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Report of the Programme Evaluation Panel

Provider's Name:	National College of Ireland
Address:	Mayor Square
	IFSC
	Dublin 1
QA procedures agreed on:	2006
QA procedures reviewed on:	2010
Programme(s) submitted for approval:	Leading to the award of:
1. MSc in FinTech	Master of Science
2. Postgraduate Diploma in Science in FinTech	Postgraduate Diploma in Science
Date submitted to QQI:	11 th April 2016
Date of Evaluation:	9 May 2016
Date of Report:	10 May 2016

Membership of the Programme Evaluation Panel:

Role	Name	Area of Expertise	QQI Peer Review Reference Listing
Chairperson	Dr Tara Ryan	Registrar, Hibernia College	
External Specialist	Mr Peter Cowap	Governance Risk and Compliance Technology Centre @ UCC	
External Specialist	Dr Aidan Duane	Waterford Institute of Technology	
External Specialist	Prof Paolo Guasoni	Dublin City University	
External Specialist	Mr Jim Sears	University of Surrey	
Industry/Employer Perspective	Dr Amy Neale	Mastercard	
Non-voting Secretary	Dr Maurice FitzGerald	National College of Ireland	

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1 Profile of provider:

NCI, through its two schools, the School of Business, School of Computing, offers over 80 full-time and part-time programmes at levels 6-10 of the National Framework of Qualifications.

NCI's programmes are accredited by the QQI, the Chartered Institute of Personal Development (CIPD) and the Institute of Commercial Management (ICM).

Programmes in Accounting and Finance enjoy recognition by such professional bodies as the Chartered Accountants Ireland (ACA), the Association of Chartered Certified Accountants (ACCA), and the Chartered Institute of Management Accountants (CIMA). National College of Ireland is the largest provider of Chartered Institute of Professional Development (CIPD) accredited programmes in the Human Resource Management area

Although a company limited by guarantee, the College is partially funded through the Department of Education and Skills for 925 undergraduate full-time students. All other funding comes from student fees and commercial income. As part of its internationalisation strategy, the College is active in India, Malaysia, China and more recently Brazil and Africa. Over 50 nationalities are represented within the study body, mainly from communities in the Greater Dublin area.

Enrolment in May 2016 stands at 4,600 students (3,700 Full-Time-Equivalents) of which 43% are part-time. 70% of learners are enrolled on undergraduate programmes which range from major awards to professionally focussed special purpose awards. The College is currently one of the largest providers of Springboard/ICT programmes in the country rising to over 800 places in 2015/16.

The Higher Education Authority (HEA) provides additional funding under initiatives such as Funds for Students with Disability and the Student Assistance Funds.

In line with its mission of widening access to education, the College places a strong emphasis on the needs of the learner and provides a range of learning options that extend beyond traditional classroom dynamics, including distance learning and internet-based learning programmes.

Programmes are provided by a combination of full-time and part-time (associate faculty) which bring current experiences and issues from the workplace into the classroom. The College currently has a policy of normally only appointing holders of PhD to full-time faculty and supports any member of staff who is undertaking PhD study both financially and via workload rebalancing. The College currently has 52 full-time academic staff, of which 60% are holders of a PhD.


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2 Planning:

Programme development since agreement of QA procedures / the last review

The College has developed a significant number of programmes since its last institutional review in 2010 culminating in 2015 with a complete programmatic review of its portfolio across the Business, Computing and Education subject areas. During the period 2014-2016, 31 programmes have been revalidated and a further 35 programmes (15 in 2015) have been validated or are in the process of being validated.

2.1 Purpose of the award

Does the proposed programme address a clear market demand? Yes✓ No

The overall goal of the MSc in FinTech programme is to provide graduates with essential research and development skills to work in the field of Financial Technologies. This is a field newly identified and it will be important to ensure the programme is delicately balanced between the two core elements – computing and finance, to maintain usefulness in the labour market. It is intended that upon completion, graduates will be able to perform independent research that puts them into a position to make informed and critical decisions regarding requirements elicitation and analysis, implementation, evaluation and documentation in FinTech. An embedded award, of a Level 9, 60 ECTS Postgraduate Diploma will be offered to those learners who may need to leave the MSc in FinTech early. The PGDip in FinTech programme may also be made available under labour activation calls such as Springboard. Funding has been secured for 30 places from the HEA under the Springboard call for 2016/17.

Clearer articulation of the specialised FinTech skills being addressed by the programme should be made within the programme documentation. Additionally, Fintech should be **more clearly defined** to cover all technologies related to the financial industry instead of a narrow focus such as block chain.

2.2 Avoidance of duplication

Has the Programme Development Team identified the availability of similar programmes locally, regionally, nationally?

Yes✓ No

Comment: The team identified a number of programmes in various Higher Education Institutions (HEIs) which address some of the elements of the proposed MSc, but none which were identical in focus to that proposed. The panel drew the College's attention to the WIT Masters in Global Financial Systems, which does have many overlaps with the proposed programme. However, it is the panel's view that whilst this is a specialised programme, there is a sufficient demand in the market place to sustain the variety of programmes on offer.

2.3 Stakeholder consultation

Was the level of stakeholder engagement satisfactory? Yes✓ No

Comment: The level of stakeholder engagement was identified in the documentation. Greater insight was provided during the meetings with the panel. It would be **important** in future programme proposals that the full spectrum of stakeholder engagement be documented. The panel also considers it important to **continue with stakeholder engagement** on an ongoing basis. Key liaison points include Enterprise Ireland, and the banking, ICT and FinTech recruitment sectors, as well as those parties identified.

Support for the programme (industry/business/community) Yes✓ No

Comment: Building on the points made above, it is noted that the various iterations of the programme benefited from the suggestions of stakeholders, e.g. the introduction of a dedicated module on Blockchain Technologies. There **may be scope** to utilise guest lecturers from industry or use live projects from companies to enhance the support.

2.4 Efficient and effective use of resources

Does the proposed programme represent both efficient and effective use of the provider's resources?

Yes✓ No

Comment: The College's management articulated a commitment to fully resourcing the programme. It was noted that the programme whilst drawing on other computing and financial programmes was utilising very few modules directly from other programmes, i.e. 90% of modules have been developed for the new programme each module and other modules have been reworked to reflect the Minimum Intended Programme Learning Outcomes of the MSc.

2.5 Resource development over last 5 years (or in direct support of this programme)

Specific Comments:

Staff: The panel notes that NCI is currently recruiting an additional four full-time, academic staff to supplement the existing complement of sixteen full time faculty in the School of Computing, and that provision is also being made to recruit additional associate faculty as/when required by the teaching needs of these programmes. The NCI policy for recruitment of academic staff is that candidates will be holders of PhD or in an advanced stage of completion.

Accommodation: The programme will be provided at the NCI campus in Dublin and there are adequate facilities in place.

Information technology: Comment: It was noted that NCI has introduced a policy of Bring Your Own Device (BYOD) in respect of all of its postgraduate programmes. The College advised that feedback to date was positive in this regard. The panel noted that it would be **important to monitor** this approach in the context of Springboard-funded students, who may have less access to appropriate hardware.

