QQI
Quality and Qualifications Ireland
Dearbhú Cáilíochta agus Cáilíochtaí Éireann

Independent Evaluation Report on an Application for Validation of a Programme of Education and Training

Part 1 A

Provider name	Dublin Business School
Date of site visit	21 May 2019
Date of report	29 August 2019
Is this a re-validation report (Yes/No)	Yes

Overall recommendations

Principal programme	**Title**	Master of Science in Information Systems with Computing
	Award	Master of Science
	Credit[1]	90
	Recommendation *Satisfactory OR Satisfactory subject to proposed conditions*[2] *OR Not Satisfactory*	Satisfactory

Embedded programme[3]	**Title**	Postgraduate Diploma in Information Systems with Computing
	Award	Postgraduate Diploma in Science

[1] Specify the credit units because more than one system of units is in use. E.g. 20 (ECTS).
[2] Normally an application that fails to meet the criteria in any of its aspects will be considered as not satisfactory. Nevertheless, so as to ensure that the validation process will not be implemented unreasonably, if an independent evaluation finds that a programme virtually meets the validation criteria but needs some minor modifications, the independent evaluation could conclude "Satisfactory subject to recommended special conditions" where the special conditions prescribe the defects that require to be corrected.

Further, in exceptional cases the 'special conditions' may be used to identify parts of the application that are considered satisfactory on a stand-alone basis. For example, an application might propose a programme to be provided at two locations but the independent evaluation report may find the application satisfactory on condition that it be provided only at one specified location and not at the other. These conditions will not however be used to recommend that QQI can be satisfied with a programme conditional on a different QQI award (e.g. at a lower NFQ level or having a different CAS award title) being sought than the one identified in the application.
[3] Copy this panel for each embedded programme.

	Exit award (Yes/No)	Yes
	Credit	60
	Recommendation *Satisfactory OR Satisfactory subject to proposed conditions OR Not Satisfactory*	Satisfactory

Module[4]	**Title**	N/a
	Award	N/a
	Credit	N/a
	Recommendation *Satisfactory OR Satisfactory subject to proposed conditions OR Not Satisfactory*	N/a

Evaluators

Evaluators		
Name	**Role**	**Principal occupation**
Dr Marion Palmer	Chair	Former Head of Department of Technology and Psychology, Institute of Art, Design and Technology (IADT), Dún Laoghaire
Dr Brendan Ryder	Academic in Subject area	Head of Department of Visual and Human Centred Computing, Dundalk Institute of Technology (DkIT)
Dr Simon Caton	Academic in Subject area	Assistant Professor, School of Computer Science, University College Dublin
Deirdre Casey	Academic in Subject area	Lecturer of Mathematics and Effective Learning and Development, Griffith College Cork
Thomas Dowling	Academic in Subject area	Head of Department of Computing, Letterkenny IT
Catherine Sweeney	Professional/ Employer Representative	Manager Production Engineering, Facebook Ireland, Dublin
Joshua Cassidy	Learner representative on the panel	BSc in Computing, National College of Ireland, Mayor Square, Dublin
Mary Doyle	Secretary	Independent Academic QA Consultant

[4] A module leading to a QQI award is a special case of an embedded programme. Discrete modules are only validated on a stand-alone basis if they are to lead to a QQI award.

Part 1 B

Principal Programme – Master of Science in Information Systems with Computing

Names of centres where the programmes are to be provided	**Maximum number of learners***(per centre)*	**Minimum number of learners**
DBS: Dublin Campus	100	15

Enrolment interval *(normally 5 years)*	**Date of first intake**	September 2019
	Date of last intake	August 2024
Maximum number of annual intakes	Two intakes (September and January)	
Maximum total number of learners per intake (over all centres)	100	
Programme duration (<u>months</u> from start to completion)	Full-time: 1 year (3 semesters of 12 weeks each) Part-time: 2 years (5 semesters of 12 weeks each)	
Target learner groups	This programme is aimed at learners with second class second division (2.2) honours undergraduate bachelor degree in a cognate area who wish to specialise in the field of information systems with computing with a view to entering industry. Cognate subjects include science, technology, computing, engineering, mathematics or related discipline. This programme may also be of interest to those with a second class second division (2.2) honours undergraduate bachelor degree in a non-cognate area plus 4 years professional experience in a related field and who require a qualification in this area in order to progress professionally. Learners will be assessed on a case by case basis. On completion of this programme, learners will have the information systems with computing expertise to take a strategic view and effectively integrate their skills into decision-making in their company. Through the applied research project, learners will develop independent research and problem-solving skills which will be valuable in a variety of contexts in the workplace.	
Approved countries for provision	Ireland	
Delivery mode: Full-time/Part-time	Full-time and part-time	
The teaching and learning modalities	• Classroom lectures • Case-based learning • Practical skills sessions • Workshops • Tutorials • Individual and group work • Online synchronous and asynchronous classes	
Brief synopsis of the programme (e.g. who it is for, what is it for,	Information technology is the most robust industry in the world. Information Systems play a leading role in IT	

<table>
<tr><td>what is involved for learners, what it leads to.)</td><td>industry as well as in any business. There is a growing need for Information Systems specialists with a focus on business and technology.

The objective of this programme is to deliver high-quality Level 9 professionals for this growing need. On completion of this programme, learners will have the theoretical and practical skills in the area of information systems with computing skills; they will have the competencies in business and technical skills; and will have the expertise to take a strategic view and effectively integrate their problem-solving skills into decision-making in their company.

This programme accommodates a wide audience of learners whose specific interests in information systems may either be technically-focused or business-focused. It is a 1-year full-time, 2-year part-time programme with seven 5 ECTS and three 10 ECTS taught modules, and a 25 ECTS Applied Research Project.</td></tr>
<tr><td>Summary of <u>specifications</u> for teaching staff</td><td>Lecturing staff will have a minimum of a Level 9 Postgraduate Diploma or Masters and/or PhD in the following areas:
Mathematics, Statistics, Computer Science, Software Development, Computer Security, Information Systems, Data Analytics, and Database Development, Networks, Enterprise Information Systems, etc.

In modules where industry experience is desirable, holders of Level 8 honours degrees in the above disciplines, who are exceptionally qualified by virtue of significant senior industry experience may also be considered.</td></tr>
<tr><td rowspan="4">Summary of specifications for the ratio of learners to teaching-staff</td><td>Staff to learner ratio</td><td>Learning activity type</td></tr>
<tr><td>1/50</td><td>Classroom sessions</td></tr>
<tr><td>1/25</td><td>Workshops</td></tr>
<tr><td>1/25</td><td>Practical sessions</td></tr>
<tr><td>Overall WTE staff/learner ratio.[5]</td><td colspan="2">1.97/ (50 max students per intake)= 0.04:1</td></tr>
</table>

Programmes being replaced by the Master of Science in Information Systems with Computing

Programmes being replaced (applicable to applications for revalidation)	**Arrangement for enrolled learners**	**Date when replaced programme is planned to cease completely**

[5] This is the total wholetime equivalent number of staff dedicated exclusively to this programme divided by the maximum number of learners that can be enrolled with that complement of staff.

Code	Title	Last enrolment date	Indicate whether "Teach out" or "Transfer to replacement programme"	
PG19604	Master of Science in Information Systems with Computing	January 2019	Transfer to replacement programme	August 2020

Embedded programme – Postgraduate Diploma in Science in Information Systems with Computing[6]

Names of centres where the programmes are to be provided	Maximum number of learners *(per centre)*	Minimum number of learners
N/a	N/a	N/a

Enrolment interval *(normally 5 years)*	**Date of first intake**	September 2019
	Date of last intake	August 2024
Maximum number of annual intakes	Two intakes (September and January)	
Maximum total number of learners per intake	100	
Programme duration (months from start to completion)	Full-time: 1 year (2 semesters of 12 weeks each) Part-time: 2 years (4 semesters of 12 weeks each)	
Target learner groups	This programme is aimed at learners with second class second division (2.2) honours undergraduate bachelor degree in a cognate area who wish to specialise in the field of information systems with computing with a view to entering industry. Cognate subjects include science, technology, computing, engineering, mathematics or related discipline. This programme may also be of interest to those with a second class second division (2.2) honours undergraduate bachelor degree in a non-cognate area plus 4 years professional experience in a related field and who require a qualification in this area in order to progress professionally. Learners will be assessed on a case by case basis. On completion of this programme, learners will have the theoretical and practical skills in the area of information systems with computing skills; they will have the competencies in business and technical skills; and will have the expertise to take a strategic view and effectively integrate their problem-solving skills into decision-making in their company.	

[6]This only needs to be completed where embedded programmes may be offered independently of the principal programme. Add more subsections if there are more than one embedded programmes proposed to lead to QQI awards.

<table>
<tr><td>Approved countries for provision</td><td colspan="2">Ireland</td></tr>
<tr><td>Delivery mode: Full-time/Part-time</td><td colspan="2">Full-time and part-time</td></tr>
<tr><td>The teaching and learning modalities</td><td colspan="2">• Classroom lectures
• Case-based learning
• Practical skills sessions
• Workshops
• Tutorials
• Individual and group work
• Online synchronous and asynchronous classes</td></tr>
<tr><td>Brief synopsis of the programme (e.g. who it is for, what is it for, what is involved for learners, what it leads to.)</td><td colspan="2">The Postgraduate Diploma is an embedded award in the Master of Science in Information Systems with Computing. It will not be offered separately but it is an exit award at 65 ECTS for learners who are unable to reach the applied research project stage or wish not to complete the full Masters programme.

As an interdisciplinary programme that focuses on information systems with computing skills, this Postgraduate Diploma has been developed with the aim of providing learners with the applied knowledge and skills to apply several ICT concepts and techniques to generate valuable insights that can assist with making decisions in small and large enterprises.

The duration of the postgraduate programme is two semesters full-time and four semesters part-time and is comprised of seven taught modules of 5 ECTS along with three taught modules of 10 ECTS each.</td></tr>
<tr><td>Summary of specifications for teaching staff</td><td colspan="2">Lecturing staff will have a minimum of a Level 9 Postgraduate Diploma or Masters and/or PhD in the following areas:
Mathematics, Statistics, Computer Science, Software Development, Computer Security, Information Systems, Data Analytics, and Database Development, Networks, Enterprise Information Systems, etc.

In modules where industry experience is desirable, holders of Level 8 honours degrees in the above disciplines, who are exceptionally qualified by virtue of significant senior industry experience may also be considered.</td></tr>
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</table>

Programmes being replaced by the [embedded programme]

Programmes being replaced (applicable to applications for revalidation)			**Arrangement for enrolled learners**	**Date when replaced programme is planned to cease completely**
Code	**Title**	**Last enrolment date**	**Indicate whether "Teach out" or "Transfer to replacement programme"**	
N/a	N/a	N/a	N/a	N/a

Other noteworthy features of the application

The panel evaluated the observations, comments and suggestions from internal and external stakeholders and these were duly factored into the review process. Internal stakeholders consisted of students and staff (academic, support and administrative).

