Blended <input type="checkbox"/> Online <input checked="" type="checkbox"/>
	It is planned that the programme will be delivered primarily online for the part-time cohort although provision will be made for in person sessions/workshops/lectures where applicable and appropriate.
Discipline Programmes Board	Digital Transformation
Faculty Board	Faculty of Computing
Schools involved in delivery	School of Enterprise Computing and Digital Transformation
Delivery location	Tallaght

Collaborative Partner (where applicable)	
Date of Commencement	September 2025 (part-time) September 2026 (full-time)

Section B - Awards

Award Title	Master of Science in Sustainable Cloud Computing
NFQ Level	9
Award Class	Major
ECTS Credits	90
Classification of award	First Class Honours; Second Class Honours, Upper Division; Second Class Honours, Lower Division; Pass (See Section F below)
Award (2) Title	Postgraduate Diploma in Sustainable Cloud Computing
Exit/Embedded	Exit <input checked="" type="checkbox"/> Embedded <input type="checkbox"/>
NFQ Level	9
Award Class	Major
ECTS Credits	60
Classification of award	Distinction; Merit, Grade One; Merit, Grade Two; Pass (see Section F below)

Section C - Programme Derogations (if required)

<i>Derogations from Assessment Regulations/Marks and Standards already approved by University Programmes Board</i>	
Date of University Programmes Board Approval	Click or tap to enter a date.

Section D Validation Process

Please tick the process that was followed:

Validation Panel <input checked="" type="checkbox"/>	AQEC Meeting <input type="checkbox"/>	AQEC Sub-Group <input type="checkbox"/>
Date: 4 March 2025	Date:	Date:

Panel Members

Name	Role	Affiliation
Dr Susan McKeever	Chairperson	School of Computing, TU Dublin)
Dr David Power	External Panel Member	SETU
Dr Markus Hofmann	Internal Panel Member	School of Informatics & Cybersecurity, TU Dublin)
Dr Brian Gormley	Internal Panel Member	Head of Sustainability Education, TU Dublin)
Dr Gráinne Hurley	AQA/Secretary to the Panel	Quality Framework, TU Dublin

Section E - Programme Evaluation

Governance & Management		
Is the programme designed in accordance with the University's Strategic Plan, Educational Model and Quality Framework?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<p>Comment:</p> <p>A key aim of the programme is to align with TU Dublin's Strategic Plan (Strategic Intent 2030) under the three pillars of People, Planet, and Partnership, as highlighted below.</p> <p>Under Planet Pillar, aligned with Focus Area Sustainability Leadership: 'Being a Beacon for Sustainability' & 'Developing Responsible Global Citizens', by embedding sustainability appropriately in the curriculum and creating a culture of sustainability for students in the context of digital transformation. The School's strategic objective is to be recognised for its commitment to real action on sustainability, reducing carbon footprint and meeting global sustainability standards such as STARS® in the delivery of the programme.</p> <p>Under People Pillar, aligned with Focus Area Transformative Education: 'Nurturing Bright Minds, Creativity & Ambition', by giving students access to an education programme which enable them to learn modern computing and digital transformation ideas and concepts in a global context. The MSc aligns to PE1 01 A dynamic new model of education producing the most sought-after digitally-literate graduates will be embedded in the university, transforming the learning opportunities and experience for all. It also aligns to TU Dublin ambitions for partnering closely with industry nationally and internationally including Technology Ireland Skillnet partners such as IBM, Liberty IT, Ericsson, Fidelity and CISCO.</p> <p>Partnership Pillar PA3 O1: TU Dublin will be recognised internationally as a top performing technological university internationally in Cloud Computing, deep technology strategy and deep tech innovation as well as to Partnership Pillar PA4 O1: To be financially sustainable and agile in a changing landscape, in order to fund strategic aims.</p> <p>See also the table 'Alignment of the Programme to the TU Dublin Strategy and the 3 Pillars', Appendix F, in the programme validation documentation (p. 78).</p> <p>Graduate Attributes</p> <p>The programme provides students with a range of opportunities to develop, practice and be assessed in a way that will contribute to graduates who meet the university graduate attributes as well as attributes of being engaged, enterprising, effective, and enquiring, in addition to obtaining expert knowledge (5 Es) in their specialist field, as highlighted below:</p> <p>GA/02 Planet</p> <p>Sustainability-focused, global citizens</p> <p>Sustainability concepts and relevant learning outcomes on sustainability for the specialised fields of Cloud Computing has been crafted into relevant curriculum modules. Ethics and value-based leadership development is integrated into programme, emphasising the importance of ethical decision-making, social responsibility, governance and empathy in addressing sustainability and equity challenges. These ideas are addressed across a number of modules in particular Sustainable Digital Strategy, and Human and Organisational Issues. This module also includes related talks from thought leaders from industry, government and civic and community organisations. The programme also promotes, through teaching and learning methods as well as module assessments and the capstone research project, the application of theory to practice in Cloud Computing. Graduates will possess an entrepreneurial mindset and the necessary problem-solving</p>		