Library: The panel noted that it is NCI policy to purchase copies of the recommended texts given in the Reading Lists, with one copy of each of these held on short loan, and that these physical copies are complemented where available by eBooks; copies of the supplementary reading are also held by the Library. Ebooks and electronic journals are accessible 24 hours a day, 365 days a year.

Administration: Comment: None

Publicity/public information: Comment: The panel noted that in supporting this programme and in marketing it, **clear information** need to be provided to prospective students on both the nature of the programme and the potential employment routes on its completion. The


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panel advised that clarity between the proposed Level 9 programme and a similarly titled Level 8 programme (a Higher Diploma) needs to be maintained.

2.6 Planned development over the coming 5 years?

Have the QQI award standards been explicitly referred to in the programme and does the programme meet those standards at the specified level?

Comment: None Yes✓ No

Has the Provider complied with Protection for Enrolled Learner requirements?

Comment: None Yes✓ No

2.7 Access

Is the expected minimum and maximum number of all learners entering the programme explicitly stated?

Comment: The numbers of intended students need to be stated clearly. Yes No✓

Have any/all prerequisite knowledge, skills or competence or any other specific entry requirement been articulated?

Comment: The section on Access, might merit from a retitling – Access and Entry Requirements. The panel notes that a Level 8 degree in a cognate area, which is defined as in the STEM disciplines is defined. The panel also notes that there is provision for persons with non-cognate degrees to, exceptionally, gain entry. It would be important to **make this context very clear**, as entry to the Level 8 qualification is for those with non-cognate degrees. Therefore the nature of the ‘exceptionality’ needs to be very clear, so that there is no confusion either for applicants, and there is no danger of someone being offered a place on the Level 9 programme who does not have a reasonable capacity to complete it. It is important not to conflate this matter with the overarching RPL policy.

The panel also advised that there needs **to be greater clarity** on the English Language entry requirement, e.g. are there specifications around the component elements of the IELTS 6.5 score


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3 Quality Assurance

3.1 Application of agreed quality assurance procedures for development of programmes

Were the agreed quality assurance procedures for programme development followed?

Comment: None	Yes✓	No
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Has the programme team demonstrated how programme delivery will be monitored in accordance with agreed QA procedures?

Comment: None	Yes✓	No
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Are programme management arrangements adequate and coherent?

Comment: None	Yes✓	No
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4 Programme structure and content

Is the programme structure well designed, coherent and fit for its stated purpose?

Yes✓ No

Comment: This criterion has somewhat been addressed. Provided the College addresses the conditions and recommendations of this report the panel is of the view that the programme will meet standards of good design and it will be fit for purpose.

4.1 Programme learning outcomes

Do the programme learning outcomes comply with national standards for the level of award proposed?

Yes✓ No

The programme does address the NFQ Level 9 standard and the QQI 2014 Award Standard for Science. It is noted that the programme has also been designed to meet the Computing Standard. Given the nature of the programme which straddles Computing and Finance, care needs to be taken to **ensure the programme** standard and the overarching goal of the programme are not compromised.

Notwithstanding the above, **the number of Minimum Intended Programme Learning Outcomes** – 33 MIPLOs are currently listed for the MSc in FinTech – needs to be radically reduced. The level of detail and specificity offered within the documentation is inappropriate. No more than 12-15 MIPLOs in total, with an appropriate level of broadness employed for each one of these, would suffice.

Are module descriptions adequate and relevant?

Yes✓ No

Comment: As indicated above the College is proposing both a Level 9 and a distinct Level 8 qualification in the same discipline. Whilst the panel noted that the module intended learning outcomes are different between the two programmes, **the modules would merit a revisiting** to ensure that all are sufficiently clear and at the appropriate level

Are modules relevant and current?

Yes✓ No

Comment: As indicated below there are some required amendments to the modules to ensure that the programme meets its overall objectives.

Does the combination of modules chosen have the coherence to support the proposed award?

Yes✓ No

Comment: As above.

4.2 Learning Modes

Can the teaching and learning strategies proposed support achievement of the required learning outcomes?

Yes✓ No

Comment: The College advised that whilst they designed the programme so that it could be provided in a blended mode, it is not their intent to provide it in this context currently. Accordingly this not an area that the panel considered. Should the College wish to do this in the future, a Differential Validation would be required.



Are the delivery mechanisms proposed adequate to the needs of the programme and the proposed learner cohorts?

Comment: None

Yes✓ No

4.3 Assessment strategies

Are assessment processes and methods adequately described?

The **reassessment detail** needs to be clarified. If students are required to receive an overall mark of 40% to pass a module, and are not required to pass individual component elements of a module, then this should be stated more clearly in each of the module descriptors where it applies.

Yes No✓

Are these strategies appropriate to this type of award, in terms of type, frequency and volume?

The stated volume of coursework has the very real potential to overwhelm learners. As currently delineated, it often does not, for example, offer them enough opportunity to reflect upon previous summative assessment prior to undertaking further work. It also needs to be remembered that students undertake a programme of study, not a series of modules; thus, the individual assessment components of any individual module need to keep the wider programme more fully in mind. The coursework burden on students is particularly, though not necessarily only, apparent during the course of Semester 2. **Alternative modes of assessment** instead of multiple pieces of coursework, particularly the wider use of terminal examinations, should be employed to help gauge student attainment of learning outcomes.

Yes No✓

Is assessment explicitly linked with intended learning outcomes?

Comment: Volume is nevertheless a concern.

Yes✓ No

Does the assessment strategy underpin the achievement of the relevant standard of knowledge, skill and competence?

Comment: See above.

Yes✓ No

4.4 Duration

What is the intended duration of the Programme?

Three semesters for full-time study, five semesters for part-time study.

What is the lifespan of the programme (e.g. single cohort intake to satisfy limited local demand; multiple intakes over the following 5 years etc.?)

It is projected that, assuming anticipated demand, this programme will be delivered on an ongoing basis.

Does the Panel believe this to be realistic?

Comment: None

Yes✓ No


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Are there flexible modes of participation? Yes✓ No

Comment: It was noted that some students who are currently in employment may undertake this programme based on part-time participation. Part-time and full-time Level 9 students would study in the same class group on occasion.

4.5 Credits

Is credit allocation in accordance with national and international guidelines?

Comment: None Yes✓ No

Considering the level, outcomes and volume of each module, is the number of credits attached to each appropriate?

Comment: The comments above on assessment are relevant. Yes✓ No

Considering the stated objective of the programme is the number of credits attached to the award appropriate?

Comment: None Yes✓ No

4.6 NFQ Level

Is the proposed level of the programme in accordance with institutional policy/national norms?

Yes No✓

These are level 9 awards, yet the **language employed** in much of the presented documentation here (e.g. certain module intended learning outcomes) is not necessarily distinguishable from that used for the Higher Diploma in FinTech at Level 8.

