

Independent Programme Review Report

Provider name	DBS
Date of site visit	21 May 2019
Date of report	11 June 2019

Principal programme	Title	Master of Science in Information Systems with Computing
	Award	Master of Science
	Credit	90
	Duration¹ <i>(years, months, weeks)</i>	Full-time: 1 year (3 semesters of 12 weeks each) Part-time: 2 years (5 semesters of 12 weeks each)

Embedded programme	Title	Postgraduate Diploma in Information Systems with Computing
	Award	Postgraduate Diploma in Science
	Credit	60
	Duration	Full-time: 1 years (2 semesters of 12 weeks each) Part-time: 2 years (4 semesters of 12 weeks each)

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1 Introduction

The scope of the review encompassed the Master of Science Information Systems with Computing, which is placed at Level 9 of the National Framework of Qualifications. Also under review is the new Postgraduate Diploma in Science in Information Systems with Computing, an embedded programme which supports a major EXIT award at Level 9 on the Framework. Programme approval and revalidation will be required for the programmes from 1st of September 2019.

The programmes detailed in this Terms of Reference document are due for review under the QQI requirement for periodic monitoring and review, which also requires 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 Manual 2016/2017*.

As detailed in QQI's *Core Statutory Quality Assurance (QA) Guidelines* (pp 11–12) and the *Programme Review Manual 2016/2017*, programme monitoring and review is taken as an opportunity to:

- Ensure that the programme remains appropriate, and to create a supportive and effective learning environment
- Ensure that the programme achieves the objectives set for it and responds to the needs of learners and the changing needs of society
- Review the learner workload
- Review learner progression and completion rates
- Review the effectiveness of procedures for the assessment of learners
- Inform updates of the programme content; delivery modes; teaching and learning methods; learning supports and resources; and information provided to learners
- Update third party, industry or other stakeholders relevant to the programme (s)
- Review quality assurance arrangements that are specific to that programme

Objectives of the Programme Review

The QQI *Programme Review Manual 2016/2017* states that the specific objectives of a Programme Review are to evaluate the programme as implemented in light of the provider's experience of providing the programme over the previous five years with a view to determining:

- (1) What has been learned about the programme, as an evolving process (by which learners acquire knowledge, skill and competence), from the experience of providing it for the past five or so years?
- (2) What can be concluded from a quantitative analysis of admission data, attrition rates by stage, completion rates and grades achieved by module, stage and overall?
- (3) What reputation do the programme and provider have with stakeholders (learners, staff, funding agencies, regulatory bodies, professional bodies, communities of practice, employers, other education and training providers) and in particular what views do the stakeholders have about the strengths, weaknesses, opportunities and threats concerning the programme's history and its future?
- (4) What challenges and opportunities are likely to arise in the next five years and what modifications to the programme are required in light of these?
- (5) Whether the programme in light of its stated objectives and intended learning outcomes demonstrably addresses explicit learning needs of target learners and society?

- (6) What other modifications need to be made to the programme and its awards to improve or reorient it?
- (7) Whether the programme (modified or unmodified) meets the current QQI validation criteria (and sub-criteria) or, if not, what modifications need to be made to the programme to meet the current criteria?
- (8) Whether the provider continues to have the capacity and capability to provide the programme as planned (considering, for example, historical and projected enrolment numbers and profile and availability and adequacy of physical, financial and human resources) without risk of compromising educational standards or quality of provision in light of its other commitments (i.e. competing demands) and strategy?
- (9) What is the justification (or otherwise) for the provider continuing to offer the programme (modified or unmodified)?
- (10) What changes need to be made to related policies, criteria and procedures (including QA procedures)?

2 Independent Review Process

2.1 Evidence Perused

The review process for the programmes was led by the Programme Leaders with the Programme Team in order to critically analyse all aspects of these programmes. The consultation embraced a wide range of relevant issues including:

- Programme rationale
- Programme aims, objectives and learning outcomes
- Programme structure
- Module choice and content
- Teaching, learning and assessment methodologies
- Access, transfer and progression

The guiding principles underpinning this review were:

- That assessment of learning achieved shall adhere to the relevant QQI Assessment and Standards Revised 2013
- That the proposal for the programmatic review of the programmes has been developed and approved internally as a result of the DBS quality assurance procedures
- That the proposed programme will assist DBS and the School of Business and Law in the achievement of DBS's mission and strategy
- That the programme learning outcomes will meet the needs of current and future learners, employers and other stakeholders
- That teaching and learning or research activity at any level shall be conducted in a manner morally and professionally ethical

The Programme Team has engaged in a significant consultative process to ensure that the programmes provide an appropriate and relevant mix of academic content and practical application to address the needs of the various stakeholders. This process was informed by consultation with internal and external stakeholders, including current learners, external examiners, placement and employer organisations, faculty, current reports by government agencies on labour force requirements, as well as a competitor analysis of similar programmes, in so far as these were

available. The College's Teaching and Learning strategy and Assessment Strategy was used to inform the development of the programme. See Section 7.2 of this report for more information

The results and conclusions of this review process informed the proposed changes to the programmes which are outlined in this report. DBS provided the panel with a self-evaluation report for the programme (hereafter referred to as Programme Review Reports) and access to documentation before and during the site visit. Requests for further documentation were facilitated in a timely manner and supported by further explanations where appropriate.

Membership of Provider's Review Team

Name	Job Title with the Provider
David Williams	Course Director
Dr Shazia A Afzal	Programme Leader (Higher Diploma in Science in Computing and MSc in Information Systems with Computing) Lecturer: <i>several modules within both programmes</i>
Paul Laird	Team Lead (Higher Diploma in Science in Computing revalidation) Lecturer
Dr Shahram Aziz Sazi	Lecturer: <i>Data Analytics.</i>
Clive Gargan	Lecturer: <i>Principles of Programming, Object-Oriented Programming, Database Design and Development, Tools and Technologies for DevOps</i>
Harnaik Dhoot	Lecturer: <i>Object-Oriented Programming, Advanced Programming, Mobile Application Development, DevOps Practices and Principles, DevOps Project Management and Software Engineering</i>
John Rowley	Lecturer and Subject Specialist: <i>in the areas of Web, Mobile and Databases</i>
Obinna Izima	Lecturer: <i>Operating Systems and Networks, DevOps Practices and Principles, Tools and Technologies for DevOps</i>
Rory O'Donnell	Lecturer: <i>Principles of Programming, Object-Oriented Programming, Advanced Programming</i>
Claire Caulfield	Lecturer: <i>Object Oriented Programming, DevOps Project Management</i>
Derek Mizak	Lecturer: <i>Operating Systems and Networks, Tools and Technologies for DevOps</i>
Maria Barry	Lecturer: <i>Information Systems Development and Management</i>
Brian Raymond	Lecturer: <i>Information Systems Development and Management</i>
Dermot Boyle	Lecturer: <i>Information Systems Development and Management</i>
Ehtisham Yasin	Lecturer: <i>Mobile Application Development</i>
Bernadette Higgins	Lecturer: <i>Web Design and Development</i>
Damien Kettle	Lecturer: <i>Work Placement / Project</i>
Lori Johnston	Registrar
Dr Martin Doris	Assistant Registrar
Dr Tony Murphy	Head of Quality Enhancement and Innovation in Teaching and Learning
Dr Kerry McCall Magan	Head of Academic Programmes
Dr Lee Richardson	Data Analytics and Reporting Manager
Shane Mooney	Head of Student Experience
Jane Buggle	Deputy Librarian
Emma Balfe	Head of Faculty and School Operations
Darragh Breathnach	Head of Academic Operations
Anita Dwyer	School Executive Officer
Eimear Forde / Viviana Montero	Programme Coordinators

Grant Goodwin	Quality Assurance Officer
Sarah Sharkey	Student Retention Officer

2.2 Agenda

See Appendix 2.

