National College of Ireland

BSc (Hons) in Technology Management

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1 Panel Report

BSc Honours in Technology Management

1.1 Details of Validation Event

PROVIDER	**National College of Ireland**
DATE OF VISIT	22nd January 2015
PROGRAMME(S) EVALUATED	BSc Honours in Technology Management
PROGRAMME (S) RECOMMENDED FOR APPROVAL	BSc Honours in Technology Management
PANEL OF EXPERTS	Mr David Denieffe, Registrar, IT Carlow (*Chair*) Ms Noreen Gubbins, IT Cork Mr Neil Higgins, Limerick IT Mr Brian Watters, IT Blanchardstown Mr Stephen Howell, Microsoft Ireland ***In attendance***: Sinéad O'Sullivan, Director of Quality Assurance & Statistical Services, NCI (*Rapporteur*) Ms. Gráinne Power, QQI (Observing) Ms. Angela McDonnell, QQI (Observing)

1.2 Summary

The Expert Panel, having reviewed the documentation presented by NCI and considered the responses of the programme team during the course of the site visit; recommend approval of the following programme

- BSc Honours in Technology Management

With five (5) conditions & nine (9) recommendations

1.3 Examination of Programmes

The panel met with staff of NCI involved in the design of the programme, to examine the programme submission against the criteria for the validation of programmes as stipulated by the QQI board. In this regard, the QQI's *Core Validation Policy and Criteria, 2010, revised 2013* was used by the Panel. The panel heard that this programme was developed arising from the programmatic review of the BA (Ord) in the Management of Technology in Business and BA(Hons) in Technology Management which have been run at NCI since 2005/6. The panel was presented with comprehensive documentation outlining the new programme proposal. This documentation should be reviewed and fully proofed.

1.3.1 Development and publication of explicit intended learning outcomes

The programme submission documents, together with the outcome of discussions with NCI staff articulated the target learners' prerequisite learning and any other relevant assumptions about programme participants. The panel is satisfied that the programme learning outcomes are appropriate to the level and were designed using QQI's award standards for Computing at level 8 of the National Framework of Qualifications.

1.3.2 Programme content, design and learning environment

The Panel was satisfied that the programme is coherent and fit for their stated purpose.. The panel heard that the programme is designed as a blend of NCI's core competencies in Business and in Computing. The programme content and learning environment are appropriate to the programmes intended learning outcomes and that the module learning outcomes are aligned to the programme learning outcomes. The programme team that the panel met is competent to enable learners to achieve the intended programme learning outcomes and to assess their achievements, in accordance with QQI's *Assessment and Standards 2013.* The panel is satisfied that the School of Computing has sufficient resources within its current full-time and associate faculty to appropriately resource the programme as this programme is replacing the programme being retired due to programmatic review.

Members of review panel visited laboratory teaching spaces, hardware labs and is satisfied that these resources are appropriate to these programme and learner population.

Comment on Programme Modules

Modules were reviewed and subject to the following commentary in relation to specific modules were found to have appropriate learning outcomes, indicative content and assessment strategies.

Problem & Puzzle Solving: The panel commends the presence of this module as a good foundation to programming skills.

Web Authoring/Introduction to Multimedia: The panel recommends that the credit volume for both of these modules should be reviewed as the intended outcomes for the programme put less emphasis on development.

Software Applications for Business: The panel considers that the credit volume and associated contact hours should be increased in order to reflect the importance of this module.

Data Communications & Networks: The panel recommends that content of this module should be reviewed and an opportunity taken to introduce missing aspects of Cloud Computing into the programme in this module.

Fundamentals of Business Analysis: The panel recommends that the credit volume and contact time on this module should be increased.

Stage 3 Project: The learning outcomes for this project should be clearly differentiated from those of the Interdisciplinary Team Project that the learner completes in Stage 2

Introduction to ERP: The panel considers that the relationship with SAP for the resourcing of this programme should be clearly identified so that any risk to its delivery is mitigated.

Workplacement: The panel is satisfied that the processes for operating and assessing workplacement appear robust. The panel recommends that consideration is given to grading workplacement.

Academic Internship: Business Application Development, Application Lifecycle, Communications

The programme documentation would benefit from a narrative that outlines the linkages between these modules and presenting it more clearly on the diagram representing the programme structure.