4.7 Programme titles and award

Is the title consistent with national policy, is it informative and is it fit for purpose?

Comment: Consideration should be given to giving the **Programme title** a full title, i.e. MSc in Financial Technologies Yes✓ No

4.8 Transfer and Progression

Has the Programme Development Team identified realistic transfer and progression opportunities/possibilities that learners may avail of following achievement of this award?

Comment: None Yes✓ No



5 Module Titles, Content and Assessment Strategy

5.1 Financial Markets

Is the title informative and is it fit for purpose? Yes✓ No

Comment: None

Are the specific learning outcomes a) properly stated, b) sufficient and c) achievable?

Yes No✓

The module learning outcomes and objectives stated here need to **differentiate more** between this module and the *e-Finance & Services* module on the Higher Diploma in FinTech.

Is the content sufficiently informative and is it fit for purpose? Yes No✓

The indicative module content suggests that a lot of ground is going to be covered in a relatively short space of time; more synergies with the *Financial Analytics* module should be possible. **More explicit emphasis** on the FinTech aspects of this module are necessary.

Does the Assessment Strategy align sufficiently with the intended learning outcomes?

Yes✓ No

Comment: None

Is the required reading and supplementary reading appropriate, current and realistic?

Yes✓ No

Comment: None

5.2 Data Analytics

Is the title informative and is it fit for purpose? Yes✓ No

Comment: None

Are the specific learning outcomes a) properly stated, b) sufficient and c) achievable?

Yes✓ No

Comment: None

Is the content sufficiently informative and is it fit for purpose? Yes✓ No

It could prove to be useful for the learners if appropriate financial data sets are employed on this module.

Does the Assessment Strategy align sufficiently with the intended learning outcomes?

Yes✓ No

Comment: None


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Is the required reading and supplementary reading appropriate, current and realistic?

Comment: None Yes✓ No

5.3 Information Assurance and Cybersecurity

Is the title informative and is it fit for purpose? Yes✓ No

Comment: None

Are the specific learning outcomes a) properly stated, b) sufficient and c) achievable?

Comment: None Yes✓ No

Is the content sufficiently informative and is it fit for purpose? Yes No✓

The **sub-section on Learning & Teaching Strategy** is missing from this module descriptor. Care should be taken to ensure that unnecessary overlap between this and areas of Data Governance & Compliance module.

Does the Assessment Strategy align sufficiently with the intended learning outcomes?

Yes No✓

The continuous assessment/terminal examination mix of 60%:40% was raised as a possible stumbling-block for learners; a further explicit split of the continuous assessment element may be useful, i.e. so that there is an earlier and recognised checkpoint ahead of a second piece of coursework. This could help to address and alleviate unnecessary risks to student progression.

Is the required reading and supplementary reading appropriate, current and realistic?

Comment: None Yes✓ No

5.4 Data Governance and Compliance

Is the title informative and is it fit for purpose? Yes✓ No

Comment: None

Are the specific learning outcomes a) properly stated, b) sufficient and c) achievable?

Comment: None Yes✓ No

Is the content sufficiently informative and is it fit for purpose? Yes✓ No

It could prove to be useful for the learners if a comparative reference is made to **data protection laws** across the US/UK/EU jurisdictions during the course of this module.


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Does the Assessment Strategy align sufficiently with the intended learning outcomes?

Comment: None Yes✓ No

Is the required reading and supplementary reading appropriate, current and realistic?

Comment: None Yes✓ No

5.5 Blockchain Technologies

Is the title informative and is it fit for purpose? Yes✓ No

Comment: None

Are the specific learning outcomes a) properly stated, b) sufficient and c) achievable?

Comment: None Yes✓ No

Is the content sufficiently informative and is it fit for purpose? Yes✓ No

Comment: None

Does the Assessment Strategy align sufficiently with the intended learning outcomes?

Yes No✓

This was the exemplar module which was used to illustrate the more general point regarding a lack of clarity in module descriptors surrounding reassessment detail.

In addition, questions were also raised in relation to the nature of the terminal examination (e.g. more details regarding how it is to be undertaken, what is being tested, etc.); the same point applies to the assessment description employed for this and other terminal examinations (see sub-sections 7.3.4, 7.4.5, 7.5.5, 7.6.5, and 7.8.4). A statement to the effect of 'n/a' or similar does not offer enough guidance to learners.

The process by which team projects will be graded should be clarified to ensure that all learners including those considered 'less technical', will be appropriately assessed.

Is the required reading and supplementary reading appropriate, current and realistic?

Comment: None Yes✓ No

5.6 Financial Analytics

Is the title informative and is it fit for purpose? Yes✓ No

Comment: None

Are the specific learning outcomes a) properly stated, b) sufficient and c) achievable?

Yes No✓



The module learning outcomes stated here need to differentiate more between this module and the *Financial Data Analysis* module on the Higher Diploma in FinTech.

Is the content sufficiently informative and is it fit for purpose? Yes No✓

More explicit emphasis on the FinTech aspects of this module are necessary.

Does the Assessment Strategy align sufficiently with the intended learning outcomes?

Comment: None Yes✓ No

Is the required reading and supplementary reading appropriate, current and realistic?

Comment: None Yes✓ No

5.7 Contemporary Topics

Is the title informative and is it fit for purpose? Yes No✓

There may be room for this **module to retitled**, for instance by adopting the name of the programme as an ancillary title or subtitle, as in *Contemporary Topics in FinTech* or *Contemporary Topics – FinTech*.

Are the specific learning outcomes a) properly stated, b) sufficient and c) achievable?

Comment: None Yes✓ No

Is the content sufficiently informative and is it fit for purpose? Yes✓ No

Comment: None

Does the Assessment Strategy align sufficiently with the intended learning outcomes?

Comment: The rationale requiring this module to be passed to proceed to the Research Project should be articulated. Yes✓ No

Is the required reading and supplementary reading appropriate, current and realistic?

Comment: None Yes✓ No

5.8 Digital Forensics and Auditing

Is the title informative and is it fit for purpose? Yes✓ No

Comment: None

Are the specific learning outcomes a) properly stated, b) sufficient and c) achievable?

Yes✓ No


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Comment: The programme team should ensure that the number of tutorial hours is sufficient to equip students with the skills to create a forensics software artefact. The requirements for this artefact need to be clarified further with respect to its sophistication.

Is the content sufficiently informative and is it fit for purpose? Yes No✓

The sub-section on **Learning & Teaching Strategy** is missing from this module descriptor.

Does the Assessment Strategy align sufficiently with the intended learning outcomes?

Yes No✓

The nature of the **continuous assessment** element should be outlined under the 'Assessment Description' sub-heading (see sub-section 7.8.4).

Is the required reading and supplementary reading appropriate, current and realistic?

Yes✓ No

Comment: None

5.9 Financial and Quantitative Modelling

Is the title informative and is it fit for purpose? Yes✓ No

Comment: None

Are the specific learning outcomes a) properly stated, b) sufficient and c) achievable?

