u

Programme Validation Report

Master of Engineering in Electrical and Electronic Engineering / Bachelor of Science in Engineering in Electrical and Electronic Engineering

Version of Report	Author	Date
1	Jan Cairns	11/06/2024
2	Jan Cairns	16/06/2024

Approval	Date
Programme Proposal approved by Faculty Board	22/11/2023
Programme Proposal approved by University Programmes Board	12/12/2023
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 Engineering in Electrical and Electronic Engineering
NFQ Level	9
ECTS Credits	60
Mode of delivery	Part-time Full-time ✓
Duration	Part-time: Full-time: 1 Year
Mode of provision	Face-to-Face ✓ Blended ☐ Online ☐
Faculty Board	Faculty of Engineering & Built Environment
Schools involved in delivery	School of Electrical and Electronic Engineering
Delivery location	TU Dublin Grangegorman
Collaborative Partner (where applicable)	NA
Date of Commencement	September 2025

Title	Bachelor of Science in Engineering in Electrical and Electronic Engineering
NFQ Level	8
ECTS Credits	240 (210 ECTS shared with TU821 Bachelor of Engineering in Electrical and Electronic Engineering)
Mode of delivery	Part-time Full-time ✓
Duration	Part-time: Full-time: 4 Years
Mode of provision	Face-to-Face ✓ Blended ☐ Online ☐
Faculty Board	Faculty of Engineering & Built Environment
Schools involved in delivery	School of Electrical and Electronic Engineering
Delivery location	TU Dublin Grangegorman
Collaborative Partner (where applicable)	NA
Date of Commencement	September 2024

Section B - Awards

Award Title (1)	Master of Engineering in Electrical and Electronic Engineering
NFQ Level	9
Award Class	Major
ECTS Credits	60
Classification of award	First Class Honours; Second Class Honours, First Division; Second Class Honours, Second Division; Pass
Award Title (1)	Bachelor of Science in Engineering in Electrical and Electronic Engineering
NFQ Level	8
Award Class	Major
ECTS Credits	240
Classification of award	See Condition of Panel

Section C - Programme Derogations (if required)

Derogations from Assessment Regulations/Marks and Standards already approved by University Programmes Board	
None sought	
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 ✓	AQEC Meeting ☐	AQEC Sub-Group ☐
Date: 11 June 2024	Date:	Date:

Panel Members

Name	Role	Affiliation
Dr Rudi Villing	External Panel Member	Department of Electronic Engineering, Maynooth University
Dr Ciarán O'Leary	Panel Chair	Head of Teaching and Learning, Faculty of Computing, Digital & Data, TU Dublin
Olivia Golden	Internal Panel Member	School of Architecture, Building & Environment, TU Dublin
Ruairi Hayden	Internal Panel Member	School of Surveying & Construction Innovation, TU Dublin
Jan Cairns	Academic Quality Advisor	Academic Affairs, TU Dublin
Marian Coll from the School of Architecture, Building & Environment, an internal panel member, was unable to attend.		

Section E - Programme Evaluation

Governance & Management		
Is the programme designed in accordance with the University's Strategic Plan, Educational Model and Quality Framework?	Yes ✓	No ☐
Comment: The programme documentation and the Programme Proposal Form, in particular, addresses the alignment with the TU Dublin Strategic Plan and the People, Planet and Partnership. In relation to the Educational Model, it is noted that the Masters offers considerable module choice to students.		
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: Approved TU Dublin policies and processes in this regard will be followed.		

Awards Standards		
Are the programme aims and learning outcomes clearly written using appropriate terminology?	Yes ✓	No ☐
Comment: The Panel notes that the programme learning outcomes would benefit from some editing, for example, to remove repetition.		
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: The Panel noted the progression in learning expected as specified in the programme learning outcomes of the B.Sc.Eng. and M.Eng programmes.		
Will the curricula, teaching, learning and assessment methods enable students to reach the appropriate standard to qualify for the award(s)?	Yes ✓	No ☐
Comment:		

Was the programme development appropriately informed by internal and external stakeholder input (including industry/practice, professional/regulatory bodies, and community organisations)?	Yes ✓	No ☐
Comment: The Panel notes external stakeholder engagement in the development of this programme.		
Has the programme been benchmarked against similar programmes nationally and internationally?	Yes ✓	No ☐
Comment: The Programme Team were particularly mindful of Integrated Masters programmes in other HEIs in Ireland when developing these programmes.		
Did the programme development take account of relevant external discipline benchmarks and Professional Statutory and Regulatory Body requirements?	Yes ✓	No ☐
Comment: Engineers Ireland requirements were taken on board in the development of the programme.		