skills, knowledge, and attributes to implement creative and innovative ideas, as well as devise practical, sustainable solutions in the cloud computing field.

GA/O3 Partnership

Collaborative, real-world problem solvers

As part of the programme's assessments, mini-projects and research project work, students can collaborate on real-world authentic problems in their specialist field. This provides them the opportunity to frame and creatively solve these problems by interpreting and evaluating evidence, identifying and analysing relevant assumptions, arguments and perspectives as well as making judgments, implementing potential solutions. They also have the opportunity to use interpersonal & communication skills effectively and to work as part of a team in articulating their reasoning for the solution chosen.

The programme aligns with the following UEM guiding principles:

1. Student-centred and student-engaged for student success

Students engage with the programme through online workshops and classes, recorded material, physical and online library

2. Connected, engaged, internationalised curriculum

The programme provides a connected, engaged and internationalised curriculum, co-created and delivered in partnership with the with industry partners through Technology Ireland ICT Skillnet; There is emphasis through the programme to maintain a strong focus on the application of knowledge, research and scholarship, sustainability, experiential learning and development of digitally literate students in their chosen field. Student voice is heard through Discipline Programme Boards as well as student surveys and focus groups.

3. Distinguished by diversity of provision and focus on practice and career development

There is a focus on professional practice, experiential learning and career development using a range of learning experiences that emphasise the reflective practitioner, application of knowledge through real world assignments and diversity of projects.

4. Excellent, flexible, agile teaching & learning

A number of teaching modalities have been embraced on the programme which include online virtual classrooms and recorded lectures, support for synchronous and asynchronous learning, guest speakers, flipped classrooms, discussion sessions, hands-on practical activities and projects to allow students apply their knowledge in real world contexts.

5. Knowledge creation to application

The programme supports scholarship and research particularly through the Research Project and the planned annual colloquium event where students can present the research outputs through the poster exhibition.

6. Highly engaged student experience

This principle is fostered through course development in consultation with graduates and stakeholders, guest speakers who are often leaders in their field, real world Industry related projects and students' participation at the research colloquium each year.

10. Access and equal opportunity

The Programme is promoted through the University as well as through Technology Ireland ICT Skillnet. They are accessible to all through standard candidates and non-standard candidates and are offered with a fee subsidy from Technology Ireland ICT Skillnet.

The School operates in accordance with the TU Dublin Quality Assurance and Enhancement processes.

Will the proposed strategies for programme management and quality assurance ensure that the programme is well managed and continuously enhanced and is in accordance with the University's Quality Framework?

Yes ☒

No ☐

Comment:

The programme will be managed through the TU Dublin Quality Assurance approved processes. Each programme is managed by a Discipline Programme Board, Programme Team, Programme Chair and Year Tutors, who work together for the operational management of a programme. Each Discipline Programmes Board is a sub-committee of Faculty Board and fulfils academic responsibilities within the framework laid down by Academic Council as specified in the TU Dublin Quality Enhancement Framework.

Awards Standards

Are the programme aims and learning outcomes clearly written using appropriate terminology? (See TU Dublin Guidelines)

Yes ☒

No ☐

Comment:

Are the programme aims and learning outcomes aligned to the proposed level of the award on the NFQ in accordance with applicable Award Standards?

Yes ☒

No ☐

Comment:

Will the curricula, teaching, learning and assessment methods enable students to reach the appropriate standard to qualify for the award(s)?