In the review and design of the Master of Science in Computing and Information Systems for re-validation (and the proposal for the introduction of an embedded exit award of Postgraduate Diploma in Computing and Information Systems),the Programme Team, carried out consultations on the programme design and module content with relevant employers and a range of key industry stakeholders and utilised strategic as well as academic sources and comparator analysis. They have engaged with the professional bodies as well as within industry to ensure the programme is appropriate for graduates who wish to pursue a variety of paths. In addition, an extensive consultation with graduates of the programme was also carried out for the review.

The panel found that the consultation process had been comprehensive and it was concluded that the proposed programmes were fit for purpose. In general, the panel found that the documents provided were well structured, clear in the presentation of facts and easy to read.

A summary and quantitative analysis of the recruitment, learner enrolment, application and performance statistics for the existing programme over the past five years was provided for the existing programme covering the areas specified in the Programme Review Manual 2016/2017 Section 3. At the time of the review, enrolments and applications were at their highest level since 2014.

However, in terms of benchmarking grades and QQI Award Classifications the panel concluded that the analysis provided for the programme for review was not comprehensive. The panel now notes that QQI has recently produced a draft report on award classification distributions across higher education institutions and access to this will allow DBS to better address this piece of analysis going forward.

Commentary was provided on the teaching, learning and assessment strategy, the use of guest speakers, the use of Moodle as a virtual learning environment and the current and planned developments for the blended learning elements of the programme.

Programme-specific arrangements for monitoring progress and guiding, informing and caring for learners were also discussed. A tour, including a short presentation of the facilities and services, was provided, and the panel concluded that the learning environment was consistent with the needs of the learners.

The panel explored the staffing of the programme and the various roles held/ performed by staff engaging with learners on the programme, across the College.

Evidentiary documentation of the implementation of the programme quality assurance arrangements were provided for the panel in the documentation pack. The panel concluded that the quality assurance arrangements applied to the programmes are generally effective, however, the College needs to ensure that it is taking all the steps to close the quality assurance loop and address the issues identified through the application of the quality assurance feedback processes.

Part 1C Evaluation of the Case for an Extension of the Approved Scope of Provision (where applicable).

N/a

Comment on the case for extending the applicant's Approved Scope of Provision to enable provision of this programme.

N/a

Part 2A Evaluation against the validation criteria

QQI's validation criteria and sub-criteria are copied here in grey panels.

Criterion 1

The provider is eligible to apply for validation of the programme a) The provider meets the prerequisites (section 44(7) of the 2012 Act) to apply for validation of the programme. b) The application for validation is signed by the provider's chief executive (or equivalent) who confirms that the information provided is truthful and that all the applicable criteria have been addressed. c) The provider has declared that their programme complies with applicable statutory, regulatory and professional body requirements.[7]	
Satisfactory (yes, no, partially)	**Comment**
Yes	Master of Science in Computing and Information Systems Postgraduate Diploma in Science in Computing and Information Systems

Master of Science in Computing and Information Systems
Postgraduate Diploma inScience in Computing and Information Systems

The panel has evaluated the programmes having regard to the criterion and sub-criteria and recommended that QQI can be satisfied that the programme meets this criterion.

As an established provider of higher education programmes, DBS has met the prerequisites (section 44(7) of the 2012 Act) to apply for validation of these programmes. It was noted that DBS has in place procedures for access, transfer and progression. DBS has also established arrangements for the Protection of Enrolled Learners (PEL) which have been approved by QQI.

DBS participated in the Pilot Re-Engagement process for re-approval of QA procedures with QQI in 2017/18 and has submitted an application for full Re-Engagement to QQI in early 2019. Process, policies and procedures were reviewed as part of the re-engagement application and self-evaluation process.

Within the programme documentation provided, DBS provided a copy of the letter to be submitted to QQI with the application for the revalidation of the programmes. The letter contained the signature and declaration required under sub-criteria 1b) and 1c).

Criterion 2

The programme objectives and outcomes are clear and consistent with the QQI awards sought

a) The programme aims and objectives are expressed plainly.
b) A QQI award is specified for those who complete the programme.
    (i) Where applicable, a QQI award is specified for each embedded programme.

[7]This criterion is to ensure the programme can actually be provided and will not be halted on account of breach of the law. The declaration is sought to ensure this is not overlooked but QQI is not responsible for verifying this declaration of enforcing such requirements.

c) There is a satisfactory rationale for the choice of QQI award(s).
d) The award title(s) is consistent with unit 3.1 of QQI's *Policy and Criteria for Making Awards.*
e) The award title(s) is otherwise legitimate for example it must comply with applicable statutory, regulatory and professional body requirements.
f) The programme title and any embedded programme titles are
    (i) Consistent with the title of the QQI award sought.
    (ii) Clear, accurate, succinct and fit for the purpose of informing prospective learners and other stakeholders.
g) For each programme and embedded programme
    (i) The **minimumintended programme learning outcomes** and any other educational or training objectives of the programme are explicitly specified.[8]
    (ii) The minimum intended programme learning outcomes to qualify for the QQI award sought are **consistent with** the relevant QQI awards standards.
h) Where applicable, the **minimum intended module learning outcomes** are explicitly specified for each of the programme's modules.
i) Any QQI minor awards sought for those who complete the modules are specified, where applicable.

For each minor award specified, the minimum intended module learning outcomes to qualify for the award are consistent with relevant QQI minor awards standards.[9]

Satisfactory (yes, no, partially)	**Comment**
Yes	Master of Science in Computing and Information Systems Postgraduate Diploma in Science in Computing and Information Systems

Master of Science in Computing and Information Systems
Postgraduate Diploma inScience in Computing and Information Systems

The panel has evaluated the programmes having regard to the criterion and sub-criteria and recommended that QQI can be satisfied that the programme meets this criterion.

The panel found that the aims, objectives and rationale for the programmes were expressed clearly in the context of the QQI award (s) being sought.

It was noted that the 60 ECTS credit Postgraduate Diploma in Science in Information Systems and Computing will be available to learners who have successfully completed the taught modules but are prevented from progressing with their studies, or do not wish to. In fact, 65 credits are to be delivered in the first two semesters. The introduction of this embedded exit award is a positive development.

The MIPLOs were informed by the QQI aligned to Science Award Standard, while also mapped to the Computing Standard. It was concluded that the MIPLOs and MIMLOs have been clearly outlined and are appropriate to the level of the award. The programme titles are appropriate.

The Programme document states that - The programme incorporates practical skills in every module for the professional development of learners to enhance their employability. The programme team needs to confirm how this objective is met in context of removal of the Professional Development

[8]Other programme objectives, for example, may be to meet the educational or training requirements of a statutory, regulatory or professional body.
[9]Not all modules will warrant minor awards. Minor awards feature strongly in the QQI common awards system however further education and training awards may be made outside this system.

modules**. The embedding of professional development/soft skills in individual modules rather than having a specific stand-alone module cannot be vague within the impacted modules – the development of these skills within the modules need to reflect back to the mapping (of MIMLOs) against the framework (competence and insight)**. The impact on student workload – with assignments, exams, and workshops needs to be considered.

From the mapping which is identified in the programme document, there appears to be a heavy reliance on knowledge and skills within the programme, with lesser indication of the achievement of competence/insight. It was queried where the programme aim to 'respond ethically and informatively…' is achieved and delivered on within the programme – what type of situations would be considered 'unseen' where is this discussed. In addition, the ethical considerations of the computing industry, and its human impact, needs to be considered within the programme. In the context of these matters, **the panel strongly recommended that the programme team revisit all of the programme modules to review MIMLOs, the assessment and reassessment instruments, and the indicative content, to facilitate deep learning and to ensure there is sufficient differentiation between the modules.**

Criterion 3

The programme concept, implementation strategy, and its interpretation of QQI awards standards are well informed and soundly based (considering social, cultural, educational, professional and employment objectives)

a) The development of the programme and the intended programme learning outcomes has sought out and taken into account the views of stakeholders such as learners, graduates, teachers, lecturers, education and training institutions, employers, statutory bodies, regulatory bodies, the international scientific and academic communities, professional bodies and equivalent associations, trades unions, and social and community representatives.[10]

b) The interpretation of awards standards has been adequately informed and researched; considering the programme aims and objectives and minimum intended programme (and, where applicable, modular) learning outcomes.
   (i) There is a satisfactory rationale for providing the programme.
   (ii) The proposed programme compares favourably with existing related (comparable) programmes in Ireland and beyond. Comparators should be as close as it is possible to find.
   (iii) There is support for the introduction of the programme (such as from employers, or professional, regulatory or statutory bodies).
   (iv) There is evidence[11] of learner demand for the programme.
   (v) There is evidence of employment opportunities for graduates where relevant[12].
   (vi) The programme meets genuine education and training needs.[13]

c) There are mechanisms to keep the programme updated in consultation with internal and external stakeholders.

d) Employers and practitioners in the cases of vocational and professional awards have been systematically involved in the programme design where the programme is vocationally or

[10]Awards standards however detailed rely on various communities for their interpretation. This consultation is necessary if the programme is to enable learners to achieve the standard in its fullest sense.
[11] This might be predictive or indirect.
[12] It is essential to involve employers in the programme development and review process when the programme is vocationally or professionally oriented.
[13]There is clear evidence that the programme meets the **target learners'**education and training needs and that there is a clear demand for the programme.

professionally oriented. e) The programme satisfies any validation-related criteria attaching to the applicable awards standards and QQI awards specifications.	
Satisfactory (yes, no, partially)	**Comment**
Yes	Master of Science in Computing and Information Systems Postgraduate Diploma in Science in Computing and Information Systems

Master of Science in Computing and Information Systems
Postgraduate Diploma inScience in Computing and Information Systems

The panel has evaluated the programmes having regard to the criterion and sub-criteria and recommended that QQI can be satisfied that the programme meets this criterion.

Overall the programme seems to meets a current need in Irish society. The modules included seem very relevant and the overall award should be of great value to learners.

The learner, employment-related and educational demands are evidenced within the programme documentation. The programme appears to be well informed by research on the needs of relevant stakeholders seems to address a need within the market for such courses, which should offer graduates good employment opportunities. Within the programme documentation, the graduate destination surveys indicate positive employment outcomes within 6 months of course completion. **More detail on how these student and industry surveys were executed, and their interpretation, would be welcomed in the document**. The survey provided in the appendix doesn't contain open ended text-based questions, so some high-level commentary here could be helpful to facilitate comprehension of the overall development process.

The data provided appears to indicate an over-reliance on international learners. The College needs to ensure the future proofing the programme to bolster against any international or economic forces which could adversely impact the programme's future viability.

A review process appears to be in place to keep the course current and up to date. The programme appears to be well-informed by research on the needs of relevant stakeholders and stakeholders' opinions have been sought and commented on. Where applicable their suggestions are mostly taken on board. **The mapping of the programme to the MIPLOs of national and international comparable programmes could be more comprehensive** – it has only been undertaken for a single programme, despite the fact that the document states that there are a number of similar programmes on offer in Ireland and abroad.

