New Programme Validation External Review Panel Report

Programme Reference Number:	S022
Faculty/School(s):	Faculty of Engineering and Technology
Department(s):	Department of Computing
Type of Review:	SPA

Details of Programme(s) Reviewed:

Title:	Award Type:	NFQ Level:	ECTS:	Duration:	Delivery Mode:	Proposed Student Intake:	Proposed Start Date:
Postgraduate Certificate in Applied Artificial Intelligence in Supply Chain Management	SPA	9	30	1 Stage	Online	15-25	Sept. 2025

Date of Review:	26th May 2025

Review Panel

Panellist Role	Title	Name	Organisation	Job Title
Chair	Dr	Nigel McKelvey	ATU	Head of Department of Early Education and Social Studies
External Academic Discipline Expert	Professor	Marco Formentini	Unitrento University	Associate Professor of Supply Chain Management and Sustainability
Industry/ Community Representative	Mr	John Roulstone	Kirchhoff Automotive	Operations Manager
Student Representative		Ali Usama	ATU	Student Representative
Vice President for Academic Affairs and Registrar (VPAAR) Nominee (Academic Secretary)	Mr	Declan Courell	ATU	Assistant Registrar
Recording Secretary	Mr	Declan Courell	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.

Jade Lyons
Thomas Dowling
Saad Memon
Mara Sintejudeanu
George Onofrei

Introduction

The aim of this programme is to equip supply chain professionals with the knowledge, skills, and critical awareness required to apply artificial intelligence (AI) technologies in the analysis, optimisation, and transformation of modern supply chains. Specifically, the programme seeks to:

1. Bridge the gap between AI and supply chain practice by enabling learners to critically assess and apply AI tools within real-world logistics, planning, and sustainability contexts.
2. Develop strategic insight into how AI can improve forecasting accuracy, support proactive risk management, and drive sustainable, circular supply chain decisions.
3. Enhance data-driven decision-making by building learners' confidence in interpreting AI-generated outputs and integrating these into supply chain operations, planning, and reporting.
4. Promote innovation and continuous improvement through the practical application of AI in action learning projects tailored to participants' organisational needs.
5. Foster ethical, responsible use of AI in supply chain contexts, ensuring that learners can critically evaluate issues of bias, transparency, and environmental impact.

Rationale for Programme(s)

The development of the Postgraduate Certificate in Applied Artificial Intelligence in Supply Chain Management is driven by a critical and growing need across industry for professionals who can bridge the gap between artificial intelligence (AI) technologies and the complex challenges of modern supply chains. Businesses are under increasing pressure to enhance operational efficiency, build supply chain resilience, and meet sustainability goals—demands that can no longer be met through traditional methods alone.

In today's volatile global environment, supply chains are facing unprecedented disruption from geopolitical conflicts, pandemics, extreme weather events, and economic uncertainty. These conditions have highlighted the vulnerability of conventional supply chain models and accelerated the demand for more predictive, adaptive, and sustainable systems. AI offers transformative solutions across these domains—from machine learning models that forecast demand with greater accuracy, to intelligent systems that detect and mitigate risk in real-time, and optimisation tools that drive circular supply chain design.

Despite these advances, there remains a significant skills gap. While many professionals in logistics, operations, and procurement recognise the potential of AI, few have the applied knowledge to implement and manage these technologies effectively. Reports from the Expert Group on Future Skills Needs (EGFSN) and the European Commission point to a shortfall in AI-literate talent, particularly individuals with both technical competence and domain-specific expertise.

This programme directly addresses that gap by providing targeted, industry-relevant upskilling for professionals seeking to integrate AI into supply chain operations. It is especially suited to those working in supply chain, logistics, manufacturing, or data-driven roles who require specialised knowledge in applying AI to:

- Forecast product demand and optimise inventory,
- Identify and mitigate risks in complex global networks, and
- Advance circular economy practices in line with sustainability objectives.

The modular structure (three 10-credit modules) enables learners to develop focused expertise within a short, flexible timeframe, while the Level 9 postgraduate certificate ensures academic rigour and progression opportunities.

The programme is also strongly aligned with national and EU policy goals:

- The Irish Government's AI – Here for Good (2021) strategy prioritises sector-specific AI adoption and the development of applied AI skills.
- The EU Green Deal, Digital Compass, and Circular Economy Action Plan reinforce the role of AI in building sustainable and digitally transformed supply chains.
- The National Logistics and Supply Chain Skills Group continues to highlight digitalisation and risk management as key priority areas for workforce development in Ireland.

Thus, this programme is needed to meet the urgent skills demands of a sector undergoing rapid transformation, support Ireland's and Europe's strategic priorities in AI and sustainability, and equip professionals to lead innovation in the supply chains of the future.