Yes ☒

No ☐

Comment:

The proposed programme will be delivered using a variety of teaching and learning methods, including lectures and tutorials, laboratory work, case studies, e-learning, practical assignments, project work and industry guest speakers. Methods include Problem Based Learning (PBL), experiential learning, simulations and instructional videos, peer-learning and assessment, reflective learning approaches and media-rich e-learning environments. A three-fold strategy will be adopted, that combines a strong practical, problem-based approach with a conventional lecture format and self-directed learning. The emphasis in the programmes will be on real world business cases and developing solutions for these.

Reflective Learning and the Reflective Practitioner

Learners will also be encouraged to reflect on their learning. The objective is to help the learner engage in metacognitive processes which are known to lead to the development of more effective learning strategies. The School has invested a considerable amount of time and effort in developing its teaching capability based on international best practice and pedagogical training. Staff members have participated in conferences, seminars and workshops related to teaching and learning and several members have pursued specialist teaching qualifications. The School regularly evaluates and reviews the modules it delivers and the teaching methods it employs to become reflective practitioners.

<p>The panel have recommended that the School should ensure a balance and consistency in the number of assessments per module in a bid to avoid over assessment. In addition, it recommended the introduction of cross module assessments and peer evaluation inclusion/introduction of a minor assessment self-evaluation.</p>		
<p><i>Was the programme development appropriately informed by internal and external stakeholder input (including industry/practice, professional/regulatory bodies, and community organisations)?</i></p>	<p>Yes <input checked="" type="checkbox"/></p>	<p>No <input type="checkbox"/></p>
<p>Comment:</p> <p>This programme was developed in response to a Request for Tender (RFT) by Technology Ireland ICT Skillnet for the provision of a Level 9 Masters Programme in Sustainable Cloud Computing. The School of Enterprise Computing and Digital Transformation engaged with internal and external experts as well as the TU Dublin Enterprise Academy and the TU Dublin Sustainability Team when developing its RFT response document. TU Dublin (School of Enterprise Computing and Digital Transformation) was chosen as the preferred bidder. The proposed programme has been developed through a series of workshops with Technology Ireland ICT Skillnet, where the needs of their partner companies for skilled Masters' level resources were discussed.</p> <p>As part of the process, a number of group meetings and individual follow-up meetings were held (see Appendix B in validation documentation) where Technology Ireland ICT Skillnet and their industry experts were presented with a 'strawman' of the programme to ascertain their advice and feedback on the structure and content of the programme. This informed the academic team of correct structure for the programme as well as the modules and their content</p> <p>The process was also informed by previous consultations with industry (see Appendix C).</p>		
<p><i>Has the programme been benchmarked against similar programmes nationally and internationally?</i></p>	<p>Yes <input checked="" type="checkbox"/></p>	<p>No <input type="checkbox"/></p>
<p>Comment:</p> <p>The School recognises that Masters programmes in Cloud Computing are available at NCI, MTU, and ATU in Ireland, however, this specific programme stands out due to its unique integration of Public Cloud Computing and Cloud Computing Component Technology. In addition, the other cloud computing programs fall short of addressing the specific needs of ICT Ireland Technology Skillnet members, particularly in areas such as sustainability, digital technology strategy, and human skills development. The programme is not currently targeting international students but has plans to do so in the future in an effort to augment and sustain numbers.</p>		
<p><i>Did the programme development take account of relevant external discipline benchmarks and Professional Statutory and Regulatory Body requirements?</i></p>	<p>Yes <input checked="" type="checkbox"/></p>	<p>No <input type="checkbox"/></p>
<p>Comment:</p>		