The QQI award standards for both Science and Computing standards have been used in reviewing the programme, and use of both standards is explained and motivated. The MIPLOs for the embedded Postgraduate Diploma programme are also clear. The programme seems to sway more towards the knowledge and skills parts of the science award standards, rather than competence. It is noted, however, that competence areas in the computing standard are more expansively represented. It would be useful for the documentation to better understand the basis for this.

MIMLOs as well as MIPLOs are mapped. The panel observed that some of the 16 domains across both standards, 4 modules (1, 3, 7 and 9) are not mapped at all to at least 6 domains.All modules

have MIMLOs, yet the level of some outcomes may not be commensurate with level 9 expectations. MIPLO 10 may be slightly under-addressed outside the research project module across the programme.

The embedding of soft skills in individual modules rather than having a specific stand-alone module was recognised as an institutional decision but where these skills are currently developed cannot be vague– the **development of these skills within modules need to reflect back to the mapping (of MIMLOs) against the framework (competence and insight).** The impact on student workload – with assignments, exams, and workshops needs to be considered.

The panel recommend that the programme team revise and develop Teaching and Learning Strategy required for the programme, to clarify (as a group) how the programme goals identified in the document are realised.

Criterion 4

The programme's access, transfer and progression arrangements are satisfactory

a) The information about the programme as well as its procedures for access, transfer and progression are consistent with the procedures described in QQI's policy and criteria for access, transfer and progression in relation to learners for providers of further and higher education and training. Each of its programme-specific criteria is individually and explicitly satisfied[14].

b) Programme information for learners is provided in plain language. This details what the programme expects of learners and what learners can expect of the programme and that there are procedures to ensure its availability in a range of accessible formats.

c) If the programme leads to a higher education and training award and its duration is designed for native English speakers, then the level of proficiency in English language must be greater or equal to B2+ in the Common European Framework of Reference for Languages (CEFRL[15]) in order to enable learners to reach the required standard for the QQI award.

d) The programme specifies the learning (knowledge, skill and competence) that **target learners** are expected to have achieved before they are enrolled in the programme and any other assumptions about enrolled learners (programme participants).

e) The programme includes suitable procedures and criteria for the **recognition of prior learning**for the purposes of access and, where appropriate, for advanced entry to the programme and for exemptions.

f) The programme title (the title used to refer to the programme):-
   (i) Reflects the core *intended programme learning outcomes*, and is consistent with the standards and purposes of the QQI awards to which it leads, the award title(s) and their class(es).
   (ii) Is learner focused and meaningful to the learners;
   (iii) Has long-lasting significance.

g) The programme title is otherwise legitimate; for example, it must comply with applicable statutory, regulatory and professional body requirements.

[14] Each of the detailed criteria set out in the Policy and criteria for access, transfer and progression in relation to learners for providers of further and higher education and training must be addressed in the provider's evaluation report. The detailed criteria are (QQI, restated 2015) arranged under the headings

- Progression and transfer routes
- Entry arrangements
- Information provision

[15] http://www.coe.int/t/dg4/linguistic/Source/Framework_EN.pdf (accessed 26/09/2015)

Satisfactory (yes, no, partially)	Comment
Yes	Master of Science in Computing and Information Systems Postgraduate Diploma in Science in Computing and Information Systems

Master of Science in Computing and Information Systems
Postgraduate Diploma inScience in Computing and Information Systems

The panel has evaluated the programmes having regard to the criterion and sub-criteria and recommended that QQI can be satisfied that the programme meets this criterion.

The panel were of the opinion that the programme information provided to learners is appropriate, and the MIPLOs and title convey an accurate reflection of the programme, its content and the outcomes for graduates.

The student handbook gives students information regarding the course, but it has a number of omissions e.g an overview of the modules, the inclusion of which would greatly strengthen the publication.

The access, transfer, progression, RPL, and entry requirements are documented and appropriate. However, the impact of admitting learners from both cognate and non-cognate fields it is not clear or fully explored in the programme documentation.

Regarding entry requirements, the programme document states that any level 8 degree is accepted (at minimum honours grade 2.2), no honours requirement is attached to the HDip (level 8) programme which is also a primary entry qualifier. There is also no indication of how non-cognate candidates would achieve prior knowledge of database, programming and networking, which is assumed/required for learners coming onto the programme. In evidence of learner demand for the programme the documents state that DBS BA, BSc and Higher Diploma students have shown a keen interest in the programme. Clarity is required as to how non-cognate award holders' 4 years professional work in a relevant role is assessed in terms of entry to the programme.

There are also no details/evidence provided of how the minimum mathematical proficiency requirements for non-cognate degree holders will be verified –the programme team stated that it seeks mathematical equivalence of an undergraduate degree (L8, 2.2 classification), or the use of sufficiently complex mathematics and statistics in their professional life (to a Level 8, 2.2 classification standard). They also stated that Mathematics material is covered in the modules, and additional support is provided for learners through the DBS Student Engagement and Success Unit (SESU).

It is unclear how a learner with a computing/computer science primary degree should engage with some of the introductory modules which appear conversion-like in their design, and may be inappropriate for a learner with a computing / computer science primary degree.In considering both primary programmes for review, the panel queried if it would be better to direct learners with no prior programming experience to the Higher Diploma prior to their enrolment on this programme.

The panel recommended that the programme team revisit and review the Admission requirements, including those for non-standard and RPL applicants, to eliminate any ambiguity in relation to thresholds and barriers to assure a process that is appropriate, fair and consistent.

The panel were advised that when recruiting staff, the Faculty manager identifies new staff to the academic appointments sub-committee. The establishment and role of this committee was particularly commended in terms of assuring that sufficient qualified and capable programme staff are available to implement the programme as planned. The committee also identifies therequirements for each newly appointed member of staff to be supported through their orientation at the College.

DBS currently do not undertake of analysis of learner performance against entry qualifications. The panel noted that with the planned introduction of a new Student Information System in November 2019 this type of analysis will be possible and should be undertaken for the 2018/19 intake onwards. **The panel recommended that analysis of learner performance versus their entry profile should be conducted particularly, as in this case, for programmes where non-standard and RPL admissions are permitted.**

Academic Staff indicated that they are cognisant of the pedagogical aspect of dealing with a class of predominantly international learners, and the in-class experience resulting from this. Teaching is adjusted to facilitate these learners. After the session with learners and graduates, **the panel recommended that it would be beneficial (and particularly supportive of learners whose first language was not English) if the basics for each topic could be prepared and made available to learners on Moodle in advance of their lectures**, to support their engaging with class material.

Progression opportunities for programme graduates seem good and clear examples are given. The process for how a learner who has previously availed of the Postgraduate Diploma exit award may return to complete the MSc needs to be defined for the College.

The programme learners and graduates particularly praised the existence of the (60 ECTS) Postgraduate Diploma Exit award option which provided an opportunity for learners to recognise their efforts, even/especially if not completing the full award.

Criterion 5

The programme's written curriculum is well structured and fit-for-purpose

a) The programme is suitably structured and coherently oriented towards the achievement by learners of its intended programme learning outcomes. The programme (including any stages and modules) is integrated in all its dimensions.
b) In so far as it is feasible the programme provides choice to enrolled learners so that they may align their learning opportunities towards their individual educational and training needs.
c) Each module and stage is suitably structured and coherently oriented towards the achievement by learners of the intended *programme* learning outcomes.
d) The objectives and purposes of each of the programme's elements are clear to learners and to the provider's staff.
e) The programme is structured and scheduled realistically based on sound educational and training principles[16].
f) The curriculum is comprehensively and systematically documented.

[16] This applies recursively to each and every element of the programme from enrolment through to completion.
In the case of a modular programme, the pool of modules and learning pathway constraints (such as any prerequisite and co-requisite modules) is explicit and appropriate to the intended programme learning outcomes.

g) The credit allocated to the programme is consistent with the difference between the entry standard and minimum intended programme learning outcomes. h) The credit allocated to each module is consistent with the difference between the module entry standard and minimum intended module learning outcomes. i) Elements such as practice placement and work based phases are provided with the same rigour and attentiveness as other elements. j) The programme duration (expressed in terms of time from initial enrolment to completion) and its fulltime equivalent contact time (expressed in hours) are consistent with the difference between the minimum entry standard and award standard and with the credit allocation.[17]	
Satisfactory (yes, no, partially)	**Comment**
Yes	Master of Science in Computing and Information Systems Postgraduate Diploma in Science in Computing and Information Systems

Master of Science in Computing and Information Systems
Postgraduate Diploma inScience in Computing and Information Systems

The panel has evaluated the programmes having regard to the criterion and sub-criteria and recommended that QQI can be satisfied that the programme meets this criterion.

The panel was generally satisfied that the programmes and their modules were appropriately structured and scheduled. The module descriptors are well written and fit for purpose. The rational for the inclusion of new modules, and the stakeholder engagement which informed their content and that of the revised modules, was discussed with the programme team.

The programme team outlined how the programme was reviewed and developed. There appeared to be a heavy reliance on/deference to the material in the previously approved programme.

The panel indicated that it got little sense of the programme team's cohesiveness, and recommended that the management of the programme be strengthened – there appeared to be a disconnect between the lecturer, the programme and the college. **The panel recommended that the programme team to meet to review and 'personalise' their modules (recognising the ownership of the module by the lecturer).** The programme team meetings would reinforce the coherence/cohesiveness of the modules within the programme. In addition, **clarity is required on the specific programme management roles of Course Director and Programme Leader**.

Notwithstanding, the panel commended the lecturer commitment to the programme and its learners, and the technical expertise of the team. The support of learners and accessibility of the programme staff to learners was evident in the documentation, in the engagement with both the staff and the learners at the panel.

The panel considered the mapping of the MIMLOs to the MIPLOs for the programme is unclear and very broadly grouped. It is difficult to see vertical alignment from the documentation provided.**The panel recommended that the diagram of the programme structure contained in the student handbook (page 9) would be very helpful in programme documents to fully appreciate the overall programme structure and schedule**. In addition, the overview of programme modules provided in the programme document would be very useful for the students in the Student Handbook.

[17] If the duration is variable, for example, when advanced entry is available, this should be explained and justified

The module descriptors provide clear information regarding the syllabus and learning outcomes. The panel were concerned that the programme team may have chased the technology rather than competence and depth.The learning required to successfully progress from intake to completion is substantial, but this is in keeping with a programme which accepts learners from non-cognate disciplines.

In the module descriptors, there is an inclusion to e-learning and the breakdown of the contact hours for students in the programme document describes "*class or equivalent contact*". However in the teaching and learning strategy there is no evidence of consideration of the large differences (and breakdown) between face to face contact and online/blended learning, or how formative feedback is facilitated in an online setting. **The panel require the programme team to revise and develop the Teaching and Learning Strategy required for the programme, to clarify (as a group) – how are the programme goals identified in the document realised - the eLearning content, the module class contact time, the Workshop requirements and non-credit bearing elements.**

The panel recommended that staff training be developed and provided to support teaching, learning and assessment objectives. This would serve to support staff in module design and address issues such as what's a fair workload both for staff and learners. In reviewing the programme structure the panel noted that DBS have recently recruited a Learning Technologist and are intending to recruit an Instructional Designer to support lecturers' teaching and learning strategies.