Strategic Management/Business & Network Security/Technology Management: The panel recommends reviewing these modules and integrating the content into 2 mandatory modules. In this context elements of IT law, security and data protection should be included.

Programming for Big Data: Considerable discussion was had over the required skills of learners to be able to participate and successfully complete the programme. The programme team is satisfied that, based on experience of teaching this module on other programmes that the learning outcomes are achievable. The panel recommends that learner performance on this module should be monitored through its first implementation.

Stage 4 Project: The panel considers that splitting the project into 2 modules (5 & 15 ECTS) may lead to unintended consequences where learners who do not successfully pass the 1ST module at the first attempt will be unable to repeat the module and be unable to achieve an honours award. The panel considers that it is more appropriate to present the module as a 20ECTS capstone project which is commenced in the 1st semester.

1.3.3 Enabling the achievement of the intended programme learning outcomes

The panel noted that the number of learning outcomes at a programme level should be condensed and is satisfied that learners will be able to meet the programme learning outcomes using the delivery mechanisms and patterns as described by the programme team.

1.3.4 Actions and procedures for access, transfer and progression for learners

The Panel was satisfied that the procedures for access, transfer and progression are consistent with national policy. The panel also heard about the support services in numeracy and computing that are afforded to all learners.

The panel is satisfied that the programme's use of *ECTS* (credit) and provisions for Recognition of Prior Learning (RPL) is consistent with QQI's *Assessment and Standards 2013* and with relevant national policy including:

i. NQAI's *Principles and Operational Guidelines for the Implementation of a National Approach to Credit in Irish Higher Education and Training 2006*
ii. NQAI's *Principles and Operational Guidelines for the Recognition of Prior Learning in Further and Higher Education and Training 2005*

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1.3.5 Education and training needs

The panel is satisfied that this programme satisfies a current need in the Irish education market. The panel recommends that the programme team revisit the roles that are outlined in the programme document and clearly articulate the core skills that graduates will have on leaving the programme.

1.3.6 Programme viability

The Panel was satisfied that the programme is consistent with the provider's mission and strategy. The panel heard the projections for student intake over the next 5 year period.

1.3.7 Learner Protection

NCI's policy is that once a programme has commenced, the programme will be completed for all learners enrolled. It is National College of Ireland's policy that, should a programme commence, it will be offered to completion for the specific intake of learners. The College is committed to the provision of this programme. As a member of the Dublin Pillar II Cluster, NCI has agreement from Dublin City University and Maynooth University to provide Learner Protection. Learners may transfer to an appropriate DCU or Maynooth University

programme. In the case where the programme does not have an appropriate transfer option DCU or Maynooth University will complete out the QQI award using NCI faculty and premises. NCI has agreement in principle from QQI and is currently working with QQI on finalising the arrangement of these provisions'

1.3.8 Assessment of learners

The panel is satisfied that the learners will be appropriately assessed and underpins the achievement of the relevant standard of knowledge, skill and competence. The programme document should clearly outline the rules for classification of the final award and any requirements for mandatory submission and/ or passing of assessment components.

1.3.9 Quality Assurance Arrangements

The panel is satisfied that NCI has appropriate quality assurance arrangements in place and that no new quality assurance arrangements are required for these programmes. The documentation submitted demonstrated that the programme development followed rigorous institutional quality assurance to ensure that it conforms with strategy, stakeholders had been consulted with, had clearly identified resource requirements, and had undergone internal review prior to submission.

1.3.10 Ethics

It is expected that providers will have procedures in place to ensure that any teaching and learning or research activity at any level shall be conducted in a manner that is morally and professionally ethical. The panel was satisfied that this requirement has been met in respect of the proposed programmes.

1.3.11 Programme Titles and Award Titles

The Panel heard the rationale for the programme title and that there was considerable debate as part of the programme development regarding the title. Whilst the panel is satisfied that the programme title and award as proposed as being appropriate and consistent with QQI policy for the naming of awards, it recommends that the programme team revisit it again in the context articulating the core skills that a graduate of the programme will have.