Yes✓ No

Comment: None

Is the content sufficiently informative and is it fit for purpose? Yes No✓

More explicit emphasis on the **FinTech aspects** of this module are necessary; synergies with the *Financial Markets* module should be possible.

Does the Assessment Strategy align sufficiently with the intended learning outcomes?

Yes No✓

This is one of the modules with 100% continuous assessment where a terminal examination may help to alleviate workload during the semester, as well as not allowing module learning outcomes to be over-assessed by multiple coursework elements.

Is the required reading and supplementary reading appropriate, current and realistic?

Yes✓ No

Comment: None

5.10 Entrepreneurship in FinTech

Is the title informative and is it fit for purpose? Yes✓ No

Comment: None

Are the specific learning outcomes a) properly stated, b) sufficient and c) achievable?


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Comment: None Yes✓ No

Is the content sufficiently informative and is it fit for purpose? Yes No✓

The subject of **Intellectual Property**, which it was suggested would be included as part of the *Data Governance and Compliance* module curriculum, should also be addressed here.

Does the Assessment Strategy align sufficiently with the intended learning outcomes?

Yes No✓

There may well be room to expand the assessment beyond the Lean Canvas Business Model.

Is the required reading and supplementary reading appropriate, current and realistic?

Comment: None Yes✓ No

5.11 Research Project

Is the title informative and is it fit for purpose? Yes No✓

This module and *Industry Based Research Project* **cannot both be listed as mandatory** in their respective module descriptors – this is a streamed elective.

Are the specific learning outcomes a) properly stated, b) sufficient and c) achievable?

Comment: None Yes✓ No

Is the content sufficiently informative and is it fit for purpose? Yes No✓

The mechanics of supervision need to be outlined more clearly, for instance in a Teaching & Learning Strategy sub-section; details regarding Teaching & Learning Strategy are missing from here, as well as from the descriptors of a number of other modules.

Does the Assessment Strategy align sufficiently with the intended learning outcomes?

Comment: None Yes✓ No

Is the required reading and supplementary reading appropriate, current and realistic?

Comment: None Yes✓ No

5.12 Industry Based Research Project

Is the title informative and is it fit for purpose? Yes No✓

This module and *Research Project* **cannot both be listed as mandatory** in their respective module descriptors – this is a streamed elective.


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Are the specific learning outcomes a) properly stated, b) sufficient and c) achievable?

Yes✓ No

Comment: The deliverables for this module should be reconsidered **given the timeframe** required. Alternatively a longer timeframe should be allowed. Processes for ensuring that the student receives the correct support and mentoring as well as ensuring that the work is that of the student will need to be worked through.

Is the content sufficiently informative and is it fit for purpose?

Yes No✓

The **supervision arrangements** (e.g. in also involving an industry supervisor) need to be outlined more explicitly in the Teaching & Learning Strategy sub-section.

Does the Assessment Strategy align sufficiently with the intended learning outcomes?

Yes✓ No

Comment: None

Is the required reading and supplementary reading appropriate, current and realistic?

Yes✓ No

Comment: None

6 Specific Issues to be addressed by the provider

6.1 Conditions of Approval:

- C1. The Minimum Intended Programme Learning Outcomes (MIPOs) require thorough rationalisation, i.e. so that they are more generic and less specific in nature, as well as being considerably less numerous (a maximum of 12-15). MIPOs should be expressed at a level of generality that readily allow module learning outcomes to contribute to their realisation, while also mapping to and from the Science Award standards.
- C2. The curriculum as a whole needs to be rebalanced so that there is more explicit emphasis on financial dimension in FinTech. This will mean, for instance, reworking the curriculum offered in *Financial Markets*, *Financial Analytics*, and *Financial and Quantitative Modelling* to avoid overlap and maximise complementarity among these modules
- C3. The student workload implied through the assessment schedule is too high. Thus, the number of summative assessments needs to be reduced significantly, particularly but not only in Semester 2. Greater consideration could be given to the use of examinations across the programme as an alternative means of ensuring that module learning outcomes are being met.
- C4. Greater differentiation is required between the awards at Level 9 and the Higher Diploma in FinTech at Level 8. This should be more clearly expressed throughout the programme documentation, including in terms of programme rationales, MIPOs, etc., as well as learning outcomes, objectives, curriculum content, assessment strategy, etc., in the individual module descriptors.
- C5. Module descriptors should be refined with the skills development of specific programme target audiences in mind so that, for example, *Entrepreneurship in FinTech* might consider app development and programming as an appropriate case study and/or output.
- C6. The generalised 'Future and emerging technologies' placeholder that is present in most of the module descriptors should be removed. This consideration is already inherent in dynamic programmes of study and standard quality assurance mechanisms.

6.2 Recommendations:

In addition to, or complementary to the feedback above identified **in bold**, the following specific items merit consideration:

- R1. The title of the programme should be reconsidered adopting its full title i.e. Financial Technologies rather than 'FinTech'.
- R2. The College's policy on the assessment of group work should be explicitly referenced in the documentation.
- R3. Future proposals should include copies of the stakeholder feedback.


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- R4. Consideration should be given to developing a landscape module or part of module which introduces the concept of Financial Technologies and its role in the wider digital economy. This module could, in addition to providing a general overview and introduction to FinTech, discuss trends in the digital economy, business models of digital platforms and look more closely at emerging, alternative forms of finance including p2p lending, p2p payments, crowdfunding, crowdlending, and invoice financing, etc..
- R5. Further thought should be given to module weightings. For example, expanding the *Entrepreneurship in FinTech* module from 5 to 10 ECTS would allow the entwined Business and Computer Science aspects of the programme to be explored in considerably more depth. Such a change might readily be balanced by a corresponding reduction in the *Research Project* and *Industry Based Research Project* modules from 25 to 20 ECTS.
- R6. If one of the target audiences of the programme is, aspiring entrepreneurs, Business Modelling could be addressed more explicitly with business model canvas and a review of different existing business models for Fintech businesses could be undertaken. Content related to establishing a business, business planning, and IP management could be included more explicitly in addition to pitching. The Final Project could be developed as a business plan for those aspiring to set up their own companies. This would provide a pathway for students to complete the programme and then progress to a business incubator. In this context work experience could be further developed by including mentoring. A business incubator associated with School could be expanded to possibly work on projects with designated start-ups to gain practical experience about emerging companies. It may be helpful also to include innovation management in a module which would be useful for those setting up their businesses as well as those working in larger organisations.
- R7. Deeper consideration could be given to the inclusion of an elective module that – given the nature of the programme, the projected target audience, the resulting graduate destinations, etc. – is more firmly centred on *Programming*. Alternatively or additionally one could embed coding into a module as an experience to build an understanding of software development for non-IT specialists; this can be developed further to possibly relate to prototyping to develop understanding of the product development process.
- R8. Clearer articulation of the specialised FinTech skills being addressed by the programme should be made within the programme documentation. FinTech should be more clearly defined to cover all technologies related to the financial industry instead of a narrow focus such as block chain. Additionally financial risk analysis/management could be addressed in the modules more explicitly both from a data analytics basis and finance theory basis. Financial theory can be more explicitly sign-posted or apportioned among modules to make sure that all relevant content is covered and is complementary.
- R9. The documentation should address how guest lecturers and field trips outside of the College will be facilitated.