The panel noted the strong focus on practice and experiential development. The embedding of soft skills in individual modules rather than having a specific stand-alone module cannot be vague within the impacted modules – **the panel recommends that the development of these skills within the modules need to reflect back to the mapping (of MIMLOs) against the framework (competence and insight)**. The impact on student workload – with assignments, exams, and workshops needs to be considered. **A Workshop List of the mandatory, optional and support resources available is needed by the programme team, and required by the learners, and should be part of the development of the teaching and learning strategy.**

Many of the sample assessments provided in the programme documentation pack are terminal examinations. **More samples of (group) continuous assessment material would be welcomed, to better delineate individual vs. group assessments as well as give an impression of individual projects**.

Clarity around the strategy for continuous assessment for the programme is required. **The assessment schedule for the programme needs to be developed to identify the learner assessment burden. In addition, the opportunities for students to receive feedback in a timely fashion to improve their work within that module should be identified and adhered to by the programme team**.

In managing learner assessment workload, and supporting programme cohesiveness, there seems to be a missed opportunity with regard to implementing integrated assessments within the blocks, and across modules.

The panel requires that the full programme team come together to develop an Assessment Strategy for the Programme, which would incorporate all modules, their CA deadlines, reassessment mechanisms, etc. to facilitate management of the learner workload. This document should provide clarity regarding the preference for written examinations over practical laboratory-

based exams for the programming modules, examination duration (2 versus 3 hours), etc. It would also identify in which modules is group assessment undertaken, and what structures are in place to ensure individually appropriate grades - group project guidelines should be developed. The review of CA material by the extern (in advance) should be considered. In addition, in developing the Strategy, the programme team should review lecturer workload in terms of assessment workload, to facilitate provision of formative and constructive feedback to learners in a timely fashion during the academic year to allow learners to manage their assessment performance.**The output of this activity should also include an assessment schedule to be provided to learners at commencement of the semester/year.**

There are pre-requisite modules from Semester 1 to Semester 2 – this can severely negatively impact learner progression within the programme. As a single stage programme these cannot be formalised, but the College should consider how learners that fail key modules in semester 1 would be affected and supported in semester 2.

The current workload for the programme is challenging. The programme is currently structured to incorporate 30 ECTS in semester 1. In addition, learners are also required to undertake the Writing for Graduate Studies workshop in Semester 1. This is a 2 hour per week mandatory class (over 12 weeks) for all learners, which covers ethics, referencing, academic impropriety and plagiarism. (No information is available for participation of learners of this programme.) Semester 2 attracts 35 ECTS, plus any repeats the learner might have to complete (particularly in the context of 'pre-requisite' modules). This is concerning with respect to scheduling and learner workload. In addition, for part-time students, it is unclear why they are required to undertake the applied research project in one semester, not over two, as for the workload for the taught semesters.

The programme team should revise and develop Teaching and Learning Strategy required for the programme, to clarify (as a group) how the programme goals identified in the document are realised –with particular reference to the module class contact time (versus ECTS), the eLearning content, the Workshop requirements (including the 'ghost' programme, project, etc.

The panel queried what programme-level rationale is used to identify the programming language used. Programme management indicated that this decision is left to the programme team. The team discussion would make this determination at the commencement of the programme (on the basis of the previous semester/academic year). This should be included in the teaching and learning strategies, and included in the programme information provided to learners.

Learners expressed inability to get material covered and not being able to read around the programme content. The panel stated that while most postgraduate programmes are currently minimising areas to facilitate depth, this programme appears to have broadened the module content – adding more/broader rather than trying to explore depth. Is it possible to cover all of the material identified in the various syllabi? It was queried if the syllabi set an unreasonable expectation of the learners.

As a programme which is open to non-cognate undergraduates, elements of the programme seem introductory in nature, and more depth is needed (or it needs to be better documented within the specific module descriptors. Within the context of the current skills shortage on the area of business analytics, the panel queried if cert topics/domains would be beneficial to include. Although the programme emphasises computing aspects of Information Systems, that there is no mention of some of these topics seems a missed (graduate employment/marketing) opportunity.

Academic and soft skills are supposed to be embedded within the programme. These are supplemented through 'additional non-credit bearing' workshops within the College. **Clarity on the Workshops in/for each module, their content and contact time should be outlined within each module descriptor. A Workshop List of the mandatory, optional and support resources available is needed by the programme team, and required by the learners**, and should be part of the development of the teaching and learning strategy.

The panel recommended that the reading list for each module be reviewed to ensure they are up to date.

The panel queried where topics such as ethics in computing covered - while it seems to be confined to the research project, students are asked to develop artefacts/computing solutions in many of the modules. Consideration of the ethics of the solution is important, as is development of the competence to become an ethical computing professional in future employment/roles. In addition, the implications of GDPR and privacy need to be considered and integrated within programme modules. Where these skills are developed cannot be vague within the impacted modules – the development of these skills within the modules need to reflect back to the mapping (of MIMLOs) against the framework (competence and insight).

Some module-related specific comments were also included and some suggestions for improvement and/or clarity were provided to the programme team.

In particular, the panel explored how the individual modules compensate for the removal of the Professional Developmentmodule.**The embedding of soft skills in individual modules rather than having a specific stand-alone module was recognised as an institutional decision but where these skills are currently developed cannot be vague within the impacted modules. The panel recommended that the development of these skills within the modules needs to reflect back to the mapping (of MIMLOs) against the framework (competence and insight). The impact on student workload – with assignments, exams, and workshops needs to be considered.**

The panel recommended that the reading list for each module be reviewed to ensure they are up to date.

Criterion 6

There are sufficient qualified and capable programme staff available to implement the programme as planned

a) The specification of the programme's staffing requirements (staff required as part of the programme and intrinsic to it) is precise, and rigorous and consistent with the programme and its defined purpose. The specifications include professional and educational qualifications, licences-to practise where applicable, experience and the staff/learner ratio requirements. See also criterion 12 c).
b) The programme has an identified complement of staff[18] (or potential staff) who are available, qualified and capable to provide the specified programme in the context of their existing commitments.
c) The programme's complement of staff (or potential staff) (those who support learning including any employer-based personnel) are demonstrated to be competent to enable learners to achieve the intended programme learning outcomes and to assess learners' achievements as required.
d) There are arrangements for the performance of the programme's staff to be managed to ensure continuing capability to fulfil their roles and there are staff development[19] opportunities[20].

[18] Staff here means natural persons required as part of the programme and accountable (directly or indirectly) to the programme's provider, it may for example, include contracted trainers and workplace supervisors.

e) There are arrangements for programme staff performance to be reviewed and there are mechanisms for encouraging development and for addressing underperformance. f) Where the programme is to be provided by staff not already in post there are arrangements to ensure that the programme will not enrol learners unless a complement of staff meeting the specifications is in post.

Satisfactory (yes, no, partially)	Comment
Yes	Master of Science in Computing and Information Systems Postgraduate Diploma in Science in Computing and Information Systems

Master of Science in Computing and Information Systems
Postgraduate Diploma inScience in Computing and Information Systems

The panel has evaluated the programmes having regard to the criterion and sub-criteria and recommended that QQI can be satisfied that the programme meets this criterion.

Specifications for programme staffing requirements seem appropriate and realistic. The necessary qualification profile for academic staff is identified within the modules, and is appropriate.

The staff CVs provided show excellent qualifications, up-to-date skills,and experience to provide such a programme, with staff also showing plenty of experience in lecturing. The panel also expressed some concern about the level of professional development and professional memberships of the programme team.

While the staff scholarship scheme was outlined in the documentation, there is little evidence of staff engagement with research.

The panel recommended that the College focus on the development of teaching and learning-related qualifications within the programme team. This would support staff in the engagement with programme management, the teaching and learning strategy, the assessment strategy and the organisation of both learner and staff workload.

The specific contract arrangement (hours and teaching requirements) of academic staff were outlined for the panel. Specific contractual arrangements are in place to facilitate academic staff supervising learners'projects. [Reference Special Consideration of Programme Review]. **The specifics for supervision for the *Applied Research Project*, while provided, should be more detailed in the document, and the individual responsibilities outlined**.

The establishment and role of the academic appointments sub-committee was particularly commended in terms of assuring that sufficient qualified and capable programme staff are available

[19] Development here is for the purpose of ensuring staff remain up-to-date on the discipline itself, on teaching methods or on other relevant skills or knowledge, to the extent that this is necessary to ensure an adequate standard of teaching.

[20] Professional or vocational education and training requires that teaching staff's professional/vocation knowledge is up to date. Being qualified in a discipline does not necessarily mean that a person is currently competent in that discipline. Therefore, performance management and development of professional and vocational staff needs to focus on professional/vocational competence as well as pedagogical competence. Professional development may include placement in industry, for example. In regulated professions it would be expected that there are a suitable number of registered practitioners involved.

to implement the programme as planned. The committee also identifies the requirements for each newly appointed member of staff to be supported through their orientation and professional development at the College. However, **the panel cautioned that sourcing staff primarily through referrals and recommendations may not be a sustainable method of assuring externality and a challenging and supportive academic environment**.

Criterion 7

There are sufficient physical resources to implement the programme as planned

a) The specification of the programme's physical resource requirements (physical resources required as part of the programme and intrinsic to it) is precise, and rigorous and consistent with the programme, its defined purpose and its resource/learner-ratio requirements. See also criterion 12 d).
b) The programme has an identified complement of supported physical resources (or potential supported physical resources) that are available in the context of existing commitments on these e.g. availability of:
   (i) suitable premises and accommodation for the learning and human needs (comfort, safety, health, wellbeing) of learners (this applies to all of the programme's learning environments including the workplace learning environment)
   (ii) suitable information technology and resources (including educational technology and any virtual learning environments provided)
   (iii) printed and electronic material (including software) for teaching, learning and assessment
   (iv) suitable specialist equipment (e.g. kitchen, laboratory, workshop, studio) – if applicable
   (v) technical support
   (vi) administrative support
   (vii) company placements/internships – if applicable
c) If versions of the programme are provided in parallel at more than one location each independently meets the location-sensitive validation criteria for each location (for example staffing, resources and the learning environment).
d) There is a five-year plan for the programme. It should address
   (i) Planned intake (first five years) and
   (ii) The total costs and income over the five years based on the planned intake.
e) The programme includes controls to ensure entitlement to use the property (including intellectual property, premises, materials and equipment) required.

Satisfactory (yes, no, partially)	Comment
Yes	Master of Science in Computing and Information Systems Postgraduate Diploma in Science in Computing and Information Systems

Master of Science in Computing and Information Systems
Postgraduate Diploma inScience in Computing and Information Systems

The panel has evaluated the programmes having regard to the criterion and sub-criteria and recommended that QQI can be satisfied that the programme meets this criterion.

