

**Institiúid Teicneolaíochta Luimnigh
Limerick Institute of Technology**

**Dámh, Eolaíocht Fheidhmeach, Innealtóireacht agus
Teicneolaíocht
Faculty, Applied Science, Engineering and Technology**

Report of Peer Review Panel

Programmatic Review

of the

**Department of Mechanical and Automobile
Engineering**

April 2017

TABLE OF CONTENTS

1. INTRODUCTION	3
2. GENERAL INFORMATION	3
2.1 Higher Education Provider	3
2.2 Programmes Evaluated	3
2.3 External Programmatic Review Panel of Expert Assessors	3
2.4 Institute Staff	4
2.5 Selected Stakeholders	4
2.6 Documentation	5
3. FINDINGS AND RECOMMENDATIONS OF EXTERNAL PROGRAMMATIC REVIEW PANEL	6
3.1 Main Findings	6
3.2 Conditions	6
3.3 Recommendations	6
3.4 Commendations and Observations	7

1. INTRODUCTION

This report outlines, in summary form, the proceedings of the External Panel visit to LIT for the Programmatic Review of the Department of Mechanical and Automobile Engineering, and the findings and conclusions of the External Panel. The Programmatic Review visit was undertaken in accordance with Section 3 of the LIT document 'Academic Council Regulations and Procedures for Taught Programmes (ACRP): Academic Year 2016/2017'. The ACRP is published on the LIT website. An external Panel makes an impartial judgement on the Critical Self Study and programme changes proposed within the Programmatic Review.

2. GENERAL INFORMATION

2.1 Higher Education Provider

Institute:	Limerick Institute of Technology
Faculty/School:	Applied Science, Engineering and Technology
Department:	Mechanical and Automobile Engineering
Date of Visit:	26 th & 27 th April 2017
Venues:	Institute Board Room, Moylish Park Campus Room 5C01, Moylish Park Campus

2.2 Programmes Evaluated

Department of Electrical and Electronic Engineering

Higher Certificate in Engineering in Mechanical Engineering
Bachelor of Engineering in Mechanical Engineering
Bachelor of Engineering (Hons) in Mechanical Engineering (Facilities – Add on)
Bachelor of Engineering (Hons) in Mechanical Engineering (Facilities – Ab-initio)

Bachelor of Science (Hons) in Process & Engineering Management (Add on)
Higher Certificate in Precision Engineering
Bachelor of Engineering in Precision Engineering (Ab-initio)
Bachelor of Engineering in Precision Engineering (Add on)
Higher Certificate in Agricultural Mechanisation

Higher Certificate in Engineering in Automobile Engineering
Bachelor of Engineering in Road Transport Technology & Management

Special Purpose Awards:
Certificate in Aviation
Certificate in Aircraft Records Technician
Certificate in Transport Safety Management

2.3 External Programmatic Review Panel of Expert Assessors

Mr. Damien Courtney,
Fellow Emeritus, Cork Institute of Technology (**Chairperson**)
Dr. Maura Kelleher,
Dublin Institute of Technology
Dr. Donnacha Lowney,

Institute of Technology Carlow
Mr. James Hicks,
Student Representative
Mr. Michael Holton,
Schivogroup & Prodioco, Dublin
Mr. Denis McFadden,
Letterkenny Institute of Technology
Mr. Michael Moroney,
The Association of Farm and Forestry Contractors in Ireland
Mr. Seamus Ryan,
Transport Safety Consultant.

2.4 Institute Staff

Prof. Vincent Cunnane, Institute President (*unavoidably absent*)
Mr. Terry Twomey, Vice President Academic Affairs & Registrar
Ms. Maria Kyne, Vice-President of Academic Affairs and Registrar
Dr. Philip Ryan, Head of Department of Electrical and Electronic Engineering

Department of Mechanical and Automobile Engineering – Lecturing Staff

Jonathon Blackmore
Tadgh Brosnan
Adrian Chaplin
Bosco Clarke
Colm Crowe
Niall Enright
Eoin Fitzgerald
Mark Hennessy
Paul Hickey
Emma Kelly
Tony Mahon
Shane McAuliffe
Tony McMahan
Tom Meade
Clodagh Moore
Ger Moynihan
Ciaran O'Loughlin
Niall O'Shaughnessy
Michael Ryan
John Walsh
Paddy Walsh