1.4 RECOMMENDATION/COMMENT

FOR THE ATTENTION OF THE ACADEMIC COMMITTEE

The panel of experts recommend the validation of the following programme:

NFQ Level	*Level 8*
Programme Title	***BSc (Hons) in Technology Management***
ECTS	*240 ECTS*
Award Type	*Major Award*

Subject to:

Council's general conditions of approval

1.4.1 Commendations

- Inclusion of Problem & Puzzle Solving module

1.4.2 Conditions

C1. The programme document should clearly outline the rules for classification of the final award and any requirements for mandatory submission and/ or passing of assessment components.

C2. The relationships with SAP with respect to its resourcing of teaching staff should be clarified in order to mitigate against risk to delivery

C3. The learning outcomes for the stage 3 project should be clearly outlined and differentiated from those of the stage 2 interdisciplinary project

C4. The stage 4 project should be presented as 1 20 ECTS module

C5. The components of the Academic Internship should be reviewed and a narrative included in the programme submission on how these are linked. The diagram representing the programme structure should be updated to clearly reflect these.

1.4.3 Recommendations

R1. The credit volume and associated contact hours for Software Applications for Business should be increased to 10 ECTS

R2. The credit volume and associated contact hours for Fundamentals of Business Analysis should be increased to 10 ECTS

R3. The content for Data Communications & Networks should be reviewed and an opportunity taken to focus on aspects of Cloud computing

R4. The programme team should consider how graduates will have sufficient exposure to Cloud Computing, in particular the management of technology in the Cloud. This should be evident in throughout the programme.

R5. The core skills of the graduate should be clearly articulated and the name of the degree should reflect this

R6. The performance of learners on the Programming for Big Data module should be monitored in the initial stages of delivery

R7. The programme team should consider grading the work placement

R8. Strategic Management, Business Networks & Technology Management should be merged into 2 core modules. Data Protection and IT law should be included.

R9. Programme documentation should be fully proofed.

APPENDIX

Staff Met

Prof. Jimmy Hill, Vice President Academic Affairs & Research
Mr John McGarrigle, Registrar
Dr Pramod Pathak, Dean of School of Computing
Mr Paul Stynes, Vice Dean, School of Computing
Dr Eugene O'Loughlin, Programme Director BSc Hons Technology Management
Ms Lisa Murphy, Programme Director Higher Certificate in Science in Business Computing
Ms Michael Bradford, School of Computing
Mr Sam Cogan, School of Computing
Mr Eugene McLaughlin, School of Computing
Ms Michele Kehoe, School of Business
Dr Laura Costelloe, Learning & Teaching
Ms Bronwyn McFarlane, School of Business
Dr Orla Lahart, School of Computing
Mr Michael Bane, School of Business
Mr Jonathan Brittain, School of Business
Dr Paul Hayes, School of Computing
Mr Dermot Bradfield, School of Computing
Dr Cristina Muntean, School of Computing
Dr Keith Maycock, School of Computing
Dr Simon Caton, School of Computing
Mr Desmond Gibney, School of Business
Ms Eva Perez, School of Business
Dr Ionna Gherlescu, School of Computing
Ms Caroline Kennedy, Careers Service
Ms Siobhan Mockler, Careers Service

2 Programme Team Response

The programme team for the proposed Level 8 BSc (Hons) in Technology Management programme would like to express their appreciation of the Expert Panel's deliberations and feedback.
The programme presented to the External Panel has undergone a set of considered amendments based on the panel's feedback and the conditions and recommendations relating to the proposed programme.
Responses to each of the recommendations made by the panel follow:

2.1 Conditions

C1. The programme document should clearly outline the rules for classification of the final award and any requirements for mandatory submission and/ or passing of assessment components.

Response:

The rules for classification of the final award have been updated and assessment details have been reviewed and corrected.
The award classification Information can be reviewed at 6.4.6, and the Programme Assessment Strategy can be viewed at 6.4.3. Students have to attempt all assessments as specified in the Module Assessment Strategy.

C2. ***The relationships with SAP with respect to its resourcing of teaching staff should be clarified in order to mitigate against risk to delivery***

Response:

The relationship with SAP with respect to resourcing of the staff was discussed. It is to be noted that SAP staff that have been teaching the module are appointed qualified Associate faculty of the college. In case of an SAP staff not being available the college will appoint suitably qualified Associate Faculty to teach the module. In previous recruitments the School has been able to identify candidates that would have suitable qualifications for lecturing on the "Introduction to ERP" module.

