Differential Validation Report Form
Report of the Review Panel

Reference AQAE046 *Procedure for Approving and Implementing Changes to Programmes and* AQAE047 *Procedure for Approving and Implementing Changes to Modules.* Used for Major Changes to Programme(s) (Type A).

Programme Reference Number:	M099
Faculty/School(s):	Faculty of Engineering and Design
Department(s):	Department of Mechatronic Engineering

Details of Programme(s) Reviewed (include embedded awards):

Title:	**Award Type:**	**NFQ Level:**	**ECTS:**	**Duration**	**Delivery Mode:**
Bachelor of Engineering in Polymer Processing Engineering	Major	7	60	4 Sem	Online

Date of Review:	5th March 2025

Review Panel

Panellist Role	**Title**	**Name**	**Organisation**	**Job Title**
Chair	Dr	Carine Gachon	ATU	Transcend project manager
External Academic/Industry Discipline Expert*	Ms	Colette Breheny	Technological University of the Shannon	Lecturer in Polymer and Mechanical Engineering
Academic/Head of Department	Dr	Xavier Velay	ATU	Head of Department of Mechanical and Manufacturing Engineering
Vice President for Academic Affairs and Registrar (VPAAR) Nominee/Academic Secretary	Mr	Declan Courell	ATU	Assistant Registrar

*One or two external members of panel in total.

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 Board

The panel met the staff listed below during the review of the proposed modifications.

Douglas Marques	Programme Co-Ordinator
David Mulligan	Head of Department Mechatronics Engineering
Giordano Bernardes	Lecturer

Summary of Proposed Modifications

- Plastic Part Design (MATL07019) will have credits reduced from 10ECTs to 5ECTs.
- Materials for Polymer Industry (MATL07028) will be replaced by two modules: Polymer Chemistry & Structure (MATL07030), and Polymer Characterization & Application (MATL07031).
- Polymer Processing (MATL07027) will be replaced by two modules: Polymer Processing 1 (MATL07033) and Polymer Processing 2 (MATL07034).
- Medical Device Manufacturing (QLTY07037) will be removed from the course.
- Module codes are being updated to follow new ATU guidelines for Subject Area.
- Course delivery through Online Learning and Online Independent Learning are being updated on Programme AMM.
- Module mapping for the course was reassessed and requires approval.

Rationale for Modifications

The BEng in Polymer Process Engineering currently has a module structure dedicated to discussing polymer science and polymer processing. Modules in the field of design, mathematics, quality, and physics will remain. Modules in the field of polymer science and polymer processing will be updated. The proposed modifications that follow intend to refresh the course structure without major effects on the original programme learning outcomes.

- Plastic Part Design (MATL07019) will have credits reduced from 10ECTs to 5ECTs, better reflecting the semester-long workload of the module. No alterations are proposed for the module assessment strategy or learning outcomes.
- Materials for Polymer Industry (MATL07028) will be divided into two modules, expanding content in Polymer Chemistry & Structure (MATL07030), as well as Polymer Characterization & Application (MATL07031). This will give the course a better baseline in materials science.
- Polymer Processing (MATL07027) will be divided into two modules, separating processing methods based on material being processed.
- One module (MATL07033) will focus on the processing of thermoplastics, while the other (MATL07034) will focus on the processing of thermosets, elastomers, additive manufacturing, and sustainable processing

development. This expansion will ease the delivery time in the first module, allowing for more practical approach, attending to industrial partners suggestions.

- Medical Device Manufacturing (QLTY07037) will be eliminated from the course. For being a specific and advance technological subject, the module will be restructured and proposed for inclusion in the Polymer courses at NFQ level 8.
- The following modules either had their codes altered or are in draft status and require approval on AMM: MGMT07069; MATL07030; DSGN07117; MGMT07070; MATL07032; MATL07031; THES07001; MECT07024; MATL07033; MECT07025; MATL07034.

Furthermore, the Module mapping for the course was reassessed and requires approval.

Findings

Overall Finding

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

Reason for Overall Finding

Approved subject to minor conditions as outlined below

Conditions

Level 7

- Ensure all learning outcomes reflect Bloom's Taxonomy
- Review hours allocation and balance between independently and self-directed learning for 5 ECT Modules.
- Consider articulating provisions for repeat submissions
- Use the term Self-Directed learning for;
    - MATLA07030 Fundamentals of Polymer Chemistry
    - MATL07031 Structure of Polymer Characterization and Application
- MATL07031 Structure of Polymer Characterization and Application
    - Review practical hours allocated to the module

- MATL07033 Polymer Processing 1.

- Edit programme mapping on MATL07033 Polymer Processing 1.
- Add report writing into content

- MATL07034 Polymer Processing 2
  - Correct typos
- THES07001 Polymer Project
  - Online only remove reference to taught with level of supervision provided to students

Recommendations

Approved subject to minor conditions as outlined above

Report Approval

The evaluation panel has agreed on this report and signed on their behalf by the chairperson.

Signed:  **Name Carine Gachon** **Differential Validation Panel Chair**	**Date: 07/03/2025**