Letterkenny Institute of Technology

Report of the Panel of Assessors

PART 1   **GENERAL INFORMATION**

SCHOOL/DEPARTMENT: Computing

DATE OF VISITATION: 15 May 2018

PROGRAMMES EVALUATED:

Master of Science in Computing in Cybersecurity Level 9 (90 ECTS) (With Minor Awards)

with named Awards:

- Information Security Management

- Software Compliance

- Threat Management

- MSc in Computing in Cybersecurity

MEMBERS OF PANEL OF ASSESSORS:

- Professor Mike Murphy, Academic Registrar, Dublin Institute of Technology (Chair)
- Professor Martin McKinney, former HOD Computing, UU Coleraine
- Dr Barry Feeney, Head of Department of Computing, IT Tallaght
- Dr Christian Horn, Head of Department of Computing and Mathematics, Dundalk IT
- Ronan Comer, Pramerica

Secretary to Panel: Siobhan Cullen, Head of Department of Law and Humanities

INSTITUTE STAFF Paul Hannigan, Billy Bennett, Dr Gertie Taggart, Thomas Dowling, John McGarvey, Ruth Lennon. John O Raw, Dr Mark Leeney and Maria Griffin.

PART 2   FINDINGS OF ASSESSORS

The Panel of Assessors are satisfied that the proposal adequately addresses the following criteria:

(1)   Education and Training Requirements

The programme is consistent with the Institute's mission, avoids redundant provision and makes efficient use of resources (collaborating where this is beneficial).

(2)   Unity

There is an underlying unifying theme and the modules are bonded by interactions which are either implicit or explicit. The proposal demonstrates how the standard (of knowledge, skill and competence), determined by QQI for the named award to which the programme proposes to lead, evolves throughout the programme as a whole.

(3)   Teaching and Learning

The proposed approach to teaching and learning is clearly indicated and justified.

(4)   Learner Assessment

The learner assessment methods are fully elaborated and consistent with QQI's policy on fair and consistent assessment. The assessment methods are capable, among other things, of demonstrating attainment of the standards of knowledge, skill or competence, determined by QQI, for the related award.

(5)   Resources

The proposed staffing levels are appropriate and the levels of qualifications and competence of the staff is sufficient to deliver the programme. The necessary facilities available in terms of accommodation, equipment, and library and information technology resources are satisfactory to support the proposed programme.

(6)   Quality Assurance

The proposal demonstrates how the Institute's quality assurance procedures have been applied in the development of the proposed programme and satisfactory procedures exist for the on-going monitoring and periodic review of programmes.

(7)   Programme Title and Award Title

The award title is consistent with the named awards determined by QQI. The programme title is clear, accurate, succinct and fit for the purpose of informing prospective learners and other stakeholders. See recommendations below.

(8)   QQI Standards

The learning outcomes of the programme are stated in such a way that the compliance with the appropriate QQI standard is demonstrated.

(9)   Access Transfer and Progression

This programme incorporates the procedures for access transfer and progression that have been established by the NQAI and is consistent with QQI policy in accommodating a variety of access and entry requirements.

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PART 3 RECOMMENDATIONS

(For the attention of the Academic Council)

Commendations

The Panel of Assessors make a number of specific commendations to LYIT.
1. The Assessors found academic staff to be enthusiastic and engaged, and with a clearly positive team ethos. Their expertise is current and up to date, and supported by a culture and ethos of publishing in journals and conferences.
2. LYIT is commended for its support for CPD and staff development.
3. There is evidence of close cooperation with and engagement with industry, including the identification of issues and initiatives that are relevant to industry.
4. For the programs under review, the Assessors were presented with comprehensive documentation, and an up to date curriculum. All necessary resources to run the programs were available and up to date.

The Panel of Assessors advises the Academic Council that the Institute and the School/Department should take cognisance of following recommendations:

1. In Section 4 Introduction, insert a rationale for the program that is based on the programme's merits, rather than the existing rationale which is based on the need to re-develop the existing programme (see Page 7).
    The contents of page 7 has been modified to reflect this recommendation.
2. In Section 4 Introduction, state explicitly that the PG Diploma is an exit award (See Page 7).
    This change has been made.
3. Consider renaming the 4th MSc Award described on Page 7, and also on Page 11, as "MSc in Computing in Cybersecurity Research".
    This change has been made.
4. The Programme Team is asked to reflect on the title of the module Software Compliance and Mitigation Techniques – could a different title better indicate content?
    The module has been renamed to Software Compliance.
5. It should be made clear (see Page 12) that the Minimum Entry Requirements should be "ONE of the following criteria".
    This change has been made.
6. The Panel of Assessors found the structure of streams (programme options) to be very helpful, but recommend additional language to be added to describe to students mandatory and elective modules for each stream.
    Supporting information will be including in all marketing material and on the web site.
7. We recommend clarifying that this is a single programme with streams (programme options)
    We can confirm that this is two courses. There is an MSc with 60 taught credits and a 30 credit dissertation. This MSc has three names award options in Information Security Management, Software Compliance and Threat Management. The second MSc has 30 taught credits and a 60 credit dissertation. This MSc has "Research" in the title.
8. We also recommend the addition of a sentence to explain that it may not be possible to run all elective modules if there is insufficient demand for them to run. This should be stated in the programme documentation and also in the marketing material.
    A minimum number of students has been added to the course schedule.

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9. The Programme Team is asked to reflect on whether and how there could be internal transfer between streams.
   We can confirm that there is no structural impediment to students transferring within streams subject to normal logistical constraints.
10. The module reading lists should be refreshed, and this should be a continual process
    This has been done and will continue on a regular basis.
11. Amend and update Page 89 to be consistent with the material provided in the Overview on Page 11.
    This change has been made.
12. Specify the total number of hours of effort per module, including the typical duration of each module in weeks.
    This change has been made.

The Panel of Assessors advises the Academic Council that approval of the programmes subject to general conditions of approval together with the following additional condition:

No conditions were placed on the programme.

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PART 4 PROPOSED PROGRAMME SCHEDULE(S) Please add below

MSc in Computing in Cybersecurity with Information Security Management - Proposed Course Schedules

Semester	Module Title	Module status	ACCS credits		Contact hours (per week)			Allocation of marks				
			Level	Number	L/T	P	Total	CA	Project	Practical	Final	Max
1	Secure Infrastructure	M	9	10	2	2	4	100	-	-	-	100
1	Cryptography and Forensic Analysis	M	9	10	2	2	4	50	-	-	50	100
1	Threat Management 1	M	9	10	2	2	4	100	-	-	-	100

Total ACCS credits required for stage: **30**

Semester	Module Title	Module status	ACCS Credits		Contact hours (per week)			Allocation of marks				
			Level	Number	L/T	P	Total	CA	Project	Practical	Final	Max
2	Threat Management 2	E	9	10	2	2	4	50	-	-	50	100
2	Information Security Management 1	M	9	10	2	2	4	100	-	-	-	100
2	Information Security Management 2	M	9	10	2	2	4	100	-	-	-	100

Total ACCS credits required for stage: **30**

Semester	Module Title	Module status	ACCS credits		Contact hours (per week)			Allocation of marks				
			Level	Number	L/T	P	Total	CA	Project	Practical	Final	Max

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3	Dissertation	M	9	30		2	2		100	-		100

Total ACCS credits required for stage: **30**

This option will be available where student numbers make the offering viable, minimum 5 students.

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MSc in Computing in Cybersecurity with Software Compliance - Proposed Course Schedules

Semester	Module Title	Module status	ACCS credits		Contact hours (per week)			Allocation of marks				
			Level	Number	L/T	P	Total	CA	Project	Practical	Final	Max
1	Secure Infrastructure	M	9	10	2	2	4	100	-	-	-	100
1	Cryptography and Forensic Analysis	M	9	10	2	2	4	50	-	-	50	100
1	Threat Management 1	M	9	10	2	2	4	100	-	-	-	100

Total ACCS credits required for stage: **30**

Semester	Module Title	Module status	ACCS Credits		Contact hours (per week)			Allocation of marks				
			Level	Number	L/T	P	Total	CA	Project	Practical	Final	Max
2	Threat Management 2	M	9	10	2	2	4	50	-	-	50	100
2	Software Compliance	M	9	10	2	2	4	100	-	-	-	100
2	Web Application Security and Software Standards	M	9	10	2	2	4	100	-	-	-	100

Total ACCS credits required for stage: **30**

Semester	Module Title	Module status	ACCS credits		Contact hours (per week)			Allocation of marks				
			Level	Number	L/T	P	Total	CA	Project	Practical	Final	Max
3	Dissertation	M	9	30		2	2		100	-			100

Total ACCS credits required for stage: **30**

This option will be available where student numbers make the offering viable, minimum 5 students.