2.3 Persons Met

Staff, Students and Graduates with whom the Panel Met

1. Evaluation of Programme Proposed for Revalidation against QQI validation Criterion 1. The provider is eligible to apply for validation of the programmes (s)

2. Evaluation of the Programme Review Process and Report

Name	Job Title with the Provider
Andrew Conlan-Trant	Executive Dean (<i>for session 1 only</i>)
David Williams	Course Director
Dr Shazia Afzal	MSc Programme Lead
Paul Laird	HDIP Programme Lead
Dr Kerry McCall Magan	Head of Academic Programmes
Lori Johnston	Registrar
Emma Balfe	Head of Faculty and School (Acting)
Dr Tony Murphy	Head of Quality Enhancement and Innovation in Teaching and Learning
Shane Mooney	Head of Student Experience
Dr Martin Doris	Assistant Registrar
Grant Goodwin	QA Officer

3. Evaluation of Programme Proposed for Revalidation against QQI validation criteria- Programme Rationale and overall structure

Name	Job Title with the Provider
David Williams	Course Director
Dr Shazia Afzal	MSc Programme Lead
Paul Laird	HDip Programme Lead
Dr Kerry McCall Magan	Head of Academic Programmes
Lori Johnston	Registrar
Emma Balfe	Head of Faculty and School (Acting)
Shane Mooney	Head of Student Experience
Dr Martin Doris	Assistant Registrar
Grant Goodwin	QA Officer
Tanya Balfe	Admissions Manager

4. Panel Meeting with Student and Graduate Representatives

Name and Status
Martin Behan, HDip student - Part-time
Coleman Ifeanyi, MSc current student - Sept Intake

Pritesh Joshi, MSc current student - Sept Intake
Naghma Khan, MSc current student - Jan Intake)
Yamuna Kuberappa, HDip graduate - Full-time
Nitanshu Rehani, MSc graduate
Ruben Ruiz Torres, MSc current student - Sept Intake
Gustavo Reis, HDip graduate - Part-time
Nisar Sayed, MSc current student
Niall Scannell, HDip student - Part-time

5. Curriculum, Learning Teaching & Assessment - Proposed Programme: Master of Science in Information Systems with Computing

Name	Job Title with the Provider
Dr Kerry McCall Magan	Head of Academic Programmes
Dr Tony Murphy	Head of Quality Enhancement and Innovation in Teaching and Learning
Grant Goodwin	QA Officer
Dr Shazia Afzal	MSc Programme Lead, Lecturer, (HDip) Web and Cloud Application Development, Principles of Programming, (MSc) Programming for Information Systems, Advanced Databases
Paul Laird	HDip Programme Lead, Lecturer (HDip) Advanced Programming, (MSc) Enterprise Information Systems & Networks and Systems Administration

Faculty Team:	
Name	Job Title with the Provider
Shahram Azizi Sazi	Lecturer (MSc): <i>Data Analytics</i>
Maria Barry	Lecturer (HDip& MSc): <i>Information Systems Development and Management</i>
Claire Caulfield	Lecturer (HDip): <i>Object Oriented Programming, DevOps Project Management</i>
Dr Harnaik Dhoot	Lecturer (MSc): <i>Object-Oriented Programming, Advanced Programming, Mobile Application Development, DevOps Practices and Principles, DevOps Project Management and Software Engineering</i>
Clive Gargan	Lecturer (HDip): <i>Principles of Programming, Object-Oriented Programming, Database Design and Development, Tools and Technologies for DevOps</i>
Bernadette Higgins	Lecturer (HDip& MSc): <i>Web Design and Development</i>
Terri Hoare	(MSc) Project Supervisor
Dr Obinna Izima	Lecturer (MSc): <i>Operating Systems and Networks, DevOps Practices and Principles, Tools and Technologies for DevOps</i>
Abhishek Kaushik	Lecturer (MSc): Applied Research Methods
Damien Kettle	Lecturer (HDip): Work Placement / Project
Ciara Lambe	Faculty Manager
Bernie Lydon	(MSc & HDip) Project Supervisor
Basel Magableh	
Rory O'Donnell	Lecturer (HDip): <i>Principles of Programming, Object-Oriented Programming, Advanced Programming</i>

Garry Prentice	Lecturer (MSc): <i>Research Methods</i> , Dissertation Coordinator
John Rowley	Lecturer (MSc): <i>Web, Mobile and Databases</i>

6. College Tour for the Panel

Name	Job Title with the Provider
Shane Mooney	Head of Student Experience

7. Resourcing and Supports for Learners

Name	Job Title with the Provider
David Williams	Course Director
Dr Shazia Afzal	MSc Programme Lead
Paul Laird	HDIP Programme Lead
Dr Kerry McCall Magan	Head of Academic Programmes
Lori Johnston	Registrar
Emma Balfe	Head of Faculty and School (Acting)
Dr Tony Murphy	Head of Quality Enhancement and Innovation in Teaching and Learning
Shane Mooney	Head of Student Experience
Jane Buggle	Deputy Librarian
Dr Martin Doris	Assistant Registrar
Grant Goodwin	QA Officer
Darragh Breathneach	Head of Academic Operations

8. Oral feedback to Senior DBS Staff

Name	Job Title with the Provider
Andrew Conlan-Trant	Executive Dean
David Williams	Course Director
Dr Shazia Afzal	MSc Programme Lead
Paul Laird	HDIP Programme Lead
Dr Kerry McCall Magan	Head of Academic Programmes
Lori Johnston	Registrar
Emma Balfe	Head of Faculty and School (Acting)
Dr Tony Murphy	Head of Quality Enhancement and Innovation in Teaching and Learning
Shane Mooney	Head of Student Experience
Darragh Breathneach	Head of Academic Operations

3 Review of the Programme Review Report

In general the panel found that the documents provided were well structured, clear in the presentation of facts and easy to read.

The contents followed the template provided in Section 5.2 of the Programme Review Manual 2016/2017. The panel complemented the reflective nature of the review undertaken, and the SWOT analysis provided as prescribed by the guidelines.

There follows a summary of the commentary on nine major areas of the reports and findings in relation to each area.

3.1 Fitness for Purpose of the Programme

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 current and previous students and lecturers (especially those working in industry) and other staff (support and administrative).

The Programme Team 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. The key stakeholders in respect of programmes in computing are employers, with progression opportunities also an important consideration. In the design of the programme, Dublin Business School carried out consultations on the programme design and module content with a range of industry stakeholders, as identified in section 1.5 of the programme document.

The summary of employer feedback regarding the programme and its proposed new incarnation are contained in the Survey Report in the supporting documents folder.

The review process was also informed by the comparator analysis undertaken by DBS (with both national and international programmes), a review of External Examiner reports and feedback obtained from industry and professional organisations.

The panel found that the consultation process had been comprehensive and concluded that the proposed programmes were fit for purpose. Further commentary is provided in Sections 7.6 and 7.7 of this report.

3.2 Achievement of the Programme of its Stated Objectives

This programme focuses on theoretical knowledge and practical skills in core areas such as Information systems, software engineering, programming, advanced databases, web technologies, networking while also offering applied skills in contemporary topics such as data analytics, visualisation, web, mobile and social computing. The stated aim of the programme is to create a deeper understanding of core computer technologies and information systems while also enhancing the practical technical skills of the learners.

The programme incorporates practical skills in every module for the professional development of learners to enhance their employability which will enable the learner to integrate seamlessly into an organisation by addressing skills such as awareness to social media such as GitHub, leadership, self-management, teamwork and academic writing that are essential for a Level 9 graduate in the ICT sector. It also comprises an Applied Research Methods module, which focuses on research and development skills. This module will inform the learner's dissertation or choice of an Applied Research Project.

3.3 Learner Profile

The MSc in Information Systems with Computing provides technical, organisational and professional knowledge to learners and prepares them to successfully lead at different positions in industry. Another aim is to educate learners so that they can carry out research according to the emerging industry needs and provide appropriate solutions.

This programme is designed for graduates with a background in IS/IT disciplines wishing to pursue a career in Information Systems with Computing on a professional level. The programme also enables existing IT professionals to upgrade their skills at Level 9 for promotion purposes at their work place. This MSc programme provides learners with the applied professional knowledge and competencies required of an Information Systems professional in the computing area.

A process of application and selection takes place prior to admission to the MSc in Information Systems with Computing programme. The programme team reviewed the entry standards for learners to this programme as outlined in the Quality Assurance Handbook.

The minimum entry requirements for the MSc in Information Systems with Computing are:

1. A minimum Second Class Honours (2.2) in a Level 8 degree in an IS/IT discipline or a business discipline where IS/IT is a significant component of the degree from a recognised third level institution, or equivalent qualification in a cognate discipline.
2. Higher Diploma in Science in Computing Level 8 award.
3. In addition to 1, prior knowledge and the study of the areas of Databases, Programming and Networking is required.
4. The minimum IELTS score for entry to the programme is an overall IELTS Academic 6.5.