C3. ***The learning outcomes for the stage 3 project should be clearly outlined and differentiated from those of the stage 2 interdisciplinary project***

Response:

The outcomes of the stage 2 interdisciplinary project and stage 3 team project have been more clearly outlined. The learning outcomes of the year 2 interdisciplinary project have been more clearly focused so students are now asked to conduct a small scale interdisciplinary software project. The year three project advances students knowledge in so far as students are expected to develop a medium scale software project in their area of specialisation.

C4. ***The stage 4 project should be presented as one 20 ECTS module***

Response: The project module has been amended to 20 ECTS delivered over the academic year with the following deliverables:

Deliverable	Indicative Submission Times
Project Proposal (5%)	Semester 1, Week 3
Requirements Specification (10%)	Semester 1, Week 6
Prototype Presentation (10%)	Semester 1, Week 13
Project & Final Presentation (70%)	End of Semester 2, *circa* 2nd/3rd Week in May
Project Showcase (5%)	End of Semester 2, *circa* Last Week in May

C5. ***The components of the Academic Internship should be reviewed and a narrative included in the programme submission on how these are linked. The diagram representing the programme structure should be updated to clearly reflect these. The learning outcomes of the Academic Internship must be clearly stated and differentiated from those of the project modules in stages 2 and 3 while aligning to the programme outcomes.***

Response:

The following narrative has been added to the programme document:

All students will complete work placement. However, in exceptional cases where this is not possible students will complete the academic internship. The academic internship comprises three modules namely, Business Application Development, Application Lifecycle and Business

Communication Skills. These modules are intrinsically interlinked and together their learning outcomes map into the same programme learning outcomes, work placement module's learning outcomes map into.

The Business Application Development module provides a practical real-world forum to practice the skills obtained in the Applic ation Lifecycle and Business Communication Skills modules. The Application Lifecycle and Business Communication Skills modules equip students with the skills and knowledge necessary to complete the Business Application Development module. The inter-reliant nature of these modules may allow for some cross module assessment.

The project completed as part of the Business Application Development module builds on the interdisciplinary project in stage 2 of the programme and the team project in stage 3 of the programme. In particular, the advanced nature of this project is two-fold. Firstly, the real-world nature of this project provides students with an opportunity to develop the skills necessary to support a positive business relationship with an external stakeholder, similarly to that required with work placement. Secondly, the requirement of a business plan to support project development allows for the development of an understanding of the holistic approach required for project development.

The result of the assessment for each of the three modules is pass or fail.

Students must pass all three modules of the academic internship. If one or more modules are not passed these must be repeated in the next academic year in line with the repeat assessment strategy for the work placement.

2.2 Recommendations

R1. ***The credit volume and associated contact hours for Software Applications for Business should be increased to 10 ECTS***

Response:
The SAB module has been taught over a number of years in the programme. The programme team has discussed the panel feedback. The feedback from faculty delivering the module was taken into account while redefining the module content and contact time. It is the view of the programme team that in the overall scheme of the programme it is appropriate to have this module at 5 credits with 3 hours of contact time. The main content areas are: ERP, CRM, LMS and Accounting software. The time will allow students to work with sample applications, integrate different scenarios and above all interact with software. The students will receive a real insight to what the systems are used for and how to navigate around them. The overall aim of the module is for students to gain a real experience working with Business Applications. The time allocated to the module will allow for this.

R2. ***The credit volume and associated contact hours for Fundamentals of Business Analysis should be increased to 10 ECTS***

Response:
It has been decided by the programme team to retain these modules at five credits as it is deemed to be sufficient to cover the two central topics of this module (Requirements Elicitation, and Requirements Analysis). These topics are based on two of the six knowledge areas from the Business Analysis Body of Knowledge. The remaining four knowledge areas are covered in the fourth year on the Business Analysis specialization in the Requirements Management module.

R3. ***The content for Data Communications & Networks should be reviewed and an opportunity taken to focus on aspects of Cloud computing***

Response:

The Data Communications and Networking module was fully reviewed bearing in mind the importance of Cloud Computing. Data networks are an enabling technology of Cloud Computing, delivering the high bandwidth requirements for the Cloud services including SaaS, PaaS and IaaS. Cloud Computing is viewed as an evolution of centralised, client-server and distributed processing and is an important overall theme in the module. The importance and relevance of each of the module topics to Cloud Computing is also highlighted.