- R10. *Digital Forensics & Auditing* – The programme team should ensure that the number of tutorial hours is sufficient to equip students with the skills to create a forensics software artefact. The requirements for this artefact need to be clarified further with respect to its sophistication.
- R11. *Industry Research Project* – The deliverables for this module should be reconsidered given the timeframe required. Alternatively a longer timeframe should be allowed. Processes for ensuring that the student receives the correct support and mentoring as well as ensuring that the work is that of the student will need to be worked through.
- R12. The role of Regulatory Technology (RegTech) should be addressed explicitly within the programme.
- R13. The inclusion of topics such as Incumbent Market Disruption, non banks, new business modules/markets, intermediation-distintermediation-re-intermediation should be considered.
- R14. Social media and digital marketing are linked and consideration could be made to addressing them more explicitly in one of the modules. They can be related to the growth of Fintech platforms.

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7 Overall Result of Evaluation Panel Review:

The Programme is recommended to the Programmes and Awards Executive Committee for approval subject to the provision to QQI of a revised submission document including programme schedule(s), which addresses the conditions and recommendations required in the report and which has been signed off by the Panel Chair.

This report has been agreed by the Evaluation Panel and is signed on their behalf by the Chair.

Panel Chairperson:

Date: 30th May 2016

The Report of the External Review Panel contains no assurances, warranties or representations express or implied, regarding the aforesaid issues, or any other issues outside the Terms of Reference.

While QQI has endeavoured to ensure that the information contained in the Report is correct, complete and up-to-date, any reliance placed on such information is strictly at the reader's own risk, and in no event will QQI be liable for any loss or damage (including without limitation, indirect or consequential loss or damage) arising from, or in connection with, the use of the information contained in the Report of the External Evaluation Panel.

National College of Ireland

Response of the Programme Team



MSc and PGDip in FinTech

Validation of a New Programme
QQI Panel

June 2016
Post Panel Report

1 Response to External Panel

On behalf of the programme team, the programme director graciously thanks the panellists for their time, input, and suggestions. In so far as has been possible all constraints, recommendations and suggestions have been implemented, and the programme has greatly benefited from this process. This document outlines the changes to the programme in response to the validation report.

In section 1.1 a high level overview of changes to the MSc and PGDip in FinTech programmes is provided. Section 1.2 details changes made in response to approval conditions. Section 1.3 details changes made in response to recommendations, where a recommendation has not or could not be implemented a reason is provided. Finally, in section 1.4 module specific changes are highlighted.

1.1 Summary of Changes

Programme Learning Outcomes New minimum level programme learning outcomes have been introduced. Both the level 8 and level 9 awards have been reviewed at both the programme as well as module levels to ensure clarity of differentiation between the two programmes. Also noteworthy is an adjustment on learning and teaching strategies to more explicitly include programming skills throughout the programme.

Programme Structure The programme has one new module (Crowd Markets; Sem 2; Elective, 5 ECTS), replacing the Financial and Quantitative Modelling module, which was removed as a consequence of curriculum rebalancing.

Programme Assessment The overall assessment strategy has been reviewed with the result that learners have reduced number of assessments, i.e. workload. Learners now have a mid term checkpoint assessment to highlight progress through the programme curricula in most modules. Where possible terminal examinations have been included with appropriate descriptors. Reassessment detail has been reviewed across all modules.

Programme Documentation In response to comments on the presentation of programme documents, the documents have been significantly reformatted and thoroughly proof read. Here key changes to note are:

- The assessment schedule has been reformatted to afford readers a better overview of the programme assessment strategy and timing.
- A complete reading list is provided arranged by type (recommended, supplementary, journal articles) to potential learners to better prepare for the programme and garner a more holistic view of the volume of reading for the programme.
- Module assessment strategies have also been reformatted and additional clarity has been added with respect to specific details of the assessment and/or terminal exam.

College Policy Documents Better referencing to College policy documentation is now included to provide learners with a more detailed perspective on relevant policies.

1.2 Approval Constraints

C1 The Minimum Intended Programme Learning Outcomes (MIPLOs) require thorough rationalisation, i.e. so that they are more generic and less specific in nature, as well as being considerably less numerous (a maximum of 12-15). MIPLOs should be expressed at a level of generality that readily allow module learning outcomes to contribute to their realisation, while also mapping to and from the Science Award standards.

Response The number of Minimum Programme Learning Outcomes has been reduced to 8. Their granularity has also been increased to better afford learners to identify core programme learning outcomes and their mapping to specific modules.

C2 The curriculum as a whole needs to be rebalanced so that there is more explicit emphasis on financial dimension in FinTech. This will mean, for instance, reworking the curriculum offered in Financial Markets, Financial Analytics, and Financial and Quantitative Modelling to avoid overlap and maximise complementarity among these modules

Response The curriculum has been rebalanced. Most notably in the modules Financial Markets as well as Financial Analytics. In addition, the Financial and Quantitative Modelling module has been removed, and its core curriculum components have been added to other modules to improve consistency across modules. Similarly, the Crowd Markets module was introduced.

C3 The student workload implied through the assessment schedule is too high. Thus, the number of summative assessments needs to be reduced significantly, particularly but not only in Semester 2. Greater consideration could be given to the use of examinations across the programme as an alternative means of ensuring that module learning outcomes are being met.

Response The assessment strategy has been rebalanced. The number of assessment components has been significantly reduced. For ease of presentation, a more intuitive assessment schedule has been added to the programme document at the end of section 6.

C4 Greater differentiation is required between the awards at Level 9 and the Higher Diploma in FinTech at Level 8. This should be more clearly expressed throughout the programme documentation, including in terms of programme rationales, MIPOs, etc., as well as learning outcomes, objectives, curriculum content, assessment strategy, etc., in the individual module descriptors.

Response Both programmes have been significantly adjusted to better aid learners to differentiate between the two programmes. Key changes here are:

- The improvement to the MIPOs in the MSc/PGDip programme, as noted in the response to C1.
- A statement of purpose has been added to the HDip programme noting it as *mainly intended for those aiming for entry to a Masters degree programme but who have not yet studied Finance or Information Technology in sufficient depth for direct entry.*
- The learning outcomes of HDip and MSc/PGDip modules have been adjusted to better emphasize the depth of learning comparable modules entail.

C5 Module descriptors should be refined with the skills development of specific programme target audiences in mind so that, for example, Entrepreneurship in FinTech might consider app development and programming as an appropriate case study and/or output.

Response Completed, as noted in the module comments in section 1.4.

C6 The generalised Future and emerging technologies placeholder that is present in most of the module descriptors should be removed. This consideration is already inherent in dynamic programmes of study and standard quality assurance mechanisms.

Response These have been removed.