DBS also recruits both mature learners and International learners directly, and applies College RPL policies for such purposes.

3.4 Learner Performance

A quantitative analysis was provided for the existing MSc in Information Systems with Computing programme covering the areas specified in the Programme Review Manual 2016/2017 Section 3.

- ***Enrolments and Applications***

Applications and enrolment numbers for the MSc in Information Systems with Computing since the last programmatic review were provided in the documentation. The total number of enrolled students over the previous four academic years is 139, ranges from 10 in academic year 2014/15 to 53 in academic year 2018/19. Data in the report was provided on the total enrolment numbers for the last five years on the MSc in Information Systems with Computing by mode, nationality, demographic and gender – the specific information for learner admission numbers per academic year, to 2018/2019 (including full-time and part-time mode), was provided in supporting documentation pack.

In analysing the data, it shows that enrolled learners are mostly males, in the age range of 21-30 (section 3.12.1 of the programme document). It is also notable that it is mostly international students, especially from India, that have enrolled on the programme. These learners have diverse educational backgrounds that include engineering degrees, business information systems degrees and computer science degrees, and hence they possess a mixed set of abilities.

Further commentary is provided in Section 7.6 of this report.

- ***Attrition, Transfer, Progression, Completion, Drop Outs and Repeat Learners***

Successful completion of each stage of the programme and progression through to graduation is a critical indicator of a successful programme. A comprehensive analysis was provided for the MSc in Information Systems with Computing programme, including reasons for learners dropping out or being academically withdrawn. Data was provided for retention and progression statistics from 2015-2018, and the panel noted that some efforts had been made by the programme team to determine the rationale for learner drop-out/academic withdrawal.

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

The documentation indicated that Learners from different academic backgrounds and countries with diverse educational structures enrol on this programme. The programme team stated that sometimes they struggle to adjust themselves in the new academic environment for them and some gaps remain in their knowledge which causes fails and withdrawals. In the year 2017/18, the fail rate was 36.73%, which is higher than the previous years – and was attributed to several weak learners being enrolled on the programme. It was alleged that some learners do not adapt quickly to their changed environment which impacts their performance. Changes have been made to the structure of the revised programme to help identify and fill gaps in the knowledge where required.

Students are withdrawn from the programme due to non-engagement or have failed the maximum number of attempts/sittings on a module (s) as per QQI regulations.

Benchmarking of the programme's pass, fail and non-active rates in relation to entry qualifications for the academic years 2014/15-2017/18 was it conducted as this was not supported by the current learner management system – there are plans to replace this system in autumn 2019.

Further commentary is included in Section 7.13 of this report.

- ***Analysis of Grades and QQI Classifications***

An analysis was provided for the MSc in Information Systems with Computing programme grades and its QQI classifications, which included benchmarking of the programme's pass, fail and non-active rates in relation to entry qualifications for the academic years 2015/16-2017/18.

The range of percentage of students who pass each year lies between 59%-72%. In the year 2017/18, fail percentage is high as compared to the previous years due to the number of weak learners in that year.

Analysis of the award classifications of this MSc in Information Systems with Computing programme data reveals that the percentage of students graduating with a First Class Honours is higher than the DBS average and equivalent to other Private Providers for MSc programmes. The percentage of students graduating with a H2 award is lower than both the DBS average and the average from other Private Providers. The percentage of students graduating with a Pass award is higher than both the DBS average and Private Providers.

Refer to Section 7.12 of this report for further background.

3.5 Quality of the Learning Environment

Commentary was provided on the teaching 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.

A tour, including a short presentation of the facilities and services, was provided of the College library for the panel.

There appeared to be a difference between the College's perception of the DBS student laptop provision (mobile labs) and that of the students met by the panel. These particular students indicated that they had not used DBS laptops/mobile labs.

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 (file size too large), and the timing of Moodle update in reading week (when learner access to class material required). Learners indicated that this is an area where improvement could be helpful.

Programme-specific arrangements for monitoring progress and guiding, informing and caring for learners were also discussed. An outline of physical facilities and resources was also included in the documentation. The panel concluded that additional resources/oversight of the learning environment, and the development of a teaching and learning strategy for the programme, would support the College meet the needs of the learners.

Further commentary is provided in Section 7.11 of this report.

3.6 Suitability of Learner Workload

The suitability of the learner workload is one of the areas monitored by the programme team through feedback from learners, alumni, internal moderators, external examiners and through review and discussion at team meetings. The panel recommends 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. In addition, the overview of programme modules provided in the programme document would be very useful for the students in the Student Handbook.

The panel explored the learner contact hours for the individual module descriptors. From the discussions with the programme team, the panel considers that the scheduling of assessment across the programme's semesters needs to be defined by the programme team, and published for access by all relevant stakeholders. The students interviewed said that the hand-in times sometimes came too close together. A published assessment schedule may alert academic staff and students to deadlines/scheduling clashes or excessive clustering of due dates, and the need to provide timely feedback to learners to manage their time and performance.

Feedback from students and graduates indicated that the programme assessment workload was heavy and would be better supported with a more explicit statement of the assessment schedule,

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

Refer to Sections 7.12 and 7.13 for further background.

The programme document stated that all assessment for the programme conforms to the DBS assessment regulations, which are informed by QQI Assessment and Standards, Revised 2013. The panel recommends that the assessment strategy is developed for the programme to provide clarity regarding examination and assessment processes and requirements for the all modules, and the programme in its entirety, and to ensure its compliance with the QQI requirements.

The evaluation of assessment is based on feedback from learners, external examiners, employers, as well as feedback from reviews and validations. It is the subsequent actions taken to 'close the loop' that should have a positive impact on improving the effectiveness of assessment procedures – the College needs to ensure that it is closing the loop and addressing the issues identified in feedback processes.

The panel found the assessment processes relating to the programme need to be reviewed, in the context of a programme assessment strategy and overall assessment schedule, to ensure it is appropriate.

Further commentary is provided in Section 7.12 of this report.

3.7 Quality Assurance Arrangements

All DBS quality assurance policies and procedures are detailed in the Quality Assurance Handbook (QAH). This is the first point of reference for all stakeholders involved in the design and monitoring of programmes. The programmes under review have been designed to comply with the DBS QAH and, in turn, with QQI's statutory quality assurance guidelines with respect to governance; quality assurance; assessment; and access, transfer and progression. Programme-specific quality assurance considerations include supporting the research project/dissertation and work-based learning opportunities.

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 and the QAH is being updated as part of the re-engagement application and self-evaluation process.

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.

A new mechanism for processing external examiners comments was identified to the panel– this process will serve to close the loop on addressing the issues identified during the process.

3.8 Proposed Modifications

These following changes are proposed by the programme review. The implementation of these changes is considered in the review of the programme document in Section 4.

Overview:

- It is proposed to re-name several modules in order to more accurately reflect updates in the content.
- It is also proposed to re-distribute and re-organise credits within the programme's content, through the removal of some modules which are deemed to be out of date and the introduction of new/updated modules.
- All module reading lists will be reviewed and updated.
- It is proposed to introduce an exit award of a Postgraduate Diploma in Science in Information Systems with Computing to allow learners who, for one reason or another, are not able to complete the final research project. This will allow learners to graduate with an award at 60 ECTS. The inclusion of an exit award for Level 9 programmes has been identified as important for DBS generally to allow acknowledgement of attainment for learners who cannot progress (in particular for international learners whereby a transcript with ECTS alone may not be fully recognised or understood by employers in their home country).