R4. ***The programme team should consider how graduates will have sufficient exposure to Cloud Computing, in particular the management of technology in the Cloud. This should be evident in throughout the programme.***

Response:

An element of Cloud Computing has now being included to the module Information's Systems Management (previously named Technology Management). Along with this, Data protection and IT law have being included as per the comments of the panel to this module. We feel the three modules – Strategic Management, Business Networks and Technology Management should be standalone modules.

R5. ***The core skills of the graduate should be clearly articulated and the name of the degree should reflect this.***

Response:
The programme team has decided to retain the exising name of the degree – BSc (Hons) in Technology Management. The programme learning outcomes reflect the core skills, and the transferable Skills Matrix has been updated to reflect changes in the programme.

R6. ***The performance of learners on the Programming for Big Data module should be monitored in the initial stages of delivery.***

Response:

As recommended by the panel, performance of the learners will be monitored in the initial stages of delivery. This would mean monitoring from the first assessment and initial lab sessions. This continuous monitoring and analysis will help faculty and Computing suport to provide extra support and classes if needed.

R7. ***The programme team should consider grading the work placement.***

Response:

The programme team and and Career Office discussed the possibility to mark Work (WP) Placement.
30% of the WP mark is for Performance Assessment which is done by the Industry supervisor and Academic Supervisor.
It would be very difficult to have a consistent marking across all students if different people from industry provide marks for the students especially where these marks account towards a final mark in the range of 0 to 100.

The team has also looked at other Colleges that have programmes that include Work Placement module and it was found that Work Placement/ Internship module are marked as pass/ fail. The programme team decided to keep the work placement and academic internship as a pass fail.

R8. ***Strategic Management, Business Networks & Technology Management should be merged into 2 core modules. Data Protection and IT Law should be included.***

Response:

An element of Cloud Computing has now being included to the module Information's Systems Management (previously named Technology Management). Along with this, Data protection and IT law have being included as per the comments of the panel to this module. We feel the three modules – Strategic Management, Business Networks and Technology Management should be standalone modules.

R9. ***Programme documentation should be fully proofed.***

Response: Programme documentation has been proofed.

3 Confirmation of Acceptance by Expert Panel

Reaction of the Panel to the Programme Team Response

I have read the amended submission document for the Bachelor of Science (Honours) in Technology Management and have received feedback from the members of the other external review panel who have also received and reviewed the amended documentation.. I can state that it addresses in a satisfactory manner, all the conditions made by the panel.

Therefore we recommend this programme for validation to QQI.

Signed on behalf of the external review panel

Mr David Denieffe
Chair

Date: 10th March 2015

4 Programme Schedules

4.1 Programme Schedule for Stage 1

Name of Provider			National College of Ireland			Programme Codes			BSHTM		
Programme Title (i.e. named award)			BSc (Hons) Technology Management								
Award Title (QQI named award)			Bachelor of Science (Honours)								
Stage Exit Award Title											
Modes of Delivery (FT/PT/ACCS/BLENDED/OC etc)			FT, PT Blended, Block, ACCS								
Stage			1			Number of Stages			4		
Award Class			Major			Award NQF Level					8
Award EQF Level						Stage Credits (ECTS)					60
Stage NQF Level			6			Stage EQF Level					
Date Effective			14/09/15			ISCED Subject Code					
Ref	Module Title	Semester	Module		ECTS Credit Number	Total Student Effort			Allocation of Marks		
			Status (M/E)	NQF Level		Total Hours	Contact Hours	Independent Learning	Course Work %	End of Module Formal Examination %	Total %
1.1	Problem Solving and Programming Concepts	1	M	6	5	125	48	77	100	0	100
1.2	Introduction to Mathematics for Business & Computing	1	M	6	5	125	36	89	50	50	100
1.3	Web Design	1	M	6	10	250	72	178	50	50	100
1.4	The Computing Industry	1	M	6	5	125	36	89	100	0	100
1.5	Managing Your Learning	1	M	6	5	125	36	89	100	0	100
1.6	Software Applications for Business	2	M	6	5	125	36	89	100	0	100
1.7	Introduction to Management	2	M	6	5	125	36	89	40.00	60.00	100
1.8	Introduction to Marketing	2	M	6	5	125	36	89	50	50	100
1.9	Introduction to Programming	2	M	6	5	125	48	89	50	50	100
1.10	Digital Multimedia	2	M	6	10	250	72	178	100	0	100
Special Regulations: None											