1.3 Recommendations

R1 The title of the programme should be reconsidered adopting its full title i.e. Financial Technologies rather than FinTech.

Response The programme team believe that a renaming the programme may add ambiguity to the content and purposes of the programme. A core premise for this argument is that the portmanteau FinTech is more familiar to potential learners than Financial Technologies.

R2 The Colleges policy on the assessment of group work should be explicitly referenced in the documentation. Future proposals should include copies of the stakeholder feedback.

Response This has been added to section 6.6.3. Stakeholder feedback has been added to the programme Appendix.

R3 Consideration should be given to developing a landscape module or part of module which introduces the concept of Financial Technologies and its role in the wider digital economy. This module could, in addition to providing a general overview and introduction to FinTech, discuss trends in the digital economy, business models of digital platforms and look more closely at emerging, alternative forms of finance including p2p lending, p2p payments, crowdfunding, crowdlending, and invoice financing, etc..

Response This has been addressed through the addition of the Crowd Markets elective.

R4 Further thought should be given to module weightings. For example, expanding the Entrepreneurship in FinTech module from 5 to 10 ECTS would allow the entwined Business and Computer Science aspects of the programme to be explored in considerably more depth. Such a change might readily be balanced by a corresponding reduction in the Research Project and Industry Based Research Project modules from 25 to 20 ECTS.

Response All NCI MSc programmes have a 25 or 30 credit research project. The programme team believe that the cross module assessment between the (Industry based) Research Project and Entrepreneurship in FinTech modules as well as the changes already made to the latter address the intention of this recommendation.

R5 If one of the target audiences of the programme is, aspiring entrepreneurs, Business Modelling could be addressed more explicitly with business model canvas and a review of different existing business models for Fintech businesses could be undertaken. Content related to establishing a business, business planning, and IP management could be included more explicitly in addition to pitching. The Final Project could be developed as a business plan for those aspiring to set up their own companies. This would provide a pathway for students to complete the programme and then progress to a business incubator. In this context work experience could be further developed by including mentoring. A business incubator associated with School could be expanded to possibly work on projects with designated start-ups to gain practical experience about emerging companies. It may be helpful also to include innovation management in a module which would be useful for those setting up their businesses as well as those working in larger organisations.

Response As noted in the panel discussion NCI has a business incubation centre on site affording ample opportunity for technology transfer as well as industry on campus arrangements between the programme and start up culture within the IFSC. The programme team do not believe that documenting processes and procedures thereof within a programme document is appropriate. The assessment strategy of the Entrepreneurship in FinTech module has been adjusted to provide scope for other modelling methodologies.

R6 Deeper consideration could be given to the inclusion of an elective module that given the nature of the programme, the projected target audience, the resulting graduate destinations, etc. is more firmly centred on Programming. Alternatively or additionally one could embed coding into a module as an experience to build an understanding of software development for non-IT specialists; this can be developed further to possibly relate to prototyping to develop understanding of the product development process.

Response Programming as well as statistics boot camps (see section 6.6.2) have been added to the start of the first semester. These will provide a basis for learners to quickly (re)acquaint themselves with these topics. Similarly, the learning and teaching strategy of the Data Analytics module has been adjusted to explicitly include programming teaching in the context of data analytics.

R7 Clearer articulation of the specialised FinTech skills being addressed by the programme should be made within the programme documentation. FinTech should be more clearly defined to cover all technologies related to the financial industry instead of a narrow focus such as block chain. Additionally financial risk analysis/management could be addressed in the modules more explicitly both from a data analytics basis and finance theory basis. Financial theory can be more explicitly sign-posted or apportioned among modules to make sure that all relevant content is covered and is complementary.

Response As noted in the response to C2 a rebalance of curriculum has been instrumented to also address this recommendation.

R8 The documentation should address how guest lecturers and field trips outside of the College will be facilitated.

Response The programme team understand the motivation for this recommendation. However, were wary of its inclusion within the programme document as the availability of guest lectures and field trips will vary, as will their timing. Therefore, all such arrangements will be discussed and minuted within the programme committee meetings that take place prior to commencing each semester.

R9 Digital Forensics Auditing: The programme team should ensure that the number of tutorial hours is sufficient to equip students with the skills to create a forensics software artefact. The requirements for this artefact need to be clarified further with respect to its sophistication.

Response The number of tutorial hours has been reviewed and increased.

R10 Industry Research Project: The deliverables for this module should be reconsidered given the timeframe required. Alternatively a longer timeframe should be allowed. Processes for ensuring that the student receives the correct support and mentoring as well as ensuring that the work is that of the student will need to be worked through.

Response Each industry based research project is handled on a case by case basis. In some cases it will be necessary to accommodate differences in start and/or end time based upon the industry context of the project. The industry based research project module descriptor has been updated to accommodate the remaining recommendations.

R11 The role of Regulatory Technology (RegTech) should be addressed explicitly within the programme.

Response The programme team agree that the area of RegTech is important, but that a sufficient introduction to the area is already present. This area will be closely monitored for consideration as an elective in the future. The programme team also notes that regulatory aspects have also been added via the inclusion of the Crowd Markets module.

R12 The inclusion of topics such as Incumbent Market Disruption, non banks, new business modules/markets, intermediation-distintermediation-re-intermediation should be considered.

Response This has been addressed through the inclusion of the Crowd Markets module.

R13 Social media and digital marketing are linked and consideration could be made to addressing them more explicitly in one of the modules. They can be related to the growth of Fintech platforms.

Response The Contemporary Topics in FinTech module is already strategically aligned to accommodate (emerging) themes such as these.

1.4 Changes to Modules

1.4.1 Financial Markets

Comments

- The module learning outcomes and objectives stated here need to differentiate more between this module and the e-Finance Services module on the Higher Diploma in FinTech.
- The indicative module content suggests that a lot of ground is going to be covered in a relatively short space of time; more synergies with the Financial Analytics module should be possible. More explicit emphasis on the FinTech aspects of this module are necessary.

Response

- The learning outcomes of the e-Finance module have been adjusted to better differentiate the two modules. The learning outcomes of the Financial Markets module have been adjusted to reflect the additional content from Financial and Quantitative Modelling.
- To improve synergies and content balance across the programme as a whole, some theoretical foundations from the Financial and Qualitative Modelling module have been added to better synergise with, and prepare for, the Financial Analytics Module.

1.4.2 Data Analytics

Comments

- It could prove to be useful for the learners if appropriate financial data sets are employed on this module.

Response

- The module assessment strategy has been adjusted to reduce the number of assessments
- A higher emphasis has been placed on financial data sets, please refer to the sample assessments.
- The learning and teaching strategy of this module has been adjusted to facilitate a higher emphasis on programming in accordance with recommendation R7

1.4.3 Information Assurance and Cybersecurity

Comments

- The sub-section on Learning & Teaching Strategy is missing from this module descriptor. Care should be taken to ensure that unnecessary overlap between this and areas of Data Governance & Compliance module.
- The continuous assessment/terminal examination mix of 60%:40% was raised as a possible stumbling-block for learners; a further explicit split of the continuous assessment element may be useful, i.e. so that there is an earlier and recognised checkpoint ahead of a second piece of coursework. This could help to address and alleviate unnecessary risks to student progression.