Changes Proposed and Rationale:

1. Based on the feedback of several stakeholders, it is realised that there has been a gap between the software engineering principles and the programming skills required to meet those principles. Learners on this programme have different educational backgrounds and their programming skills are not always at the level required. Therefore, it is proposed to redesign the *Software Engineering* module by updating the content to focus solely on the core principles of software engineering. As a result there will be no consideration of programming within this module. This change leads to a reduction in the ECTS awarded for *Software Engineering*, i.e., from 10 to 5 ECTS and, in parallel, the introduction of a separate module on programming.
2. *Personal and Professional Development* (5 ECTS) will no longer be offered on the programme, and some of the content from this module will be merged into several other modules within the programme. With the change of *Software Engineering* to a 5 credits module and the deletion of *Personal and Professional Development*, it is proposed to introduce a new taught module named *Programming for Information Systems* (10 ECTS) to more effectively meet the educational needs of students from diverse educational backgrounds. It will also expand their knowledge of contemporary programming languages, which are essential in understanding and implementing information systems.
3. The content of *Enterprise Information Systems* (10 ECTS) will be updated and restructured. It is proposed that the credits are reduced to 5 ECTS and a new module *Networks and Systems Administration* (5 ECTS) is introduced to provide core knowledge and skills related to networking and systems administration.
4. The content of two theoretical modules *Research Methods I* (5 ECTS) and *Research Methods II* (5 ECTS) will be reorganised, updated and a new module is designed, i.e. *Applied Research Methods* (5 ECTS) to be taught in semester 2. This change will align this module with the *Research Methods* module of all ICT Programmes.
5. The existing module *Data and Data Analytics* (5 ECTS) will be increased from 5 to 10 ECTS. With 10 ECTS, we can provide the practical skills and theoretical knowledge in more depth due to the emerging demands of data analytics in industry. The redesigned module will be renamed *Data Analytics and Visualisation* to reflect the updated content and focus.

6. The credits available for *Research Project* are reduced from 30 ECTS to 25 ECTS and this module will be entitled *Applied Research Project*. As a result of this reduction, 5 ECTS will be applied to a new module *Web Development for Information Systems* (and see point 7 below).
7. A new module *Web Development for Information Systems* (5 ECTS) will be included to address gaps which have been noted in learners' understanding of web services, service-oriented architectures, web APIs and front-end development for information systems.

Special Considerations

- Consider objective 10 having regard to the new QQI QA guidelines which were published since the programmes were last validated.
- The panel should consider the College's capacity to supervise dissertations for the proposed maximum intake of learners and the panel should review current/past dissertations and report on the quality of them.
- Inclusion of a Postgraduate Diploma exit award to allow learners who cannot progress to complete the full award to graduate with an award.

Professional Considerations

There are no professional considerations. The programme is not recognised by or affiliated to or accredited by any professional body.

4 Evaluation of the Modified Programme

4.1 Report

See Appendix 1.

5 Outcome of the Review

5.1 Summary

5.2 Recommendations

Principal programme	Title	Master of Science in Information Systems with Computing
	Award	Master of Science
	Credit	90
	Recommendation	Satisfactory, subject to proposed special conditions

Embedded programme	Title	Postgraduate Diploma in Information Systems with Computing
	Award	Postgraduate Diploma in Science
	Credit	60
	Recommendation	Satisfactory, subject to proposed special conditions

6 Panel

Name	Role	Affiliation
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

All members of the panel have declared that they are independent of DBS and have no conflict of interest.

7 Appendix 1: independent Programme Review Report

Part 1

Provider name	DBS
Date of site visit	25 April 2019
Date of report	

	First intake	Last intake
Proposed Enrolment interval	September 2019	September 2023
Maximum number of annual intakes	Two intakes: <ul style="list-style-type: none"> • September • January 	

Principal programme	Title	Master of Science in Information Systems with Computing
	Award	Master of Science
	Credit	90
	Duration² <i>(years, months, weeks)</i>	Full-time: 1 year (3 semesters of 12 weeks each) Part-time: 2 years (5 semesters of 12 weeks each)
	Recommendation	Satisfactory, subject to proposed special conditions

Embedded programme	Title	Postgraduate Diploma in Information Systems with Computing
	Award	Postgraduate Diploma in Science
	Credit	60
	Duration³ <i>(years, months, weeks)</i>	Full-time: 1 years (2 semesters of 12 weeks each) Part-time: 2 years (4 semesters of 12 weeks each)
	Recommendation	Satisfactory, subject to proposed special conditions

Evaluators

Name	Role	Affiliation
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

²Expressed in terms of time from initial enrolment to completion

³Expressed in terms of time from initial enrolment to completion

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

7.1 Principal Programme: Master of Science in Information Systems with Computing

Names of Centres Where the Programmes are to be provided	Maximum number of learners	Minimum number of learners
DBS: Dublin Campus	100	15
Target learner groups	<p>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.</p> <p>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.</p>	
Number of learners per intake		
Countries for provision	Ireland	
Delivery mode: Full-time/Part-time	Full-time and part-time	
The teaching and learning modalities	<ul style="list-style-type: none"> • 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, what is involved for learners, what it leads to.)	Information technology is the most robust industry in the world. Information Systems play a leading role in IT industry as well as in any business. There is a growing need for Information Systems specialists with a focus on business	

	<p>and technology. The objective of this programme is to deliver high-quality Level 9 professionals for this growing need.</p> <p>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.</p> <p>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.</p>										
Specifications for teaching staff	<p>Lecturing staff will have a minimum of a Level 9 Postgraduate Diploma or Masters and/or PhD in the following areas:</p> <p><i>Mathematics, Statistics, Computer Science, Software Development, Computer Security, Information Systems, Data Analytics, and Database Development, Networks, Enterprise Information Systems, etc.</i></p> <p>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.</p>										
Specifications for the ratio of learners to teaching-staff	<table border="1"> <thead> <tr> <th>Staff to learner ratio</th> <th>Learning activity type</th> </tr> </thead> <tbody> <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 colspan="2">1.97/ (50 max students per intake) = 0.04:1</td> </tr> </tbody> </table>	Staff to learner ratio	Learning activity type	1/50	Classroom sessions	1/25	Workshops	1/25	Practical sessions	1.97/ (50 max students per intake) = 0.04:1	
Staff to learner ratio	Learning activity type										
1/50	Classroom sessions										
1/25	Workshops										
1/25	Practical sessions										
1.97/ (50 max students per intake) = 0.04:1											

7.2 Embedded Programme: Postgraduate Diploma in Information Systems with Computing

Names of Centres Where the Programmes are to be provided	Maximum number of learners	Minimum number of learners
DBS: Dublin Campus	100	8
Target learner groups	<p>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</p>	

	<p>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.</p> <p>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.</p>
Number of learners per intake	N/a
Countries for provision	Ireland
Delivery mode: Full-time/Part-time	Full-time and part-time
The teaching and learning modalities	<ul style="list-style-type: none"> • 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, what is involved for learners, what it leads to.)	<p>Information technology is the most robust industry in the world. Information Systems play a leading role in IT 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.</p> <p>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.</p> <p>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.</p>
Specifications for teaching staff	<p>Lecturing staff will have a minimum of a Level 9 Postgraduate Diploma or Masters and/or PhD in the following areas:</p> <p><i>Mathematics, Statistics, Computer Science, Software Development, Computer Security, Information Systems, Data Analytics, and Database Development, Networks, Enterprise Information Systems, etc.</i></p>

	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.	
Specifications for the ratio of learners to teaching-staff	Staff to learner ratio	Learning activity type
	1/50	Classroom sessions
	1/25	Workshops
	1/25	Practical sessions
	1.97/ (50 max students per intake) = 0.04:1	

Other noteworthy features of the application

Part 2 Evaluation against the validation criteria

7.3 Criterion1: The provider is eligible to apply for validation of the programme

Satisfactory	Comment	Sub criteria
Yes		a) The provider meets the prerequisites (section 44 (7) of the 2012 Act) to apply for validation of the programme.
Yes		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.
Yes		c) The provider has declared that their programme complies with applicable statutory, regulatory and professional body requirements. ⁴

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 – up to an including level 9 taught programmes. It was noted that DBS has procedures in place 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).

Commendation (s) #1 (reference section 8.3)

7.4 Criterion 2: The programme objectives and outcomes are clear and consistent with the QQI awards sought

Satisfactory	Comment	Sub-criteria
Yes		a) The programme aims and objectives are expressed plainly.
Yes		b) A QQI award is specified for those who complete the programme.
Yes		(i) Where applicable, a QQI award is specified for each embedded programme.
Yes		c) There is a satisfactory rationale for the choice of QQI award (s).
Yes		d) The award title (s) is consistent with unit 3.1 of QQI's <i>Policy and Criteria for Making Awards</i> .
Yes		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
Yes		(i) Consistent with the title of the QQI award sought.
Yes		(ii) Clear, accurate, succinct and fit for the purpose of informing prospective learners and other stakeholders.
		g) For each programme and embedded programme
Yes		(i) The minimum intended programme learning outcomes and any other educational or training objectives of the programme are explicitly specified. ⁵
Yes		(ii) The minimum intended programme learning outcomes to qualify for the QQI award sought are consistent with the relevant QQI awards standards.
Yes		h) Where applicable, the minimum intended module learning outcomes are explicitly specified for each of the programme's modules.
Yes		i) Any QQI minor awards sought for those who complete the modules are specified, where applicable.
Yes		(i) For each minor award specified, the minimum intended module learning outcomes to qualify for the award are consistent with relevant QQI minor awards standards. ⁶

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 modules. The embedding of professional development/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.