4.2 Programme Schedule for Stage 2

Name of Provider			National College of Ireland		Programme Codes		BSHTM			
Programme Title (i.e. named award)			BSc (Hons) Technology Management							
Award Title (QQI named award)			Bachelor of Science (Honours)							
Stage Exit Award Title										
Modes of Delivery (FT/PT/ACCS/BLENDED/OC etc)			FT, PT Blended, Block, ACCS							
Stage			2		Number of Stages		4			
Award Class					Award NQF Level					8
Award EQF Level					Stage Credits (ECTS)					60
Stage NQF Level			6		Stage EQF Level					
Date Effective			14/09/15		ISCED Subject Code					
Ref	Module Title	Semester	Module		ECTS Credit Number	Total Student Effort			Allocation of Marks		
			Status (M/E)	NQF Level		Total Hours	Contact Hours	Independent Learning	Course Work %	End of Module Formal Examination %	Total %
2.1	Introduction to Databases	1	M	6	5	125	36	89	50	50	100
2.2	Fundamentals of Business Analysis	1	M	6	5	125	36	89	50	50	100
2.3	IT Project Management	1	M	6	5	125	3	89	40	60	100
2.4	Web Authoring	1	M	6	10	250	72	178	100	0	100
2.5	Organisational Behaviour	1	M	6	5	125	36	89	30	70	100
2.6	Introduction to Human Resource Management	2	M	6	5	125	36	89	30	70	100
2.7	Data Communications and Networking	2	M	6	5	125	36	89	40	60	100
2.8	Interdisciplinary Team Project	2	M	6	10	250	96	154	100	0	100
2.9	Business Entrepreneurship	2	M	6	5	125	36	89	30	70	100
2.10	Principles of Accounting	2	M	6	5	125	36	89	40	60	100
Special Regulations: None											

4.3 Programme Schedule for Stage 3

Name of Provider				National College of Ireland		Programme Codes		BSHTM			
Programme Title (i.e. named award)				BSc (Hons) Technology Management							
Award Title (QQI named award)				Bachelor of Science (Honours)							
Stage Exit Award Title											
Modes of Delivery (FT/PT/ACCS/BLENDED/OC etc)				FT, PT Blended, Block, ACCS							
Stage				3		Number of Stages		4			
Award Class						Award NQF Level					8
Award EQF Level						Stage Credits (ECTS)					60
Stage NQF Level				7		Stage EQF Level					
Date Effective				14/09/15		ISCED Subject Code					
Ref	Module Title	Semester	Module		ECTS Credit Number	Total Student Effort			Allocation of Marks		
			Status (M/E)	NQF Level		Total Hours	Contact Hours	Independent Learning	Course Work %	End of Module Formal Examination %	Total %
3.1	Advanced Databases	1	M	7	5	125	36	89	50	50	100
3.2	Team Project	1	M	7	10	250	96	154	100	0	100
3.3	Accounting for Business	1	M	7	10	250	96	154	30	70	100
3.4	Business Intelligence and Data Warehousing I	1	E	7	5	125	36	89	40	60	100
3.5	Introduction to ERP	1	E	7	5	125	36	89	50	50	100
3.6	Work Placement	2	M	7	30	750		750	100		100
3.7	Business Application Development	2	GE1	7	10	250	72	178	100		100
3.8	Application Life Cycle	2	GE1	7	10	250	48	202	100		100
3.9	Business Communication Skills	2	GE1	7	10	250	72	178	100		100

Special Regulations:
Note 1: GE1represent modules of the academic internship. These modules are intrinsically interlinked and together their learning outcomes correlate to those of the work placement.
Note 2: Students must pass all three modules of the academic internship. If one or more modules are not passed then all modules of the academic internship must be repeated in the next academic year in line with the repeat assessment strategy for the work placement.

Note 3: Business Intelligence & Data Warehousing I is mandatory for Business Information Systems and Social Media streams.