Programme Design		
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?	Yes ✓	No ☐
Comment: The engagement with industry in the programme development was noted, as was the development of a number of new elective modules reflecting staff research.		
Will there be opportunities for students to input into curriculum design decisions in the future?	Yes ✓	No ☐
Comment: Programme development will be informed by student feedback on the programmes and modules.		
Is there a mechanism to ensure the input of external stakeholders in the ongoing development of the programme?	Yes ✓	No ☐
Comment:		
Is the programme curriculum well-structured with a logical progression of learning and development across the modules and stages?	Yes ✓	No ☐
Comment: The progression in learning and development from the undergraduate programme to the Masters is clear.		
Are there appropriate opportunities for students to undertake work-based learning, through work placements or work-based projects or assignments?	Yes ☐	No ☐
Comment: Students undertake a Work Placement in their undergraduate programme, prior to progressing to the Integrated Masters route.		
If applicable, have the relevant Blended Learning Checklists (i.e. Learning Experience Context & Programme Context) been fully completed and submitted to the Panel?	Yes ☐	No ☐
Comment: N/A.		
Is the required programme and module information provided in the correct format?	Yes ✓	No ☐
Comment:		

The Panel received programme submission documents as well as the programme and module information downloaded from TU Dublin's Programme and Module Catalogue. See Condition of the Panel in relation to the revision of Student Handbooks to outline exit points within the Integrated Masters back to the Bachelor of Engineering pathway.

Learning, Teaching & Assessment		
Is there an effective student-centred teaching and learning strategy that aligns with the University's strategies and Education Model?	Yes ✓	No ☐
Comment: The Panel is satisfied that the learning and teaching strategy is student-centred, following discussions with teaching staff.		
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?	Yes ✓	No ☐
Comment: The Panel notes the assessment strategy of 60% Examination and 40% Other Assessment for many of the modules within the Masters programme.		
Do the learning outcomes and assessment strategy ensure that academic integrity can be maintained and attempted breaches of academic integrity are minimised/easily detected?	Yes ✓	No ☐
Comment: Please see Condition of the Panel in respect of module learning outcomes and assessment.		
Is there a comprehensive mapping of assessment methods and module learning outcomes and between module learning outcomes and programme learning outcomes?	Yes ☐	No ☐
Comment: See Condition of the Panel in respect of the alignment between module learning outcomes and assessments.		
Are there opportunities in all modules to provide students with timely and constructive feedback on their learning and development?	Yes ✓	No ☐
Comment: Module assessments provide opportunities for feedback.		
Do the teaching and assessment methods consider the diversity of the student cohort?	Yes ✓	No ☐
Comment:		

Student Supports & Learning Environment		
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?	Yes ✓	No ☐
Comment:		
Are there sufficient staff that are appropriately qualified and capable to support the programme delivery, from both context and pedagogy perspectives?	Yes ✓	No ☐
Comment:		
Are there appropriate arrangements in place to support the student experience and to monitor student performance?	Yes ✓	No ☐
Comment:		

Are the access, transfer and progression arrangements clearly defined and appropriate, and aligned to TU Dublin policy/strategy in this regard?	Yes ☐	No ☐
Comment: Please see Condition of the Panel in relation to the threshold of performance in the Bachelor of Engineering programme required to progress to the Integrated Masters programme.		
Do the student supports and learning environment cater for equality, diversity and inclusivity of students?	Yes ✓	No ☐
Comment:		
Is the relevant programme information clearly communicated to the students to ensure they are informed, guided and cared for?	Yes ✓	No ☐
Comment: Student Handbooks were submitted to the Panel. See the Condition of the Panel in relation to the need to include guidance on the exit points from the Masters back to the Bachelor of Engineering.		
Has the Checklist for First Year Student Success (where applicable) been fully completed and submitted to the Panel?	Yes ☐	No ☐
Comment: N/A		

Collaborative Provision (if applicable)		
Are the roles and responsibilities of each partner clearly defined?	Yes ☐	No ☐
Comment: N/A		
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?	Yes ☐	No ☐
Comment: N/A		

Section F - Overall Recommendation

1.	**Recommend approval of programme as submitted, without amendment**	☐
2.	**Recommend approval of programme, subject to minor amendments/editorial changes to be completed as soon as possible and with recommendations for consideration.** **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.	☐
3.	**Recommend approval of programme subject to the fulfilment of conditions. Recommendations for consideration may also be attached.** **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. 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.	☒
4.	**Do not recommend approval of programme.**	☐

Areas for commendation	
1.	The creation of a pathway to an Integrated Masters programme that will be attractive to existing TU Dublin Engineering students.