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 recommends 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.

Recommendation (s) #1 (*reference section 8.2*)

Commendation (s) #2 (*reference section 8.3*)

7.5 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).

Satisfactory	Comment	Sub-criteria
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Yes		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. ⁷
Yes		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.
Yes		(i) There is a satisfactory rationale for providing the programme.
Yes		(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.
Yes		(iii) There is support for the introduction of the programme (such as from employers, or professional, regulatory or statutory bodies).
Yes		(iv) There is evidence ⁸ of learner demand for the programme.
Yes		(v) There is evidence of employment opportunities for graduates where relevant ⁹ .
Yes		(vi) The programme meets genuine education and training needs. ¹⁰
Yes		c) There are mechanisms to keep the programme updated in consultation with internal and external stakeholders.
Yes		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 professionally oriented.
Yes		e) The programme satisfies any validation-related criteria attaching to the applicable awards standards and QQI awards specifications.

Overall the programme seems to meet 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 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.

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.

Condition (s) #1, #2, #3 (*reference section 8.1*)

Recommendation (s) #1 (*reference section 8.2*)

Commendation (s) #3 (reference section 8.3)

7.6 Criterion 4: The programme’s access, transfer and progression arrangements are satisfactory

Satisfactory	Comment	Sub-criteria
Yes		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 ¹¹ .
Yes		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.
Yes		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 (CEFR ¹²) in order to enable learners to reach the required standard for the QQI award.
Yes		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).
Yes		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):-
Yes		(i) Reflects the core <i>intended programme learning outcomes</i> , and is consistent with the standards and purposes of the QQI awards to which it leads, the award title (s) and their class (es).
Yes		(ii) Is learner focused and meaningful to the learners;
Yes		(iii) Has long-lasting significance.

Yes		g) The programme title is otherwise legitimate; for example, it must comply with applicable statutory, regulatory and professional body requirements.
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The panel were of the opinion that the programme information provided to learners is appropriate, and the MIPOs 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) but no honours requirement is attached to the HDip (level 8) programme which is also a primary entry qualifier (there is no rationale for why this classification barrier is not also applied to HDip holders). 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. This needs to be rationalised with the 4-years' relevant professional experience? There also needs to be clarification in the admission section 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 recommends 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 the requirements 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 recommends 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. The session with learners and graduates felt 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.

Recommendation (s) #2, #3, #4 (reference section 8.2)

Commendation (s) #4, #5, #2 (reference section 8.3)

7.7 Criterion 5: The programme's written curriculum is well structured and fit-for-purpose

Satisfactory	Comment	Sub-criteria
Yes		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.
Yes		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.
Yes		c) Each module and stage is suitably structured and coherently oriented towards the achievement by learners of the intended <i>programme</i> learning outcomes.

Yes		d) The objectives and purposes of each of the programme's elements are clear to learners and to the provider's staff.
Yes		e) The programme is structured and scheduled realistically based on sound educational and training principles ¹³ .
Yes		f) The curriculum is comprehensively and systematically documented.
Yes		g) The credit allocated to the programme is consistent with the difference between the entry standard and minimum intended programme learning outcomes.
Yes		h) The credit allocated to each module is consistent with the difference between the module entry standard and minimum intended module learning outcomes.
Yes		i) Elements such as practice placement and work based phases are provided with the same rigour and attentiveness as other elements.
Yes		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. ¹⁴

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 rationale 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 recommends that the management of the programme be strengthened – there currently appears 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.

Notwithstanding, the panel commends 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 recommends 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.

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 recommends 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 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. 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 would be affected and supported in Sem 2, for example what happens to a learner who fails Advanced Databases or Programming for Information Systems and is taking Data Analytics and Visualisation in the following semester?

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. The 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 topics/domains such as operations research, service systems/science /innovation, business models/process management, human behaviour/HCI, governance and strategy, economics of information systems, RegTech, etc. 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 facilitated 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 recommends 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 included the following:

The panel explored how the individual modules compensate for the removal of the **Professional Development** module. 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.

- **Software Engineering**

This module seems a little too theoretical/conceptual– learners seem to focus on design and testing strategies – but there isn't a clear element of implementing software solutions. How do learners engage in software development, implementation, and maintenance in this module? The module aims state an emphasis on practical elements, but these are not clearly signposted in the module descriptor. All MIMLOs except #4 are doubly assessed, is this necessary? It was also queried if a terminal exam is an appropriate assessment strategy for this module? It is unclear how the assessment maps to the module MIMLOs. It is also concerning that a solution that "doesn't solve the problem" could be considered for a pass grade – it is recommended to review this module.

- **Advance Databases**

This is a very high-paced module, with much higher expectations than, for example, the programming module. It is queried if a non-cognate undergrad learner could keep up with the content? The panel questioned what supports (e.g. boot camp) would be provided for learners struggling with this module content. The phrasing of MIMLO #1 and 4 should be reviewed. Clarity is needed on whether individual or group CA is needed for the module, as the module descriptor is vague (and notes both).

- ***Networks and Systems Administration***

MIMLOs 3-6 for this module need to be reviewed to ensure they are appropriate to level 9. The sample project identified is nice, and its style should be reflected across other modules CAs, as it exemplifies research-driven automated independent learning well.

- ***Programming for Information Systems***

This appears to be a very basic introductory module (are MIMLOs appropriate for level 9?), which seems to assume no prior programming experience, and in this instance the panel queried how a cognate undergraduate learner would engage with this module. However, the documentation suggests progressing learners from DBS BSc in Computing programmes. The programming language (s) which learners will be exposed to is not specified, and it was queried if this module will provide sufficient depth for modules like Web and Mobile Technologies (descriptor notes, C#, JavaScript, vs. this module that highlights Python in the reading list).

MIMLOs for this module need to be reviewed to ensure they are appropriate to level 9. It was felt that it appears that learners cover more ground in the same number of credits/amount of time in Sem 1, blocks 1 and 2 of the Higher Diploma (which is also under review by the panel).

Regarding Assessment, the current identified elements total to 130%. It is unclear why this module would use a group project, and the sample project information provided lacks detail.

The panel queried what specifically in the module links it to the IS domain?

- ***Web and Mobile Technologies***

MIMLOs for this module need to be reviewed to ensure they are appropriate to level 9.

The learners expressed concern of not getting material covered – should the module focus on one or other of web and mobile. Is this module really necessary as a similar Web module occurs in Semester 2. Could consider the possibility of replacing this module with a “foundations of IS” or similar module.

- ***Applied Research Methods***

This material was previously provided as two 5 ECTS modules and is now one. There is a Moodle page (of available resources) for Research Methods and Workshops are also available to support learners.

From the module descriptor, it appears that learners seem to enter this module with very little exposure to research. Perhaps some semester 1 modules could include or encourage simple research tasks like literature reviews in their assessments to get learners used to finding and reading research papers/articles etc. prior to this module. There seems to be an attempt to introduce quantitative methods without any statistics, statistics is also notably absent in the data analytics

module. Statistics and statistical modelling are required to facilitate learners' engagement with their research project.

The module also seems to take a bird's eye view of many methodologies as opposed to focusing on core methods that the learners are likely to use in the research project – the programme team should consider rationalising the number of methods covered.

Design science is highly emphasised in the reading list, but seems underrepresented in the descriptor. It was also queried if it would make sense to include case studies of seminal IS works, e.g. from ECIS, ICIS, JAIS, MISQ, BISE etc.

- ***Enterprise Information Systems***

This is a nice module; however the panel requested that the inclusion of grid computing be explained.

Some clarity is required on what the group project involves and the sample project.

The reading list needs a review.

- ***Data Analytics and Visualisation***

This module is quite content heavy.

It is unclear why regression and some basic statistics/statistical learning are absent in this module, or preceded in another module. The panel queried if learners will have sufficient exposure to the methods in this module to support prescriptive analytics with the added complexity of unstructured data – i.e., is the emphasis of this module to do a small number of analytics methods in depth, or rather a high level view of many methods?