Response

- The learning and teaching strategy section has been added.
- The assessment strategy of the module has been changed to provide learners a checkpoint on performance earlier in the semester.
- Potential overlap between this and the Data Governance & Compliance module has been noted.

1.4.4 Data Governance and Compliance**Comments**

- It could prove to be useful for the learners if a comparative reference is made to data protection laws across the US/UK/EU jurisdictions during the course of this module.

Response

- As noted in the panel discussion including US jurisdiction would overwhelm learners, as the legal theory needed would outweigh the benefits to learning. Adding a comparison to US jurisdiction would also then suggest that other jurisdictions be added where examples include but are not limited to Chinese, Japanese, Sharia, Swiss etc. However, in order to find a compromise, the assessment strategy for the module has been modified to encourage learners to independently explore other jurisdictions. See sample assessment bullet 5(c).

1.4.5 Blockchain technologies**Comments**

- This was the exemplar module which was used to illustrate the more general point regarding a lack of clarity in module descriptors surrounding reassessment detail.
- In addition, questions were also raised in relation to the nature of the terminal examination (e.g. more details regarding how it is to be undertaken, what is being tested, etc.); the same point applies to the assessment description employed for this and other terminal examinations (see sub-sections 7.3.4, 7.4.5, 7.5.5, 7.6.5, and 7.8.4). A statement to the effect of n/a or similar does not offer enough guidance to learners.
- The process by which team projects will be graded should be clarified to ensure that all learners including those considered less technical, will be appropriately assessed.

Response

- The reassessment detail has been corrected in this as well as all other modules.
- Terminal examination details in this as well as all other modules has been corrected.
- A section on the College group work and group assessment policies has been added in section 6.6.3.

1.4.6 Financial Analytics**Comments**

- The module learning outcomes stated here need to differentiate more between this module and the Financial Data Analysis module on the Higher Diploma in FinTech.
- More explicit emphasis on the FinTech aspects of this module are necessary.

Response

- The module learning outcomes of the level 8 Financial Data Analysis have been adjusted. The programme team notes the inclusion of Big Data platforms; Risk Measures and Portfolio optimisation as well as the application of machine learning techniques to the latter as key differences.
- The module content has been adjusted to include more explicit emphasis on FinTech topics.

1.4.7 Contemporary Topics**Comments**

- There may be room for this module to be retitled, for instance by adopting the name of the programme as an ancillary title or subtitle, as in Contemporary Topics in FinTech or Contemporary Topics in FinTech.
- The rationale requiring this module to be passed to proceed to the Research Project should be articulated.

Response

- The module has been renamed to Contemporary Topics in FinTech
- The rationale for passing this module in order to commence the semester three modules has been added to section 6.6.3

1.4.8 Digital Forensics and Auditing**Comments**

- The programme team should ensure that the number of tutorial hours is sufficient to equip students with the skills to create a forensics software artefact. The requirements for this artefact need to be clarified further with respect to its sophistication.

Response

- The learning and teaching strategy section has been added.
- The continuous assessment element has been moved to the relevant section.
- Tutorial hours have been increased.

1.4.9 Financial and Quantitative Modelling**Comments**

- More explicit emphasis on the FinTech aspects of this module are necessary; synergies with the Financial Markets module should be possible.
- This is one of the modules with 100% continuous assessment where a terminal examination may help to alleviate workload during the semester, as well as not allowing module learning outcomes to be over-assessed by multiple coursework elements.

Response

- As an existing module in another programme, this module could not be edited without a knock on effect. Therefore, core content relevant to the FinTech programme has been included in the Financial Markets as well as the Financial Analytics modules as a part of programme curriculum rebalancing. Subsequently, the module has been removed.

1.4.10 Crowd Markets

To fill the gap created by removing the Financial and Quantitative Modelling module and in response to recommendation R4, the Crowd Markets module has been added as a new elective in semester 2.

1.4.11 Entrepreneurship in FinTech

Comments

- The subject of Intellectual Property, which it was suggested would be included as part of the Data Governance and Compliance module curriculum, should also be addressed here.
- There may well be room to expand the assessment beyond the Lean Canvas Business Model.

Response

- Intellectual Property and apps have been added to the indicative curriculum
- The assessment strategy has been updated to accommodate alternatives to the Lean Canvas Business Model.

1.4.12 Research Project

Comments

- The mechanics of supervision need to be outlined more clearly, for instance in a Teaching & Learning Strategy sub-section; details regarding Teaching & Learning Strategy are missing from here, as well as from the descriptors of a number of other modules.

Response

- The descriptor has been extended to include supervision practices as well as other delivery specific information.

1.4.13 Industry-based Research Project

Comments

- This module and Research Project cannot both be listed as mandatory in their respective module descriptors this is a streamed elective.
- The deliverables for this module should be reconsidered given the timeframe required. Alternatively a longer timeframe should be allowed. Processes for ensuring that the student receives the correct support and mentoring as well as ensuring that the work is that of the student will need to be worked through.
- The supervision arrangements (e.g. in also involving an industry supervisor) need to be outlined more explicitly in the Teaching Learning Strategy sub-section.

Response

- The descriptor has been extended to include supervision practices as well as other delivery specific information.

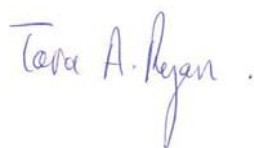
Panel Chair Confirmation

To QQI Validation Unit

This is to confirm that I have reviewed the amended documentation from **National College of Ireland** for the programmes titled Postgraduate Diploma in Science in FinTech and Master of Science in FinTech submitted in response to a recent panel report chaired by me.

I can confirm that the amendments made address all the conditions set by the panel. Therefore, on behalf of the panel, I recommend this programme to QQI for validation.

Signed:

A handwritten signature in blue ink that reads "Tara A. Ryan .". The signature is written in a cursive style with a period at the end.

Date: 11th July 2016



CERTIFICATE OF VALIDATION

Provider name	National College of Ireland
Date of validation	20 July 2016

	First Intake	Last Intake
Enrolment interval	September 2016	September 2020

	Code	Title	Award
Principal programme		MSc in FinTech	Master of Science
Embedded programme		Postgraduate Diploma in Science in FinTech	Postgraduate Diploma in Science
Embedded programme			

	Name	Maximum number of learners	Minimum number of learners
Approved centre	National College of Ireland	As per the validated programmes	As per the validated programmes

Target learner groups	As per the validated programmes
Approved countries for provision	Ireland
The teaching and learning modalities	As per the validated programmes
Brief synopsis of the programme (e.g. who it is for, what is it for, what is involved for learners, what it leads to.)	As per the validated programmes
Specifications for teaching staff	As per the validated programmes
Specifications for the ratio of learners to teaching-staff	As per the validated programmes

Programmes being replaced		
Code	Title	Comment
		N/A



Conditions of validation

The statutory ([section 45\(3\) of the 2012 Act](#)) conditions of validation are that the provider of the programme shall:

- a) co-operate with and assist QQI in the performance of QQI's functions in so far as those functions relate to the functions of the provider,
- b) establish procedures which are fair and consistent for the assessment of enrolled learners to ensure the standards of knowledge, skill or competence determined by QQI under section 49 (1) are acquired, and where appropriate, demonstrated, by enrolled learners,
- c) continue to comply with [section 65 of the 2012 Act](#) in respect of arrangements for the protection of enrolled learners, if applicable, and
- d) provide to QQI such information as QQI may from time to time require for the purposes of the performance of its functions, including information in respect of completion rates.