Programme Design		
<i>Is the programme design informed by current development in the discipline and associated subject areas, having taken into consideration current trends, stakeholder feedback and market analysis?</i>	Yes ✓	No <input type="checkbox"/>
<p>Comment:</p> <p>As previously noted, this programme was developed in response to a request for tender (RFT) by Technology Ireland ICT Skillnet for the development and delivery of a masters programme in sustainable cloud computing, an initiative which emerged from the needs expressed by its member companies. The Technology Ireland ICT Skillnet comprises of companies in the Republic of Ireland from a cross section of industry and sectors whose primary focus is on upskilling workers in employment by providing advanced technical and soft skills programmes. They help individuals and businesses embrace the infinite possibilities shaping the world of tomorrow, through continuous technology training and upskilling. Their purpose is to advance Ireland's technology workforce, by building critical technology skills needed for the future of work. Collaborating with industry, they develop training courses, that bridge skills gaps and future-proof companies and individuals for their next phase of growth.</p>		
<i>Will there be opportunities for students to input into curriculum design decisions in the future?</i>	Yes ✓	No <input type="checkbox"/>
<p>Comment:</p> <p>The student voice plays an essential role in the TU Dublin Quality Assurance and Quality Enhancement processes and procedures. The School recognises that building a partnership between staff and students of the programme is of great importance. Such a partnership requires effective student input through the academic Quality Assurance and Quality Enhancement processes and procedures which includes:</p> <ul style="list-style-type: none"> • requesting participation in student feedback surveys • engaging in the national student engagement survey • holding regular meetings with student representatives • encouraging student participation in Programme meetings <p>In addition, students are encouraged to communicate with academic faculty on an informal basis throughout the programme and an open dialogue is thus actively promoted.</p> <p>Furthermore, the development process for this programme was informed from the learnings and student feedback on the three adjacent MSc programmes (See Appendix D). Students on the programmes were surveyed in March 2024 by TU Dublin through the Evasys survey system.</p>		
<i>Is there a mechanism to ensure the input of external stakeholders in the ongoing development of the programme?</i>	Yes ✓	No <input type="checkbox"/>
<p>Comment:</p> <p>Engagement with external stakeholders is fundamental to the genesis of this programme. In addition, the School of Enterprise Computing and Digital Transformation maintains strong contacts with industry, both those directly involved in the ICT sector such as Amazon AWS, IBM, Fidelity, Ericsson, Microsoft, CISCO, SAP, Ergo, Mastercard, WorkHuman and Workday and those entities which use ICT in their daily business e.g. AIB, FBD, HSE, Tallaght University Hospital, Fidelity Investments, These contacts are a major component in keeping programmes of study in the School relevant and current. The interactions between the School and industry also help place computing in context for students and provide a bridge between the students of the department and potential future employers.</p>		
<i>Is the programme curriculum well-structured with a logical progression of learning and development across the modules and stages?</i>	Yes ✓	No <input type="checkbox"/>
<p>Comment:</p>		

The panel have recommended that the exact timing of the Research Methods & Proposal Writing module and the Research Project module should be provided for clarity. It also recommended that the School should consider incorporating GreenOps, in addition to FinOps, into the programme.		
<i>Are there appropriate opportunities for students to undertake work-based learning, through work placements or work-based projects or assignments?</i>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Comment: N/A. This programme has been tailored to meet upskilling needs of experienced ICT professionals.		
<i>If applicable, have the relevant Blended Learning Checklists (i.e. Learning Experience Context & Programme Context) been fully completed and submitted to the Panel?</i>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Comment: N/A		
<i>Is the required programme and module information provided in the correct format?</i>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Comment: The panel have made it a condition that the School reviews the programme and module information as it appears on the Programme and Module Catalogue to ensure consistency and correct content.		

Learning, Teaching & Assessment		
<i>Is there an effective student-centred teaching and learning strategy that aligns with the University's strategies and Education Model?</i>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Comment: As highlighted earlier, this programme embraces the University's Strategies and Education Model Guiding Principles in this regard with its focus on professional practice, experiential learning and career development using a range of learning experiences that emphasise the reflective practitioner, application of knowledge through real world assignments and diversity of projects. The School will provide flexible and agile teaching & learning. Students will engage with the programme through online workshops and classes, recorded material and a physical and online library.		
<i>Does the assessment strategy provide an appropriate mix of assessment types that will enable students to demonstrate that they have met the module and programme learning outcomes?</i>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Comment: The panel have recommended that the School consider options for Group Work.		
<i>Do the learning outcomes and assessment strategy ensure that academic integrity can be maintained and attempted breaches of academic integrity are minimised/easily detected?</i>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Comment: The panel have recommended that the School provide guidelines for CA integrity, in particular for use of GenAI.		
<i>Is there a comprehensive mapping of assessment methods and module learning outcomes and between module learning outcomes and programme learning outcomes?</i>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Comment: The panel have made it a condition for the School to map any floating Programme Learning Outcomes to assessments.		
<i>Are there opportunities in all modules to provide students with timely and constructive feedback on their learning and development?</i>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Comment:		