How does the module include how to evaluate models: MIMLO 4? This is not well addressed in the indicative syllabus across the three forms of analytics presented.

The inclusion of big data techniques was identified during the stakeholder engagement, but it's unclear where in the assessment strategy this is included, and what practical skills learners will attain.

- ***Computer Systems Security***

The differentiation between this module and the *Advanced Networks and Security* module on the Higher Diploma needs to be considered.

It was also queried how MIMLOs 4 and 5 would be accessed in a terminal examination, and suggested that CA only could be considered.

- ***Web Development for Information Systems***

The panel considered that the sample assessment provided lacks detail as it is unclear what learners actually would do.

- ***Applied Research Project***

The project has been reduced from 30 to 25 ECTS (aligned with College policy). It was noted that the projects cannot be required to be 'Novel and Unique' - not required at Masters level. Some sample titles of previous projects would be useful.

The panel were advised that experience of how learners can engage with the project has influenced the decision not to facilitating part-time learners completing the project over two semesters (i.e. spread time/effort as per the taught modules).

In response to a query on how learners approach the research element, and consider a project topic, having completed their literature review, the programme team stated that research workshops and tutorials will be happening through discipline-specific research groups in Semester 1. At these events, learners are encouraged to discuss problem statements and research question.

Learners are encouraged and facilitated to attend student conferences which support their consideration of the research project.

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

Condition (s) #1, #2, #3 (reference section 8.1)

Recommendation (s) #1, #2, #3, #4, #5, #6, #7, #8, #9, #10 (reference section 8.2)

Commendation (s) #1, #2, #3, #5, #6, #7, #8, #9, #10 (reference section 8.3)

7.8 Criterion 6: There are sufficient qualified and capable programme staff available to implement the programme as planned

Satisfactory	Comment	Sub-criteria
Yes		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 unit (7.14c).
Yes		b) The programme has an identified complement of staff ¹⁵ (or potential staff) who are available, qualified and capable to provide the specified programme in the context of their existing commitments.
Yes		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.
Yes		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 ¹⁶ opportunities ¹⁷ .
Yes		e) There are arrangements for programme staff performance to be reviewed and there are mechanisms for encouraging development and for addressing underperformance.
Yes		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.

The necessary qualification profile for academic staff is identified within the modules, and is appropriate.

Specifications for programme staffing requirements seem appropriate and realistic.

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.

There is an opportunity to 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 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.

Condition (s) #1 (reference section 8.1)

Recommendation (s) #5, #8 (reference section 8.2)

Commendation (s) #1, #6, #7, #8, #9 (reference section 8.3)

7.9 Criterion 7: There are sufficient physical resources to implement the programme as planned

Satisfactory	Comment	Sub-criteria
Yes		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 (7.14d).
		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:
Yes		<ul style="list-style-type: none"> 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)
Partially	In the context of the resource issues identified by learners and graduates, which were predominantly in relation to issues with technology set-up	<ul style="list-style-type: none"> suitable information technology and resources (including educational technology and any virtual learning environments provided)
Yes		<ul style="list-style-type: none"> printed and electronic material (including software) for teaching, learning and assessment
Yes		<ul style="list-style-type: none"> suitable specialist equipment (e.g. kitchen, laboratory, workshop, studio) – if applicable
Yes		<ul style="list-style-type: none"> technical support
Yes		<ul style="list-style-type: none"> administrative support
Yes		<ul style="list-style-type: none"> company placements/internships – if applicable
Yes		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).
Yes		d) There is a five-year plan for the programme. It should address
Yes		(i) Planned intake (first five years) and
Yes		(ii) The total costs and income over the five years based on the planned intake.
Yes		e) The programme includes controls to ensure entitlement to use the property (including

		intellectual property, premises, materials and equipment) required.
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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,

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.

Recommendation (s) #10 (reference section 8.2)

Commendation (s) #8, #9, #10 (reference section 8.3)

7.10 Criterion 8: The learning environment is consistent with the needs of the programme's learners

Satisfactory	Comment	Sub-criteria
Yes		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.
Yes		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.
Yes		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.

From the documentation provided, support systems for learners sound exemplary, and generally 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. This 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 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.

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 feel a bit rushed and as if pushing through material to get it covered. Learners felt that it would be beneficial if 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, it would be beneficial if 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 recommends that learners receive an assessment deadlines’ schedule for the programme modules at the commencement of the semester/stage.

In addition, the panel recommends 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 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.

Condition (s) #1, #2, #3 (reference section 8.1)

Recommendation (s) #1, #4, #6, #7, #8, #9, #10 (reference section 8.2)

Commendation (s) #2, #3,#5, #6, #8, #9, #10 (reference section 8.3)

7.11 Criterion 9: There are sound teaching and learning strategies

Satisfactory	Comment	Sub-criteria
Partially	Reference condition #1	a) The teaching strategies support achievement of the intended programme/module learning outcomes.
Yes		b) The programme provides authentic learning opportunities to enable learners to achieve the intended programme learning outcomes.

Yes		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).
Yes		d) Learning is monitored/supervised.
Yes		e) Individualised guidance, support ¹⁸ and timely formative feedback is regularly provided to enrolled learners as they progress within the programme.

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 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 recommends 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 where these skills are currently developed cannot be vague within the impacted modules – 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. The session with learners and graduates felt 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 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.

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 were of the opinion that this could be further supported by 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.

Condition (s) #1, #2, #3 (reference section 8.1)

Recommendation (s) #1, #4, #5, #7, #8, #9, #10 (reference section 8.2)

Commendation (s) #5, #6, #7, #8, #9, #10 (reference section 8.3)

7.12 Criterion 10: There are sound assessment strategies

Satisfactory	Comment	Sub-criteria
Yes		a) All assessment is undertaken consistently with Assessment Guidelines, Conventions and Protocols for Programmes Leading to QQI Awards ¹⁹
Partially		b) The programme's assessment procedures interface effectively with the provider's QQI approved quality assurance procedures.
Partially		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. ²⁰
Partially		d) The programme includes formative assessment to support learning.
No	Reference Condition #3	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. ²¹
Partially		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.
Yes		g) There are sound procedures for the moderation of summative assessment results.
Yes		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. ²²

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, 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.

Following feedback from students, the panel stated that it is important, where learners are required to complete continuous assessment assignments, that feedback is provided in a timely and effective fashion. 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, it would be beneficial if 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 recommends 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 where these skills are currently developed cannot be vague within the impacted modules – 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 (e.g. use of the GitHub repository to log activity, the moderator attends the dissertation oral presentation) to support learners and proved their engaging in academic propriety, 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 – this process 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.

Condition (s) #1, #2, #3 (reference section 8.1)

Recommendation (s) #1, #3, #4, #5, #8, #9 (reference section 8.2)

Commendation (s) #2, #5, #6, #7, #8, #9, #10 (reference section 8.3)

7.13 Criterion 11: Learners enrolled on the programme are well informed, guided and cared for

Satisfactory	Comment	Sub-criteria
Yes		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.
Yes		b) Information is provided about learner supports that are available to learners enrolled on the programme.
Yes		c) Specific information is provided to learners enrolled on the programme about any

		programme-specific appeals and complaints procedures.
Yes		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.
Yes		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.
Yes		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.
Yes		g) The programme provides supports for enrolled learners who have special education and training needs.
Yes		h) The programme makes reasonable accommodations for learners with disabilities ²³ .
Yes		i) If the programme aims to enrol international students it complies with the <i>Code of Practice for Provision of Programmes to International Students</i> ²⁴ 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.
Yes		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).

The panel noted that the Student Handbooks and website contain information on the supports and services available to students. The panel recommends 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

²³For 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).

²⁴See Code of Practice for Provision of Programmes to International Students (QQI, 2015)

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, where for example the assessment consisted of a project, plus report, but the grade was often only allocated on report – this does not suit the skill set of a poor writer/good practitioner.

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 where these skills are currently developed cannot be vague within the impacted modules – 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.

During the feedback from the learners and graduates, they indicated 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.

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).