The panel noted that a five year plan had been provided for each of the programmes under review.

From the documentation provided, there appears to be sufficient and appropriate physical resources available within DBS to support delivery of the programme. A tour of the library facilities in the

Aungier Street Campus was undertaken, and the open meeting and study areas throughout the campus to facilitate group work and peer study-support were acknowledged.

The panel were advised of the mobile IT laboratory facility, whereby charged laptops are available within classrooms to provide a flexible, responsive computer laboratory option. Learners are also facilitated to bring their own laptops, and to support their course work, each learner is provided with their own cloud space, and specific software availability is provided here.

In the meeting with learners and graduates there were some resource issues identified, predominantly in relation to the technology set-up, and specific issues identified included as projectors not working, laptops for computer-based exams not charged, Moodle not able to take assessment file (as file size too large), and the timing of Moodle update for reading week (when learner access to class material was required). Learners indicated that this is an area where improvement could be helpful.

Criterion 8

The learning environment is consistent with the needs of the programme's learners

a) The programme's physical, social, cultural and intellectual environment (recognising that the environment may, for example, be partly virtual or involve the workplace) including resources and support systems are consistent with the intended programme learning outcomes.
b) Learners can interact with, and are supported by, others in the programme's learning environments including peer learners, teachers, and where applicable supervisors, practitioners and mentors.
c) The programme includes arrangements to ensure that the parts of the programme that occur in the workplace are subject to the same rigours as any other part of the programme while having regard to the different nature of the workplace.

Satisfactory (yes, no, partially)	Comment
Yes	Master of Science in Computing and Information Systems Postgraduate Diploma in Science in Computing and Information Systems

Master of Science in Computing and Information Systems
Postgraduate Diploma inScience in Computing and Information Systems

The panel has evaluated the programmes having regard to the criterion and sub-criteria and recommended that QQI can be satisfied that the programme meets this criterion.

From the documentation provided, support systems for learners appear to be sufficient to support delivery of the programme and meet learner needs. The programme team is strong and supportive.

The panel noted that a five-year plan had been provided for the programme under review. The panel also noted the recent update of the DBS strategic plan, and were advised that the development of eLearning/blended learning programmes is a strategic objective of the College.

A description of the learning environment in place to support students is provided in Section 3.5 of this report. A tour of the physical facilities in the Aungier Street Campus, particularly the library, was

undertaken. To support their course work, each learner is provided with their own cloud space, and had access to the necessary software required to engage with the programme.

The workload created by the implementation of the assessment strategy, for both lecturers and students was highlighted within the sessions with the panel. **An Assessment Strategy for the Programme, which would require the full programme team coming together to schedule their individual assessment requirements, to incorporate all modules, CA deadlines (to prevent deadlines falling on examination dates), group project guidelines, reassessment mechanisms,reference /citation system used in the programme, etc. is essential to facilitate management of the learner workload. T**his Strategy should also provide clarity regarding examination duration, word counts,and reference/citation system used in the programme. Its preparation should also necessitate a review of lecturer workload in terms of the assessment workload (and feedback provision).**The output should include an assessment schedule to be provided to learners at commencement of the semester/year.** It was queried if there is scope for reducing some of the programme content and/or assessment elements?

The embedding of soft skills in individual modules rather than having a specific stand-alone module was recognised by the panel as an institutional decision, but cannot be vague within the impacted modules. **The panel recommended that the development of these skills within the modules need to reflect back to the mapping (of MIMLOs) against the framework (competence and insight)**. The impact on student workload – with assignments, exams, and workshops needs to be considered.

In meetings with students and graduates, the panel were advised that the MSc requires an enormous amount of knowledge to be developed, and that sometimes it can feels a bit rushed and as if pushing through material to get it covered. **The panel recommended that the basics for each topic could be prepared and made available on Moodle to them in advance of their lectures, rather than having to research programme content themselves.** This was particularly requested by learners whose first language was not English, as a support to their engaging with material on delivery in class.

The panel found that the students and graduates were very positive about the level of support received from lecturers and other staff. They appreciated the easy access to teaching staff who were generally very responsive to requests for support. However, it was also noted that in some instances, issues raised at meetings between the learners and the College may not be resolved in a timely manner, and also that some learners were reluctant to approach lecturers for fear of imposing on their time (as they always seemed to be under pressure to get work done).

The level of feedback provided on assignments appeared to be very helpful when received, but several incidents were cited where this was not provided in a timely fashion – this was particularly challenging for learners in the context of the short delivery block. Learners appeared satisfied that they could meet with lecturers for further feedback if they so desired. **As far as possible, the panel recommended that learners received feedback on assignments within the recommended four week timeframe.** This is especially important where there is an assignment component and a written exam – learners should be made aware of their results in an assignment prior to sitting their exam.

The panel recommended that learners receive an assessment deadlines' schedule for the programme modules at the commencement of the semester/stage.

In addition, **the panel recommended that the programme team consider clarifying the re-assessment strategy for the modules in the programme document into clearly articulated and standard format to ensure consistency**.

The panel recommended that the specifics for supervision for the Applied Research Project, while provided, should be more detailed in the document, and the individual responsibilities outlined.

The panel noted that additional classes (Workshops and tutorials) are held to support learners' engagement with learning material during the academic year, in particular the Writing for Graduate Studies – a 2 hour per week mandatory class (over 12 weeks) for learners, which covers ethics, referencing, academic impropriety and plagiarism. The impact of such non-credit bearing requirements on the learners' workload needs to be considered. **A Workshop List of the mandatory, optional and support resources available is needed by the programme team, and required by the learners, and should be part of the development of the teaching and learning strategy**.

The development of the (60 ECTS) exit award – the Postgraduate Diploma in Science in Information Systems with Computing – to provide an opportunity to recognise the efforts of learners, even/especially if not completing the full award is a positive development for learners and graduates.

Criterion 9

There are sound teaching and learning strategies

a) Theteaching strategies support achievement of the intended programme/module learning outcomes.
b) The programme provides authentic learning opportunities to enable learners to achieve the intended programme learning outcomes.
c) The programme enables enrolled learners to attain (if reasonably diligent) the minimum intended programme learning outcomes reliably and efficiently (in terms of overall learner effort and a reasonably balanced workload).
d) Learning is monitored/supervised.
e) Individualised guidance, support[21] and timely formative feedback is regularly provided to enrolled learners as they progress within the programme.

Satisfactory (yes, no, partially)	**Comment**
Yes	Master of Science in Computing and Information Systems Postgraduate Diploma in Science in Computing and Information Systems

Master of Science in Computing and Information Systems
Postgraduate Diploma inScience in Computing and Information Systems

The panel has evaluated the programmes having regard to the criterion and sub-criteria and recommended that QQI can be satisfied that the programme meets this criterion.

[21] Support and feedback concerns anything material to learning in the context of the programme. For the avoidance of doubt it includes among other things any course-related language, literacy and numeracy support.

The College has developed a Learning Teaching and Assessment Strategy which was provided in the documentation pack for the panel, and appropriate extracts and references were included in the programme documentation. The purpose of this strategy is to support the enhancement of learning and teaching at DBS by establishing a framework, aligned with the overall College Strategy.

The module descriptors provide clear information regarding the syllabus and learning outcomes. Teaching and learning strategies are also provided within each of the module descriptors. Many modules, however, appear to use the same base text, and there is little individualisation at the module level, this could be improved, specifically how each module will apply directed e-learning. **The panel recommended that the reading list for each module be reviewed to ensure they are up to date**. The learning required to successfully progress from intake to completion is substantial, but this is in keeping with a programme which accepts learners from non-cognate disciplines.

In the teaching and learning strategy there is no evidence of consideration of the large differences (and breakdown) between face to face contact and online/blended learning, or how formative feedback is facilitated in an online setting. **The panel require the programme team to revise and develop the Teaching and Learning Strategy required for the programme, to clarify (as a group) – how are the programme goals identified in the document realised - the eLearning content, the module class contact time, the Workshop requirements. Each module descriptor should be updated individually to appropriately reflect its use of online learning components, this should not be a generic text, but specifically tailored to each module.**

The panel recommended that staff training be developed and provided to support teaching and learning objectives. This would serve to support staff in module design and address issues such as what's a fair workload both for staff and learners, and problem based learning. In reviewing the programme structure the panel noted that DBS have recently recruited a Learning Technologist and are intending to appoint an Instructional Designer to support DBS and the lecturers' teaching and learning strategies. This is further supported by list of e-resources available in library and library subject specialists coming to class and being available in the library to support learners. **The programme team should define the e-learning element of each module within the module descriptor for clarity. This need not be identical for each module.**

The embedding of academic and soft skills in individual modules rather than having a specific stand-alone module was recognised as an institutional decision but these cannot be vague within the impacted modules**. The panel recommended that the development of these skills (including reading, writing, presenting, referencing, plagiarism and ethics) within the modules need to reflect back to the mapping (of MIMLOs) against the framework (competence and insight).** The impact on student workload – with assignments, exams, and workshops needs to be considered.

Academic Staff indicated that they are cognisant of the pedagogical aspect of dealing with a class of predominantly international learners, and the in-class experience resulting from this. Teaching is adjusted to facilitate these learners. **Following the session with learners and graduates the panel recommended that it would be beneficial (and particularly supportive of learners whose first language was not English) if the basics for each topic could be prepared and made available to learners on Moodle in advance of their lectures**, to support their engaging with class material.

It was stated that the team is well practiced in supporting a diverse collection of learners within the programme through the use of practically-focused videos (e.g. YouTube). There is a strong culture of collaborative learning and supportive practice within the programme team.

The panel recommended that the specifics for supervision for the *Applied Research Project*, while provided, should be more detailed in the document, and the individual responsibilities outlined.

In meetings with students and graduates, the panel found that they were very positive about the level of support received from lecturers and other staff. However, it was also noted that in some instances, issues raised at meetings between the learners and the College may not be resolved in a timely manner, and also that some learners were reluctant to approach lecturers for fear of imposing on their time (as they always seemed to be under pressure to get work done).

The module documentation makes frequent reference to ongoing formative feedback. The assessments seem to encourage continuous engagement and several module mention submission of a draft for project work. The level of feedback provided on assignments appeared to be very helpful when received, but several incidents were cited where this was not provided in a timely fashion – this was particularly challenging for learners in the context of managing assessment preparation and performance.**As far as possible, the panel recommended that learners received feedback on assignments within the recommended four week timeframe.**

The strategy for the Student Engagement and Success Unit (SESU) is also aligned with the Teaching and Learning Strategy. The establishment of the SESU, as a multidisciplinary intervention to support non-engaging students, was considered a very positive move by DBS to support learner engagement, retention and progression.

Feedback from students and graduates also confirmed that the workload was appropriate but that more structure and communication around this workload was required**. The panel recommended the creation of an assessment schedule, to be provided to learners at commencement of the semester/year, which would be visible/accessible to all**.