Conditions from HET Core Validation Policy and Criteria 2010, Revised 2013

The provider of the programme shall (for each programme):

1. Maintain the status of the programme(s) recognition;
2. Establish, having regard to existing quality assurance procedures, procedures for quality assurance for the purpose of further improving and maintaining the quality of education and training which is provided, organised or procured by that provider as part of the programme(s) concerned, and agree those procedures with QQI;
3. Operate quality assurance procedures agreed with QQI;
4. Implement procedures for the assessment of learners which are consistent with Assessment and Standards, Revised 2013;
5. Implement the procedures described in the document Policies, Actions and Procedures for Access, Transfer and Progression for Learners;
6. Implement any special conditions of validation attached to the relevant awards standards.

Other conditions from HET Core Validation Policy and Criteria 2010, Revised 2013

7. Notify QQI of any change in circumstances affecting the provider which could affect or be perceived to affect the provision of the programme(s). This includes significant changes in corporate or academic governance, ownership, legal status, profile of teaching staff, profile of learners, numbers enrolled, facilities, or resources;
8. Maintain learner data records (personal identification, progression, module marks, stage classification etc.) in order to assist QQI in the performance of its functions;
9. Provide the information required by QQI's award making and monitoring functions, including information in respect of completion rates;
10. Implement the programme in accordance with the **approved programme schedule(s)** (appended) and current assessment strategies;
11. Subject to Section 4.6.1 of *HET Core Validation Policy and Criteria 2010, Revised 2013*, obtain QQI's approval prior to substantially amending the programme's minimum intended learning outcomes, save in the case of incremental enhancements arising from the implementation of findings of the provider's agreed quality assurance procedures;
12. Notify QQI of any information concerning the programme(s), or circumstances that may reasonably be expected to give QQI cause to consider reviewing the programme. Explicitly this includes where another awarding body withdraws or seeks to withdraw validation from the programme(s) and /or any alterations to accreditations (additions or withdrawals) by a professional or regulatory body;
13. Implement the programme(s) as agreed with the resources indicated;
14. Adhere to, and implement the Provider Lifecycle of Engagements.



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Dearbhú Cáilíochta agus Cáilíochtaí Éireann

PAEC/A19/4.3.1.1

Approved Programme Schedule(s)

Name of Provider		National College of Ireland		Programme Codes							
Programme Title (i.e. named award)		MSc in FinTech									
Award Title (HETAC named award)		Master of Science									
Stage Exit Award Title		Postgraduate Diploma in Science in FinTech									
Modes of Delivery (FT/PT/ACCS/BLENDED/OC etc)		FT, PT, ACCS, OC, BLOCK									
Stage		1		Number of Stages							
Award Class		1		Award NQF Level							
Award EQF Level		7		Stage Credits (ECTS)							
Stage NQF Level		9		Stage EQF Level							
Date Effective		14/09/16		ISCED Subject Code							
Ref	Module Title	Sem.	Module		Credits	Total Student Effort		Marks (%)			
			Status(M/E)	NQF Level		Total	Contact	IL	Coursework	EOM Assess.	Total
1.1	Financial Markets	1	M	9	10	250	48	202	60	40	100
1.2	Data Analytics	1	M	9	10	250	48	202	100	0	100
1.3	Data Governance and Compliance	1	M	9	5	125	36	89	60	40	100
1.4	Information Assurance and	1	M	9	5	125	36	89	60	40	100
1.5	Blockchain Technologies	2	M	9	10	250	48	202	60	40	100
1.6	Financial Analytics	2	M	9	10	250	48	202	40	60	100
1.7	Contemporary Topics in FinTech	2	M	9	5	125	35	90	100	0	100
1.8	Digital Forensics and Auditing	2	E (GE1)	9	5	125	48	89	50	50	100
1.9	Crowd Markets	2	E (GE1)	9	5	125	36	89	60	40	100
1.10	Entrepreneurship in FinTech	3	M	9	5	125	36	89	100	0	100
1.11	Research Project	3	E (GE2)	9	25	500	12	488	100	0	100
1.12	Industry Based Research Project	3	E (GE2)	9	25	500	12	488	100	0	100

Special Regulations: i) Elective modules are divided into GE1 and GE2. Learners must undertake 5 credits from GE1 and 25 from GE2. ii) To undertake Semester 3 modules (GE2 and "Entrepreneurship in FinTech"), learners must pass the "Contemporary Topics in FinTech" module. iii) GE2 modules cannot be compensated.



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PAEC/A19/4.3.1.1

Name of Provider		National College of Ireland				Programme Codes					
Programme Title (i.e. named award)		Postgraduate Diploma in Science in FinTech									
Award Title (HETAC named award)		Postgraduate Diploma in Science									
Stage Exit Award Title											
Modes of Delivery (FT/PT/ACCS/BLENDED/OC etc)		FT, PT, ACCS, OC, BLOCK									
Stage		1		Number of Stages		1					
Award Class		Major		Award NQF Level		9					
Award EQF Level		7		Stage Credits (ECTS)		60					
Stage NQF Level		9		Stage EQF Level							
Date Effective		14/09/16		ISCED Subject Code							
Ref	Module Title	Sem.	Module		Credits	Total Student Effort		Marks (%)			
			Status(M/E)	NQF Level		Total	Contact	IL	Coursework	EOM Assess.	Total
1.1	Financial Markets	1	M	9	10	250	48	202	60	40	100
1.2	Data Analytics	1	M	9	10	250	48	202	100	0	100
1.3	Data Governance and Compliance	1	M	9	5	125	36	89	60	40	100
1.4	Information Assurance and Blockchain Technologies	1	M	9	5	125	36	89	60	40	100
1.5	Financial Analytics	2	M	9	10	250	48	202	60	40	100
1.6	Contemporary Topics in FinTech	2	M	9	10	250	48	202	40	60	100
1.7	Digital Forensics and Auditing	2	E (GE1)	9	5	125	35	90	100	0	100
1.8	Crowd Markets	2	E (GE1)	9	5	125	48	89	50	50	100
1.9		2	E (GE1)	9	5	125	36	89	60	40	100

Special Regulations:) Elective modules are divided into GE1 and GE2. Learners must undertake 5 credits from GE1 and 25 from GE2