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 recommendation(s)	**X**
Rejected	

Reason for Overall Finding

Commendations

The review panel praises the programme team for their outstanding documentation quality, teamwork, and strategic planning, which align the programme with institutional goals, industry demands, and current module offerings.

Their solid rationale, backed by evidence of demand, market insights, and stakeholder feedback, ensures the programme meets real-world needs while supporting the university's mission.

Conditions

The Validation Panel advises Academic Council that subject to satisfying the recommendations 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.

Recommendations

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

- Review entry requirements and teaching and learning strategy to ensure that they are transparent for potential applicants, particularly those from a non-technical background
- Delete section 6.4 of the document.
- Review the statement on progression
- Remove reference to Blackboard and replace with VLE
- Review PLOs and MLOs in terms of Bloom's Taxonomy
- Review the reading list for currency
- Review the document for sections that were cut and paste from other templates
- Consider adding content on the following in relevant modules.
    - Forecasting on micro levels,
    - Using AI for repetitive tasks, i.e. robotic process automation.
    - Internal Risk
    - Supply Chain Risk
    - Different models of supply chains
    - Contextual characteristics of supply chains to inform the selection of appropriate supply chain models

Report Approval

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

Signed:  **Name: Dr Nigel McKevely** **Validation Panel Chair**	**Date:26/05/2025**

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Ollscoil Teicneolaíochta an Atlantaigh

Atlantic Technological University

DL_KAPPL_S09
Postgraduate Certificate in Applied Artificial Intelligence in Supply Chain Management

Programme Overview

Type of Award	Special Purpose Award		
Programme Title	Postgraduate Certificate in Applied Artificial Intelligence in Supply Chain Management		
Proposed Commencement Date	2025		
Status	Draft	**Programme Code**	DL_KAPPL_S09
Framework Level	09	**Number of ECTS**	30 ECTS
Delivered By	Stage	**Minimum Duration**	1
Minimum Course Grade	40	**Classified Award**	
Primary Award Standard	Computing	**Secondary Award Standard**	
ISCED Code	0613 - Software & app dev & analysis	**RGAM Code**	1.3 - Fieldwork
Proposed Delivery Mode(s)	Online Learning		
Contains Work Placement	No	**Work Placement Credits**	
Contains Work-based Project	No	**Work-based Project Credits**	
PSRB Recognition Planned		**Garda Vetting Required**	
Fitness to Practice Applies		**Interim List of Eligble Programmes ILEP**	
Department	Computing	**Campus**	Port Road

Programme Authors
Mara Sintejudeanu, Thomas Dowling, George Onofrei, Dr. Saad Memon, Jade Lyons

Entry Requirements and Access Routes

Level 9 Awards:

Candidates must hold a level 8 Bachelor (Hons) degree with a minimum grade classification of H2.2 or equivalent. Candidates who do not meet the H2.2 performance standard in a Level 8 award will be required to pass a qualifying assignment at an 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 native 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 native 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.

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.

Programme Learning Outcomes

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

PLO	Programme Learning Outcome
PLO 1	Critically apply machine learning algorithms to analyse historical and real-time data for accurate demand forecasting, improving inventory control and minimising stock imbalances.
PLO 2	Evaluate and implement AI tools to identify, assess, and mitigate risks across supply chain networks, supporting continuity, agility, and resilience in the face of disruptions.
PLO 3	Design AI-driven decision-making models that support the development of circular supply chains, enhancing sustainability, resource efficiency, and waste reduction.
PLO 4	Integrate and synthesise AI techniques across demand forecasting, risk management, and circular supply chain operations to support end-to-end supply chain optimisation.
PLO 5	Critically evaluate the strategic impact of AI applications on supply chain performance, sustainability, and risk exposure through data-informed evaluation and continuous improvement.
PLO 6	Justify AI-driven supply chain strategies through the lens of ethical integrity, legal compliance, and operational feasibility, advocating for responsible innovation and social impact.

Approved Programme Schedule - DL_KAPPL_S09 Postgraduate Certificate in Applied Artificial Intelligence in Supply Chain Management

Stage 1

Delivery	Code	Module Title	Level	Credit	M/E	OL	OL IL	CA	PJ	PC	FE	Total
SEM 1	COMPIT927	AI-Driven Demand Forecasting	09	10	M	4.00	10.00	40	60	0	0	100
SEM 2	COMPIT926	AI in Supply Chain Risk Management	09	10	M	4.00	10.00	40	60	0	0	100
SEM 3	COMPIT928	AI Enabled Decisions in Circular Supply Chain	09	10	M	4.00	10.00	100	0	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	4.00
Semester 2	4.00
Semester 3	4.00
Stage Total Average Weekly Contact Hours	4.00

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,