The panel identified the need for an Assessment Strategy for the Programme, which would require the full programme team coming together to schedule their individual assessment requirements, to incorporate all modules, CA deadlines, group project guidelines, reassessment mechanisms, etc. is essential to facilitate management of the learner workload. This Strategy should also provide clarity regarding examination duration, word counts,and reference/citation system used in the programme. Its preparation should necessitate a review of lecturer workload in terms of the assessment workload (and feedback provision). **The output should include an assessment schedule to be provided to learners at commencement of the semester/year.**

The panel further noted the feedback from students confirmed the willingness of teaching staff to address any issues brought to them.

Criterion 10

There are sound assessment strategies a) All assessment is undertaken consistently with ***Assessment Guidelines, Conventions and Protocols for Programmes Leading to QQI Awards***[22] b) The programme's assessment procedures interface effectively with the provider's QQI approved quality assurance procedures. c) The programme includes specific procedures that are fair and consistent for the assessment of enrolled learners to ensure the minimum intended programme/module learning outcomes are acquired by all who successfully complete the programme.[23] d) The programme includes formative assessment to support learning. e) There is a satisfactory written **programme assessment strategy**for the programme as a whole and there are satisfactory module assessment strategies for any of its constituent modules.[24] f) Sample assessment instruments, tasks, marking schemes and related evidence have been provided for each award-stage assessment and indicate that the assessment is likely to be valid and reliable. g) There are sound procedures for the moderation of summative assessment results. h) The provider only puts forward an enrolled learner for certification for a particular award for which a programme has been validated if they have been specifically assessed against the standard for that award.[25]	
Satisfactory (yes, no, partially)	**Comment**
Yes	Master of Science in Computing and Information Systems Postgraduate Diploma in Science in Computing and Information Systems

Master of Science in Computing and Information Systems
Postgraduate Diploma inScience in Computing and Information Systems

The panel has evaluated the programmes having regard to the criterion and sub-criteria and recommended that QQI can be satisfied that the programme meets this criterion.

The panel was advised that all assessment for the programmes conforms to the DBS Assessment Regulations which are informed by QQI's Assessment and Standards, revised 2013, and QQI's Effective Practice Guidelines for External Examining, revised February 2015.

While the programme teaching and learning strategy is briefly articulated in 5.6 of the programme document. Assessment seems appropriate at individual module level and samples are available for some modules, however **the panel stated that it would have liked to see samples of each type of assessment for any given module, and some sample assessments need more detail.** There is little detail on the mention of the overall programme assessment strategy.

An Assessment Strategy for the Programme, which would require the full programme team coming together to schedule their individual assessment requirements, to incorporate all modules,

[22] See the section on transitional arrangements.
[23] This assumes the minimum intended programme/module learning outcomes are consistent with the applicable awards standards.
[24] The programme assessment strategy is addressed in the Assessment Guidelines, Conventions and Protocols for Programmes Leading to QQI Awards. See the section on transitional arrangements.
[25] If the award is a QQI CAS compound award it is not necessarily sufficient that the learner has achieved all the components specified in the certification requirements unless at least one of those components is a capstone component (i.e. designed to test the compound learning outcomes).

CA deadlines, group project guidelines, reassessment mechanisms, etc. is essential to facilitate management of the learner workload. This Strategy should also provide clarity regarding examination duration, word counts, and reference/citation system used in the programme. Its preparation should necessitate a review of lecturer workload in terms of the assessment workload (and feedback provision). **The output should include an assessment schedule to be provided to learners at commencement of the semester/year**.

The panel are of the opinion that it is imperative that learner workload is appropriately managed, particularly in the context of assessment scheduling. The programme team stated that a large proportion of supported CA is undertaken within the class/laboratory sessions.

The programme team stated that there is little overlap between assessment components – integrated assessment is not a feature of the programme. The panel considered that there may be opportunities in the programme to have integrated and serial assessments between modules, e.g. progressing projects from one block to another for additional augmentation and further, deepen learning.

In discussions with students, the level of feedback provided on assignments appeared to be very helpful when received, and learners appeared satisfied that they could meet with lecturers for further feedback if they so desired, but several incidents were cited where feedback was not provided in a timely fashion – this is particularly challenging for learners in the context of the programme's short delivery block and being able to improve their performance within the module. As far as possible, **the panel recommended that the learners received feedback on assignments within the recommended four week timeframe**. This is especially important where there is an assignment component and a written exam – learners should be made aware of their results in an assignment prior to sitting their exam.

In addition, the **panel recommended that the programme team considers clarifying the re-assessment strategy for each of the modules in the programme document into clearly articulated and standard format to ensure consistency.** They need not be the same for each module. The re-assessment strategy should be reflected in the programme assessment strategy.

The embedding of academic and soft skills in individual modules rather than having a specific stand-alone module was recognised as an institutional decision but cannot be vague within the impacted modules. **The panel recommended that the development of these skills (including reading, writing, presenting, referencing, plagiarism and ethics) within the modules need to reflect back to the mapping (of MIMLOs) against the framework (competence and insight).** The impact on student workload – with assignments, exams, and workshops needs to be considered.

The specifics for supervision for the Applied Research Project, while provided, should be more detailed in the document, and the individual responsibilities outlined.

With extensive CA/project work involved in the programme, the panel explored how the programme team ensured that the work is the learners own. DBS utilises plagiarism detection software, and also employs a number of initiatives to support learners and prevent their engaging in academic impropriety, such as the new library website with resources to assist students with the essay writing process; referencing, avoiding plagiarism etc. **The panel advised that the provision in class of samples of examples of what's considered a good report and poor referencing, and the modelling of good referencing practice in class material and college resources, could support the prevention of accidental plagiarism.**

The CA material (and descriptor) is only provided to the extern post-assessment completion. **It was recommended that the module specification could be provided to the external examiner at the commencement of the academic year.** Feedback can be obtained and utilised to improve the assessment in the current or subsequent block/semester/year. A new mechanism for processing external examiners comments was identified to the panel– this is being introduced in academic year 2019/20 – thisprocess will serve to close the loop on addressing the issues identified during the process.

The establishment and role of the academic appointments sub-committee was particularly commended in terms of assuring that sufficient qualified and capable programme staff are available to implement the programme as planned (including assessment). The committee also identifies the requirements for each staff to be supported through their orientation and professional development at the College.

Criterion 11

Learners enrolled on the programme are well informed, guided and cared for

a) There are arrangements to ensure that each enrolled learner is fully informed in a timely manner about the programme including the schedule of activities and assessments.
b) Information is provided about learner supports that are available to learners enrolled on the programme.
c) Specific information is provided to learners enrolled on the programme about any programme-specific appeals and complaints procedures.
d) If the programme is modular, it includes arrangements for the provision of effective guidance services for learners on the selection of appropriate learning pathways.
e) The programme takes into account and accommodates to the differences between enrolled learners, for example, in terms of their prior learning, maturity, and capabilities.
f) There are arrangements to ensure that learners enrolled on the programme are supervised and individualised support and due care is targeted at those who need it.
g) The programme provides supports for enrolled learners who have special education and training needs.
h) The programme makes reasonable accommodations for learners with disabilities[26].
i) If the programme aims to enrol international students it complies with the *Code of Practice for Provision of Programmes to International Students*[27]and there are appropriate in-service supports in areas such as English language, learning skills, information technology skills and such like, to address the particular needs of international learners and enable such learners to successfully participate in the programme.
j) The programme's learners will be well cared for and safe while participating in the programme, (e.g. while at the provider's premises or those of any collaborators involved in provision, the programme's locations of provision including any workplace locations or practice-placement locations).

Satisfactory (yes, no, partially)	**Comment**

[26]For more information on making reasonable accommodations see www.AHEAD.ie and QQI's Policies, Actions and Procedures for Access, Transfer and Progression for Learners (QQI, restated 2015).
[27]See Code of Practice for Provision of Programmes to International Students (QQI, 2015)

Yes	Master of Science in Computing and Information Systems Postgraduate Diploma in Science in Computing and Information Systems

Master of Science in Computing and Information Systems
Postgraduate Diploma inScience in Computing and Information Systems

The panel has evaluated the programmes having regard to the criterion and sub-criteria and recommended that QQI can be satisfied that the programme meets this criterion.

The panel noted that the Student Handbooks and website contain information on the supports and services available to students. **The panel recommended that the diagram of the programme structure contained in the Student Handbook would be very helpful in programme documents to fully appreciate the overall programme structure and schedule.** The overview of programme modules provided in the programme document would be very useful for the students in the Student Handbook.

In the meeting with learners and graduates, they indicated that while they love the international culture and diversity, they found it a challenge to get a handle on the overall Irish educational structure. Some orientation about the Irish education system, expectations, etc. would support engagement with the programme. There was also the possibility of learners finding the programme overwhelming (as it's very different from their previous experience at undergraduate level). For example one learner cited the example that in their home country the approach to learning was more about doing than writing - they subsequently found assessments challenging.

The embedding of academic and soft skills in individual modules rather than having a specific stand-alone module was recognised as an institutional decision but cannot be vague within the impacted modules. The **panel recommended that the development of these skills (including reading, writing, presenting, referencing, plagiarism and ethics) within the modules need to reflect back to the mapping (of MIMLOs) against the framework (competence and insight).** The impact on student workload – with assignments, exams, and workshops needs to be considered.

Following feedback from the learners and graduates, **the panel recommended that it would be beneficial if the basics for each topic could be prepared and made available on Moodle to learners in advance of their lectures, rather than having to research programme content themselves**. This would be particularly supportive of learners whose first language was not English in engaging with class material.

However, it also noted that where learners are required to complete continuous assessment assignments, the **programme team should develop an Assessment Strategy for the Programme, which would require the full programme team coming together to schedule their individual assessment requirements, to incorporate all modules**, CA deadlines, group project guidelines, reassessment mechanisms, etc. is essential to facilitate management of the learner workload. This may alleviate the sense that some learners expressed a concern the some assessment so big that they are not able to complete them. This Strategy should also provide clarity regarding examination duration, word counts,and reference/citation system used in the programme. Its preparation should necessitate a review of lecturer workload in terms of the assessment workload (and feedback provision). **The output should include an assessment schedule to be provided to learners at commencement of the semester/year.**

It was noted that, in the year 2017/18, the overall fail rate for the programme is 36.73% – overall, over its lifetime, there is a very high attrition rate for this programme. The panel queried how has this been addressed during the programmes lifetime, and what facilitation has been made in the newly developed programme to overcome whatever challenges to learner success may be presenting.

The panel noted that additional classes (Workshops and tutorials) are held to support learners' engagement with learning material during the academic year, in particular the Writing for Graduate Studies – a 2 hour per week mandatory class (over 12 weeks) for learners, which covers ethics, referencing, academic impropriety and plagiarism – referred to by learners as a 'ghost' programme. The impact of such non-credit bearing requirements on the learners' workload needs to be considered. **A Workshop List of the mandatory, optional and support resources available is needed by the programme team, and required by the learners, and should be part of the development of the teaching and learning strategy.**

The specifics for supervision for the Applied Research Project, while provided, should be more detailed in the document, and the individual responsibilities outlined.