<i>Do the teaching and assessment methods consider the diversity of the student cohort?</i>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<p>Comment:</p> <p>The programme supports part-time students by offering the classes in synchronous and asynchronous mode. Students are supported by lecturers through provision of class recordings consistently and readings ahead of the class. To further support the university's general Equality Diversity and Inclusivity (EDI) philosophy, Universal design Principles are applied on the programme by providing multiple means of engagement, such as interactive cloud platform environments (e.g. AWS, Google Cloud Microsoft Azure), real-world case studies, and collaborative projects to maintain student motivation and enhance engagement. Multiple means of representation ensure that content is delivered in varied formats, including video tutorials, visual diagrams, hands-on labs, and detailed textual explanations to support different learning preferences. The programme aims to provide an inclusive learning environment that fosters problem-solving, innovation, and accessibility, ensuring that all students, regardless of their backgrounds or abilities, can thrive on the programme.</p> <p>For this programme remote learning will be supported to assist groups working at a distance from the campus. In these cases, Microsoft Teams (or similar) will be used to provide access to lectures and workshops.</p>		

Student Supports & Learning Environment		
<i>Are there sufficient and appropriate resources (e.g. human, financial and physical) to support the proposed programme aims and objectives, to deliver the programme as specified?</i>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<p>Comment:</p> <p>This programme is co-funded by the participating companies and the Irish Government through Skillnet Ireland (www.skillnetireland.ie) from the Department of Further and Higher Education, Research, Innovation and Science under the National Training Fund.</p>		
<i>Are there sufficient staff that are appropriately qualified and capable to support the programme delivery, from both context and pedagogy perspectives?</i>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<p>Comment:</p>		
<i>Are there appropriate arrangements in place to support the student experience and to monitor student performance?</i>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<p>Comment:</p> <p>This is facilitated through the university's QA/QE processes.</p> <p>To ensure accessibility, equality, inclusion and to prepare students to undertake this programme of study, and to support students during their studies, special induction programmes will be provided by the programme team throughout the programme as required. These meet-ups and sessions also support students to socialise with their peers. For students who cannot make sessions on campus, arrangements will be made to offer them in hyflex mode. At the beginning of each cycle of the programme an induction day will be held to introduce new participants to the programme, the University, the award and the related assessments. Attendance at these induction sessions is essential. Online material backing up the induction material will be made available. Work completed as part of any induction session is not marked. Sessions are organised by the programme team to support upcoming taught modules, and general research and academic writing skills required across all modules. Sessions will be given by both internal and</p>		

<p>external academics, and industry representatives. Induction programmes will involve important seminars on specific topics. The induction sessions augment the normal supports provided for part-time students by the University. The Department of Life-Long Learning provides support for all part-time students of the University.</p> <p>The panel recommended that the School make it explicit in its documentation as to whether the programme can be taken fully online.</p>		
<p><i>Are the access, transfer and progression arrangements clearly defined and appropriate, and aligned to TU Dublin policy/strategy in this regard?</i></p>	<p>Yes <input checked="" type="checkbox"/></p>	<p>No <input type="checkbox"/></p>
<p>The panel recommended that the School clarify the entry criteria for non-standard entrants (i.e. those from a non-computing background).</p>		
<p><i>Do the student supports and learning environment cater for equality, diversity and inclusivity of students?</i></p>	<p>Yes <input checked="" type="checkbox"/></p>	<p>No <input type="checkbox"/></p>
<p><i>Is the relevant programme information clearly communicated to the students to ensure they are informed, guided and cared for?</i></p>		
<p><i>Has the Checklist for First Year Student Success (where applicable) been fully completed and submitted to the Panel?</i></p>	<p>Yes <input type="checkbox"/></p>	<p>No <input type="checkbox"/></p>
<p>Comment:</p>		