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MSc in Computing in Cybersecurity with Threat Management - Proposed Course Schedules

Semester	Module Title	Module status	ACCS credits		Contact hours (per week)			Allocation of marks				
			Level	Number	L/T	P	Total	CA	Project	Practical	Final	Max
1	Secure Infrastructure	M	9	10	2	2	4	100	-	-	-	100
1	Cryptography and Forensic Analysis	M	9	10	2	2	4	50	-	-	50	100
1	Threat Management 1	M	9	10	2	2	4	100	-	-	-	100

Total ACCS credits required for stage: 30

Semester	Module Title	Module status	ACCS Credits		Contact hours (per week)			Allocation of marks				
			Level	Number	L/T	P	Total	CA	Project	Practical	Final	Max
2	Threat Management 2	M	9	10	2	2	4	50	-	-	50	100
2	Information Security Management 1	E1	9	10	2	2	4	100	-	-	-	100
2	Information Security Management 2	E1	9	10	2	2	4	100	-	-	-	100
2	Software Compliance	E2	9	10	2	2	4	100	-	-	-	100
2	Web Application Security and Software Standards	E2	9	10	2	2	4	100	-	-	-	100

Total ACCS credits required for stage: 30

Students must choose group elective E1 or E2

Semester	Module Title	Module status	ACCS credits		Contact hours (per week)			Allocation of marks				
			Level	Number	L/T	P	Total	CA	Project	Practical	Final	Max
3	Dissertation	M	9	30		2	2		100	-		100

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Total ACCS credits required for stage: **30**

This option will be available where student numbers make the offering viable, minimum 5 students.

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MSc in Computing in Cybersecurity Research - Proposed Course Schedules

Semester	Module Title	Module status	ACCS credits		Contact hours (per week)			Allocation of marks				
			Level	Number	L/T	P	Total	CA	Project	Practical	Final	Max
1	Secure Infrastructure	M	9	10	2	2	4	100	-	-	-	100
1	Cryptography and Forensic Analysis	M	9	10	2	2	4	50	-	-	50	100
1	Threat Management 1	E	9	10	2	2	4	100	-	-	-	100
1	Software Compliance	E	9	10	2	2	4	100	-	-	-	100
2	Information Security Management 1	E	9	10	2	2	4	50	-	-	50	100

Students should take 1 elective module.

Total ACCS credits required for stage: **30**

Semester	Module Title	Module status	ACCS credits		Contact hours (per week)			Allocation of marks				
			Level	Number	L/T	P	Total	CA	Project	Practical	Final	Max
2 & 3	Research Dissertation	M	9	60		2	2		100	-		100

Total ACCS credits required for stage: **60**

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Certificate in Information Security Management - Proposed Course Schedule

Semester	Module Title	Module status	ACCS Credits		Contact hours (per week)			Allocation of marks				
			Level	Number	L/T	P	Total	CA	Project	Practical	Final	Max
	Threat Management 1	M	9	10	2	2	4	100	-	-	-	100
	Threat Management 2	M	9	10	2	2	4	50	-	-	50	100

Total ACCS credits required for stage: **20**

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Certificate in Software Compliance - Proposed Course Schedule

Semester	Module Title	Module status	ACCS credits		Contact hours (per week)			Allocation of marks				
			Level	Number	L/T	P	Total	CA	Project	Practical	Final	Max
	Software Compliance	M	9	10	2	2	4	100	-	-	-	100
	Web Application Security and Software Standards	M	9	10	2	2	4	100	-	-	-	100

Total ACCS credits required for stage: **20**

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Certificate in Threat Management - Proposed Course Schedule

| Semester | Module Title | Module status | ACCS Credits | | Contact hours (per week) | | | Allocation of marks | | | | |
			Level	Number	L/T	P	Total	CA	Project	Practical	Final	Max
	Threat Management 1	M	9	10	2	2	4	100	-	-	-	100
	Threat Management 2	M	9	10	2	2	4	50	-	-	50	100

Total ACCS credits required for stage: **20**

Programme Evaluation Report Approved by:

Mike Murphy

Professor Mike Murphy

Chairman to Panel

(Registrar, DIT)

Date _2 - July - 18_

Billy Bennett

Billy Bennett

(Registrar, Letterkenny IT)

Date ___9/9/18.___

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