The panel considered the establishment of the Student Engagement and Success Unit (SESU) a very positive move by DBS to support learner engagement, retention and progression.

The learners and graduates that met with the panel spoke extremely positively and impressively about the programme. It appeared they were well informed of what was required of them in class and for assessments, and they praised their lecturers highly. The positive employment prospects of the programme's graduates were a significant driver of learners' satisfaction with the programme.

Learners are provided with Career Search Support through workshops, which cover development of CVs, relevant job sites, etc. These workshops run twice per week over the academic year. In addition the College hosts two careers weeks per year – these consist of subject-specific recruitment events to optimise learners, graduates and employers time and efforts.

It appeared that the lecturers were very dedicated to lecturing on the programme, and to the learning of their students. However, it was also noted that in some instances, learners were reluctant to approach lecturers for fear of imposing on their time (as they always seemed to be under pressure to get work done).

Criterion 12

The programme is well managed

a) The programme includes intrinsic governance, quality assurance, learner assessment, and access, transfer and progression procedures that functionally interface with the provider's general or institutional procedures.
b) The programme interfaces effectively with the provider's QQI approved quality assurance procedures. Any proposed incremental changes to the provider's QA procedures required by the programme or programme-specific QA procedures have been developed having regard to QQI's statutory QA guidelines. If the QA procedures allow the provider to approve the centres within the provider that may provide the programme, the procedures and criteria for this should be fit-for-the-purpose of identifying which centres are suited to provide the programme and which are not.
c) There are explicit and suitable programme-specific criteria for selecting persons who meet the programme's staffing requirements and can be added to the programme's complement of staff.
d) There are explicit and suitable programme-specific criteria for selecting physical resources that

meet the programmes physical resource requirements,and can be added to the programme's complement of supported physical resources. e) Quality assurance[28] is intrinsic to the programme's maintenance arrangements and addresses all aspects highlighted by the validation criteria. f) The programme-specific quality assurance arrangements are consistent with QQI's statutory QA guidelines and use continually monitored completion rates and other sources of information that may provide insight into the quality and standards achieved. g) The programme operation and management arrangements are coherently documented and suitable. h) There are sound procedures for interface with QQI certification.	
Satisfactory (yes, no, partially)	**Comment**
Yes	Master of Science in Computing and Information Systems Postgraduate Diploma in Science in Computing and Information Systems

Master of Science in Computing and Information Systems
Postgraduate Diploma inScience in Computing and Information Systems

The panel has evaluated the programmes having regard to the criterion and sub-criteria and recommended that QQI can be satisfied that the programme meets this criterion.

The documentation suggests a well-conceived programme management strategy and structure.

The programme development team have completed an extensive review of the programme in accordance with the programmatic review terms of reference and QQI programme validation criteria.

The panel were satisfied that there are effective structures in place for the governance and management of the programmes under review. The QAH contains the governance structures for the College and procedures for access, transfer and progression, learner assessments and supports, and teaching and learning.

With that in mind, the panel indicated that it got little sense of the programme team cohesiveness, and recommended that the management of the programme be strengthened – there appeared to be a disconnect between the lecturer, the programme and the college. **The panel required that the programme team to meet to review and 'personalise' their modules (recognising the ownership of the module by the lecturer).** The programme team meetings would reinforce the coherence/cohesiveness of the modules within the programme. In addition, clarity is required on the specific programme management roles of Course Director and Programme Leader.

The specifics for supervision for the Applied Research Project, while provided, should be more detailed in the document, and the individual responsibilities outlined.

Notwithstanding, the panel commended the lecturer commitment to the programme and its learners, and the technical expertise of the team. The support of learners and accessibility of the programme staff to learners was evident in the documentation, in the engagement with both the staff and the learners at the panel.

[28]See also QQI's Policy on Monitoring (QQI, 2014)

It was noted that the QAH and associated policies and procedures have been developed in line with QQI statutory guidelines, and that DBS have submitted an application to QQI for reengagement. The process for interim programme change was outlined to the panel by the programme team. The programme-specific quality assurance arrangements are outlined in Section 3.8 of this report. There is an extensive cohort of staff in place to manage the quality assurance and enhancement aspects of the programme which appears to be well managed in terms of staffing and quality assurance.

In relation to areas for improvement, the conditions and recommendations identified in this report capture the feedback from the panel.

The identified commendations provide areas of enhancement that serve to continuously enhance the College's activities.

Part 2B Overall recommendation to QQI

Master of Science in Computing and Information Systems
Postgraduate Diploma inScience in Computing and Information Systems

Select one	
X	Satisfactory (meaning that it recommended that QQI can be satisfied in the context of unit 2.3) of Core policies and criteria for the validation by QQI of programmes of education and training;
	Satisfactory subject to proposed special conditions (specified with timescale for compliance for each condition; these may include proposed pre-validation conditions i.e. proposed (**minor**) things to be done to a programme that almost fully meets the validation criteria before QQI makes a determination);[29]
	Not satisfactory.

Reasons[30] for the overall recommendation

The panel carried out a comprehensive review of the Master of Science in Computing and Information Systems, with its embedded Postgraduate Diploma EXIT award, between May and August 2019.

The MSc programme was due for review under the QQI requirement for periodic monitoring and review, and also require review to conform with recent policies, including QQI Core Policies and Criteria for the Validation of Programmes of Education and Training (QQI, 2016), Core Statutory Quality Assurance (QA) Guidelines (QQI, 2016) and in accordance with the QQI Programme Review

[29]Normally an application that fails to meet the criteria in any of its aspects will be considered as not satisfactory. Nevertheless, so as to ensure that the validation process will not be implemented unreasonably, if an independent evaluation finds that a programme virtually meets the validation criteria but needs some minor modifications, the independent evaluation could conclude "Satisfactory subject to recommended special conditions" where the special conditions prescribe the defects that require to be corrected.

[30]Give precise reasons for the conclusions organised under each of the 12 criteria (for the programme and each embedded programme and any modules proposed to lead to QQI awards) citing supporting evidence. If any criteria or sub-criteria are not met by the application this must be stated explicitly giving precise reasons with evidence. A "Not Satisfactory" recommendation may be justified if any one of the applicable criteria or sub-criteria are not demonstrated to be satisfied.

Manual 2016/2017. The Postgraduate Diploma in Science in Computing and Information Systems is a newly developed award.

The review comprised six stages:

- A desk review by the panel of the self-evaluation report on the internal programme review prepared by the Programme Leaders and Programme Team, and a review of the initial/revised proposed Master of Science in Computing and Information Systems programme documentation to be submitted for revalidation.
- A site visit on 21 May 2019 involving a series of meeting with academic staff and administrative staff engaged in programme delivery and support, a meeting with recent graduates and current learners on the programme, and a tour of the DBS campus (and College Library) to review facilities.
- The preparation of a panel report, outlining the process and evidence pursued, and a series of conditions and recommendations.
- A follow-up desk review of revised documentation provided by DBS addressing the panel's conditions and recommendations.
- Further feedback from the panel to DBS in relation to necessary action required to close-out on the identified conditions.
- A follow-up desk review of further revised and developed documentation provided by DBS which address the panel's conditions.

The revised documentation provided consisted of:

- DBS Programme Review Document for the Master of Science in Computing and Information Systems (and embedded Postgraduate Diploma programme) – referred to as Programme Document hereafter
- DBS Appendix 5 Module Descriptors for Master of Science in Computing and Information Systems (and embedded Postgraduate Diploma programme) – referred to as Module Descriptors hereafter
- Programme Team's response to the Independent Programme Review Report – referred to as Team Response hereafter
- Proposed Assessment Schedule for the programme
- Extensive supporting documentation which included DBS Teaching and Learning Strategy for the Master of Science in Computing and Information Systems; DBS Assessment Strategy for the Master of Science in Computing and Information Systems; Terms of Reference for the Programme Board and Programme Team meetings; Work Placement Handbook.

Based on the site visit and the revised documentation received, the panel concluded that the Master of Science in Computing and Information Systems, as presented to QQI for revalidation, satisfies the core policies and criteria for revalidation by QQI of programmes of education and training, specifically as follows:

Criterion1: DBS meets the prerequisites (section 44(7) of the 2012 Act) to apply for validation of these programmes. The panel was informed DBS is currently taking part in the re-engagement process with QQI. QA policies and procedures are therefore under review. Access, transfer and progression procedures are detailed in Section 4 of Programme Document and Chapter 6 of the current DBS Quality Assurance Handbook.

The panel noted that DBS has arrangements in place for Protection of Enrolled Learners (PEL), documentation for which is provided to QQI with every submission for revalidation of a programme.

Criterion2: the programme objectives and programme outcomes are clear and consistent with the QQI award sought. They are set out in Sections 2.1 and 2.4 of the Programme Document. The Interpretation of the awards standards and research supporting the programme's aims, objectives and the MIPLOs is provided in section 3.6.
MIPLOS are mapped against the QQI Generic Awards Standards as set out in Section 13 of the Programme Document, and are compared with those of comparable programmes in section 2.7.
The panel observed that some of the 16 domains across both standards, 4 modules (1, 3, 7 and 9) are not mapped at all to at least 6 domains.MIPLO 10 may be slightly under-addressed outside the research project module across the programme. All modules have MIMLOs, yet the level of some outcomes may not be commensurate with level 9 expectations.
From the mapping, there appears to be a heavy reliance on knowledge and skills within the programme, with lesser indication of the achievement of competence/insight.The embedding of professional development/soft skills in individual modules rather than having a specific stand-alone module need to reflect back to the mapping (of MIMLOs) against the framework (competence and insight). The panel recommend that the programme team revisit all of the programme modules to review MIMLOs, and their mapping. This was completed in the revised programme documentation prior to the programme team's response to the panel.

Criterion3: the panel found that the programme concept, implementation strategy and interpretation of QQI awards are well informed, taking into consideration social, cultural, educational, professional and employment objectives. Extensive consultation with ICT stakeholders, as well as students and graduates, was evidenced in Section 3.4 and 3.7 of the Programme Document and had informed the evolution of the programme.
The College needs to ensure the future proofing the programme to bolster against any international or economic forces which could adversely impact the programme's future viability.
The embedding of soft skills in individual modules cannot be vague within the impacted modules, and the panel recommended that the development of these skills within the modules need to reflect back to the mapping (of MIMLOs) against the framework (competence and insight).Updated module descriptors and a soft-skills' matrix were provided with the response documentation.
The panel also recommend that the programme team revise and develop the Teaching and Learning Strategy required for the programme, to clarify (as a group) how the programme goals identified in the document are realised. Programme-specific Teaching and Learning and Assessment Strategies have been prepared for the programme, and embedded in the programme documentation and module descriptors.