4.4 Programme Schedule for Stage 4

Name of Provider				National College of Ireland		Programme Codes		BSHTM		
Programme Title (i.e. named award)				BSc (Hons) Technology Management						
Award Title (QQI named award)				Bachelor of Science (Honours)						
Stage Exit Award Title										
Modes of Delivery (FT/PT/ACCS/BLENDED/OC etc)				FT, PT Blended, Block, ACCS						
Stage				4		Number of Stages		4		
Award Class						Award NQF Level				8
Award EQF Level						Stage Credits (ECTS)				60
Stage NQF Level				8		Stage EQF Level				
Date Effective				14/09/15		ISCED Subject Code				
Ref	Module Title	Semester	Module		ECTS Credit Number	Total Student Effort			Allocation of Marks		
			Status (M/E)	NQF Level		Total Hours	Contact Hours	Independent Learning	Course Work %	End of Module Formal Examination %	Total %
4.1	Project	1 & 2	M	8	20	500	132	368	100	0	100
4.2	Global Supply Chain Management	1	M	8	5	125	36	89	50	50	100
4.3	Requirements Management	1	GE4	8	5	125	36	89	50	50	100
4.4	Business Data Analysis	1	M	8	5	125	36	89	50	50	100
4.5	Programming for Big Data	1	GE1	8	5	125	36	89	100	0	100
4.6	Strategic Management	1	M	8	5	125	36	89	30	70	100
4.7	Technology Management	1	M	8	5	125	36	89	30	70	100.00
4.8	Business Intelligence and Data Warehousing II	1	GE2	8	5	125	36	89	60	40	100
4.9	Advanced Web Authoring	1	GE3	8	5	125	36	89	100	0	100
4.10	Agile Project Management	2	GE4	8	5	125	36	89	30	70	100

Name of Provider			National College of Ireland			Programme Codes			BSHTM	
Programme Title (i.e. named award)			BSc (Hons) Technology Management							
Award Title (QQI named award)			Bachelor of Science (Honours)							
Stage Exit Award Title										
Modes of Delivery (FT/PT/ACCS/BLENDED/OC etc)			FT, PT Blended, Block, ACCS							
Stage			4			Number of Stages			4	
Award Class						Award NQF Level				8
Award EQF Level						Stage Credits (ECTS)				60
Stage NQF Level			8			Stage EQF Level				
Date Effective			14/09/15			ISCED Subject Code				
Ref	Module Title	Semester	Module		ECTS Credit Number	Total Student Effort			Allocation of Marks	
			Status (M/E)	NQF Level		Total Hours	Contact Hours	Independent Learning	Course Work %	End of Module Formal Examination %	Total %
4.11	Data and Web Mining	2	GE1	8	10	250	48	202	50	50	100.00
4.12	Advanced Business Data Analysis	2	GE1	8	5	125	36	89	40	60	100.00
4.13	Business Intelligence and Analytics with Social Media	2	GE3	8	10	250	48	202	40	60	100.00
4.14	Business Process Management	2	GE2, GE4	8	10	250	48	202	30	70	100.00
4.15	Business and Network Security	2	GE2	8	5	125	36	89	30	70	100
4.16	Public Relations and Social Media	2	GE3	8	5	125	36	89	100	0	100.00

Special Regulations:
Note 1: GE1 represents the Data Analytics Stream
Note 2: GE2 represents Business Information Systems Stream
Note 3: GE3 represents the Social Media Stream.
Note 4: GE4 represents the Business Analysis Stream

5 Context of Validation

National College of Ireland
Validation of :
BSc (Hons) in Technology Management

These programmes were evaluated using QQI's policy for devolution of validation sub-processes. The programmes were submitted to QQI in January 2015.
Membership of the Expert Panel was agreed with QQI's Programme Accreditation Unit. No member of the panel has indicated a conflict of interest and has signed a declaration to that effect.

The panel considered the programmes' submission documents, self-evaluation report. The final report was agreed by the panel. The programme team's response to the Expert Panel's agreed report has been considered by the panel and the Chair has indicated in the final report that the panel is happy that the conditions of the report have been fulfilled and that the programmes should be recommended to QQI for approval.

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John McGarrigle
Registrar & Company Secretary
12 March 2015