New Programme Validation External Review Panel Report

Programme Reference Number:	S023
Faculty/School(s):	Faculty of Engineering and Technology
Department(s):	Department of Electronic and Mechanical Engineering
Type of Review:	SPA Validation

Details of Programme(s) Reviewed:

Title:	Award Type:	NFQ Level:	ECTS:	Duration:	Delivery Mode:	Proposed Student Intake:	Proposed Start Date:
Postgraduate Certificate in Data Analytics for Offshore Wind Energy Management	SPA	9	30	2 Sems	Online		Sept. 2025

Date of Review:	26 May 2025

Review Panel

Panellist Role	Title	Name	Organisation	Job Title
Chair	Dr	Kim McFadden	ATU	Head of Department of Life and Physical Sciences
External Academic Discipline Expert	Dr	Bronac Flanagan	Ulster University	Lecturer in Computer Science
Industry/ Community Representative	Mrs	Saoirse O'Neill	CDE Group	Project Design Engineer
Student Representative	Mr	Agni Paul	ATU	Student Representative
Vice President for Academic Affairs and Registrar (VPAAR) Nominee (Academic Secretary)	Mr	Declan Courell	ATU	Assistant Registrar
Recording Secretary	Ms	Carmel Brennan	ATU	Assistant Registrar

All external members of the panel have declared that they are independent of ATU (Atlantic Technological University), and all have declared that they have no conflict of interest.

Programme Design Team

The panel met the staff listed below during the review process.

Mr Thomas Dowling	Dr Emmet Kerr

Introduction

Postgraduate Certificate in Data Analytics for Offshore Wind Energy Management

The Level 9 Postgraduate Certificate in Data Analytics for Offshore Wind Energy Management equips participants with critical, high-demand skills for the offshore wind sector. Developed in response to industry-identified needs, the course ensures learners gain expertise in data management, analytics, and visualisation—essential for optimising offshore wind operations, improving predictive maintenance, and enabling real-time decision-making.

Delivered fully online with weekly interactive sessions, the course ensures accessibility for working professionals, allowing immediate application of skills in offshore wind projects.

Rationale for Programme(s)

With operations and maintenance (O&M) costs accounting for 30% of the levelized cost of energy in offshore wind farms, data-driven strategies are crucial for improving cost-efficiency, reliability, and performance. The course directly addresses skills shortages for Resource Analysts (short term), Commercial Analysts (short term), and Project Engineers (short to medium term), all requiring advanced data analysis and decision-support capabilities. This programme's discipline has been identified as a skills shortage area by Springboard.

Validation Criteria

ATU's Developing and Validating New Taught Programmes Policy specifies that new programmes must comply with the following criteria for validation:

1. The programme aims and learning outcomes are clear and aligned with the proposed award title.
2. The rationale for the programme is well informed and justified.
3. The design of the programme is suitably structured and fit for purpose.
4. The design of the programme ensures that students can successfully achieve the Programme Learning Outcomes.
5. The teaching, learning and assessment strategy is well planned and appropriate for the discipline area and type of award.
6. Assessment techniques are fair, valid, reliable, consistent and a credible measure of the academic standard attained by students.
7. The planned resources, including staff, physical, online, library and student supports, sufficiently support the teaching, learning and assessment strategy for the programme.
8. The programme facilitates lifelong learning for a diverse student population by setting out appropriate entry requirements and opportunities for access, transfer, and progression.
9. There is demand for potential graduates from the programme.
10. The learning environment and mode of delivery are consistent with the needs of the intended students of the programme and accessible and appropriate support services for students have been provided for.
11. Students will be well informed on the requirements of the programme, guided to relevant resources and supported in their studies in a caring environment.

Findings

Overall Finding

Validated without changes	
Validated subject to condition(s) and/or recommendation(s)	**X**
Rejected	

Reason for Overall Finding

The programme has a strong rationale and meets ATU's validation criteria as listed above. As such, the programme validation panel were satisfied to recommend the programme for approval.

Commendations

The Validation Panel advises Academic Council of the following commendations.

1. Responsiveness to the Springboard call and agility in developing an industry focussed programme.
2. Recognising and meeting a regional need for expertise in data analytics for the offshore wind energy sector.

Conditions

The Validation Panel advises Academic Council that subject to satisfying any condition(s) detailed below, the panel is satisfied that the proposed programme(s) meets the validation criteria as set out in Atlantic Technological University's Developing and Validating New Programmes Policy.

1. Review the wording or Programme Learning Outcome 3 with a view to rewording to ensure that it is achievable. Clarify in the module learning outcomes how Programme Learning Outcome 5 will be achieved.

Recommendations

The panel advises Academic Council that the Programme Development Team and/or the Department should take cognisance of any recommendations outlined below.

1. Expand on entry requirements to provide clarity on the types of cognate degrees which are acceptable for programme admission.
2. Clarify the procedures that will be followed when students are working with confidential industry data, particularly where it forms part of the students' assessment.
3. Remove acronyms from Programme Learning Outcomes for clarity.
4. Tidy up the front page of the document, removing reference to an exit award in the APS, Quickscan and the old website, and ensuring that missing sections of the programme specification are completed.

Report Approval

This report has been agreed by the review panel and is signed on their behalf by the chairperson.