Collaborative Provision (if applicable)		
<p><i>Are the roles and responsibilities of each partner clearly defined?</i></p>	<p>Yes <input type="checkbox"/></p>	<p>No <input type="checkbox"/></p>
<p>Comment:</p>		
<p><i>In the case of Joint or Multiple Awards, has due diligence on capacity of partner institution meeting the QA-QE requirements for the programme been undertaken?</i></p>	<p>Yes <input type="checkbox"/></p>	<p>No <input type="checkbox"/></p>
<p>Comment:</p>		

Section F - Overall Recommendation

1.	<p>Recommend approval of programme as submitted, without amendment</p>	<input type="checkbox"/>
2.	<p>Recommend approval of programme, subject to minor amendments/editorial changes to be completed as soon as possible and with recommendations for consideration.</p> <p>Note: recommendations are attached where it is considered that the programme would benefit from particular changes, or from a review of certain aspects of the programme over a period of time, with changes made if required. While recommendations are advisory in nature, there is an expectation that all recommendations are responded to appropriately and acted upon as appropriate.</p>	<input type="checkbox"/>

3.	<p>Recommend approval of programme subject to the fulfilment of conditions. Recommendations for consideration may also be attached.</p> <p>Note: conditions are attached where it is agreed that changes must be made to the programme / programme documentation prior to the commencement of the programme. Conditions must be set where issues are identified that relate directly to academic standards or to University regulations or procedures. It should be clear what is required in order to meet the conditions.</p> <p>A new programme cannot go forward to Faculty Board for consideration/approval unless a response to the Validation Report is submitted with revised programme documentation and the Academic Quality Enhancement Committee is satisfied that all conditions are met.</p>	<input checked="" type="checkbox"/>
4.	Do not recommend approval of programme.	<input type="checkbox"/>

Areas for commendation

1.	The panel commended the School for successfully winning this highly competitive and impressive tender.
2.	The panel were appreciative of the hard work and thought that the School put into preparing quality validation documentation and for its engagement with various stakeholders, both internal and external.
3.	The programme is clearly in demand and timely with its focus on upskilling workers in key areas such as sustainability, digital technology strategy, and human skills development.
4.	The programme was mindfully designed with a student-centred approach.
5.	

Conditions of Approval

1.	<p>The Programme & Module Catalogue should be thoroughly reviewed and corrected/updated as required. Specific attention should be paid to module learning hours; updating of reading lists, mapping floating Programme Learning Outcomes to assessments, and the module delivery type (i.e. online/not online). Panel to provide list to School.</p> <p>Response:</p> <p>The list was received and reviewed at a follow-up meeting with Academic Affairs; Based on this discussion, the programme on Akari has been updated with the relevant changes.</p>
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Recommendations

1.	<p>Clarify exact timing of the Research Methods & Proposal Writing module, and the Research Project module</p> <p>Response:</p> <p>This module is included in semester 3 in the course schedule, but part of it is taught as part of year 1 and year 2 induction, and the remainder in semester 3. CA2 for this module is a research project proposal which must be completed before a student can start the research project. This proposal is due 3 weeks after completion of classes so as not to conflict with CAs for other modules. In reality this means the project proposal is due at the end of May, and is graded and</p>
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	the overall results for the module are recorded at the Summer Exam Board. This allows students to start their research project at the end of May with an option of completing and presenting in September, though the majority of students complete the project in December.
2.	<p>Make explicit in the documentation as to whether the programme can be taken fully online</p> <p>Response: Validation document "Chapter 2 Programme Summary" has been amended to reflect the online delivery of the part-time programme as well as the on-campus delivery of the full-time version of the programme.</p>
3.	<p>Consider options for group work</p> <p>Response: Group work assessment is currently part of the Human and Organisational Issues module. However, the team will explore its suitability for other modules. It is believed that group assessments are better suited to the full-time delivery of the programme, where students complete assessments on campus.</p>
4.	<p>Provision of Guidelines for CA integrity, in particular for use of GenAI</p> <p>Response: The university's academic assessment guidelines promote fairness, consistency, and transparency in evaluating student performance. Students must comply with academic integrity policies, including proper referencing and avoiding plagiarism. The School adheres to the Academic Integrity Guidelines set by Academic Affairs, along with the upcoming GenAI guidelines currently in development.</p>
5.	<p>Clarify the entry criteria for non-standard entrants (i.e. those from a non-computing background)</p> <p>Response: The wording for non-standard entrants, particularly those from non-computing backgrounds, has been reviewed and updated in both the main validation document and the Akari system to enhance clarity.</p>
6.	<p>For assessments, consider the introduction of</p> <ul style="list-style-type: none"> - Cross-module assessments - Peer evaluation inclusion/introduction of a minor assessment self-evaluation <p>Response: The Programme team will explore cross-module assessments, particularly integrating student technical presentations from modules such as IT Infrastructure & Automation with professional skills development in the Human and Organisational Issues module. There is also possible opportunity of an assessment across the Human and Organisational Issues module and the Cloud Native. It felt that this can work well particularly with the full-time delivery of the programme.</p> <p>The School has already some experience with peer evaluation on our undergraduate programme and the evaluation method may be suitable for piloting on the Research Methods and Proposal Writing module. This will be considered further by the academic team.</p>
7.	Need to ensure a balance and consistency in the number of assessments per module in a bid to avoid over assessment