Criterion4: the programme's access, transfer and progression arrangements are satisfactory.
The student handbook gives students information regarding the course, but has a number of omissions, the inclusion of which, would greatly strengthen the publication. DBS is in the process of updating the student handbooks for the forthcoming academic year.
Entry criteria and progression options, including the concept of how a non-cognate primary discipline in the context of the minimum of a L8 requirement, and/or professional experience qualification, versus how RPL consideration works, were explored, as was how the minimum mathematical proficiency requirements for non-cognate degree holders will be verified. These are now clearly documented, as per section 3.2 and chapter 4 of the Programme Document, –the

programme team seeks mathematical equivalence of an undergraduate degree (L8, 2.2 classification), or the use of sufficiently complex mathematics and statistics in their professional life (to a Level 8, 2.2 classification standard). They also stated that Mathematics material is covered in the modules, and additional support is provided for learners through Workshops via the DBS Student Engagement and Success Unit (SESU).
The extension of the last permitted intake date, to include the full academic year (second intake), has been implemented in the programme documentation under guidance from QQI.

Criterion5: the programme's written curriculum and modules are well structured and fit-for-purpose. The panel recommended that the programme team meet to conduct the overall annual oversight, evaluation and review of the programme, to enhance overall programme cohesiveness. In its response the programme team took the recommendation on board and provided evidence of greater clarity and cohesion in the structure and the terms of reference for the course boards and programme team meetings. The panel is satisfied that these responses have addressed the recommendations.
Specific comments were identified in relation to a number of Modules on the programme. The issues identified have been closed out as identified in the programme team response to the panel.
The panel recommended that staff training be developed and provided to support teaching, learning and assessment objectives – a pre-semester staff day is being planned at DBS to initiate this development. Programme-specific teaching and learning and assessment strategies have been prepared for the programme, and embedded in the revised programme documentation and module descriptors presented to the panel.

Criterion 6: there are sufficient qualified and capable programme staff available to implement the programme as planned. The panel noted that teaching staff are qualified to a minimum of NFQ Level 9 with a number qualified to doctoral level, and that a cohort of experienced library practitioners (current DBS library staff and others) is involved in the delivery of the programme. This is evidenced in the suite of staff CVs [Appendix 2 Programme Staff CVs] which set out the qualifications of staff. Other staffing matters are set out in section 1.2 and chapter 7 of the Programme Document.
The panel recommended that the management of the programme be strengthened through the programme team meeting to review and 'personalise' their 'own' modules, which would reinforce the coherence/cohesiveness of the modules within the programme. In addition, clarity is required on the specific programme management roles of Course Director and Programme Leader.In its response the programme team took the recommendation on board and provided evidence of greater clarity and cohesion in the structure and the terms of reference for the course boards and programme team meetings (and also the roles of Course Director and Programme Leader). The panel is satisfied that these responses have addressed the recommendations.
The specifics for supervision for the Applied Research Project, while provided, needed more detail, and the individual responsibilities outlined. The Applied Research Project has been updated to address these specifics.

Criterion7: there are sufficient physical resources to implement the programme as planned, as set out in chapter 8 of the Programme Document. The wide range of resources utilised to support learners, and support their progression and retention, was noted.
The panel noted that a five-year plan had been provided for the programme under review as evidenced in Section 3.13 of the Programme Document. The extension of the last intake to include

the full academic year has been implemented in programme documentation under guidance from QQI.

Criterion8: the learning environment is consistent with the needs of the programme's learners. The panel was advised that DBS uses a number of mechanisms to develop and implement supports for students as set out in sections 5.8 and 5.9 of the Programme Document.
The processes and procedures for the student's work placement have been clarified in the Student Placement Handbook.
Programme-specific teaching and learning and assessment strategies have been prepared for the programme, and embedded in the revised programme documentation and module descriptors presented to the panel.
A Workshop List of the mandatory, optional and support resources available has been incorporated into the revised programme document.

Criterion9: there are sound teaching and learning strategies. These are outlined in chapter 5 of the Programme Document. In meetings with students and graduates at the site visit, the panel noted that they were very positive about the support they received from staff.
The panel recommended that the e-learning element of each module is defined within the module descriptor for clarity.
Programme-specific teaching and learning strategies (which include processes for feedback provision to learners) have been prepared for the programme, and embedded in the revised programme documentation and module descriptors presented to the panel.
The panel found that the lists of texts within the programme documentation required a review to reflect on essential vs recommended. The reading lists have been updated in the Module Descriptor document provided.

Criterion 10: there are sound assessment strategies. The panel was advised that all assessment for the programmes conform to the DBS Assessment Regulations which are informed by QQI Assessment and Standards Revised 2013 as set out in section 5.10 of the Programme Document, and within the individual modules.
Programme-specific assessment strategies (which include processes for feedback provision to learners) have been prepared for the programme, and embedded in the revised programme documentation and module descriptors presented to the panel.
The panel recommended that an assessment schedule be prepared for the programme and that a hardcopy be provided to learners at the commencement of the semester/stage., and are satisfied that appropriate measures have been put in place to provide this. The programme team has also clarified the re-assessment strategy for each of the modules within the programme.

Criterion 11: learners enrolled on the programme are well informed, guided and cared for.Students and graduates with whom the panel met confirmed that support services are well publicised. Supports for learners are detailed in sections 5.9 and 8.2 of the programme document.
The panel recommended that the diagram of the programme structure contained in the Student Handbook would be very helpful in programme documents to fully appreciate the overall programme structure and schedule. This has been embedded in the revised programme documentation presented to the panel.
A Workshop List of the mandatory, optional and support resources available has been incorporated into the revised programme document.

Criterion 12: the programme is well managed. The panel were satisfied that there are effective structures in place for the governance and management of the programmes under review. The College is enhancing its processes to ensure that the lecturers on the programme are more closely involved in the overall annual oversight, evaluation and review of the programme, and participate effectively in programme boards.
The Quality Assurance Handbook (QAH) contains the governance structures for the College and procedures for access, transfer and progression, learner assessments and supports, and teaching and learning. It was noted that the QAH and associated policies and procedures have been developed in line with QQI statutory guidelines, and have been redrafted as part of DBS's reengagement process with QQI.

Summary of recommended special conditions of validation

The conditions identified by the review panel were as follows:

1. Revise and develop a Teaching and Learning Strategy for the programme, to clarify (as a group) how the programme goals identified in the document are realised –with particular reference to the module class contact time (versus ECTS), the eLearning content, the Workshop requirements (including the 'ghost' programme), project, etc.

2. The embedding of soft skills in individual modules rather than having a specific stand-alone module was recognised as an institutional decision but where these skills are currently developed cannot be vague within the impacted modules – the development of these skills within the modules need to reflect back to the mapping (of MIMLOs) against the framework (competence and insight). The impact on student workload – with assignments, exams, and workshops needs to be considered.

3. An Assessment Strategy for the Programme, which would require the full programme team coming together to schedule their individual assessment requirements, to incorporate all modules, CA deadlines, group project guidelines, reassessment mechanisms, etc. is essential to facilitate management of the learner workload. This Strategy should also provide clarity regarding examination duration, word counts, and reference/citation system used in the programme. Its preparation should necessitate a review of lecturer workload in terms of the assessment workload (and feedback provision). The output should include an assessment schedule to be provided to learners at commencement of the semester/year.

Summary of recommendations to the provider

1. The panel strongly recommended that the programme team revisit all of the programme modules to review MIMLOs, the assessment instruments, and the indicative content, to facilitate deep learning and to ensure there is sufficient differentiation between the modules.

2. The panel recommended that Admission requirements for the programme be revisited to ensure that appropriate Mathematics and prior learning, knowledge and skills requirements are identified for applicants; and that RPL decisions are appropriate, fair and consistently applied.

3. The panel recommended that analysis of learner assessment performance versus their entry profile should be conducted particularly, as in this case, for programmes where non-standard and RPL admissions are permitted.

4. The panel recommended that the basics for each topic could be prepared and made available on Moodle to learners in advance of their lectures, rather than having to research programme content themselves. This would be particularly supportive of learners whose first language was not English in engaging with class material.

5. The panel recommended that the management of the programme be strengthened – there currently appeared to be a disconnect between the lecturer, the programme and the college. This would require the programme team to meet to review and 'personalise' their modules (recognising the ownership of the module by the lecturer). The programme team meetings would reinforce the coherence/cohesiveness of the modules within the programme. In addition, clarity is required on the specific programme management roles of Course Director and Programme Leader.

6. The panel recommended that the diagram of the programme structure (with regard to the streams) contained in the student handbook would be very helpful in programme documents to fully appreciate the overall programme structure and schedule. The overview of programme modules provided in the programme document would be very useful for the students in the Student Handbook.

7. Module ECTS credit allocation – the panel recommended that in some instances contact time needs to be restated to ensure its accuracy and consistency in relation to ECTS versus total expended time.

8. The panel recommended that staff training be developed and provided to support teaching, learning and assessment objectives. This would serve to support staff in module design and address issues such as what's a fair workload both for staff and learners.

9. A Workshop List of the mandatory, optional and support resources available is needed by the programme team, and required by the learners, and should be part of the development of the teaching and learning strategy.

10. The panel recommended that the reading list for each module be reviewed to ensure they are up to date.

Declarations of Evaluators' Interests

Panel secretary, Mary Doyle has previously held the role of position of Registrar at Dublin Business School. Since leaving this role, in 2009, she has not engaged in any professional relationship with the College and/or its staff. In addition, there have been extensive changes at senior/middle management within DBS in the interim and Ms Doyle has not had any professional relationship with the incumbents, during or prior to their taking up their roles at DBS.

Panel member, Dr Simon Caton was a lecturer at the National College of Ireland (NCI) from 2014 to 2019, during which time he was a member of the PhD programme staff. Course Director, Mr David Williams is currently registered on a part-time PhD programme at NCI. Dr Caton is/was not his principal supervisor.

This report has been agreed by the evaluation panel and is signed on their behalf by the chairperson.

Panel chairperson: Dr Marion Palmer Date: 29 August 2019

Signed: 

Addendum

N/a

Disclaimer

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.

Part 4: Appendices

QQI
Quality and Qualifications Ireland
Dearbhú Cáilíochta agus Cáilíochtaí Éireann

Revalidation of the Master of Science in Information Systems with Computing with the embedded exit award Postgraduate Diploma in Science in Information Systems with Computing provided by Dublin Business School - 2019

In its original independent evaluation report dated 11th June 2019, the independent panel specified 3 conditions and 10 recommendations regarding the above programmes. Dublin Business School formally responded to the report on 19th August 2019 and has addressed each of the conditions and recommendations to the satisfaction of the independent panel members.

The panel confirmed that it recommended the Master of Science in Information Systems with Computing programme with the embedded exit award Postgraduate Diploma in Science in Information Systems with Computing to QQI for revalidation.

QQI is satisfied that each condition made by the independent panel has been met and each recommendation has been taken on board and the recommended action has been taken or is scheduled to be taken.

Signed: 

Carmel Kelly - Validation Manager, Quality and Qualifications Ireland

Date: 18 November 2019