Signed: *Kim Mc Fadden.* Name: Dr Kim McFadden Validation Panel Chair	Date: 26th May 2025

Table of Contents

DL_MDATA_N09
Postgraduate Certificate in Data Analytics for
Offshore Wind Energy Management

Programme Overview

Type of Award	Minor Award

Programme Title	Postgraduate Certificate in Data Analytics for Offshore Wind Energy Management

Proposed Commencement Date	2025

Status	Draft	Programme Code	DL_MDATA_N09
Framework Level	09	Number of ECTS	30 ECTS
Delivered By	Semester	Minimum Duration	2
Minimum Course Grade	40	Classified Award	
Primary Award Standard	Engineering	Secondary Award Standard	
ISCED Code	0713 - Electricity and energy	RGAM Code	1.7 - Laboratory
Proposed Delivery Mode(s)	Online Learning		
Contains Work Placement	No	Work Placement Credits	
Contains Work-based Project	Yes	Work-based Project Credits	10
PSRB Recognition Planned		Garda Vetting Required	
Fitness to Practice Applies		Interim List of Eligble Programmes ILEP	
Department	Electronic & Mechanical Eng	Campus	Port Road

Programme Authors
Emmett Kerr

Entry Requirements and Access Routes

Candidates must hold a cognate level 8 Bachelor (Hons) degree with a minimum grade classification of H2.2 or equivalent. Examples of cognate degrees include but are not limited to; BEng (Hons) in any engineering discipline (e.g. Mechanical engineering, Electronic Engineering, Electrical Engineering, Renewable Engineering, etc.), BSc (Hons) in a computer or engineering science subject (e.g. Computer science, data science, Energy Engineering, Renewable Systems, etc.).

Candidates who do not meet the H2.2 performance standard in a Level 8 award will be required to pass a qualifying assignment at a H2.2 performance standard as established by the Programme Board for the programme in question and as approved by the Registrar.

English Language Requirements

English Language Requirements will be as determined by ATU and as published in the Access, Transfer and Progression code. The current requirements are as follows:

Non-EU applicants who are not English speakers must have a minimum score of 6.0 (with a minimum of 6.0 in each component) in the International English Language Testing System (IELTS) or equivalent. All results must have been achieved within 2 years of application to ATU.

EU applicants who are not English speakers are recommended to have a minimum score of 6.0 (with a minimum of 6.0 in each component) in the International English Language Testing System (IELTS) or equivalent.

Recognition of Prior Learning

In accordance with its policies ATU is committed to the principles of transparency, equity and fairness in recognition of prior learning (RPL) and to the principle of valuing all learning regardless of the mode or place of its acquisition. Recognition of Prior Learning may be used to:

    i.gain access or advanced entry to a programme at Stage 2 or higher, subject to available places. (Stage 1 entry to undergraduate major awards is through CAO).

    ii.gain credits and exemptions from programme modules after admission.

Applications

Applications for this programme are made directly to the University or through the Springboard Website.

Selection

Direct applicants will be offered places in decreasing order of performance until all available places are exhausted following the initial application deadline. Thereafter, if additional places remain unfilled, offers will be made to eligible applicants until all places are filled.

For entry requirement to SPAs, minor or other awards it is strongly suggested that you consult with the Admissions Officer or Assistant Registrar in relation to entry requirements and/or consult ATU's Admissions Policy when available.

Programme Learning Outcomes

On completion of this programme the learner will/should be able to:

PLO	Programme Learning Outcome
PLO 1	Adapt a systematic approach of data analytics, AI, and cybersecurity applications in offshore wind energy management, integrating advanced mathematical, scientific, and ICT methodologies to optimise wind farm performance.
PLO 2	Apply advanced data processing, modelling, and machine learning techniques to extract insights from SCADA (Supervisory Control And Data Acquisition) data, supporting predictive maintenance and real-time operational decision-making in offshore wind farms.
PLO 3	Critically evaluate cybersecurity risks and implement mitigation strategies to safeguard SCADA systems and contribute to the reliability of data-driven offshore wind operations.
PLO 4	Lead and manage a data-driven project in the area of offshore wind energy, demonstrating competence in project management, collaboration, and communication across technical and non-technical stakeholders.
PLO 5	Assess the economic, environmental, and regulatory factors influencing offshore wind operations, integrating sustainability and risk management principles into engineering solutions.
PLO 6	Engage in lifelong learning and professional development by critically evaluating emerging technologies, industry trends, and research in offshore wind data analytics.

Approved Programme Schedule - DL_MDATA_N09 Postgraduate Certificate in Data Analytics for Offshore Wind Energy Management

Stage 1

Delivery	Code	Module Title	Level	Credit	M/E	OL	OL IL	CA	PJ	PC	FE	Total
SEM 1	DMBIIT001	Data Modelling & Business Intelligence	09	10	M	4.00	13.00	50	0	50	0	100
SEM 1	ANVIME901	Data Analytics & Visualisation	09	10	M	4.00	13.00	100	0	0	0	100
SEM 2	ENERME901	Applications of Data Science in Offshore Wind	09	10	M	4.00	10.00	0	100	0	0	100
			Credit Total	30								

Area Effective Term	Credits Required	Award Classification Percentage
202500	30	100 %

Stage / Semester Average Weekly Contact Hours	OL
Semester 1	8.00
Semester 2	4.00
Stage Total Average Weekly Contact Hours	6.00

Note: The duration listed for each module on the Approved Programme Schedule includes module delivery, revision and assessment

Note: Average weekly hours for programmes with more than two semesters per stage and which have year-long modules may not calculate correctly

Key
M/E - Mandatory/Elective, OL - Online Learning Hours, IL - Independent Learning Hours, CA - Coursework Assessment, PJ - Project, PC - Practical, FE - Final Exam,