	<p>Response:</p> <p>The Programme team will carefully manage the number of assessments each semester to maintain a balanced workload and prevent over-assessment. Prior to the start of each semester, the team will meet to develop an assessment schedule, ensuring an even distribution throughout the semester. Additionally, where feasible, cross-module assessments will be considered to enhance consistency and workload balance.</p>
8.	<p>‘Sustainability Goals’ should be revised to ‘Sustainable Development Goals’ (SDGs)</p> <p>Response: The validation documents have been revised to reflect the full term “Sustainable Development Goals”.</p>
9.	<p>Consider incorporating GreenOps, in addition to FinOps, into the programme</p> <p>Response:</p> <p>GreenOps and FinOps are already core components of the programme, equipping students with essential skills in sustainable cloud operations and financial optimisation in cloud computing. To reflect this further, the Digital Technology Strategy and IT Infrastructure & Automation modules in particular have been updated explicitly to reference these terms. Additionally, as part of the 2 day programme induction, the Technical and Sustainability workshops provide valuable insights into sustainable and efficient cloud practices. The Green Software for Practitioners Certification (Linux Foundation LFC131) introduces key concepts for developing, maintaining, and operating greener applications, requiring a 2-3 hour effort. The TU Dublin Sustainability Workshop focuses on translating the UN Sustainable Development Goals (SDGs) into actionable IT practices, promoting sustainability in technology. Additionally, the Introduction to FinOps course, offered by the Linux Foundation, provides a foundational understanding of financial operations in cloud computing, helping IT professionals optimise costs and resources in a 1.5-hour self-paced format.</p>
10.	<p>Consider making micro-credentials available</p> <p>Response:</p> <p>Micro-credentials play a vital role in the School’s commitment to flexible and industry-relevant education. These certifications will provide students with targeted skills and knowledge, enhancing their employability, professional development as well as an access point to the full master’s programme. The School aims to introduce micro-credentials based on this programme by 2027, ensuring that learners can gain recognised, stackable qualifications that align with evolving industry demands.</p>

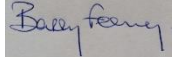
Other matters to be brought to the attention of Faculty Board and/or University Programmes Board

It is noted that these programmes like all others within TU Dublin will need to reflect University assessment regulations including award classifications that are approved for implementation in September 2025.

Section G - Approvals

Validation Report

This report has been agreed by the Validation Panel and is signed on their behalf by the chairperson.	
Chairperson: susan mckeever	
Signed: 	Date: 30/03/2025

School Response	
The response to the conditions and recommendations has been agreed by the School and is signed by the Head of School.	
Head of School: Dr Barry Feeney	
Signed: 	Date: Click or tap to enter a date.

Faculty Board	
The report and response have been approved by Faculty Board	
Vice-Dean for Education:	
Signed:	Date: Click or tap to enter a date.

University Programmes Board (Programmes of 30 ECTS or great)	
The report and response have been approved by the University Programmes Board	
Registrar:	
Signed:	Date: Click or tap to enter a date.