2.5 Selected Stakeholders

2.5.1 Employers/Industry & Alumni Representatives

Donal Galligan,	Takumi Precision Engineering
Joe Whelan,	Whelan Ltd Kilrush

2.5.2 Current Students

Mark Doran	Facilities Engineering Year 4 (Did 3rd Year Mechanical)
------------	---

Maeve Guilfoyle	Precision Engineering Year 2 (Part-time, working in Takumi)
Barry Moizzon	Mechanical Engineering Year 2 (Direct Entry)
Pat Mongan	Mechanical Engineering Year 3
Chris Noonan	Mechanical Engineering Year 1
Daire O Connor	Facilities Engineering Year 4 (1st 2 years in New Zealand)
Edward Toomey	Mechanical Engineering Year 2 (Mature Student)
Mark Doran	Facilities Engineering Year 4 (Did 3rd Year Mechanical)
Edgaras Baratus	BSc. (Honours)in Process and Engineering Management – Year 4
Eoghan Coughlan	BSc. (Honours)in Process and Engineering Management – Year 4
Mark Healy	BSc. (Honours)in Process and Engineering Management – Year 4
Waseem Kalid	BSc. (Honours)in Process and Engineering Management – Year 4
Matthew Reynold	BSc. (Honours)in Process and Engineering Management – Year 4

2.6 Documentation

2.6.1 Critical Self-Study, Faculty of Applied Science, Engineering and Technology

2.6.2 Department of Electrical and Electronic Engineering, Programmatic Review document

2.6.3 Higher Certificate in Engineering in Mechanical Engineering
 Bachelor of Engineering in Mechanical Engineering
 Bachelor of Engineering (Hons) in Mechanical Engineering (Facilities – Add on)
 Bachelor of Engineering (Hons) in Mechanical Engineering (Facilities – Ab-initio)

2.6.4 Bachelor of Science (Hons) in Process & Engineering Management (Add on)
 Higher Certificate in Precision Engineering
 Bachelor of Engineering in Precision Engineering (Ab-initio)
 Bachelor of Engineering in Precision Engineering (Add on)

2.6.5 Higher Certificate in Agricultural Mechanisation

2.6.6 Higher Certificate in Engineering in Automobile Engineering
 Bachelor of Engineering in Road Transport Technology & Management

2.6.7 Special Purpose Awards:
 Certificate in Aviation
 Certificate in Aircraft Records Technician
 Certificate in Transport Safety Management

3. FINDINGS AND RECOMMENDATIONS OF EXTERNAL PROGRAMMATIC REVIEW PANEL

3.1 Main Findings

The External Validation Panel of Assessors recommends the on-going approval and re-validation for a further five years of the submitted programmes and associated amendments in the Department of Mechanical and Automobile Engineering, subject to the following conditions and recommendations.

3.2 Conditions

None

3.3 Recommendations

- 3.3.1 A Work placement is a positive element of an Engineering degree programme. The programme team should consider how this requirement could be met within Engineering Level 8 programmes.
- 3.3.2 Work placement needs to be relevantly resourced by LIT including supporting the usage of work placement on the Higher Certificate in Agricultural Mechanisation. Without such support, this programme could face challenges.
- 3.3.3 The Panel acknowledges the healthy conversation around semesterisation and progress made in this programmatic review to semesterise Stages 3 & 4 of programmes. This needs to be kept under review to see how semesterisation affects students. In particular, the Road Transport programme needs to strongly consider the inclusion of semesterisation in Year 3.
- 3.3.4 The embedding of transferrable skills such as customer management, presentation skills, people skills, and business principles should be stated clearly within module descriptors. Specifically, this relates to modules on the Mechanical Engineering (Facilities) and the Higher Certificate in Agricultural Mechanisation.
- 3.3.5 The Panel acknowledges the position to move towards a wider range of assessments. The opportunity to increase continuous assessment within semesterisation may need to be underpinned by rigorous management and design of assessment to ensure the integrity of the assessment process. The Road Transport programme needs to include an Assessment Schedule in the programme document.
- 3.3.6 The opportunity to carry out diagnostic testing at the beginning of first year to support student learning should be formalised.
- 3.3.7 Recommended reading material for all modules should be reviewed to ensure currency of texts. Harvard referencing system should be used when quoting texts to include details of publisher and date of publication.
- 3.3.8 Equipment requirements in the areas of 3D scanning and Rapid Prototyping would need attention in the future to allow the Precision Engineering programmes to advance to the next level.
- 3.3.9 The opportunities to develop Level 9 taught programmes in the Department needs consideration, including having structured, focused, niche areas of learning and development for post-graduate students.