Condition (s) #1, #2, #3 (*reference section 8.1*)

Recommendation (s) #5, #1, #6, #7, #2, #3, #4, #8, #9, #10 (*reference section 8.2*)

Commendation (s) #1, #2, #3, #5, #6, #7, #8, #9, #10 (*reference section 8.3*)

7.14 Criterion 12: The programme is well managed

Satisfactory	Comment	Sub-criteria
Yes		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.
Yes		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.
Yes		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.
Yes		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.
Yes		e) Quality assurance ²⁵ is intrinsic to the programme's maintenance arrangements and addresses all aspects highlighted by the validation criteria.
Yes		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.
Yes		g) The programme operation and management arrangements are coherently documented and suitable.
Yes		h) There are sound procedures for interface with QQI certification.

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 recommends that the management of the programme be strengthened – there currently appears 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.

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 commends 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.

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.

Condition (s) #1, #2, #3 (*reference section 8.1*)

Recommendation (s) #1, #2, #3, #4, #5, #6, #7, #8, #9, #10 (*reference section 8.2*)

Commendation (s) #1, #2, #3, #5, #6, #7, #8, #9, #10 (*reference section 8.3*)

8 Overall recommendation to DBS

Master of Science in Information Systems with Computing

Select one	
	Satisfactory (meaning that it recommends 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;
X	Satisfactory subject to proposed 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); ²⁶
	Not satisfactory.

Postgraduate Diploma in Science in Information Systems with Computing

Select one	
	Satisfactory (meaning that it recommends 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;
X	Satisfactory subject to proposed 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); ²⁷
	Not satisfactory.

8.1 Reasons²⁸ for the overall recommendation

Condition (s)

- #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.

8.1 Summary of recommendations

#1: The panel strongly recommends 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 recommends 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 recommends 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 recommends 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 recommends that the management of the programme be strengthened – there currently appears 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 recommends 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 recommends 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 recommends 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 recommends that the reading list for each module be reviewed to ensure they are up to date.

8.2 Summary of commendations

- #1:** The panel commended the process of the review undertaken within the College, as outlined both in the documents and to the panel, and the Immense amount of work undertaken in compiling the extensive templates and documents generated and presented to the panel.
- #2:** 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.
- #3:** The employment outcomes for graduates of the programme are commendable and meet national needs evidenced in the graduate employment outcomes and employers feedback.
- #4:** The student supports available within DBS, including the writing for academic workshops, and the commitment of module leaders to academic process and student development were particularly remarked upon.
- #5:** The establishment of the Student Engagement and Success Unit (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.
- #6:** The panel commends the lecturer commitment to the programme and its learners, and the technical expertise of the team.
- #7:** The establishment and role of the academic appointments sub-committee was commended in terms of assuring that sufficient qualified and capable programme staff are available to implement the programme as planned, and identifying the requirements for each newly appointed staff member to be supported through their orientation at the College and CPD.
- #8:** The appointment of a Learning Technologist and the recent recruitment of an Instructional Designer to support the college's ambitions in relation to blended and e-learning, and support staff in its implementation, was commended by the Panel.
- #9:** 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.
- #10:** The student experience and student contribution to the processes within DBS were particularly remarked upon.

9 Declaration of Evaluator's Interests

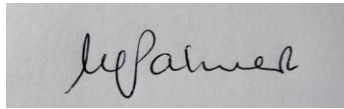
Panel secretary, Mary Doyle, has previously held the position of Registrar at Dublin Business School. Since leaving this role, in 2009, she has not engaged in any professional relationship with the College and/or its staff. In addition, there have been extensive changes at senior/middle management within 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.

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

Panel chairperson: Dr Marion Palmer

Date: 25 June 2019

Signed:

A rectangular box containing a handwritten signature in cursive script, which appears to read 'M Palmer'.

9.1 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.

Part 3: Proposed programme schedules

MSc in Information Systems with Computing– Full-time

Name of Provider:		Dublin Business School										
Programme Title (i.e. Named Award):		Master of Science in Information Systems with Computing										
Award Title (HETEC Named Award):		Master of Science										
Stage Exit Award Title:		Postgraduate Diploma in Information Systems with Computing										
Modes of Delivery (FT/PT)		Full-time										
Award Class	Award NFQ Level	Award EFQ Level	Stage (1,2,3,4, ..., or Award Stage)	Stage NFQ	Stage EFQ	Stage Credits (ECTS)	Date Effective	ISCED Subject Code				
Major	9	7	Award	9	7	90	September 2019	0613				
Module Title (Up to 70 characters including spaces)	Semester Number where applicable (Semester 1 or 2)	Module		ECTS Credit Number	Total Student Effort Module (hours)				Allocation of Marks (from the module assessment strategy)			
		Status	NFQ Level where specified		Total hours	Contact Hours	Directed E-learning	Independent Learning hours	CA %	Proj %	Prac %	Exam %
Software Engineering	1	M	9	5	125	24	25	76	50			50
Advanced Databases	1	M	9	5	125	24	25	76		50		50
Networks and Systems Administration	1	M	9	5	125	24	25	76	60			40
Programming for Information Systems	1	M	9	10	250	48	50	152	100			
Web and Mobile Technologies	1	M	9	5	125	24	25	76	50	50		
Applied Research Methods	2	M	9	5	125	24	25	76	100			
Enterprise Information Systems	2	M	9	5	125	24	25	76	50			50
Data Analytics and Visualisation	2	M	9	10	250	48	50	152	100			
Computer Systems Security	2	M	9	10	250	48	50	152	50			50
Web Development for Information Systems	2	M	9	5	125	24	25	76	100			
Applied Research Project	3	M	9	25	625	12		613	100			
Special Regulations:												
Students will not progress to the Applied Research Project module unless all taught modules have been passed.												

MSc in Information Systems with Computing– Part-time

Name of Provider:		Dublin Business School											
Programme Title (i.e. Named Award):		Master of Science in Information Systems with Computing											
Award Title (HETEC Named Award):		Master of Science											
Stage Exit Award Title:		Postgraduate Diploma in Information Systems with Computing – 60 credits											
Modes of Delivery (FT/PT)		Part-time											
Award Class	Award NFQ Level	Award EFQ Level	Stage (1,2,3,4, ..., or Award Stage)	Stage NFQ	Stage EFQ	Stage Credits (ECTS)	Date Effective	ISCED Subject Code					
Major	9	7	Award	9	7	90	September 2019	0613					
Module Title (Up to 70 characters including spaces)		Semester Number where applicable (Semester 1 or 2)	Module		ECTS Credit Number	Total Student Effort Module (hours)				Allocation of Marks (from the module assessment strategy)			
			Status	NFQ Level where specified		Total hours	Contact Hours	Directed E-learning	Independent Learning hours	CA %	Proj %	Prac %	Exam %
Software Engineering		1	M	9	5	125	18	31	76	50			50
Advanced Databases		2	M	9	5	125	18	31	76		50		50
Networks and Systems Administration		2	M	9	5	125	18	31	76	60			40
Programming for Information Systems		1	M	9	10	250	36	62	152	100			
Web and Mobile Technologies		2	M	9	5	125	18	31	76	50	50		
Applied Research Methods		3	M	9	5	125	18	31	76	100			
Enterprise Information Systems		3	M	9	5	125	18	31	76	50			50
Data Analytics and Visualisation		3	M	9	10	250	36	62	152	100			
Computer Systems Security		4	M	9	10	250	36	62	152	50			50
Web Development for Information Systems		4	M	9	5	125	18	31	76	100			
Applied Research Project		5	M	9	25	625	12		613	100			
Special Regulations:													
Students will not progress to the Applied Research Project module unless all taught modules have been passed.													