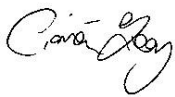| Conditions of Approval	
1.	The Panel considers that there should be a 50% threshold for entry to the Integrated Masters route, reflecting the entry requirements for existing Masters programmes in the School and similar programmes in other institutions. The Panel recognises that the operation of this threshold might not be appropriate in the first cohort where students have already completed the third year of the programme.
	Response: A threshold of 50% will be applied based on the Year 3 module weighted average (with a weighting of 5 ECTS applied for the 15 ECTS work placement).
2.	The Panel considers that the proposed B.Sc. Eng. award should be classified, given that it represents 240 ECTS of student achievement.

	Response: The current calculation applied to the classification of the TU821 programme will be applied to the BScEng.
3.	The M.Eng award classification should be based only on the 60 ECTS of the Level 9 programme.
	Response: Agreed but it will need to be reconsidered when the concept of an Integrated Masters is included in the new General Assessment Regulations.
4.	TU Dublin-approved Graduate Attributes should be included in the Masters programme documentation, including the Student Handbook, and how these attributes are achieved within the programme.
	Response: This condition will be implemented in the relevant documentation prior to the start of the Masters Programme.
4.	Module learning outcomes in the Masters programme modules should be reviewed and revised to ensure that they are appropriately written and are at the correct NFQ level.
	Response: This condition will be implemented in the relevant documentation prior to the start of the Masters Programme.
5.	The continuous assessment components within modules should be reviewed and revised to ensure that these are appropriately described and that the alignment to module learning outcomes is appropriate.
	Response: This condition will be implemented in the relevant documentation prior to the start of the Masters Programme.
6.	The topics of design, unstructured problems and sustainability should be more visible within the relevant module descriptors in the Masters programme, particularly in module learning outcomes.
	Response: This condition will be implemented in the relevant documentation prior to the start of the Masters Programme.
7.	The proposed pathway to the M.Eng. award should be clear within Student Handbooks, including that for the existing B.Eng. In addition, the Student Handbooks should outline all the potential exit points back to the B.Eng. award, for those students who do not complete the Masters.
	Response: This will require a provison for students to complete the Level 8 capstone project. This will be offered in Semester 2 with the other Level 8 students and the details will be provided in the Student Handbook.
8.	The Programme Team should put in place a process whereby students are not enabled to take overly similar modules from the suite of electives.
	Response:

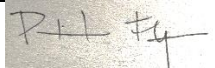|	The Programme Team will explore all possible combinations of streams/modules to ensure that this possibility does not arise.

Recommendations	
1.	The assessment breakdown of the research project should be reconsidered, with a view to reducing the number of assessed elements, specifically to combine the three week 15 components into one single assessment element, using the School's well-established rubric.
	Response: The Programme Team will align the summary elements in the rubric with a limited number of elements in the assessment section of the module description.
2.	The School is encouraged to explore opportunities to move the Research Methods to the first semester of year five.
	Response: The Programme Team will explore this issue with the other Schools in FEBE to ensure that the module is offered in Semester 1.

Other matters to be brought to the attention of Faculty Board and/or University Programmes Board	
1.	The Panel recognises that the structure of the Integrated Masters programme, which currently includes a B.Sc.Eng. award, has been developed and approved by the Faculty and University. However, the Panel considers this structure to be unnecessarily complicated and that a simpler structure that reflects an integrated five-year programme would be easier to explain and promote to potential students. It points out that the B.Sc.Eng. award is not a recognised Engineering qualification. It also observes that the agreed structure prevents the Masters award classification being based on more than the 60 ECTS, as originally proposed by the School. This comment reflects the fact that the concept of an Integrated Masters is not considered in the current GAR. The Programme Team agrees that that the structure is unnecessarily complicated and will work with Academic Affairs to devise a more appropriate arrangement in the next edition of the GAR.
2.	It is noted that the Programme Proposal Form for these programmes has not yet received approval and sign-off from Finance. The Panel has no concerns in relation to the resourcing of the programme. The delay in approval from Finance and, in particular, the delay is setting the fee level for the programme are causeing difficulties in terms of marketing the programme to out students and would welcome an early resolution.

Section G - Approvals

Validation Report	
This report has been agreed by the Validation Panel and is signed on their behalf by the chairperson.	
Chairperson: Dr Ciarán O'Leary	
Signed:	Date: 14/06/2024

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: Prof Michael Conlon	
Signed:	Date: Click or tap to enter a date.19/06/2024

Faculty Board	
The report and response have been approved by Faculty Board	
Head of Teaching and Learning	
Signed:	Date: 26/11/2024

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.