- 3.3.10 Special Purpose Awards: The Panel would have welcomed the opportunity to meet the programme teams representing these programmes in order to review these in detail. In the absence of the opportunity to discuss the programmes in detail, the following comments are raised:
- (i) The reading materials need to be incorporated in the respective programme documents. For example, the Certificate in Aviation: in the bibliography consideration should be given to including ATA manuals in the bibliography
 - (ii) The Certificate in Aircraft Records: consideration should be given to include content on safety management systems, and traceability/handling missing records.
- 3.4 Commendations and Observations
- 3.4.1 The Panel commended the department on its presentation as a coherent team and thanked the staff for the quality of their engagement.
- 3.4.2 The Panel commended the department on the quality of the documentation presented.
- 3.4.3 There is very strong evidence of the degree of work conducted by the department over an extended period, which is reflected in the documentation and the quality of the engagement during this Programmatic Review process.
- 3.4.4 The Panel commended the department on the exceptional high quality and complexity of the project work completed by students.
- 3.4.5 The students are articulate and enthusiastic and are a positive reflection on LIT.
- 3.4.6 The tour of LIT indicated how good the facilities were. Wider usage of YouTube videos to promote such facilities in LIT in marketing its programmes should be considered.
- 3.4.7 The Panel commended the departments and the level of its engagement with industry to ensure that the programmes are kept current to meet the knowledge, skills and competencies required by the wide spectrum of engineering disciplines that the programmes presented serve.
- 3.4.8 The nature and range of the assessments, including repeat assessments, adequately reflects the capacity to achieve the learning outcomes for a module, specifically as outlined by the Process Engineering programme.
- 3.4.9 There is strong evidence of LIT's active engagement in the Region.
- 3.4.10 the plan to move to new premises must address the critical space requirements for commercial vehicle usage including health and safety requirements. It is also seen as a critical requirement for the evolution and development of programmes in the faculty. LIT senior management should be commended for this development.
- 3.4.11 The Panel commend the use of Six Sigma, CPC, Green Belt on programmes, which is evidence of the quality and relevance of the programmes, and their external recognition.

Signature of Chairperson and Date

4.3.10 Special Purpose Awards: The Panel would have welcomed the opportunity to meet the programme teams representing these programmes in order to review these in detail. In the absence of the opportunity to discuss the programmes in detail, the following comments are raised:

(i) The reading materials need to be incorporated in the respective programme documents. For example, the Certificate in Aviation: in the bibliography consideration should be given to including ATA manuals in the bibliography

(ii) The Certificate in Aircraft Records: consideration should be given to include content on safety management systems, and traceability/handling missing records.

4.4 Commendations and Observations

4.4.1 The Panel commended the department on its presentation as a coherent team and thanked the staff for the quality of their engagement.

4.4.2 The Panel commended the department on the quality of the documentation presented.

4.4.3 There is very strong evidence of the degree of work conducted by the department over an extended period, which is reflected in the documentation and the quality of the engagement during this Programmatic Review process.

4.4.4 The Panel commended the department on the exceptional high quality and complexity of the project work completed by students.

4.4.5 The students are articulate and enthusiastic and are a positive reflection on LIT.

4.4.6 The tour of LIT indicated how good the facilities were. Wider usage of YouTube videos to promote such facilities in LIT in marketing its programmes should be considered.

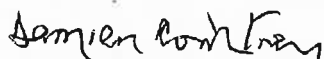
4.4.7 The Panel commended the departments and the level of its engagement with industry to ensure that the programmes are kept current to meet the knowledge, skills and competencies required by the wide spectrum of engineering disciplines that the programmes presented serve.

4.4.8 The nature and range of the assessments, including repeat assessments, adequately reflects the capacity to achieve the learning outcomes for a module, specifically as outlined by the Process Engineering programme.

4.4.9 There is strong evidence of LIT's active engagement in the Region.

4.4.10 the plan to move to new premises must address the critical space requirements for commercial vehicle usage including health and safety requirements. It is also seen as a critical requirement for the evolution and development of programmes in the faculty. LIT senior management should be commended for this development.

4.4.11 The Panel commend the use of Six Sigma, CPC, Green Belt on programmes, which is evidence of the quality and relevance of the programmes, and their external recognition.



Signature of Chairperson and Date

12th May 2017