Postgraduate Diploma in Information Systems with Computing– Full-time

Name of Provider:		Dublin Business School											
Programme Title (i.e. Named Award):		Master of Science in Information Systems with Computing											
Award Title (HETEC Named Award):		Master of Science											
Stage Exit Award Title:		Postgraduate Diploma in Information Systems with Computing – 60 credits											
Modes of Delivery (FT/PT)		Full-time											
Award Class	Award NFQ Level	Award EFQ Level	Stage (1,2,3,4, ..., or Award Stage)	Stage NFQ	Stage EFQ	Stage Credits (ECTS)	Date Effective	ISCED Subject Code					
Major	9	7	Award	9	7	60	September 2019	0613					
Module Title (Up to 70 characters including spaces)		Semester Number where applicable (Semester 1 or 2)	Module		ECTS Credit Number	Total Student Effort Module (hours)				Allocation of Marks (from the module assessment strategy)			
			Status	NFQ Level where specified		Total hours	Contact Hours	Directed E-learning	Independent Learning hours	CA %	Proj %	Prac %	Exam %
Software Engineering		1	M	9	5	125	24	25	76	50			50
Advanced Databases		1	M	9	5	125	24	25	76		50		50
Networks and Systems Administration		1	M	9	5	125	24	25	76	60			40
Programming for Information Systems		1	M	9	10	250	48	50	152	100			
Web and Mobile Technologies		1	M	9	5	125	24	25	76	50	50		
Applied Research Methods		2	M	9	5	125	24	25	76	100			
Enterprise Information Systems		2	M	9	5	125	24	25	76	50			50
Data Analytics and Visualisation		2	M	9	10	250	48	50	152	100			
Computer Systems Security		2	M	9	10	250	48	50	152	50			50
Web Development for Information Systems		2	M	9	5	125	24	25	76	100			
Special Regulations:													
None													

Postgraduate Diploma in Information Systems with Computing– Part-time

Name of Provider:		Dublin Business School											
Programme Title (i.e. Named Award):		Master of Science in Information Systems with Computing											
Award Title (HETEC Named Award):		Master of Science											
Stage Exit Award Title:		Postgraduate Diploma in Information Systems with Computing											
Modes of Delivery (FT/PT)		Part-time											
Award Class	Award NFQ Level	Award EFQ Level	Stage (1,2,3,4, ..., or Award Stage)	Stage NFQ	Stage EFQ	Stage Credits (ECTS)	Date Effective	ISCED Subject Code					
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Module Title (Up to 70 characters including spaces)		Semester Number where applicable (Semester 1 or 2)	Module		ECTS Credit Number	Total Student Effort Module (hours)				Allocation of Marks (from the module assessment strategy)			
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Software Engineering		1	M	9	5	125	18	31	76	50			50
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Networks and Systems Administration		2	M	9	5	125	18	31	76	60			40
Programming for Information Systems		1	M	9	10	250	36	62	152	100			
Web and Mobile Technologies		2	M	9	5	125	18	31	76	50	50		
Applied Research Methods		3	M	9	5	125	18	31	76	100			
Enterprise Information Systems		3	M	9	5	125	18	31	76	50			50
Data Analytics and Visualisation		3	M	9	10	250	36	62	152	100			
Computer Systems Security		4	M	9	10	250	36	62	152	50			50
Web Development for Information Systems		4	M	9	5	125	18	31	76	100			
Special Regulations:													
None													

10 Appendix 2: Agenda

DUBLIN BUSINESS SCHOOL

SCHOOL OF BUSINESS AND LAW PROGRAMME REVIEW AND REVALIDATION

MSc in Information Systems with Computing (with embedded Postgraduate Diploma in Information Systems with Computing)

Higher Diploma in Science in Computing (with embedded Certificate in Information Technology)

Agenda: Monday, 21st May 2019

[Room 3.6, DBS, 13/14 Aungier Street, Dublin 2]

Time	Location	Item	DBS Attendees
08.30hrs		Panel Private Meeting (with Tea & Coffee)	N/a
09.45hrs		1. Evaluation of Programme Proposed for Revalidation against QQI validation criteria <i>Criterion 1. The provider is eligible to apply for validation of the programmes (s)</i>	<ul style="list-style-type: none"> Andrew Conlan-Trant, Executive Dean David Williams, Course Director
10.00hrs		2. Evaluation of the Programme Review Process and Report (a) the fitness for purpose of the programme (including its objectives, intended learning outcomes, organisation, teaching, learning and assessment strategies, staffing, resources and management) in light of experience; (b) the actual achievement by the programme of its stated objectives; (c) the profile of learners who were enrolled and its suitability for the programme; (d) the performance of enrolled learners (grades, attrition, completion, benchmarking) and how the provider has responded to this; (e) the quality of the learning environment and the learning opportunities afforded to learners by the programme; (f) the suitability of the learner workload in light of experience (whether it is excessive or inadequate); (g) the effectiveness of procedures for the assessment of learners including summative and formative assessment of learners and external examining procedures; (h) the quality assurance arrangements that are specific to the programme; (i) the proposed modifications to the programme.	<ul style="list-style-type: none"> Dr Shazia Afzal, MSc Programme Lead Paul Laird, HDIP Programme Lead Dr Kerry McCall Magan, Head of Academic Programmes Lori Johnston, Registrar Emma Balfe, Head of Faculty and School (Acting) Dr Tony Murphy, Head of Quality Enhancement and Innovation in Teaching and Learning Shane Mooney, Head of Student Experience Dr Martin Doris, Assistant Registrar Grant Goodwin, QA Officer
10.30hrs		Break – Tea & Coffee	N/a
10.45hrs		3. Evaluation of Programme Proposed for Revalidation against QQI validation criteria - Programme Rationale and overall structure	<ul style="list-style-type: none"> David Williams, Course Director

Time	Location	Item	DBS Attendees
		<p><i>Criterion 2: Programme objectives and outcomes are clear and consistent with QQI awards sought.</i></p> <p><i>Criterion 3: Programme concept, implementation strategy and interpretation of QQI award standards are well informed and soundly based</i></p> <p><i>Criterion 4: Access Transfer & Progression arrangements are satisfactory</i></p>	<ul style="list-style-type: none"> • Dr Shazia Afzal, MSc Programme Lead • Paul Laird, HDIP Programme Lead • Dr Kerry McCall Magan, Head of Academic Programmes • Lori Johnston, Registrar • Emma Balfe, Head of Faculty and School (Acting) • Shane Mooney, Head of Student Experience • Dr Martin Doris, Assistant Registrar • Grant Goodwin, QA Officer • Tanya Balfe, Admissions Manager
11.30hrs		4. Panel Meeting with Student and Graduate Representatives	Student names to be confirmed
12.00hrs		<p>5. (a) Curriculum, Learning Teaching & Assessment - Proposed Programme: MSc in Information Systems with Computing (with embedded Postgraduate Diploma)</p> <p><i>Criterion 5: Written curriculum is well structured and fit for purpose</i></p> <p><i>Criterion 9: There are sound learning and teaching strategies</i></p> <p><i>Criterion 10: There are sound assessment strategies</i></p>	<ul style="list-style-type: none"> • David Williams, Course Director • Dr Shazia Afzal, MSc Programme Lead • Paul Laird, HDIP Programme Lead • Teaching Faculty (list tbc separately)
13.00hrs		Private Panel Discussion (and Lunch)	N/a
13.30hrs		<p>5. (b) Curriculum, Learning Teaching & Assessment - Proposed Programme: Higher Diploma in Science in Computing (with embedded Certificate)</p> <p><i>Criterion 5: Written curriculum is well structured and fit for purpose</i></p> <p><i>Criterion 9: There are sound learning and teaching strategies</i></p> <p><i>Criterion 10: There are sound assessment strategies</i></p>	<ul style="list-style-type: none"> • David Williams, Course Director • Dr Shazia Afzal, MSc Programme Lead • Paul Laird, HDIP Programme Lead • Teaching Faculty (list tbc separately)
14.30hrs		Private Panel Discussion	N/a
15.00hrs		6. College Tour for the Panel	
15.10hrs		<p>7. Resourcing and Supports for Learners</p> <p><i>Criterion 6: There are sufficient qualified and capable programme staff available to implement the programme as planned</i></p>	<ul style="list-style-type: none"> • David Williams, Course Director

Time	Location	Item	DBS Attendees
		<p><i>Criterion 7: There are sufficient physical resources available to implement the programme as planned</i></p> <p><i>Criterion 8: The learning environment is consistent with the needs of the programme learners</i></p> <p><i>Criterion 11: Learners enrolled on the programme are well informed and cared for</i></p> <p><i>Criterion 12: The programme is well managed</i></p>	<ul style="list-style-type: none"> • Dr Shazia Afzal, MSc Programme Lead • Paul Laird, HDIP Programme Lead • Dr Kerry McCall Magan, Head of Academic Programmes • Lori Johnston, Registrar • Emma Balfe, Head of Faculty and School (Acting) • Dr Tony Murphy, Head of Quality Enhancement and Innovation in Teaching and Learning • Shane Mooney, Head of Student Experience • Jane Buggle, Deputy Librarian • Dr Martin Doris, Assistant Registrar • Grant Goodwin, QA Officer • Darragh Breathneach, Head of Academic Operations
15.30hrs		Deliberation of the panel	N/a
15.45hrs-16.00hrs		Oral feedback to Senior DBS Staff	